FAHL

THE TRACHEOSTOMY MANAGEMENT

AIDS FOR REHABILITATION

FOREWORD

ANDREAS FAHL MEDIZINTECHNIK-VERTRIEB was founded as a sole trader company in 1992, our business activities have always been dedicated to the tracheostoma care sector and the patient has consistently been the focus of our attention.

Irrespective of where the individual is on their rehabilitation journey - we help. This might be directly after surgery, at the point of discharge from hospital or when the patient is back in their home environment. Care is always based on cooperation between the various stakeholders such as physicians, nursing staff, speech therapists, patients, relatives and ANDREAS FAHL MEDIZINTECHNIK-VERTRIEB GmbH. This collaboration results in a clear FAHL promise: to be a reliable partner in rehabilitation, to help laryngectomised and tracheotomised patients manage their everyday situations.

Tracheotomised, laryngectomised or non-hospital ventilated patients can rely on the wealth of experience of ANDREAS FAHL MEDIZINTECHNIK-VERTRIEB GmbH and our partners. Even in complicated cases, we guarantee needs-based care without losing sight of our promise.

Our partners collaborate with the multi-disciplinary team in the hospitals to ensure that they're fully informed about the range of products supplied by ANDREAS FAHL MEDIZINTECHNIK-VERTRIEB GmbH and how they can best support your rehabilitation. Our employees and partners do their best every day to provide the medical devices on time and to guarantee their continuity of supply to the hospitals, local pharmacies and Dispensing Appliance Contractors. ANDREAS FAHL MEDIZINTECHNIK-VERTRIEB GmbH and our partners are specialists in their field: caring for tracheostoma patients.

FAHL's comprehensive range of tracheostoma care products enable us to be a reliable partner/aid supplier for the established user as well as being of interest to new customers.

We hope that this guide/catalogue convinces you of our solutions. Service that builds trust. Products that keep our promise.

Yours
Andreas Fahl
Managing Director

CONTENTS

OUR VALUES AS A FAMILY-RUN BUSINESS

The FAHL company - a trustworthy partner for patients and their carers, for clinicians in hospitals and in care facilities and for the specialist trade. To this day, the company's focus is on expansion. What started as a small office in 1992 has, over the past 30 years, established itself as an international role model and medical aid specialist in the fields of tracheostomy, laryngectomy and ventilation. The foundation of this success is based on high quality product, first class service and highly qualified and dedicated employees and partners.

The worldwide supply of around 4,000 medical devices is organised centrally from Cologne. The branch office was established in Berlin since 2002, with regional offices opened in Austria (2003), Sweden (2017) and Switzerland (2019). Starting with only a small number of employees when the company was founded, a total of more than 250 employees worldwide are now doing their best every day to provide seamless all-round care. Over the past three decades FAHL has provided needs-based care to over 150,000 patients in more than 80 countries.

Then as today, customers appreciate both the way we treat them as equals and the reliability of our service. We do our all to keep the FAHL promise and be a reliable partner, supporting you with aids which are suitable for everyday use.

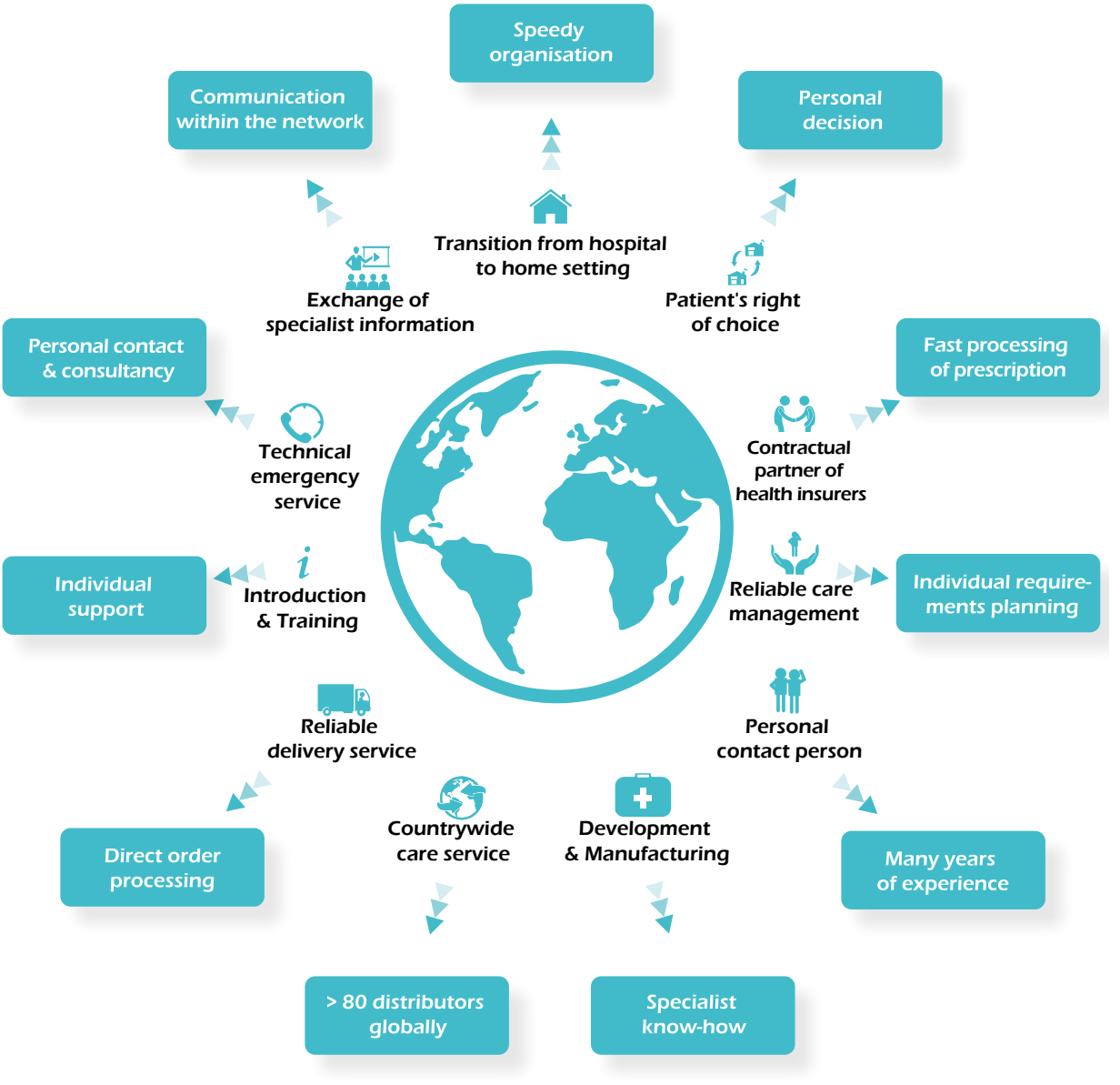
To continue to meet our own high standards, far-reaching expansions both in the product portfolio as well as product variations are planned. Building on our decades of experience, the FAHL company exchange professional expertise with patients and their clinicians to aid this product development and refinement.

RANGE OF SERVICES

The FAHL promise guides our and our partners actions at all levels:

"A reliable partner in rehabilitation for coping with everyday situations"

For us, being a partner means meeting our clients at eye level, taking their concerns and needs seriously and responding to them with competence. As a result, we create appropriate solutions with the aim of offering high-quality and innovative products and services for our customers.



SALES AND DISTRIBUTION

FAHL provide a product portfolio that upholds our promise, we cater for all age groups of patients, clinics and the specialised trade. Our products are medical aids designed to support patient rehabilitation and to enable the individual to cope with the activities of daily living.

FAHL offer a starter set that provides the basic postoperative care of tracheostomised and laryngectomised patients, together with specialist ENT aids designed to support rehabilitation later in the patient journey. Individual requirements can be catered for, with custom-made versions of specific products manufactured in the company's own workshop. Special sizes of tracheostomy tubes or tracheostoma protection products are also available by arrangement.

Children, as a result of their physical development, have frequently changing needs; special products, adapted to meet the anatomical and physiological requirements of the child, round off FAHL's product portfolio.

Our product portfolio at a glance:

- Initial care
- Secretion management
- Inhalation and air humidification
- Ventilation and oxygen therapy
- Tracheostomy tubes and accessories
- Tracheostoma protection
- Voice rehabilitation
- Cleaning and care
- Emergency products

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MANUFACTURING AND DEVELOPMENT

One reason for our success is the expertise that FAHL has gained over the past 30 years as a manufacturer, distributor and service provider of medical devices in the field of ENT medicine, specialising above all in the needs-based provision of aids for tracheostomised, laryngectomised and ventilated patients. This expertise is reflected in our extensive product portfolio, in the development and manufacture of our own FAHL products and in our high-quality service levels.

Close collaboration with the patient and clinical community has enabled FAHL to create patient-oriented, needs-based products that support rehabilitation. An example of this is the LARYVOX® EXTRA HME: four different densities of Heat and Moisture Exchange (HME) filter that provide variations in breathing resistance to suit the activity being undertaken by the individual laryngectomee. All four LARYVOX® EXTRA HME cassettes ensure the necessary heating, humidification and filtering of respiratory air, required to replace the lost upper respiratory function. The expertise in FAHL's product development, evident in the LARYVOX® EXTRA HME range is reflected in the design and manufacture of all FAHL products. More than 100 granted patents, as well as registered designs/utility models, guarantee products that stand out in terms of function, form, design and colour. Exciting developments are pending too - numerous applications have been filed with the German Patent and Trade Mark Office for future product innovations.

QUALITY MANAGEMENT

The provision of high-quality products was a founding principle of FAHL and this remains of utmost importance to us, to ensure we can always guarantee the safety of our customers. Quality management has been in place since the company was founded in 1992. Quality standards, for products, as well as in all upstream or downstream organisational processes, are met and maintained.

To guarantee consistent quality, our quality management system has been accredited by an independent certification body since 1998. In accordance with DIN EN ISO 13485:2016 and Annex II as well as Annex V of the European Medical Device Directive 93/42/EEC, ANDREAS FAHL MEDIZINTECHNIK-VERTRIEB GmbH is regularly inspected and certified by an independent body in line with clearly defined and generally binding standards. The implementation of the new European Medical Device Regulation 2017/745 (MDR) has been completed and this ensures conformity with the applicable medical device legislation.

"Quality is reflected in stable and safe products in an ergonomic form."

For us, this quality standard means the development of products that are safe and state of the art in terms of form and function.

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GENERAL DISCHARGE/CARE MANAGEMENT

DISCHARGE/CARE MANAGEMENT

New laryngectomy patients are inundated with information, especially around the time of their surgery. There is a lot that needs to be considered before informed decisions can be made. The post-operative rehabilitation process equips the new laryngectomee to adjust to their new situation and gain independence. To help achieve this goal the patient needs to decide, with the help of their clinician, which tracheostoma care devices they will need and which supplier they will work with. The FAHL company and their partners strive to become a provider of tracheostoma care products that you can trust from the outset.

"A trustworthy partner helping you to manage those everyday situations"

The medical device supplier tends to be chosen during your stay in hospital so that you have everything that you require on discharge. In general, the new laryngectomy has a choice in terms of provider and their clinician can help guide them through the decision on which supplier to choose. Once in the community, your products will be sourced for example from a Dispensing Appliance Contractor who will be able to process orders and deliver the products that you need. You will discuss the choice of which products are appropriate with a member of the Speech & language/Clinical Nurse Specialist teams in the hospital pre-discharge. It is important to choose an independent Dispensing Appliance Contractor who can ensure that you get the choice of products that you require.

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ORDERING INFORMATION

The entire product portfolio from ANDREAS FAHL MEDIZINTECHNIK-VERTRIEB GMBH consists of close to 4,000 products. Although these products can be ordered directly from our local partner, most of your requirements will be listed in your healthcare system. Those products will be supplied via your Dispensing Appliance Contractor of choice and in most cases a prescription will be required for this. The representatives of that Dispensing Appliance Contractor will be able to guide you through the process from script to order to delivery.

QUICK AND EASY OF ORDERING YOUR MEDICAL AIDS

01

Issuing a prescription

Your clinician /general practitioner will be able to write you a prescription for your tracheostoma care devices

02

Sending the necessary documents

The prescription is then submitted to your Dispensing Appliance Contractor of choice who will be able to advise you on availability and delivery times and ensure that product reaches you as quickly as possible.

03

Always a suitable solution

If necessary, our international partners in conjunction with your clinician can advise on the right aids for your circumstances.

04

Ordering your medical aids

You can place an order directly with your Dispensing Appliance Contractor and they will then send you your products as quickly as possible.

05

Speedy delivery of your order

The ordered products will be sent to you within the shortest possible time, usually by mail. This way we ensure a continuous supply.

COMING HOME SAFELY

The FAHL partners have many years of experience and so they are able to provide industry leading support to both the patient and clinician communities in the countries that they serve.

This includes training, education and technical support in the choice and use of the medical devices that they supply on our behalf. The aim is to be a reliable partner during and after the rehabilitation process, helping patients adjust to and live as laryngectomees.

The benefits that they provide include:

- Active support of clinical teams to help support the patient's transition from hospital to the home environment
- Helping clinicians in making the correct choice of medical device(s) to meet their patients' needs
- Consultation with the attending clinical teams, including education and training
- Support and consultation during patient clinics
- Good networking with other specialists and coordination of further care services

ANATOMICAL AND PHYSIOLOGICAL PRINCIPLES

To understand the specific anatomical differences between tracheotomy (incision of the trachea) and laryngectomy (removal of the larynx), it is of particular importance to first visualise and correctly understand the airways of a healthy person.

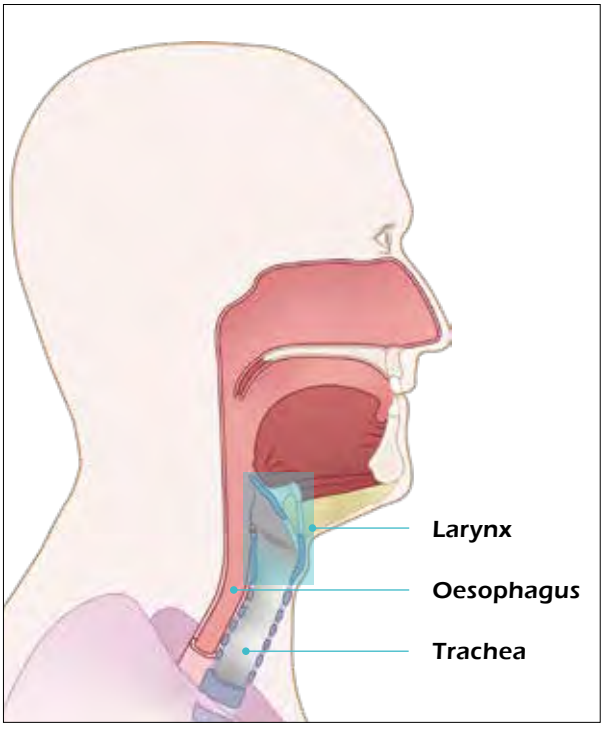
The schematic illustrations show that the trachea and oesophagus run in close proximity to each other, with the oesophagus positioned behind the trachea. The larynx forms an important interface between these two structures. It not only takes over the function of the voice, but also the correct direction of air and food as well as protection against swallowing the wrong way by closing the trachea with the epiglottis as needed during the process of swallowing. Inhalation and exhalation in a healthy person can be performed via the nose as well as via the mouth. Therefore, if the nose is occluded, respiratory function can still be adequately maintained exclusively via the mouth.

Different diseases such as acute deterioration of the respiratory situation up to requiring ventilation, severe tumorous events in the respiratory tract or neurological diseases make the creation of a tracheotomy, i.e. performing a tracheotomy or even the removal of the larynx - the laryngectomy - necessary.

In all cases, there are specific changes to the anatomy which cause fundamental consequences for the respiratory situation of the affected person.

ANATOMY OF HEALTHY PERSONS

- Larynx present
- Oesophagus and trachea intact
- Interface larynx
- Phonation/Direction/Protection
- Breathing via the mouth, nose throat area



WHAT EXACTLY HAPPENS DURING A TRACHEOTOMY?

A tracheotomy becomes necessary to secure the patient's respiratory situation. This may prove necessary in the context of complex surgery in the facial region, due to an emergency situation or also in the case of foreseeable long-term ventilation requirements.

During a tracheotomy, the front wall of the windpipe (trachea) is opened to create direct access to the lower respiratory tract.

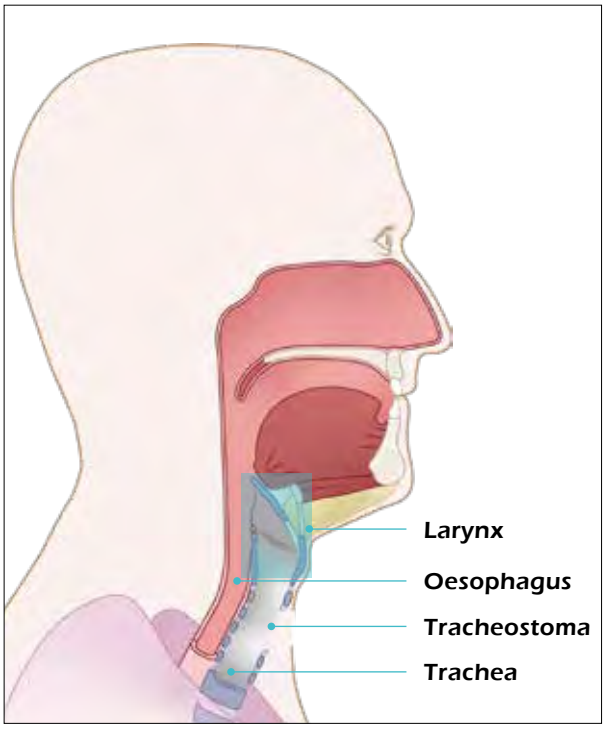
Different placement techniques are used depending on the diagnosis and must later be taken into account in the subsequent provision of aids and patient care. As a result of the tracheotomy, both inhalation and exhalation are performed via the tracheostoma.

The newly created airway bypasses the larynx, which means that no voice can be produced initially.

Special combinations of aids, such as the tracheostomy tube with a speaking valve, can in most cases reactivate the voice function at a later stage of treatment.

AFTER TRACHEOTOMY

- Preserved larynx
- Opened trachea
- Breathing via tracheostoma, poss. nose
- Displacement of airway by tracheostoma, may be reversible



TRACHEOTOMY OR TRACHEOSTOMY

In Anglo-American countries in particular, the terms "tracheostomy" or "tracheotomy" are used for the same procedure - the tracheotomy. Elsewhere, the distinction between tracheotomy for the incision and tracheostomy for the creation of an epithelialised tracheostoma has become established.

For the patient, the change in dead space (portion of the airway not available for gaseous exchange) after tracheostomy is immediately noticeable at the first breath by a significant reduction in breathing resistance.

Although this effect is initially perceived as positive, it is counterproductive for physiological reasons, because breathing resistance is important for maintaining lung volume and function. Tracheostomy tubes increase resistance, particularly in combination with an HME (Heat and Moisture Exchanger).

THE BENEFITS OF A TRACHEOTOMY

The use of a tracheal tube for ventilation should be changed as soon as possible to a tracheotomy with a well-fitted tracheostomy tube to protect the larynx and vocal cords.

This makes it easier to perform oral care and improves communication skills and oral
food intake. The tracheotomy itself offers both active benefits (safe airway, good acceptance of the tracheostomy tube, reduced foreign body sensation, high fixation security, efficient bronchial toilette) as well as passive benefits (fewer sedatives, improved oral care, rapid oralisation, early mobilisation) in different ways.
Classic indications for the placement of a tracheostoma are found in very differing medical situations.

- Mechanical airway obstruction (oedema, tumours, injuries, chemical burns, foreign bodies)
- Internal incidents (cardiological, pulmonological)
- Neurological diseases, dysphagia and aspiration risks
- Long-term ventilation/weaning

COMPLICATIONS

Various complications are possible in the course of a tracheostomy and it is imperative to keep these in mind. In general, bleeding, infection and granulation can cause problems at any time. Notable complications include: incorrect placement of the cannula, pressure ulcers in the area of the cannula tip, pneumothorax formation, tracheal wall damage due to cuff pressure errors, oesophageal fistula formation, scars and stenoses in the trachea.

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WHAT IS THE DIFFERENCE TO A LARYNGECTOMY?

Whereas a tracheotomy merely opens the trachea, a laryngectomy fundamentally changes the anatomy. This is usually caused by advanced laryngeal cancer, which requires a complete surgical removal of the larynx, including the vocal cords and epiglottis.

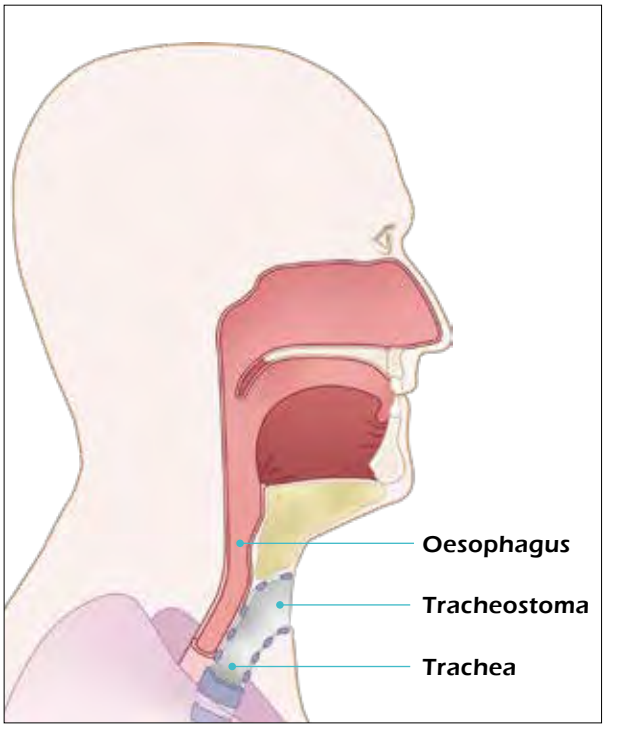
Due to the resulting elimination of the necessary interface management (safe food intake, breathing, speaking) in the pharynx, a complete separation of the trachea and oesophagus is functionally required to prevent permanent swallowing of saliva and food. Inhalation and exhalation then only take place via the tracheostoma. The upper airways and the important linked functions of humidification, warming and filtering are permanently no longer available. The anatomical changes after a laryngectomy are irreversible and thus make the patient a neck breather for life.

Despite the severity of the clinical picture and the increasing frequency of the disease, especially at a younger age, awareness in our society is still relatively low. Decisive risk factors for the development of laryngeal carcinoma include:

- Regular consumption of tobacco
- Alcoholic beverages
- Human Papillomavirus (HPV)
- Specific toxins (poisons)

AFTER LARYNGECTOMY

- Larynx removed
- Trachea and oesophagus separated from each other
- Terminal tracheostoma
- Breathing exclusively via tracheostoma
- Irreversible



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IS THE LARYNX ALWAYS REMOVED?

No. Depending on the current findings, the physician in charge will carefully consider whether a complete laryngectomy is absolutely necessary or whether alternative organ-preserving therapies are possible.

Certain parameters are of particular importance for the correct decision. In addition to tumour location, the tumour stage and its type, the mobility of the vocal cords is also an important indication for the appropriate choice of therapy. As a result of the treatment, a tracheostoma is usually necessary. This may only be necessary temporarily but, in special cases, also permanently.

Depending on the specific tumour, organ-preserving methods such as chemotherapy or antibody therapy, radiotherapy, etc. are further treatment options which are often discussed and coordinated by the attending physicians in consultation with different medical disciplines (tumour board) on a patient-specific basis.

WHAT CHANGES IN THE FIELD OF PHYSIOLOGY?

The airways in particular are a very sophisticated body segment. The nasopharygeal cavity offers a particularly large surface area that is completely covered with mucous membrane and occupied by cilia/epithelium. These coordinated structures ensure immediate heating and humidification of the inhaled respiratory air along with filtration of unwanted dirt particles.

Their transport towards the lungs is prevented as best possible by the movement activity of the cilia, and enables elimination of the particles to a large extent by swallowing. The trachea is similarly structured in the lower airways. Over a length of 10 - 12 cm, 16 - 20 horseshoe-shaped cartilage rings provide stability and maintain the necessary inner lumen of the trachea. The system reacts reflexively to the intrusion of foreign bodies by coughing to clear the airways.

The coughing function itself, depends on a necessary build-up of pressure. In a healthy person, this is produced by the closure of the larynx with the epiglottis in combination with the muscle groups responsible for the abdominal press. In both tracheotomised and post-laryngectomy patients, this mechanism is either temporarily or permanently unavailable. Functional limitations are a logical consequence and should be an obligatory consideration in the holistic rehabilitation of these patient groups.

WHAT RESTRICTIONS ARE TO BE EXPECTED?

The change in anatomy after both tracheotomy and laryngectomy brings with it specific functional losses. Functions that healthy people take for granted, such as voice or smell and taste are no longer present or only temporarily.

It is not uncommon for tracheostoma patients to also experience a significant reduction in performance with an accompanying reduction in quality of life.

This makes it all the more important to have rehabilitation measures which are well-tailored to the individual's life situation and enable them to cope with everyday life even under the new conditions. These measures should be planned and implemented according to the patient's individual resources and needs in order to replace or return the lost functions in the best possible manner. Different rehabilitation options are available for almost every functional loss suffered.

Loss of nasal function

Primary loss of voice

Changed airways

Risks when taking a shower or bath, and swimming

Separation of trachea and oesophagus

Pre- and post-operative weight loss

Limited taste sensation

Less lifting power

Loss of abdominal press

WHO FALLS ILL AND AT WHAT AGE?

The incidence of laryngeal carcinoma is 2 - 3 times higher in men than in women. However, the incidence of the disease is increasing for female patients. Generally speaking, the risk of developing a tumour increases from the age of 40 onwards.

In contrast, a connection between HPV infections and head and neck tumours is more likely to be found in younger population groups.

Typical signs of a head and neck tumour include:

- a sore tongue, non-healing mouth ulcers and/or red or white patches in the mouth
- Sore throat
- Persistent hoarseness
- Pain and/or difficulties in swallowing
- Swelling of the neck
- Blocked nose on one side and/or bloody discharge from the nose

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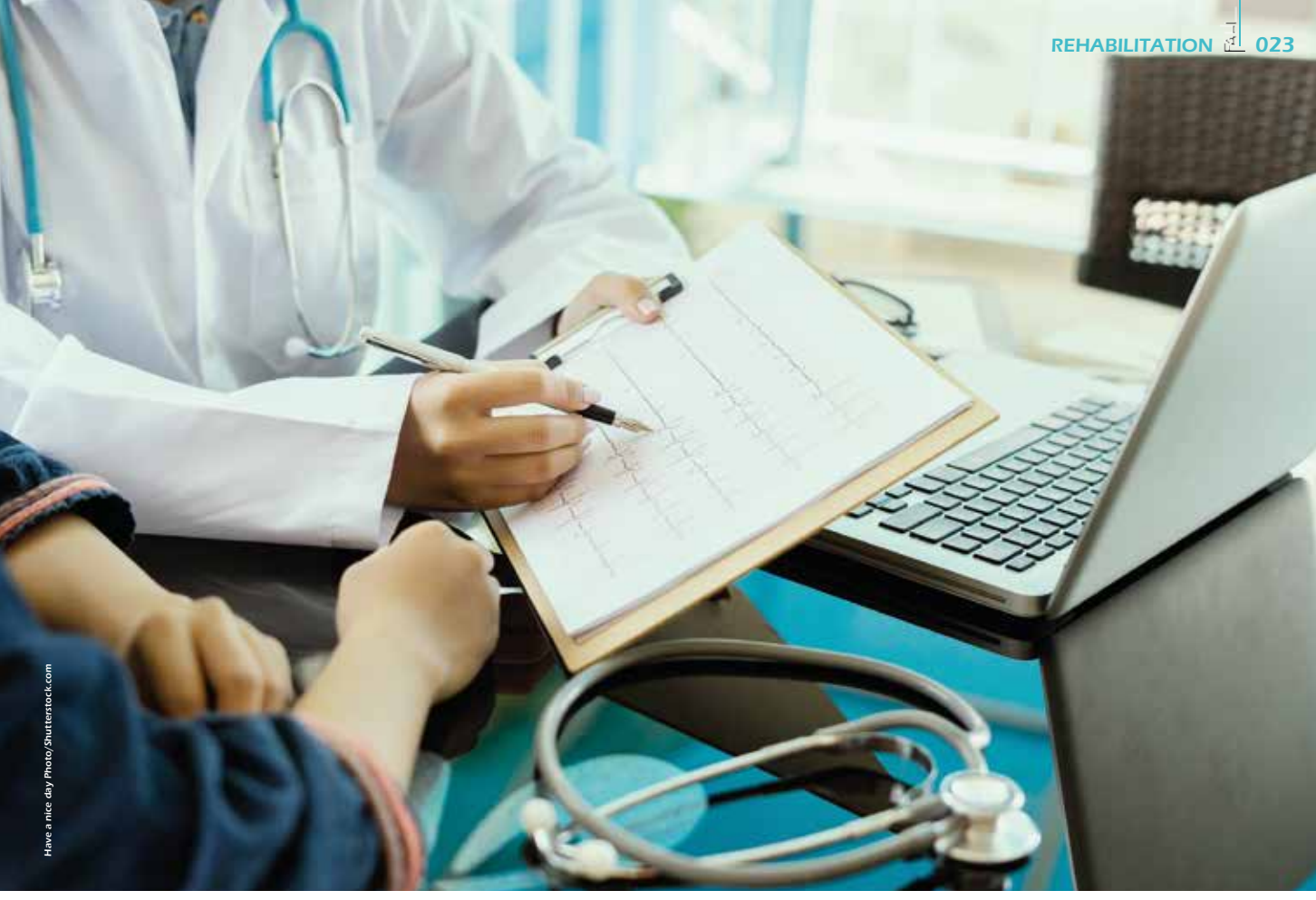
THE CONSEQUENCES OF A LARYNGECTOMY

Surgery and the associated changes definitely represent a dramatic change in the patient's life situation. The airway is and remains changed throughout life, chanages from being a mouth/nose breather to a neck breather. This entails special challenges for the personal life situation. Previously unknown aids become necessary and have to be applied or operated. The consequences of many diagnostic measures of long anaesthesia, radiotherapy and/or chemotherapy sometimes accompany the affected person for a prolonged period of time. Exhaustion and reduced performance up to the fatigue syndrome can follow. It is not uncommon for psychological problems such as lack of drive, isolation in the social and professional sphere, anxiety and even depression to occur. Special complications can also occur at the tracheostoma. Bleeding, infection, granulomas/nodules, stenosis/constriction, shrinkage and scarring have been described.

LOSS OF FUNCTION AND VISUAL CHANGE

Attention must also be drawn to the expected visual changes in the external appearance associated with the disease and its therapy. These can be temporary or permanent. Pronounced oedema (swelling) in the facial area is often seen post-operatively, with various tumours in the ear, nose and throat region. Compression bandages in the neck region reinforce this impression. A transnasal probe is usually fixed to the face for a few days following surgery. And of course, the tracheostomy itself often leads to a primary rejection of one's own appearance.

While the tracheotomy often offers the option of a re-transfer, the tracheostoma represents a life-long opening into the trachea in the laryngectomised person. In addition, the neck dissection (on one or both sides), which is occasionally necessary, also leads to a permanently recognisable and significant reduction in neck tissue.



Have a nice day Photo/Shutterstock.com

MEDICAL TREATMENT

As previously described, all available treatment options are carefully weighed up from a medical standpoint for the respective patient and the best possible therapy is selected by an interdisciplinary team. In addition to surgery, chemotherapy and/or radiotherapy complement the treatment spectrum. They can form the exclusive therapy or be a necessary supplement to surgery.

Antibody therapy has also become the focus of attention in recent years. The objective of these different methods is generally to eliminate the malignant tumour cells in the best possible way and thus to slow down or stop tumour growth or to destroy the tumour. Understandably, the procedures are each associated with a particular level of aggressiveness. Various side effects are to be expected accordingly.

Which side effects are known?

The classic side effects of chemotherapy such as weakened immune function, mucosal damage with a tendency to bleeding, loss of appetite, nausea, vomiting often lead to a reduced nutritional status and reduced performance. However, organ damage to the lungs, heart and kidneys or even the spinal cord is also possible. Temporary hair loss, specific skin damage and digestive disorders are also known.

In radiotherapy, damage to the skin and mucous membranes in the mouth and throat area, but also to the tracheostoma are particularly prominent. Often, bacterial colonisation occurs, e.g. with Candida albicans, which can lead to inflammation of the mucous membranes, sometimes

MEDICAL TREATMENT

with painful swallowing disorders. In addition, functional disorders of other organs in the irradiation area, such as the salivary glands, can occur. The fatigue/exhaustion syndrome is also a possible side effect.

In the context of antibody therapy, two possible major complications are mentioned in addition to the general side effects described above. One is an infusion reaction with accompanying circulatory problems and, the other is a painful as well as inflammatory skin reaction.

Of course, the side effects described do not necessarily occur in every patient and also in varying manifestations. The intensity of the problems should in any case be discussed with the attending physicians to be able to consider and decide on any necessary changes, interruptions or discontinuations of therapy in good time.

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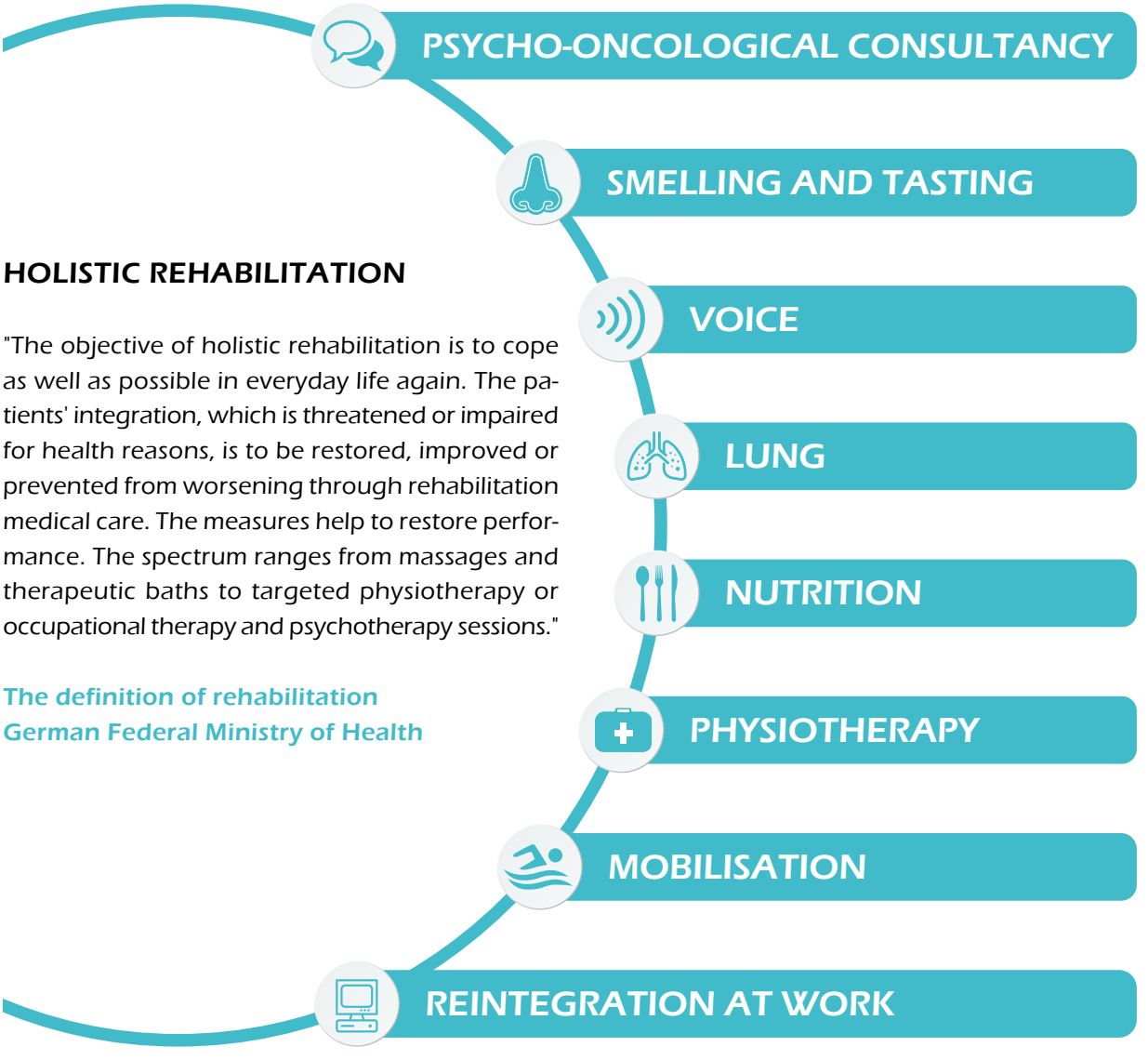
HOLISTIC REHABILITATION



HOLISTIC REHABILITATION

"The objective of holistic rehabilitation is to cope as well as possible in everyday life again. The patients' integration, which is threatened or impaired for health reasons, is to be restored, improved or prevented from worsening through rehabilitation medical care. The measures help to restore performance. The spectrum ranges from massages and therapeutic baths to targeted physiotherapy or occupational therapy and psychotherapy sessions."

The definition of rehabilitation
German Federal Ministry of Health

The rehabilitation of laryngectomised patients is very complex and includes several subtopics. The first steps of rehabilitation are already taken in the acute clinic. The main aim here is to prepare the person concerned for an independent life in their own home.

Further rehabilitation, such as follow-up treatment, can then be applied for after the stay in hospital. The objectives of the rehabilitation measures are to treat the impairments that arisedue to the illness as well as possible and, in the best case, how to overcome them. In the case of patients who have undergone laryngeal surgery, voice rehabilitation is of great importance. In some cases, the desired objective is also to regain the ability to work and to find one's way back into a working life.

The individual rehabilitation objectives are firmly intertwined and cannot be separated from each other. The individual subtopics are explained in more detail in the following.

REHABILITATION OF THE LUNG

By removing the larynx, the affected person breathes exclusively through the tracheostoma. The important function of the nose during nasal breathing is thus eliminated. The nose filters, warms and humidifies the respiratory air. These are very important functions which need to be replaced as best possible.

Pulmonary rehabilitation aims to maintain and normalise the function of the lungs and breathing as far as possible to improve physical capacity and thus the quality of life of the person concerned.

Frequent pulmonary complications include increased secretion, drying of the mucous membranes in the trachea, a strong and frequent cough, shortness of breath and breathing noises.

To counteract these complications, the "artificial nose" or "wet nose" was developed. This is an HME (Heat and Moisture Exchanger) filter that adds heat and moisture to the air when you inhale.

These filters are suitable for all patients, regardless of which substitute voice is being learned. For wearers of a voice prosthesis, there are special filter versions which are closed for speaking with the finger. The HME filters are inserted either into the silicone cannula or into specially designed patch systems.

To prevent pulmonary complications in the long term, lung rehabilitation is a crucial part of the measures to improve quality of life.

In speech therapy, specific breathing exercises can be practised for this purpose. Regular inhalation is also crucial for pulmonary health. In addition, physical activity promotes the long-term development of lung volume following laryngectomy.

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SMELLING AND TASTING

It is well known that the pleasure of eating is directly related to smelling and tasting. And at the same time, a good nutritional situation is helpful in coping with serious illnesses and promotes the recovery of those affected. Olfactory (smell) and gustatory (taste) rehabilitation are therefore further components of the holistic recovery concept following laryngectomy or tracheotomy.

After surgery, the person no longer breathes through the nose. Smelling is therefore clearly limited at first. However, many nuances of taste are perceived through smell, therefore tasting is also limited. With targeted exercises and rehabilitation measures, it is possible to significantly improve olfactory function again. In speech therapy, various exercises can be practised for this purpose.

The use of an olfactory tube or an olfactory trainer is also often possible. Starting the exercises early is particularly useful here to achieve success quickly. As the loss of the olfactory sense is often perceived as an impairment in quality of life by those affected, it is very important not to neglect this aspect of rehabilitation.

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THE IMPORTANCE OF PSYCHO-ONCOLOGY

A diagnosis of cancer is a drastic moment in the life of the person affected and their relatives. The diagnosis is accompanied by many changes in everyday life. In the case of a laryngectomy, many functional limitations are permanent and accompany the affected persons throughout their entire life. Even if the disease is initially treated successfully, the fear of the tumour disease and its further consequences and obvious limitations remain. To be able to come to terms with this drastic experience, psycho-oncological rehabilitation is of great importance as part of the treatment. Here too, the aim is to improve the quality of life of the persons with the disease and to help them come to terms with the new emotional, social and professional situation.

Self-help groups can also be a point of contact to offer support and advice to the person affected. Here they receive first-hand information on all the important topics concerning life with the disease, get to know other people affected and receive tips and advice on how they themselves have dealt with the new situation.

EATING AND DRINKING

Eating is far more than just taking in food. It is pleasure and social togetherness. When we get together with friends or the family, we usually do so to have something to eat together, for example have coffee and cake or share a barbecue.

A healthy person swallows about 2000 times a day. Due to the constant production of saliva, the person has to swallow about once a minute. This happens automatically, without us having to think about it.

After removal of the larynx, the air and food passages are completely separated. Everything that passes through the mouth and is swallowed ends up in the oesophagus and stomach. "Swallowing" in the conventional sense is no longer possible after a laryngectomy for anatomical reasons. The actual swallowing function is only slightly affected by the surgical procedure. However, complications can arise, e.g. from radiotherapy. Here it can well be that saliva production is reduced or food gets stuck at the narrowed entrance to the oesophagus.

Special swallowing techniques can be learned in speech therapy if necessary. Through certain movements and training of the muscles involved, swallowing can be strengthened and food getting stuck can be reduced significantly. Adjusting food consistencies and other adaptive and compensatory measures can quickly lead to success. In case of prolonged difficulties with food intake, a professional nutritionist should definitely be consulted.

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PHYSIOTHERAPY AND LYMPH DRAINAGE

Due to the long operation, the altered anatomy, the pain and the resulting relieving posture, affected persons may experience tension and impairment of the musculoskeletal system. In particular, pain can occur in the neck and shoulders. To counteract this, physiotherapy has proved very useful. This can improve mobility and relieve pain through specific exercises. Physiotherapy is also part of holistic rehabilitation and can be prescribed by the physician according to medical findings.

During the surgical removal of the larynx, the lymphatic channels are inevitably severed. Often, the many lymph nodes located in the neck are also removed during laryngectomy by neck dissection to increase the affected person's likelihood of recovery and to avoid a recurrence. Due to this significantly altered anatomical situation, lymphatic congestion often occurs in the tissue. Fluid accumulates between the cells in this process. The skin then appears firm, taut and swollen. This leads to an uncomfortable feeling of tension, can be painful and significantly affects vocal rehabilitation and swallowing as well as the mobility of the tissue region in the neck. Lymphatic drainage is then required and is performed by specially trained physiotherapists. This mobilises the fluid in the tissue to the remaining lymphatic channels where it can then be removed naturally. The tissue becomes softer again and the pain and impairments are noticeably reduced. Lymphatic drainage must be performed regularly. Lymphatic drainage should be started as soon as possible after the completion of clinical treatment. The exact point in time is determined by the ENT physician, also in consultation with the radiotherapist. The physician also issues the prescription for the therapy.

WATER THERAPY

With the aid of a special hydrotherapy device, the Larchel, it is possible to go swimming again after a laryngectomy or tracheostomy and to participate in exercise therapy in the water. The device consists of a blockable tracheostomy tube with cuff, which is firmly connected to a tube. The exact size of the tracheostomy tube must be determined individually in advance. The collapsible tube is inserted into the mouth via a mouthpiece. This allows breathing through the nasal cavity again and nothing stands in the way of therapy in the water. It is very important to first use the hydrotherapy device under the therapeutic supervision and control of the hydrotherapy representative of the Bundesverband der Kehlkopfoperierten e.V. (Association of Laryngectomy Patients) and to train its use. Breathing through the nose is unfamiliar at first after the long phase of exclusive neck breathing. Alternatively, a snorkel can be used as an extension of the airway. Therefore, a prior examination by an experienced ENT specialist is absolutely necessary. The physician certifies the fitness in terms of health and prescribes participation in a hydrotherapy seminar.

RETURNING TO EVERYDAY LIFE

An important component of rehabilitation rests in the hands of those affected themselves. It is crucial to continue participating actively in life despite the changed situation and the serious illness. This includes both participation in social life as well as physical activity. It is conceivable that leisure activities are not feasible to the usual extent, especially shortly after the operation. Nonetheless, it is important not to give up on these and to consistently try pursuing them. Laryngectomised patients can certainly return to work, travel, play sports and attend public events such as concerts. Over time, they learn to trust their body again and to use the possibilities available for coping with everyday situations.

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MANAGING EVERDAY SITUATIONS

After a serious illness and sometimes long-term or even permanent changes in physical integrity such as a tracheostoma, the return to everyday life is often perceived as a particular challenge by those affected and their relatives. Things of daily life that were previously performed as a matter of course have to be relearned or accomplished under different conditions. For example, neck-breathers can no longer enjoy an overhead shower in the morning without special preparations.

Fortunately, special aids can significantly reduce the risk of water entering through the tracheostoma. However, the immediate danger from the shower or bathtub must be primarily recognised and accepted. For example, patients should always use non-slip bath liners to prevent the neck opening from slipping below the water surface! Especially during the first weeks and months after surgery, a handy emergency signal device can offer safety and should be kept close at hand in the bathroom so that relatives or neighbours can be alerted in emergency situations.

Laryngectomised patients are often particularly irritated by the change in their own voice. If we take into account that people are identified to 70% by their voice, it is understandable that patients often feel insecure despite voice rehabilitation with aids and logopaedic training. Reference to the voice being a mirror of the soul also conveys its special significance.

It is therefore understandable that in the first phase after the operation, those affected avoid certain situations such as buying bread, making phone calls, large gatherings of people, etc. and react sensitively to negative experiences within the social environment.

It is not uncommon for this to quickly lead to private and social isolation as well as a barrier to professional reintegration.

The team of specialists from different areas (aid supplier, speech therapist, nursing, physicians, etc.) is called upon here to accompany these initial difficulties, to analyse them and to achieve optimisation through individual adjustments. Especially in the context of professional activities, but also for the management of emergency situations, telephone intelligibility, for example, is an important marker and safety aspect. Voice recordings made by relatives for emergency situations at home can also be helpful in informing the emergency medical services or fire brigade in a comprehensible manner if necessary.

The development of personally appropriate response strategies is a worthwhile challenge for everyone concerned.

The existing pulmonary effects after a tracheostomy/laryngectomy also make the everyday situation difficult for those affected. Secretion formation with increased coughing, productive secretion and corresponding noises are often perceived as unpleasant and disturbing by relatives, but especially when meeting strangers, e.g. in restaurants or cinemas - and unfortunately also judged accordingly.

A tip: dealing confidently with everyday situations develops over time.

The removal of the larynx leads to the loss of the "abdominal press" in addition to many of the consequences already described. This function enables us to lift heavy loads, e.g. when shopping or to perform physically demanding tasks in a professional environment. But the abdominal press is also of particular importance for maintaining digestive function. Experience has shown that little importance has been attached to this in the context of laryngectomy, especially by patients.

Even taking meals can become a stumbling block. In the course of the different therapies, various

MANAGING EVERDAY SITUATIONS

disorders of the swallowing function can occur, particularly in laryngectomised patients. Radiation causes dry mouth, for example, which can also lead to a more difficult transport of food through the swallowing pathway. The size and consistency of the food can also be crucial. It is therefore not uncommon for eating habits to change in the course of the disease, partly unconsciously but noticeably: longer duration of meals, different food preferences, reduction of quantities and tendencies towards an unbalanced diet. The onset of malnutrition, at least in terms of quality, with a reduction in performance and loss of quality of life, is to be expected. Limitations in activity, a reduction in the radius of action and physical resilience when walking - especially uphill, climbing stairs and possibly doing sports - are not uncommon. And not to be forgotten, the limitations in smell and taste as the altered airway bypasses the olfactory receptors located in the nose. This issue must also draw attention to another aspect of the changed everyday situation. Restricted smell can pose a danger, especially in the domestic environment, when forgotten and burnt food on the cooker is not noticed until it is too late and which may then lead to having to fight the source of a fire. It is highly recommended to install smoke detectors in the rooms.

It should also be noted in this context that even blowing out a candle must first be relearned by the laryngectomised person.

JL-Pfeifer/Shutterstock.com

WHERE CAN AFFECTED PERSONS FIND HELP?

During their disease, those affected have received an incredible amount of information, learned new things, experienced examinations and treatments in an unfamiliar environment, the hospital and the rehabilitation clinic. And then comes the day when the return to one's own home is imminent and the everyday situations need to be managed accordingly. Of course, every affected individual experiences this differently, and the respective expectations also differ accordingly.

In order to organise everyday life in its new form, both the affected persons and the relatives should take advantage of existing different support services as needed. Both the provider of medical aids, the speech therapists, social workers of the clinics and in particular the self-help groups are available as contact persons in every phase of the disease and rehabilitation.

The Bundesverband der Kehlkopfoperierten e. V. (Federal Association of Laryngectomy Patients) provides access to a nationwide network of patient counselling, which gives newly diagnosed patients the opportunity of receiving information about life after a laryngectomy even before surgery and of benefiting from their experience.

In the area of general head and neck tumour diseases, the Kopf-Hals-M.U.N.D.-Krebs e. V. association is a similarly structured organisation with corresponding support services.

Even if coping with everyday life initially may seem like an insurmountable challenge for those affected after the operation/tracheostomy, amazing and not infrequently unexpected results can be achieved during the course of rehabilitation. It is important for the patient and his relatives to promote patient empowerment at an early stage during the inpatient stay as well as in the further course of the disease. Strengthening the patient's individual resources and supporting independence are of utmost importance and form the basis for the fastest possible restoration of self-acceptance despite the handicap as well as promoting integration.

Hellenic association of laryngectomees (Pansyla)
21-23 Leosthenous str, Piraeus
Phone: 2104186341
Website: http://pansyla.blogspot.com/

Asociacion Regional Madrilena de Atencion Y Rehabilitacion de Laringectomizados
Av. de las Ciudades, 11
Getafe, Madrid, Spain 28903
Phone: 671 88 58 04
Mail: armarel@armarel.es
Website: http://armarel.org/

Asociación Barcelonesa de Laringectomizados.
C./ Bailén, 148, Baixos 2ª
08037- BARCELONA (SPAIN)
Phone: +34 93 457 90 03
Mail: abl@asbala.org
Twitter: @asbalabcn

Asociación Madrileña de laringectomizados
Centro Cívico Las Margaritas
Avda de las Ciudades, 11. 28903 - GETAFE MADRID (SPAIN)
Phone: +34 916 118 948 - 671 885 804
Mail: armarel@armarel.es
Website: https://armarel.org/

Asociación Canaria de Laringectomizados
Calle Antonio Manchado Viglietti,5 - 1° planta, local 36,
Las Palmas de Gran Canaria, 35005, Spain
Phone: 617606650
Website: www.ascalar.jimdo.com

Macmillan Cancer Support
89 Albert Embankment London, England SE1 7TP
Phone: 0808 808 0000

WHERE CAN AFFECTED PERSONS FIND HELP?

Laryngectomy Support Group
40-44 Eglantine Avenue Belfast, Ireland BT9 6DX
Phone: 028 9066 3281
Mail: eileencreery@cancerfocusni.org
Website: www.cancerfocusni.org

Norsk Landsforening for Laryngektmerte NLFLo
P O B 4 Senrum Oslo, Norway N-0101
Phone: 47 22 20 03 90

Patiëntenvereniging Hoofd-Hals
Postbus 13, 3500 AA Utrecht, Netherland
Vredenburg 24IV, 3511 BB Utrecht
Phone: (030) 232 14 83
Mail: info@pvhh.nl
Website: www.pvhh.nl

Liga voor Gelaryngectomeerden
Kasteelstraat 17/ 5
B-2160 Wommelgem, België
Website: www.ligavoorgelaryngectomeerden.be

Mun & Halscancerförbundet
Barks väg 14, 170 73 Solna
Phone: 08 655 83 10
Mail: kansli@mhcforbundet.se
Website: https://www.mhcforbundet.se/

hrvatska zajednica laringektomiranih
10 000 Zagreb, Ilica 197, S.8
Mail: laringekt.hz@gmail.com

Association Nationale des Mutilés de la Voix
43 rue de Pommard
75012 Paris, France
Phone: 01 42 33 16 86
Mail: info@mutiles-voix.com

Laringoloji - Foniatri Okulu Başkanı
Prof. Dr. Kayhan Öztürk
kayhanozturkmd@hotmail.com
http://kbbokullari.kbb.org.tr/

Polskie Towarzystwo Laryngektomowanych
ul. K. Brodzińskiego 4; 41-800 Zabrze
Phone: +48.608445619
Mail: ptl@ptlzg.eu

Świętokrzyski Oddział Rejonowy Polskiego Towarzystwa Laryngektomowanych
Prezes Zarządu - Tadeusz Budziński
Katarzyna Makowiecka – skarbnik,
Phone: 601 078 927
Mail: ptl_kielce@interia.pl
Website: https://gis.onkol.kielce.pl/

STOWARZYSZENIE OSÓB Z NOWOTWORAMI GŁOWY I SZYI
Wielkopolskie Centrum Onkologii
ul. Garbary 15, 61-866 Poznań
http://www.stow-nowotworyglowyiszyi.pl/

Śląskie Stowarzyszenie Osób Bez Krtani „Nadzieja" z siedzibą w Katowicach,
Schlesische Vereinigung der Menschen ohne Kehlkopf "Hoffnung" mit Sitz in Katowice,
40-075 Katowice, ul. Kłodnicka 75/6
Phone: +48 662 101 017
Mail: stowarzyszenienadzieja@gmail.com

Associazione Italiana Laringectomizzati Ailar OdV
Via Caroncini 5 - 20137 Milano
Phone: 02.5510819
Mail: info@ailar.it

Portugirdidvhr Association of Voice Limited
Rua Dr. António Bernardino de Almeida (IPO)
4200-072 Porto
Phone: 22 502 64 92
Mail: aplvoz.geral@sapo.pt

كلية العلوم الطبية التطبيقية-جامعة الملك سعود
0114677034
ssspa@live.com
https://ssspa.org.sa/

INITIAL CARE PACKAGE

FOR ADULTS

EXAMPLE FOR SCOPE OF DELIVERY	
Tracheostomy dressings	Shower guard
Cannula carrying straps	LARYVOX® Nebulizer
Optibrush® cannula cleaning set	OPTIFAHL® Stoma cleaning wipes
OPTIFLUID® Stoma oil wipes	Tracheal inhaler
TRACHEOTEX® BIB, 5-layer	Tracheal suction device
TRACHEOTEX® BIB, 8-layer	Bacterial filter
TRACHEOTEX® EASY	Tracheostoma catheter
TRACHEOTEX® SCARF	Bag
TRACHEOTEX® protective turtlenecks	Initial information set

INITIAL CARE PACKAGE

FOR ADULTS

The most important aids for the initial care of laryngectomised and tracheotomised patients have been compiled in a set.

Various set versions are available. The contents of the initial care set in individual cases depends on the available medical prescription and the cost approval of the respective cost bearer.

Ideally, instruction regarding the initial care set takes place before the patient is discharged from hospital. This gives the patient the opportunity to familiarise himself with the aids he will need later at home while still in the hospital. Instructions on the use of the aids is provided by competent, specially trained medical device consultants. The nursing staff in the hospital will also provide helpful instructions on how to use the individual products. This helps patients to learn how to use the aids correctly during their stay at the hospital. This builds security and facilitates self-sufficiency at home later on.

We would like to point out that tracheostomy tubes are usually not included in the initial care set. As each tracheostoma is different in individual patients, the tracheostomy tubes are first adjusted by the physician and selected accordingly. The attending physician will usually inform the patient during the hospital stay which tracheostomy tubes are needed and prescribe these. We then supply the tracheostomy tubes together with the initial care set.

ORDER INFORMATION	REF
INITIAL CARE SET	**10050**

SECRETION MANAGEMENT

For various reasons, tracheotomised as well as laryngectomised patients generally have a limited cough output. At the same time, there is often increased secretion in the respiratory tract. The mechanical stimulus of the tracheostomy tube on its own, but also physiological causes, can change and increase secretion production. This constellation makes effective secretion management necessary to avoid sequelae such as infections of the lower airways, more difficult decannulation or even problems during weaning from ventilation. The choice of tracheostomy tube, e.g. with an internal cannula system, is crucial for good secretion management. Low effort requirements and easy handling ensure safe care, high comfort and reduce stress for the patients. Of course, additional measures such as physiotherapy, respiratory therapy, special positioning, professional percussion, inhalations and additional breathing aids are helpful.

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ENDOTRACHEAL SUCTIONING

After a tracheotomy or laryngectomy, the trachea is particularly affected by consequential changes. The so-called ciliated epithelium - the cilia - is of great importance for respiratory function. These cilia sit on the mucous membrane of the trachea and with their regular movements ensure that undesirable particles are transported towards the mouth to be eliminated via the gastrointestinal tract.

This process can also be described as a self-cleaning mechanism of the airways. However, the aforementioned cilia can only maintain their function under certain general conditions. At least 21 - 22 °C and 50 - 55 % relative humidity are necessary to provide functionality. In addition, other factors can also seriously disrupt cilia activity.

Triggers for disturbances of the ciliated epithelium function can include smoking, cold or low humidity.

Increased secretion production with increased coughing, resulting in interrupted sleep and consequently reduced performance often occur. Endotracheal suctioning consequently plays an important role in patient care.

Professional suction management finds the right balance between indication and implementation according to needs as well as resource-oriented activation of self-cleansing processes. Medical aids such as artificial noses (HMEs), which can mimic lost functions of the nose, are a necessary part of the care of tracheotomised and laryngectomised patients. Nevertheless, endotracheal suctioning forms an important supplement to this passive respiratory gas optimisation. For example, an audible or perceptible accumulation of secretions, increased coughing or unblocking of the tracheostomy tube can lead to a need for suctioning. In general, it is important to strictly check the frequency of suctioning for its necessity.

"AS OFTEN AS NECESSARY, AS LITTLE AS POSSIBLE."

This should be the guiding principle of application in practice. The choice of suction catheter size depends on the internal diameter of the tracheostomy tube or tracheal tube. As a rule, it should correspond to max. half of the inner diameter.

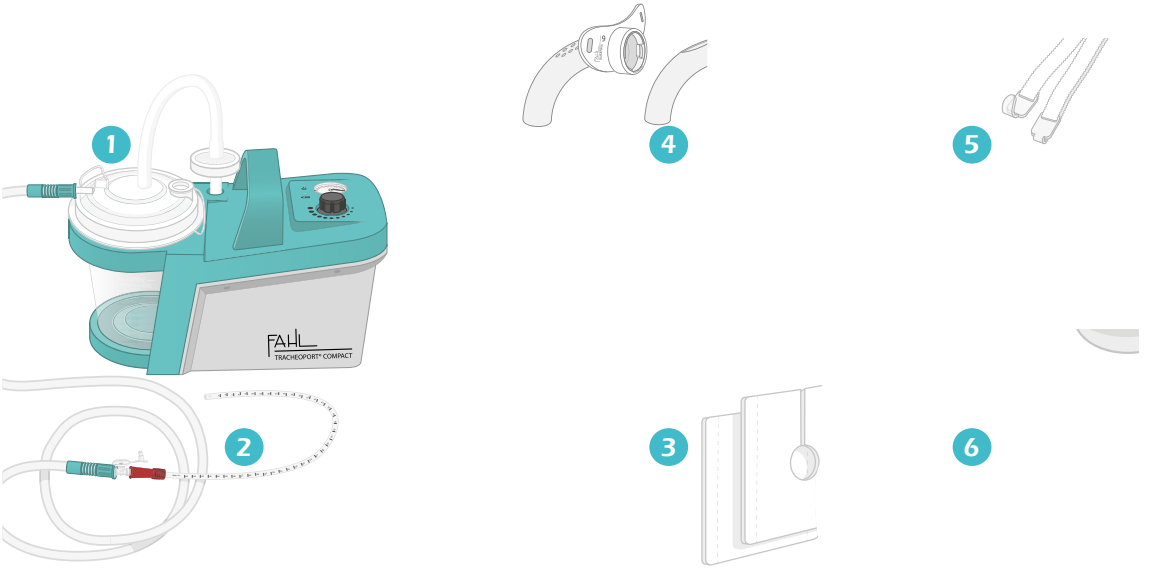
In ventilated patients, it is mandatory to use sterile disposable gloves when performing suction.

In spontaneously breathing patients, pathogen-free disposable medical gloves fulfil the hygienic requirements. Any changes to the current hygiene guidelines must be observed at all times.

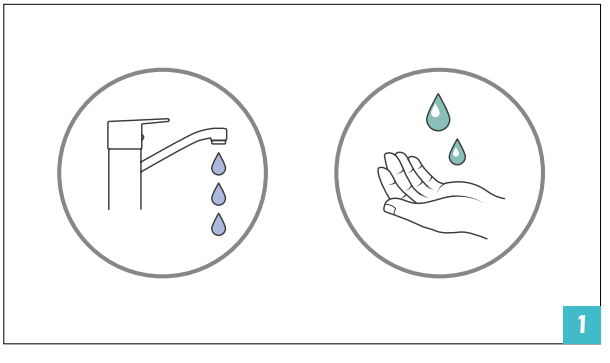
The increased production of secretions after a tracheotomy or laryngectomy basically explains why endotracheal suctioning plays a central role in the care of these patients. This makes it all the more important to approach this procedure with the appropriate respect and sense of responsibility. And not only because complications such as cardiac arrhythmias or shortness of breath can occur, but the procedure is also quite stressful for the patient, especially if suctioning is performed by a "stranger". A feeling of being "at the mercy of others" is often described. It is therefore important to inform the patient before each suctioning procedure. Maximum suctioning durations of 10-15 seconds should not be exceeded (tip: holding your breath yourself illustrates the patient's breathing situation).

ENDOTRACHEAL SUCTIONING

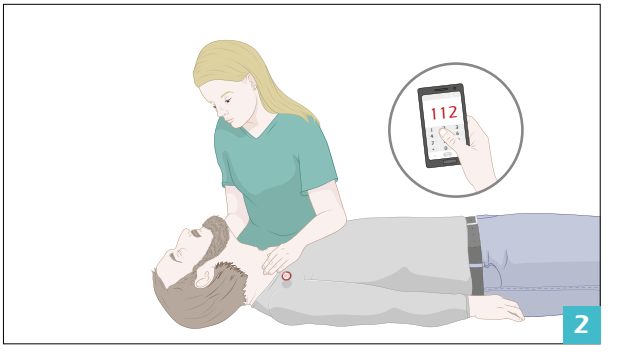
PATIENT INSTRUCTIONS



1. SUCTION DEVICE
2. SUCTION TUBE
3. SUCTION CATHETER
4. RINSING TANK
5. FINGERTIP
6. SPEAKING VALVE/HME



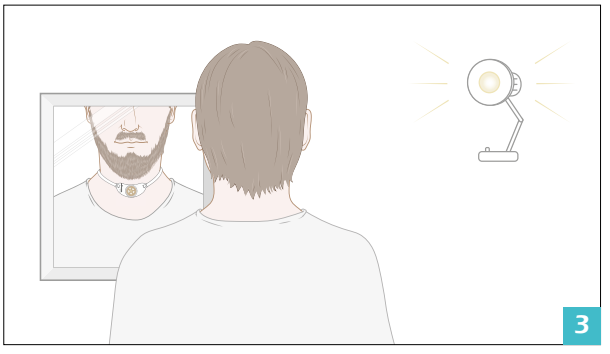
First wash your hands thoroughly. Then disinfect them.



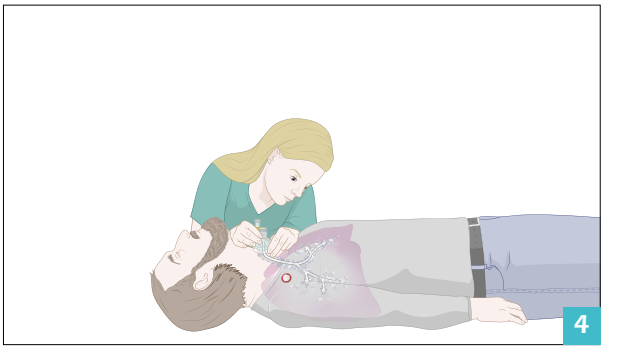
Make sure that the suction device is functional. Connect the suction tube, finger tip and suction catheter correctly.

ENDOTRACHEAL SUCTIONING

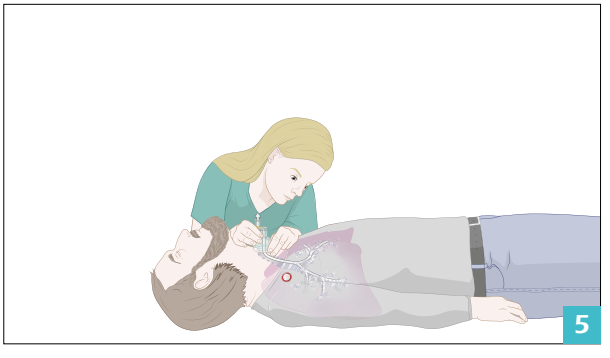
PATIENT INSTRUCTIONS



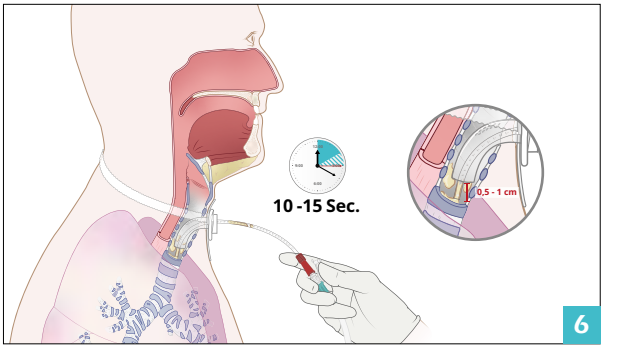
Always perform endotracheal suctioning in front of a mirror. Improve your vision with optimal lighting.



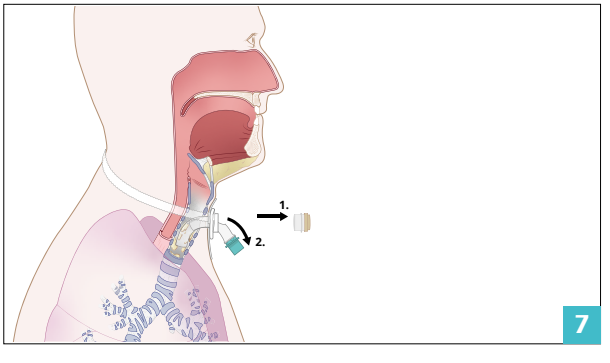
First remove the speaking valve/HME (if applicable). Then pull out the inner cannula from the outer cannula.



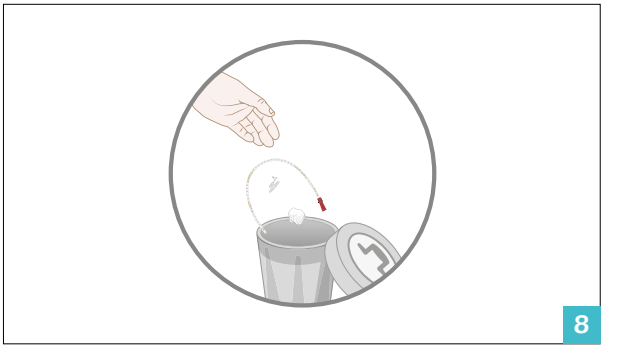
For suction of secretion, the catheter is carefully inserted into the trachea through the cannula tube in the tracheostoma. Avoid unnecessary contact with the catheter.



Advance the catheter by no more than 0.5-1 cm above the edge of the cannula tip. Suction is applied through closure of the finger tip.



Fill the rinsing tank with water. The suction procedure is used to rinse the suction tube.



Used disposable products must be disposed of. Check all materials for completeness for the next suction procedure.

TRACHEOFIRST® COMPACT

TECHNICAL DATA	
Suction power	24 l/min ± 2 l/min
Max. vacuum	–76 kPa (–760 mbar; –570 mmHg) ± 4 kPa
Secretion container	1,000 ml
Power supply (battery charger)	100–240 V AC (± 10 %)
Voltage frequency	50/60 Hz
Dimensions (H x W x D)	213 x 364 x 175 mm
Weight	approx. 2.2 kg

TRACHEOFIRST® COMPACT

The TRACHEOFIRST® COMPACT suction device is a tracheal suction device indicated in the home and clinic for patients with normal levels of secretion production.

The TRACHEOFIRST® COMPACT suction device features an ergonomic carrying handle. The electric swing-piston pump provides a suction power of 24 l/min and a maximum vacuum of up to 0.76 bar.

The secretion container has a capacity of approx. 1,000 ml. The device's suction power can be continuously adjusted using the vacuum gauge on the top of the device.

The supplied bacterial filter prevents microorganisms and secretions from penetrating into the device. The bacterial filter is connected between the suction device and the secretion canister using the short connecting tubes. It can be changed easily and quickly. TRACHEOFIRST® COMPACT features an additional air filter on the underside of the device. This prevents the unintentional escape of microorganisms and secretions from the device and thus serves as protection for the user.

There is also the option of operating the TRACHEOFIRST® COMPACT in the car via the 12 V car adapter.

SCOPE OF DELIVERY			
1	TRACHEOFIRST® COMPACT incl. secretion container with lid	1	Battery charger/2-pin (100–240 V, 50–60 Hz)
2	Connecting tubes for bacterial filter	1	Mains connection cable (2-pin, 230V)
1	Suction tube	1	Bacterial filter
5	Air filter	1	Rinsing tank
1	12V car adapter	1	Carrying bag
1	Fingertip		

ORDER INFORMATION	REF
TRACHEOFIRST® COMPACT	**67600**

TRACHEOPORT® COMPACT

BATTERY OPERATION

TECHNICAL DATA	
Suction power	24 l/min ± 2 l/min
Max. vacuum	–76 kPa (–760 mbar; –570 mmHg) ± 4 kPa
Secretion container	1,000 ml
Power supply (battery charger)	100–240 V AC (± 10 %)
Operating time with battery	Operating time of battery approx. 60 min/continuous operation
Charging time	approx. 4 hrs.
Voltage frequency	50/60 Hz
Dimensions (H x W x D)	213 x 364 x 175 mm
Weight	approx. 2.5 kg

TRACHEOPORT® COMPACT

BATTERY OPERATION

The TRACHEOPORT® COMPACT tracheal suction device is a particularly practical and powerful battery-operated small suction device for medical use.

The TRACHEOPORT® COMPACT is a mobile, mains-independent suction device and features an ergonomic carrying handle. The electric swing-piston pump provides a suction power of 24 l/min and a maximum vacuum of up to 0.76 bar. The fluid is collected in the secretion container, with a capacity of approx. 1,000 ml. The device's suction power can be continuously adjusted using the vacuum gauge on the top of the device.

The supplied bacterial filter prevents microorganisms and secretions from penetrating into the device.

TRACHEOPORT® COMPACT features an additional air filter on the underside of the device. This prevents the unintentional escape of microorganisms and secretions from the device and thus serves as protection for the user.

The battery is charged via the 12 V low-voltage connection of the device. The device can be charged or operated with either the battery charger or the car charging cable. The battery is fully charged in approx. 4 hours. Operating time of battery approx. 60 minutes. When the battery charger or the car charging cable is connected, the full suction power is available, even if the battery is empty.

SCOPE OF DELIVERY			
1	TRACHEOPORT® COMPACT incl. secretion container with lid	1	Battery charger/2-pin (100–240 V, 50–60 Hz)
2	Connecting tubes for bacterial filter	1	Mains connection cable (2-pin, 230V)
1	Suction tube	1	Bacterial filter
5	Air filter	1	Rinsing tank
1	12V car adapter	1	Carrying bag
1	Fingertip		

ORDER INFORMATION	REF
TRACHEOPORT® COMPACT	**63600**

BACTERIAL FILTER

FOR SUCTION UNITS

This filter largely prevents bacteria and particles from entering the device, as well as preventing liquids from being sucked into the aggregate providing an additional reliable overflow protection.

The filter has an important function and should therefore be checked and replaced regularly.

ORDER INFORMATION	PU	REF
BACTERIAL FILTER	1	**60800**

AIR FILTER

These air filters prevent the unintentional escape of microorganisms as well as secretions from a suction device and thus serve as protection for the user.

ORDER INFORMATION	PU	REF
AIR FILTER	10	**50000-07**

TRACHFLOW® LINE CONNECT

CONNECTING TUBE

TRACHFLOW® LINE CONNECT is a non-sterile connection tube for suction devices.

ORDER INFORMATION	PU	REF
TRACHFLOW® LINE CONNECT, length 30 cm	1	**60517**

TRACHFLOW® LINE PRO — SUCTION TUBE

The TRACHFLOW® LINE PRO non-sterile suction tube with integrated fingertip is used for suctioning tracheal secretions. The suction strength can be controlled with the fingertip.

The TRACHFLOW® LINE PRO connects the suction device to the suction catheter. The material consists of soft, flexible and transparent plastic. It is available in two different lengths: 1.30 m and 2.10 m.

ORDER INFORMATION	PU	REF
TRACHFLOW® LINE PRO, length 1.30 m	1	**60506**
TRACHFLOW® LINE PRO, length 2.10 m	1	**60508**

TRACHFLOW® CONT — CATHETER HOLSTER

The TRACHFLOW® CONT is a practical container for storing suction catheters in a collected and protected manner. The spacious opening of the lid allows quick removal of the desired catheter during use.

Easy cleaning due to the unscrewable lid and the resilient material result in a long service life.

Different practical clips on the lid, for example, allow fixation to a standard rail or individual fastening by tape. Tubing systems may also be applied in an orderly manner.

ORDER INFORMATION	PU	REF
TRACHFLOW® CONT, short, 30 cm	1	**65920**
TRACHFLOW® CONT, long, 50 cm	1	**65940**

TRACHFLOW® FINGERTIP

The TRACHFLOW® FINGERTIP is used to connect the suction tube of the suction device to the sterile stoma catheter. The conical design allows one size to fit all sizes of stoma suction catheters. TRACHFLOW® FINGERTIP is used to regulate the suction intensity.

ORDER INFORMATION	PU	REF
TRACHFLOW® FINGERTIP	10	**60700**

TUBE AND FILTER SET

We want to make it easier for you to care for your suction device and therefore offer you our special tube and filter set for suction devices. This set contains the most important spare parts for suction units which should be replaced at regular intervals.

SCOPE OF DELIVERY

- 1 TRACHFLOW® LINE PRO, length 1.30 m
- 1 Bacterial filter
  TRACHEOFIRST®/-PORT COMPACT
- 10 Air filter
  TRACHEOFIRST®/-PORT COMPACT

ORDER INFORMATION	REF
TUBE AND FILTER SET TRACHEOFIRST®/-PORT COMPACT	**60411**

TRACHEOSTOMA CATHETER METRIC STERILE

TRACHEOSTOMA CATHETER METRIC is a special version of catheters for neck breathers. The tracheostoma catheters are made of a flexible and transparent plastic. The particularly soft material is ideal for suction in the sensitive trachea. These suction catheters are available with a length of approx. 50 cm as well as with a length of only 25 cm, which facilitates insertion into the neck opening.

TRACHEOSTOMA CATHETER METRIC features a central opening as well as two lateral openings ("eyes") at the catheter tip. This arrangement has the advantage that the catheter stays flexible and does not adhere easily to the mucosa when large amounts of secretions and encrustations are produced.

A graduation (metric) on the tracheostomy catheter at 1cm intervals allows direct control of the insertion depth of the suction catheter.

SIZE	O.D. MM	LENGTH S cm	LENGTH L cm	SHORE	COLOUR	PU	REF S	REF L
CH 06	2.0	-	50	A64		30	-	**68000-06**
CH 08	2.7	25	50	A64		30	**68100-08**	**68000-08**
CH 10	3.3	25	50	A64		30	**68100-10**	**68000-10**
CH 12	4.0	25	50	A64		30	**68100-12**	**68000-12**
CH 14	4.7	25	50	A64		30	**68100-14**	**68000-14**
CH 16	5.3	25	50	A64		30	**68100-16**	**68000-16**
CH 18	6.0	-	50	A64		30	-	**68000-18**

TRACHFLOW® METRIC

ATRAUMATIC/STERILE

TRACHFLOW® METRIC are atraumatic integral ring catheters. As a special feature, they have a circular bead at the tip of the catheter and 4 lateral suction openings. These special suction catheters must be inserted into the trachea under suction so that a so-called air cushion can form around the catheter tip. This effect can only fully be achieved with a greater distance between the catheter tip and the cannula. In contrast to atraumatic conventional suction catheters, these special catheters are therefore particularly suitable for deep endotracheal suction.

It is made of a particularly soft, flexible and transparent plastic, which is ideal for suction in the sensitive trachea. Despite high flexibility, the catheter made from medical
PVC is sufficiently stable.

SIZE	O.D. MM	LENGTH S cm	LENGTH L cm	SHORE	COLOUR	PU	REF S	REF L
CH 10	3.3	25	50	A64		30	**68630-10**	**68730-10**
CH 12	4.0	25	50	A64		30	**68630-12**	**68730-12**
CH 14	4.7	25	50	A64		30	**68630-14**	**68730-14**
CH 16	5.3	25	50	A64		30	**68630-16**	**68730-16**

SUCTION CATHETER STANDARD METRIC

STERILE

The SUCTION CATHETERS STANDARD METRIC feature a central opening and two lateral openings ("eyes") at the catheter tip to prevent the catheter from adhering to the tracheal wall during suction. With its Shore hardness of 78, the suction catheter standard metric offers more dimensional stability than other catheters.

Suction catheters standard metric are to be used in conjunction with the TRACHFLOW® FINGER-TIP to regulate suction intensity. The Fingertip is used to connect the suction tube of the suction device to the suction catheter. The conical design allows the TRACHFLOW® FINGER-TIP to fit all sizes of suction catheters.

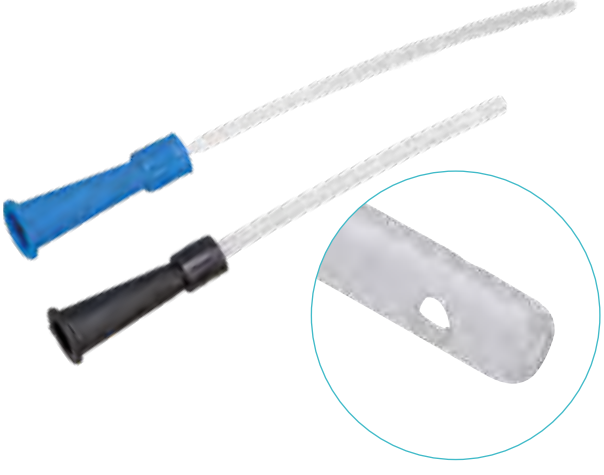
SIZE	O.D. mm	LENGTH cm	SHORE	COLOUR	ATRAUMATIC	PU	REF
CH 06	2.0	50	A78		x	100	**68900-06**
CH 08	2.7	50	A78		x	100	**68900-08**
CH 10	3.3	50	A78		x	100	**68900-10**
CH 12	4.0	50	A78		x	100	**68900-12**
CH 14	4.7	50	A78		x	100	**68900-14**
CH 16	5.3	50	A78		x	100	**68900-16**
CH 18	6.0	50	A78		x	100	**68900-18**

TRACHFLOW® SHUNT

STERILE

These special TRACHFLOW® SHUNT catheters enable the targeted suction of voice prostheses.

They are made of flexible, transparent plastic and are particularly easy to handle due to their length of approx. 10 cm. TRACHFLOW® SHUNT feature a central opening as well as two lateral openings ("eyes") at the catheter tip.



SIZE	O.D. mm	LENGTH cm	SHORE	COLOUR	ATRAUMATIC	PU	REF
CH 08	2.0	10	A64		x	30	**68800-08**
CH 10	2.7	10	A64		x	30	**68800-10**

Olga Miltsova/Shutterstock.com

ACTIVE RESPIRATORY GAS CONDITIONING

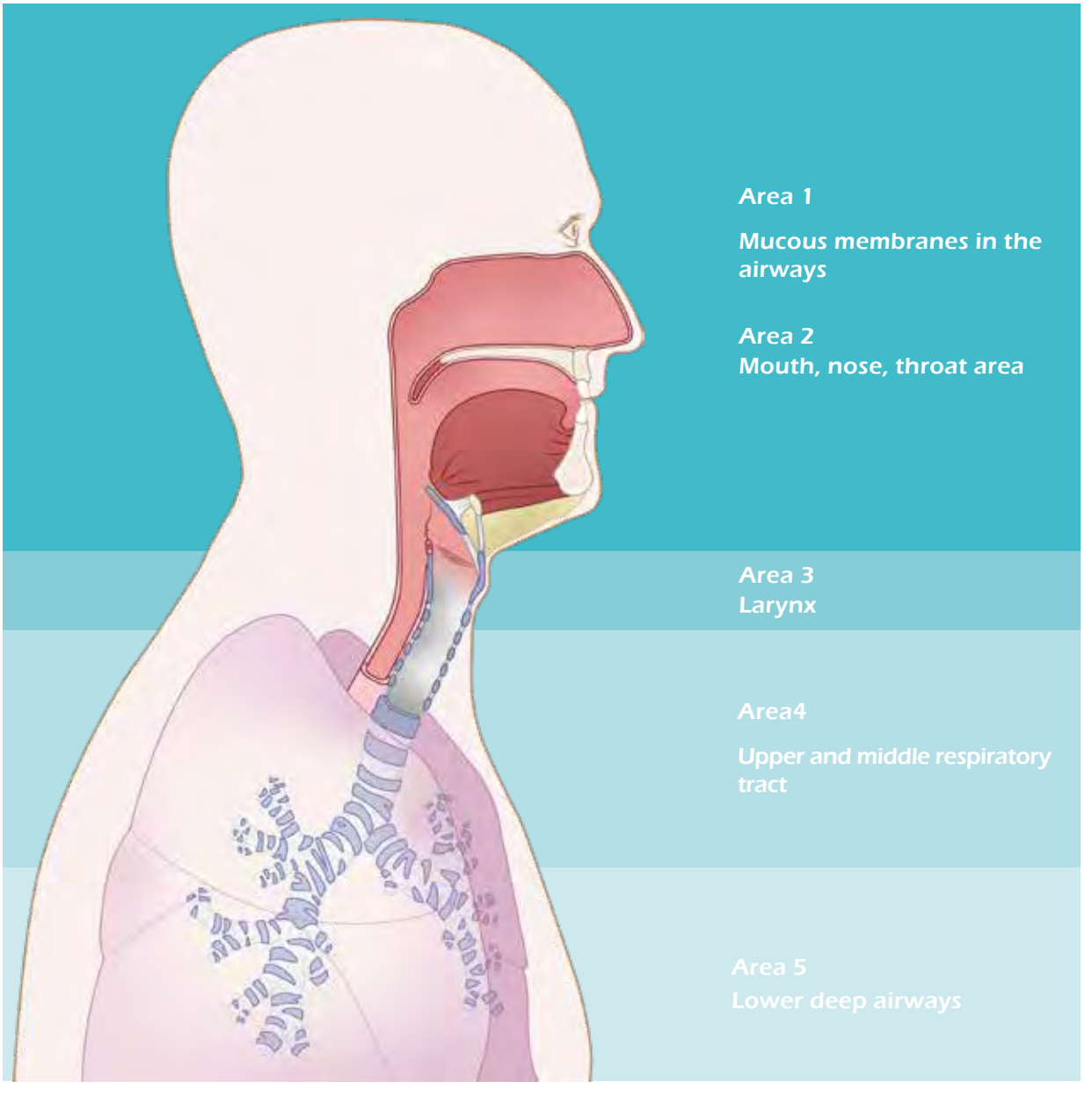
After a laryngectomy or tracheotomy, the natural airway changes. One changes from being a mouth/nose breather to become a neck breather. After surgery, breathing is performed through the throat opening, the tracheostoma. Basic functions such as filtering, heating and humidifying the respiratory air are thus lost. However, to prevent the mucous membranes from being unnecessarily irritated by cold, dry and polluted respiratory air, suitable aids must mimic these functions. When these functions are lost, severe irritation of the mucous membranes, increased secretion formation, coughing stimuli, and encrustation occur without aids. To minimise these consequences, it is essential, for example, to inhale regularly and ensure that living areas are kept at a constant air humidity of approx. 55 - 60%.

Inhalations of different compositions several times a day can achieve additional humidification and possibly warming of the airways. Medicinal additives in particular can change the consistency of secretions in the airways, prevent encrustation and support easier inhalation. The appropriate composition of inhalant, inhalation duration and intervals should be determined and prescribed by the attending physician on an individual patient basis. Special connection options (mask or 15 mm connector) ensure that inhalation can be performed directly via the tracheostoma and avoid a loss of inhalant into the environment. As different types of devices employ different techniques (compressor-driven, ultrasound-based), it is essential to observe the manufacturer's instructions for the respective devices before putting

ACTIVE RESPIRATORY GAS CONDITIONING

into operation. The objective of respiratory gas conditioning is to emulate the physiologically necessary conditions for the respiratory system. The respiratory air should lie in the range of 36 - 37 °C and 50 - 55 % relative humidity. Particularly in the winter months, the use of room humidifiers is a proven measure to create better conditions for one's own respiratory system. And by the way, this not only applies to tracheotomised patients, but also to healthy mouth/nose breathers.

AREAS AFFECTED IN INHALATION



NEBUSTEAM®

STEAM INHALER

TECHNICAL DATA	
Input voltage	230 V AC, 50 Hz
Output current	0.8 A
Steam tank filling capacity	25 ml
Operating time	≥ 6 minutes
Steam temperature	38–43 °C, ± 1 °C
Dimensions (H x W x D)	212 x 199 x 105 mm (8.35″ x 7.83″ x 4.13″)
Weight	820 g

NEBUSTEAM®

STEAM INHALER

Regular inhalation with warm steam achieves optimal humidification of the airways. This is a pleasant way to prevent irritation of the tracheostoma or to provide relief from breathing difficulties. In addition, inhalation supports effective secretion management.

The NEBUSTEAM® is a steam inhaler with a wide range of inhalation masks (one tracheostoma mask and three face masks in different sizes). It is possible to choose between three inhalation methods: inhalation without additives, with water-soluble inhalants or with essential oils. The handy design makes it convenient and easy to clean, as the NEBUSTEAM® is easy to disassemble into its individual components.

With the help of the variable steam regulator, different amounts of steam can be selected: the lower steam quantity is ideally used for inhalation via the nose, while the increased steam quantity is be used for inhalation via the mouth or the tracheostoma.

SCOPE OF DELIVERY			
1	NEBUSTEAM®	1	Medium-sized face mask
1	Power cable	1	Small face mask
1	Tracheostomy mask	1	Measuring beaker
1	Large face mask	1	Condensate tank

ORDER INFORMATION	REF
NEBUSTEAM®	**50500**

NEBUFIRST®

INHALER

TECHNICAL DATA	
Input voltage	230 V AC, 50 Hz
Output current	0.8 A
Maximum capacity for medication:	6 ml
Aerosol droplet size	0.5 to 10 µm
Droplet size according to MMAD	less than 4 µm
Dimensions (H x W x D)	196 x 170 x 107 mm (7.7″ x 6.6″ x 4.2″)
Weight	1.5 kg

NEBUFIRST®

INHALER

Due to its extensive features, the robust NEBUFIRST® is your standard device for effective inhalation. The fine aerosol mist enables optimum humidification of the respiratory tract. The easy-to-clean, handy design of the device assures comfortable operation, as well as simple cleaning of the NEBUFIRST®.

The powerful unit of the NEBUFIRST® enables optimal inhalation and the robust quality makes the NEBUFIRST® your reliable standard inhaler for daily use.

The unit features an illuminated ON/OFF switch, which reliably signals when in operation. The ergonomic handle, the central air connection as well as the simple to replace (without tools) air filter make the device comfortable and convenient to use. Furthermore, the nebulizer can also be used when tilted (45 degrees) and is protected from overflowing.

Further special accessories for tracheotomised/laryngectomised patients are available to achieve even better inhalation results.

SCOPE OF DELIVERY			
1	NEBUFIRST®	1	Nosepiece
1	Power cable	1	Inhalation mask for adults/children
1	Nebulizer	5	Air filter
1	Air tube	1	Carrying bag
1	Mouthpiece		

ORDER INFORMATION	REF
NEBUFIRST®	**50000**
NEBULIZER SET NEBUFIRST®	**50000-13**
ADAPTER NECK MASK FOR INHALATION DEVICE	**50000-11**
LARYVOX® MASK	**75200**

ADAPTER NECK FLANGE FOR LARYVOX® MASK

The ADAPTER NECK MASK FOR LARYVOX® MASK is a practical addition to the standard accessories of the NEBUFIRST®/NEBUPORT®. It allows connection of a neck mask for tracheostoma patients.

ORDER INFORMATION	PU	REF
ADAPTER NECK FLANGE FOR LARYVOX® MASK	1	**50110**

LARYVOX® MASK

The LARYVOX MASK® enables easy inhalation with a NEBUFIRST®/NEBUPORT® for neck breathers.

ORDER INFORMATION	PU	REF
LARYVOX® MASK	1	**75200**

LARYVOX® NEBULIZER

The LARYVOX® NEBULIZER is intended for patients who very quickly experience a feeling of dryness in the trachea or who suffer from severe encrustation.

The LARYVOX® NEBULIZER enables sterile water, saline or special inhalation mixtures to be nebulized. To do this, the liquid is filled into the tank of the LARYVOX® NEBULIZER. The composition of inhalation mixtures should be determined in consultation with the treating physician.

The pump-nebulizer creates a fine spray that can be used to moisten the mucous membranes of the tracheostoma.

You can comfortably carry the LARYVOX® NEBULIZER in your pocket and moisten your mucous membranes at any time while out and about.

ORDER INFORMATION	PU	REF
LARYVOX® NEBULIZER	1	**58000**

AIR HUMIDIFIER UM750

Physical well-being is influenced by numerous factors. The air humidity in living spaces is also relevant here. Especially in the heating season, the cold and usually dry outside air that enters into the living space through the windows is warmed up. This results in a massive reduction in relative air humidity, which creates an unfavourable climate for people.

Dry respiratory air impairs the absorption of oxygen and its transport to the bloodstream. Fatigue, tiredness and loss of concentration are symptoms of a reduced oxygen supply. A further result of too dry air is the impairment of the trachea's ability to clean itself. The mucous membranes dry out increasing the likelihood of infections and respiratory diseases. Low air humidity also increases the rate at which the skin loses moisture. It becomes dry, rough and scaly, with a tendency to inflammatory erythema, (so-called asteatotic eczema).

The UM750 room humidifier consists of a low-maintenance housing and impresses with its elegant appearance in matt white. The water tank of the humidifier has a capacity of 2.8 l, so that it can be operated for a longer period of time without refilling with water. Due to the removable water tank, the room humidifier is very easy to clean.

TECHNICAL DATA	
Input voltage	220–240 V, 50/60 Hz
Output current	300 W
Water tank capacity	2.8 l
Operating time	6–7 hours
Dimensions (H x W x D)	256 x 253 x 238
Weight	1.4 kg
Ambient temperature	–10 to +70 °C
Relative humidity	10–90 %

ORDER INFORMATION	REF
AIR HUMIDIFIER UM750	**59002**

DOMESTIC VENTILATION

In recent years, out-of-hospital follow-up care of patients has increased significantly. Outpatient care has become more complex and demanding. Ventilation of patients in the home setting has also become more important. The ventilation equipment used in domestic ventilation today have been specially designed and developed for this purpose. Mechanical ventilation has developed into a very demanding therapeutic measure due to the multitude of modern respirator technologies and different ventilation options. This circumstance requires comprehensive expertise and a high level of competence from all those involved in ventilation therapy both in terms of indications, the principles of care and the technology and materials employed.

Ventilation forms and supplies are differentiated

Ventilation can be performed non-invasively via a mask or, alternatively, invasively via a tracheostoma with a tracheostomy tube. The respiratory cycle, i.e. the use of ventilation, may be required permanently or intermittently. Possible indications for mechanical ventilation include:

- Injuries involving the respiratory centre
- Neurological, for example amyotrophic lateral sclerosis or paraplegia
- Different lung diseases such as COPD or similar.

For many patients from these or other disease areas, hospital discharge management must organise the transition from inpatient to outpatient follow-up care. The earliest possible cooperation between the discharging hospital, the aid supplier and the patient, or relatives and the follow-up care facility can significantly optimise the initiation and organisation of domestic mechanical ventilation.

What are the primary goals?

Outpatient home ventilation has the primary goal of either providing patients with assistance in a temporary phase of respiratory insufficiency to maintain the vital function of breathing, or to improve the patient's quality of life within the context of long-term ventilation. In addition, the intention is to enable a self-determined life and social participation in the home environment.

What needs to be considered?

Planning optimal ventilation requires the service provider to have extensive expertise in the different ventilation options and the technical details of various home ventilation devices. In the field of respiratory therapy, FAHL exclusively employs trained specialist staff, in particular specialist nurses for intensive care and anaesthesia, as well as specially trained medical-technical staff with many years of experience and expertise, for patient care.

Our objective is to accompany and comprehensively care for the patient right from the very beginning, i.e. starting in the emergency hospital and continuing into the patient's home. Therefore, our focus is on individual patient monitoring of the care situation. This gives us a comprehensive impression of the specific needs, as well as the opportunity for optimally planning the selection of the medical aids and equipment.

What is the procedure in concrete terms?

In consultation with the attending physicians and nursing staff, and after clarification of the necessary formalities, the required ventilator is delivered to the hospital before discharge to facilitate the quickest possible adaptation of the ventilator to the patient's respiratory situation. After successful adjustment of the device in the clinic and setting the discharge date, we prepare

the further provision of aids in the care facility or in the home environment. There, all persons involved in daily patient care are instructed in detail with regard to the technical equipment and familiarised with its handling. On the day of discharge, our responsible representative in the field is also on site to answer any further questions if necessary. This creates the basis for safe handling in the area of tracheostoma care and technical devices.

Nothing stays as it is.

Even after the initial introduction to the various aids, your distributor is available as a contact person at any time, so that the care can also be varied if changes are needed.

Regular visits by appointment can be part of the FAHL representatives service offer to identify any problems in the provision of aids at an early stage, to determine the changed needs and to accommodate them if necessary. We complement the provision of ventilation therapy aids with a comprehensive range of services:

- Fast delivery of consumables and accessories
- Performing technical equipment maintenance, safety checks
- Repair service
- 24-hour emergency service

OXYGEN THERAPY OUTSIDE THE HOSPITAL

The chemical element oxygen (O_2) is absolutely essential for human life. A sufficient oxygen content in the body is a prerequisite for all necessary metabolic processes and ultimately ensures our survival. Specific diseases with reduced oxygen uptake either lead directly to life-threatening situations or in the long term. An external supply of oxygen is then absolutely necessary.

The aim of continuous O_2 application in the context of such diseases is to improve the quality of life, to increase the physical performance of those affected and to increase their life expectancy. The amount of oxygen is based on the patient's individual needs and is determined via a physician's prescription, as medical oxygen is approved as a medicine and considered to be a prescription drug.

Special devices for oxygen therapy, for example O_2 concentrators or liquid oxygen systems, are offered by different manufacturers in varying designs and models.

Here, too, a solution-oriented assessment of the care situation and the specific patient needs form the basis for professional planning and long-term provision of aids by our qualified specialist staff.

Long-term oxygen therapy is indicated for conditions which pose a risk of oxygen deficiency, e.g.

- Respiratory and lung diseases
- Cardiac diseases
- Breathing disorders

Service offers such as personal on-site visits, fast delivery times, repair and maintenance service as well as a 24-hour technical emergency service complete our range of services and products as a supplier of medical aids in the care sector of ventilation and oxygen therapy.

Due to the diversity of our product range and the complexity of the supply area, only selected products and appliances in particular can be presented in this catalogue.

We would be pleased to answer your specific questions about further supply and product options in a personal discussion.

HUMIDOBAC® HME

BACTERIAL AND VIRAL FILTERS

HUMIDOBAC® HME is a bacterial/viral filter, with HME that aids in the protection of the patient and in the humidification of the air. HUMIDOBAC® HME is, for example; placed between the catheter mount tubing and the Y-piece of the ventilation system.

The HUMIDOBAC® HME filter should be exchanged when necessary, e.g., if a build-up of secretions causes increased resistance, but after 24 hours at the latest.

ORDER INFORMATION	PU	REF
HUMIDOBAC® HME	1	**46832**

HUMIDOBAC®

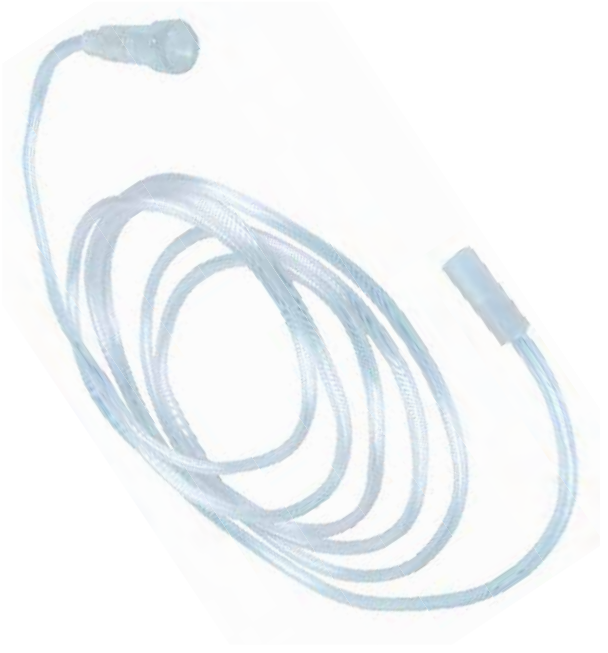
BACTERIAL AND VIRAL FILTERS

HUMIDOBAC® is a bacterial/viral filter designed to protect the patient. HUMIDOBAC® can be used as a filter in certain inhalation devices. The HUMIDOBAC® filter should be exchanged when necessary, e.g., if a build-up of secretions causes increased resistance, but after 24 hours at the latest.

ORDER INFORMATION	PU	REF
HUMIDOBAC®	1	**46831**

OXYGEN CONNECTING TUBE

WITH PROFILE



A special connection tube for the connection of, for example, an "artificial nose" with an external oxygen source. The oxygen connection tube has an inner profile to prevent tube deformation. To ensure sufficient freedom of movement the connection tube of the Fr 14 size features a length of 200 cm.

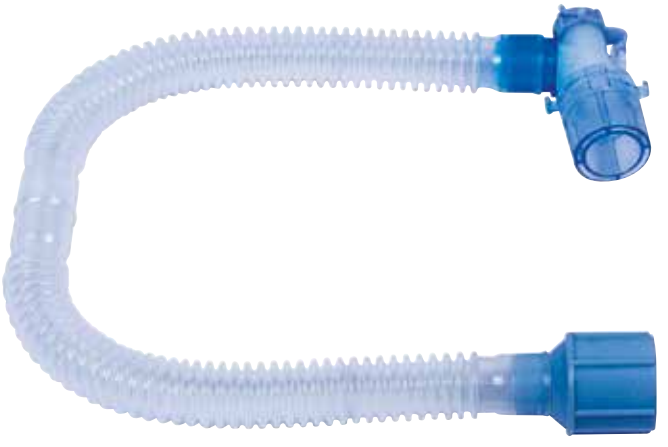
ORDER INFORMATION	PU	REF
OXYGEN CONNECTING TUBE, WITH INNER PROFILE, LENGTH 200 cm	1	**46320**

FAHL® NEBULIZER SET

The nebulizer set is a single-patient product and is ideally suited for aerosol inhalation. The nebulizer set can be used at constant power, both vertically and at an angle. It is connected via the 22ID and 22OD/15ID connectors.

ORDER INFORMATION	PU	REF
FAHL® NEBULIZER SET	1	**51202**

FAHL® CATHETER MOUNT XL, 40 CM



FAHL® CATHETER MOUNT XL is a latex-free, flexible catheter mount and ensures maximum flexibility of the tube system without kinking. The connection on the device side has an inner diameter of 22 mm. The patient side has a swivel connector with a 15 mm inner diameter.

The attachment of the angle piece, with suction opening and cover, is also designed with an inner diameter of 15 mm. The length of the catheter mount tubing is 40 cm.

ORDER INFORMATION	PU	REF
FAHL® CATHETER MOUNT, length 40 cm	1	**19100**

FAHL® CATHETER MOUNT 15 CM

This latex-free, flexible catheter mount tubing ensures the maximum flexibility of the tube system without kinking of the tube. The connection on the device side has an inner diameter of 22 mm. The angle piece is connected to the catheter mount via a swivel connector with a 15 mm inner diameter. On the patient side, the angle piece has a swivel-connector with a 22 mm outer diameter and 15 mm inner diameter.

ORDER INFORMATION	PU	REF
FAHL® CATHETER MOUNT, length 15 cm	1	**19110**

TRACHEOSTOMY TUBES

We see it as our task to provide individual and needs-oriented care for tracheotomised and laryngectomised patients. To accomplish this, we offer a variety of tracheostomy tubes in different materials, sizes, lengths and in a wide range of designs.

To meet the needs of the patient in the best possible way, we also carry the products of all other cannula manufacturers in our product portfolio in addition to our own tracheostomy tubes. Last but not least, we achieve the fastest possible delivery through our large stock holdings, with a stock of approx. 60,000 tracheostomy tubes in approx. 4,000 variants.

Our range includes various tracheostomy tubes which differ in numerous features, such as material, size, length and type of design.

Finding the optimal tracheostomy tube for the individual patient requires a high level of expertise. Various factors play a role in the decision to use a tracheostomy tube, whereby the focus should always be on a suitable fitting for the individual. The diagnosis is crucial here (laryngectomy, laryngectomy with tracheoesophageal shunt, tracheotomy, ventilation). When searching for the right tracheostomy tube, it is necessary to ask in detail about factors that are decisive for finding right the product.

petrmalinak/Shutterstock.com

WHICH DIAGNOSES REQUIRE A TRACHEOTOMY?

- Ventilation or spontaneous breathing
- Limited vocal cord function
- COPD
  (chronic obstructive pulmonary disease)
- Stenosis
  (due to recurrent paresis or tumour)
- Hypoxic brain damage
- Dysphagia
- Laryngectomy with placement of a tracheoesophageal shunt
- Apoplexy
- laryngectomy

WHAT TYPES OF TRACHEOSTOMA ARE THERE?

- Percutaneous dilatation tracheotomy
- Surgical tracheotomy/tracheostomy
- Plastic tracheotomy

WHAT ARE THE OBJECTIVES OF REHABILITATION?

- Securing the airways
- Pulmonary rehabilitation
- Option of phonation
- Optimising the swallowing process
- Decannulation
- Mobilisation
- Optimisation of care in case of hypersalivation (increased salivation)

WHAT IS THE PATIENT'S CLINICAL CONDITION?

- Assessment of the patient's level of consciousness and orientation
- Possibility of instructing the patient in tracheostomy tube care

CHOOSING THE CANNULA SIZE

When selecting a tracheostomy tube, one should ensure that a tracheostomy tube with the largest possible internal diameter is used. This both allows the cannula wearer to breathe safely with little resistance and reduces the risk of obstruction of the lumen due to accumulation of secretions.

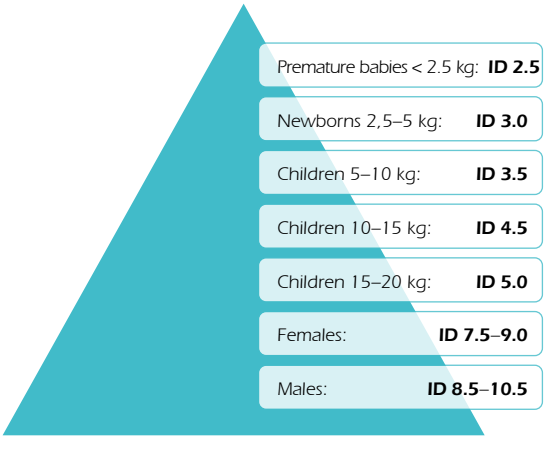
To avoid the accumulation of secretions in the tracheostomy tube, it is possible to use tubes with an inner cannula. The inner cannula can be removed quickly and cleaned if necessary. This avoids having to change the entire outer cannula. In the selection of tracheostomy tubes of different materials, it should be noted that the material strength could also influence the inner volume of the cannula. For example, because of the relatively thick-walled material, a plastic cannula has a smaller inner lumen than the thin-walled silver cannula. When making a comparison, therefore, both the inner diameter (I. D.) and the outer diameter (O. D.) need to be taken into account. In practice, this has an impact especially when a cannula type is being changed (e.g. from a silver cannula to a plastic spiral cannula).

Of course, the first thing to pay attention to is the outer diameter, which is relevant for the exact adaptation of the tracheostomy tube to the individual anatomy of the tracheostoma and the trachea. When selecting the size, it should be noted that the different materials and their respective wall thicknesses have different effects on the outer diameter. For example, a tracheostomy tube in size 9 results in a 2 - 5 mm larger outer diameter, depending on the preferred material.

In addition, the tracheostomy tube needs to be checked to see whether it is a tapered tracheostomy tube or a cylindrical tube, whereby tapered tracheostomy tubes are more comfortable to insert when changing the tube. As tapered tracheostomy tubes have a smaller diameter at their tip than immediately behind the neck flange, the standard defines that the size designation of the tube refers to the inner diameter at the tip of the tube.

When changing to a different type of cannula while taking the outer diameter into account, it must also be taken into consideration that the inner diameter may be reduced due to the material used. The subjective breathing sensation of the cannula wearer may be impaired here (shortness of breath/performance restrictions). In terms of phonation, a larger inner diameter can sometimes be problematic for the patient, as the pressure of the airflow decreases, making it more difficult to speak.

The following information is based on experience and can be used as a guide for the use and sizing of tracheostomy tubes:



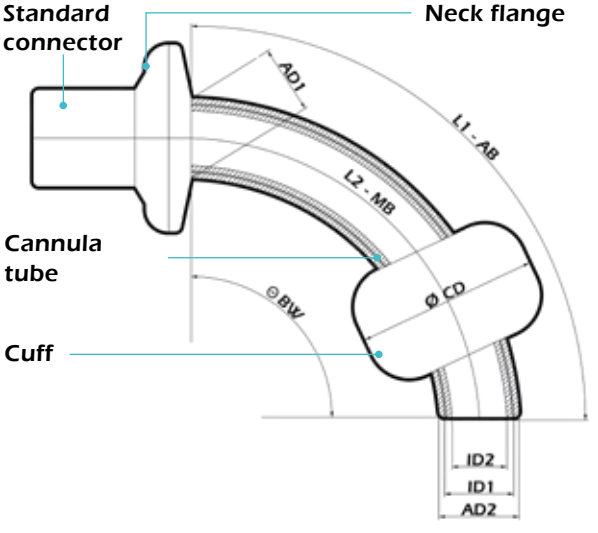
Care should be taken to ensure that in children the cannula needs to be continuously adjusted according to the stages of growth/development.

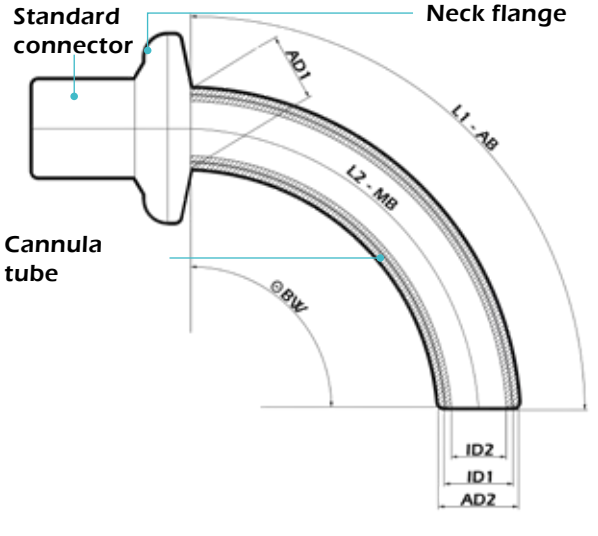
CHOOSING THE CANNULA LENGTH

When selecting the length of the tracheostomy tube, the special conditions of the tracheostoma and trachea play a decisive role. To provide effective prophylaxis against tracheomalacia or tracheal stenosis, care should be taken to alternate tracheostomy tubes of different lengths. In general, extra-long tracheostomy tubes are ideal for bridging stenoses, whereas short tubes are well suited for the exclusive stabilisation of the tracheostoma, e.g. after a laryngectomy. They largely avoid irritations such as foreign body sensation, increased secretion, etc.

Today, there is a wide range of materials that are used to manufacture tracheostomy tubes. Incompatibilities with materials should be avoided here (e.g. allergies to silver or latex).

The length of the cannula must always be adapted to the individual anatomy.





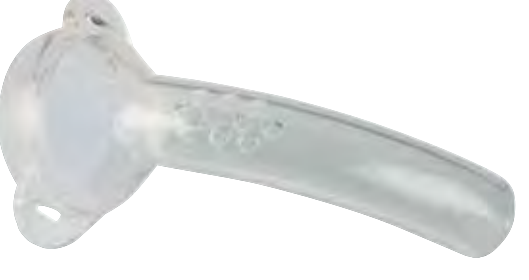
AD1	=	Outer diameter at the neck flange
AD2	=	Outer diameter of the tip of the cannula
ID1	=	Inner diameter at the cannula tip of the outer cannula
ID2	=	Inner diameter at the cannula tip of the inner cannula
L1 - AB	=	Length over the outer curve
L2 - MB	=	Length over the central arch
Θ - BW	=	Bending angle
ø - CD	=	CUFF diameter
IC	=	Inner cannula
AK	=	Outer cannula
		All specifications in mm

TRACHEOSTOMY TUBES MADE OF SILVER

ADVANTAGES	DISADVANTAGES
▶ Very long durability when regularly reconditioning by the manufacturer	▶ Risk of pressure ulceration within the trachea and the tracheostoma canal
▶ Very large inner diameter is possible due to the thin material thickness	▶ Inner cannulas are only compatible with a specific outer cannula
▶ Antibacterial effect due to silver	▶ Cold conductor at very low temperatures
▶ Easy cleaning of the cannula	▶ Not flexible in case of incorrect cannula length
▶ Sterilisation possible	
▶ Individual product modifications are feasible	

TRACHEOSTOMY TUBES MADE OF SILICONE DEHP-FREE

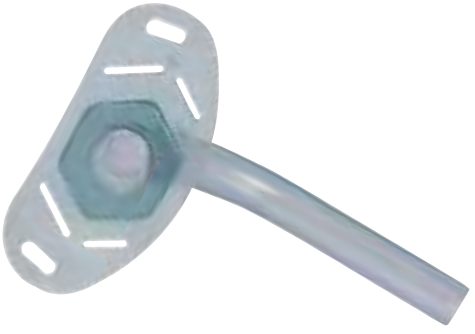
ADVANTAGES	DISADVANTAGES
▶ Very soft and supple quality	▶ Relatively thick-walled cannula tube
▶ Period of use up to approx. 6 months	▶ Candida colonisation possible
▶ Special sieving possible, thus individual adaptation for voice prosthesis wearers or phonation optimisation for tracheotomised patients	
▶ Various lengths are available	
▶ Very well suited for weaning from cannulas	
▶ Can be used with radiotherapy	
▶ Sterilisation is possible (depending on the product, see manufacturer's instructions)	



TRACHEOSTOMY TUBES MADE OF PVC

DEHP-FREE

ADVANTAGES	DISADVANTAGES
▶ Plastic cannulas turn softer at body temperature and thus adapt very well to anatomical structures	▶ Relatively thick-walled cannula tube
▶ High degree of variability due to the use of different inner cannulas	▶ Candida colonisation possible
▶ Can be used during magnetic resonance imaging (MRI) (only applies to tracheostomy tubes without metal components)	
▶ Very well suited for weaning from cannulas	
▶ Low weight	
▶ Individual product modifications are feasible (e.g. sieving)	
▶ Many plastic tracheostomy tubes feature an X-ray contrast strip	



TRACHEOSTOMY TUBES MADE OF POLYURETHANE

ADVANTAGES	DISADVANTAGES
▶ Thinner wall thickness and dimensionaly stable	▶ Steam sterilisation not possible
▶ Easy change of cannula by the patient	▶ Individual product modifications rarely feasible
▶ Can be used during magnetic resonance imaging (MRI) (only applies to tracheostomy tubes without metal components)	
▶ Many tracheostomy tubes made of polyurethane feature an X-ray contrast strip	
▶ High degree of variability due to the use of different inner cannulas	

SPIRAL CANNULAS WITH METAL SPIRAL

ADVANTAGES	DISADVANTAGES
▶ Highly flexible, thus good adaptation to the anatomy and good acceptance by the cannula wearer	▶ No individual product modifications possible (e.g. special sieving)
▶ Good compensation to the skin level possible with adjustable neck flange	▶ Relatively thick-walled cannula tube, hence smaller inner diameter
▶ Very well suited for obese patients	▶ Contraindicated for irradiation in the cannula region (risk of burns)
▶ Also available as sieved variants	▶ Cannot be used during MRI (risk of dislocation)
▶ Various lengths are available	

SPIRAL CANNULAS WITH PLASTIC SPIRAL

ADVANTAGES	DISADVANTAGES
▶ Use during magnetic resonance imaging (MRI) possible due to the plastic spiral	▶ No individual product modifications possible (e.g. special sieving)
▶ Highly flexible, thus good adaptation to the anatomy and good acceptance by the cannula wearer	▶ Relatively thick-walled cannula tube, hence smaller inner diameter
▶ Good compensation to the skin level possible with adjustable neck flange	
▶ Very well suited for obese patients	

MRI

NECK FLANGE

Selection of the appropriate tracheostomy tube often also depends on the neck flange. Due to the variety of different materials and shapes available on the cannula market, care must be taken to ensure that individual needs and anatomical conditions are taken into consideration. For example, this includes very deep stomas and protruding muscle bundles of the patient. There are rigid, flexible, straight, oval and concave neck flanges, which are usually firmly attached to the cannula tube. An additional variant is an adjustable neck flange, which allows a variable cannula length of the proximal branch.

Furthermore, there are tracheostomy tubes with a neck flange that can be moved vertically and horizontally or in a ball-and-socket joint by means of a special suspension. The placement of the retaining eyelets for the tube holding strap also plays a decisive role. Slightly vertically angled retaining eyelets may prevent unintentional dislocation from the tracheostoma. The holding strap should not move the cannula in a cranial direction, as the tracheostoma can be severely deformed by such permanent loading.

TRACHEOSTOMY TUBES WITHOUT CUFF

Cannulas without a cuff are to be used in patients who are not normally ventilated or are not at a high risk of aspiration. A prerequisite for the use of these cannulas is an efficient and safe swallowing process of the patient.

The tracheostomy tubes without cuff usually have an inner cannula, which makes secretion management easier for the user.

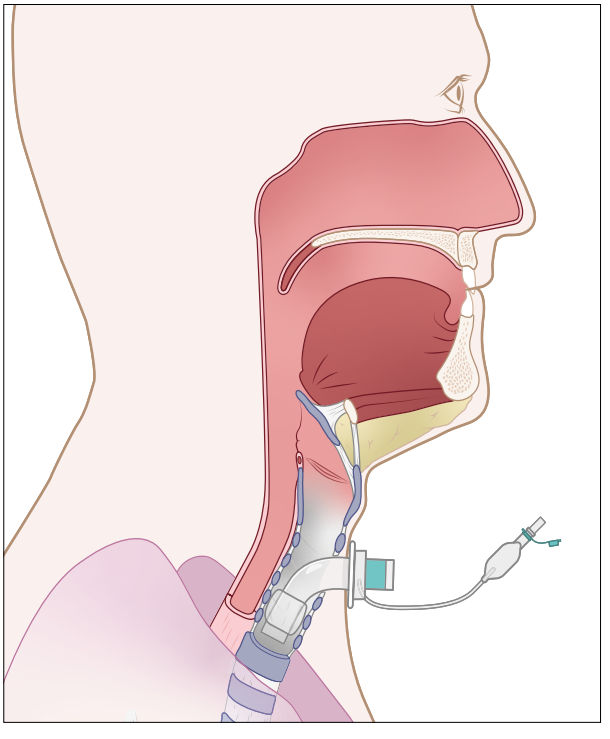
In paediatric care, these cannulas play a major role, especially with regard to ventilation, as unblocked tracheostomy tubes are usually used here.

TRACHEOSTOMY TUBES WITH CUFF

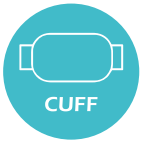
The cuff is used to seal the cannula tube against the tracheal wall. It can be inflated like a balloon. A distinction is made between tracheostomy tubes with a cuff (low-pressure cuff) to keep the pressure load on the tracheal mucosa as low as possible or tracheostomy tubes with high-pressure cuffs, where a higher pressure is built up in the cuff. These are currently rarely used and only offered by few manufacturers. The small pilot balloon on the inflation tube indicates whether the tracheostomy tube is in sealed (inflated) or non-sealed condition.

Of course, regular and documented cuff pressure checks should be performed in case of blocked cannulas. With the aid of a cuff pressure gauge, the cuff pressure must be checked at least every 6 hours and adjusted if necessary. In addition, this check should be performed every time the patient changes position.

TRACHEOSTOMY TUBE WITH CUFF



- Preserved larynx
- Breathing through the cannula
- Protection against aspiration of liquids into the airways



CUFF

TRACHEOSTOMY TUBES WITH CUFF

INDICATION	DISADVANTAGES
▶ For ventilated patients	▶ Changing tracheostomy tubes is associated with more effort than with tubes without a cuff
▶ For patients suffering from dysphagia	▶ A cuff pressure check must be performed regularly with the aid of a cuff pressure gauge (the cuff pressure should be kept constant at 20 - 30 cm H_2O)
▶ For patients with increased bleeding tendency due to tumours	▶ Risk of complications, e.g. pressure necrosis in the trachea due to identical contact surface of the cuffs
▶ As aspiration protection	▶ There is a risk of tracheomalacia and dangerous tracheoesophageal fistulas if the same cannula lengths are used continuously or if the cuff pressure is too high
	▶ May cause irritation and interfere with swallowing.

SIEVED TRACHEOSTOMY TUBES

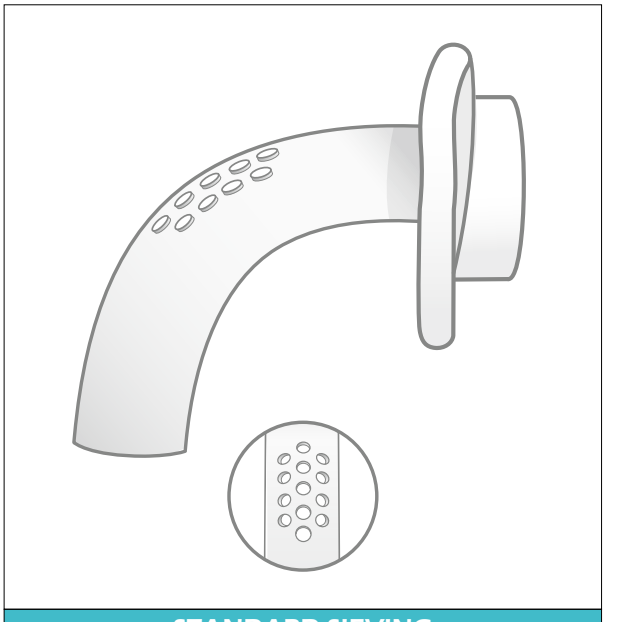
Sieved tracheostomy tubes are generally used for phonation in tracheotomised patients with an intact glottis function and adequate subglottal pressure. When using such tracheostomy tubes it is important to ensure free airways in direction of the larynx.

The field of indication also extends to laryngectomised patients provided with a shunt valve ("voice prosthesis"). Care should be taken to ensure that the sieve is under no circumstances placed in the tracheostoma canal and does not come into direct contact with the tracheal mucosa. This prevents the infiltration of tissue into the sieve, which could otherwise result in injuries when changing the tracheostomy tube. Especially for children, an unsieved cannula in a smaller size should be preferred instead of a sieved cannula.

There are tracheostomy tubes with horizontal sieving as well as graduated sieving in the cannula tube. This roof-tile-like sieving reduces secretion leakage through the sieve into the tracheobronchial system. At the same time, the atraumatic cannula sieving ensures that granulation formation is reduced. If possible, continuous fenestration of outer cannulas should be avoided, as this can favour tissue infiltration on the one hand, and on the other causes an increased risk of catheter-related injuries to the tracheal mucosa during suction procedures.

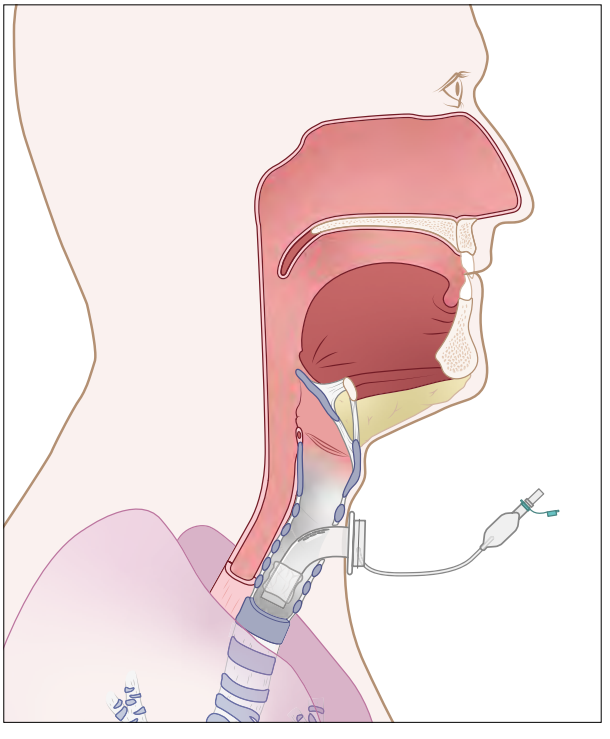
SIEVED TRACHEOSTOMY TUBES

TILE-LIKE SIEVING



STANDARD SIEVING

TRACHEOSTOMY TUBE WITH CUFF AND SIEVE



- Preserved larynx
- Breathing through the cannula
- Phonation option
- Protection against aspiration of liquids into the airways with closed inner cannula

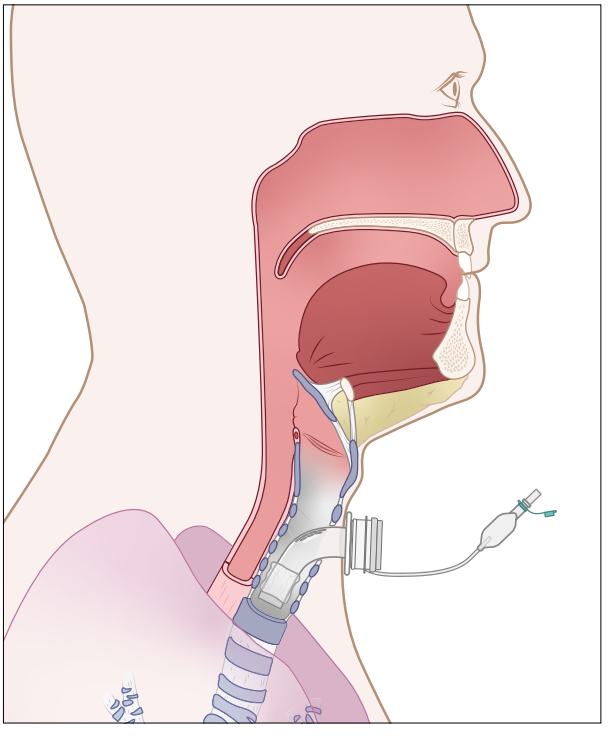
LINGO

LINGO

SPEAKING VALVES

Speaking valves can be used in tracheotomised patients in conjunction with a sieved outer cannula. The speaking valve closes during expiration and the air flows through the sieve in the outer cannula in direction of the larynx and can then be used for voice formation. One distinguishes between two different types of valves: those which close themselves (active) and those which close as a result of the air flow (passive). Which one is to be used for which patient depends on the patient's individual situation and respiratory capacity. In laryngectomised patients, the use of a classic tracheostomy tube with a speaking valve is not possible. For patients fitted with a shunt valve for vocalisation, special tracheostoma valves are used for phonation (those which are only closed for speaking when the blowing pressure is increased) in combination with a sieved tracheostomy tube, stoma button or base plate with finger-free speaking function.

TRACHEOSTOMY TUBE WITH CUFF AND SPEAKING VALVE



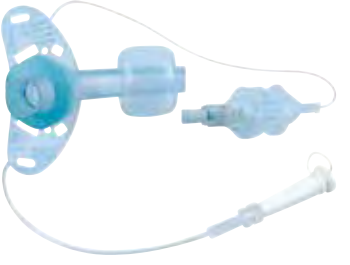
- Preserved larynx
- Breathing through the cannula
- Protection against aspiration of liquids into the airways
- Speaking option with additional speaking valve possible with unblocked cannula

PHON

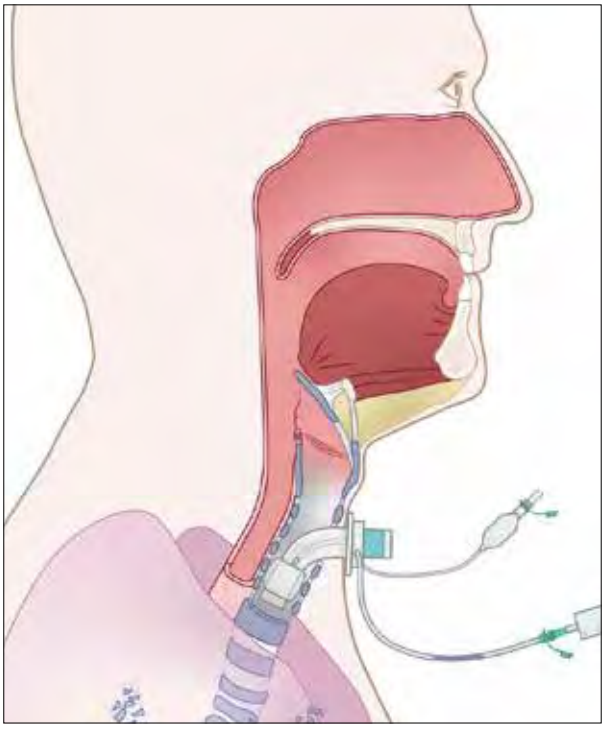
CANNULAS WITH SUBGLOTTIC SUCTION

A special variant of a tracheostomy tube with cuff is the tube with subglottic suction. These tracheostomy tubes are usually used in patients at high risk of aspiration.

ADVANTAGES	DISADVANTAGES
▶ For suctioning secretions in the subglottic space above the cuff	▶ Not to be used in case of anticoagulant therapy (risk of bleeding)
▶ To prevent micro-aspirations and recurrent bronchopulmonary infections	▶ Rapid occlusion of the suction channel in case of viscous secretion
▶ For patients suffering from dysphagia	
▶ For patients with hypersalivation (increased secretion)	



CUFFED CANNULA WITH SUBGLOTTIC SUCTION



- Preserved larynx
- Breathing through the cannula
- Protection against penetration of foreign matter into the airways
- Suction option via integrated suction tube of the cannula

SUCTION

INNER CANNULAS

Inner cannulas are generally used to facilitate secretion management for the user, so that the inner cannula can be replaced quickly and easily at any time when the tracheostomy tube is repositioned. Inner cannulas are available with a wide variety of connectors and adapters. Attention must be paid to selecting the correct size and length of the inner cannula.

Another advantage of using inner cannulas is a possible reduction in suction intervals. Changing the inner cannula is unproblematic and can easily be done in front of a mirror after appropriate instruction of the patient. The inner cannula should be changed and cleaned three times a day, but can also be changed at other intervals if required and/or medically indicated.

15 MM CONNECTOR

Connectors are used to connect compatible tube accessories. As a rule they are permanently attached to the cannula. This is a universal attachment (15 mm connector) which enables the use of so-called "artificial noses" (filters for heat and moisture exchange). Connectors are also available in a special version as 15 mm swivel connector. The swivel version of the 15 mm connector is suitable, for example, to relieve the pressure on the cannula when using a ventilation tube system and to stabilise the position. This can largely reduce the occurrence of mucosal irritation in the trachea.

UNI

22 MM COMBI-ADAPTER

The 22 mm combi adapter enables attaching compatible filters and valve systems with a 22 mm connector, for example speaking valves, HME filters or tracheostoma valves. The use of a combination adapter provides an option for relatively flat, close-to-the-body filter and speaking valve systems which are visually less conspicuous. The individual option depends on the clinical condition, such as status after laryngectomy or tracheotomy.

KOMBI

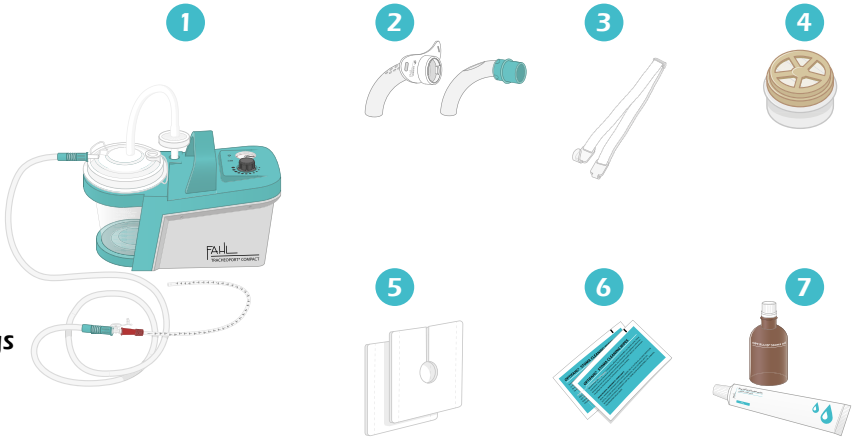
CHANGING THE TRACHEOSTOMY TUBE

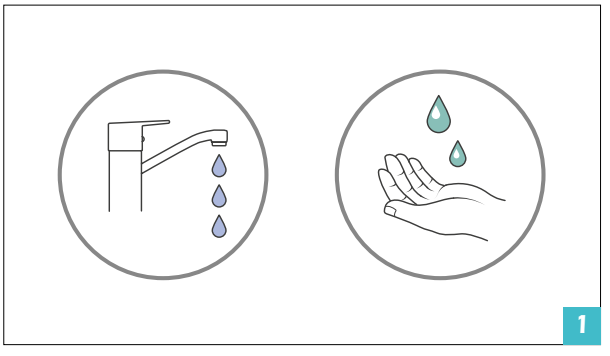
The function of the tracheostoma is to protect the airway for the patient. However, this clear advantage also entails certain disadvantages or risks (see complications). In general, it must be taken into account that the shortening of the airway will also bring about a faster penetration of pathogenic (disease-causing) organisms. Therefore, correct handling of the associated medical aids is absolutely necessary to minimise potential infection risks. In addition to the cleaning and possibly disinfection recommendations given by the manufacturer, this also includes adherence to the maximum service life of the tracheostomy tube or other aids, e.g. HMEs. However, other indications for which the physician is responsible may also make it necessary to change the tracheostomy tube, irrespective of how long it has been used.

Changing the cannula is generally a stressful procedure for the patient, which not only means stress for the patient, but can also end in an emergency situation. Accordingly, diligence and a planned professional approach are an absolute must.

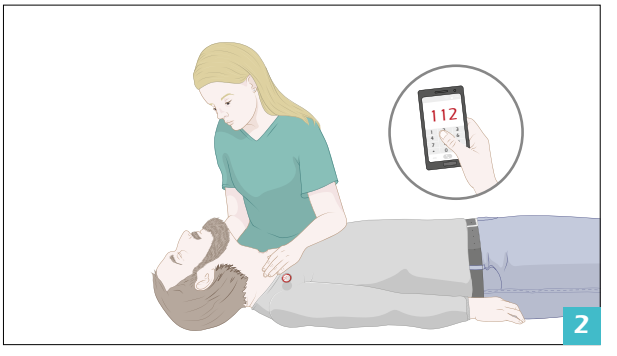
CHANGING THE TRACHEOSTOMY TUBE

1. Suction device
2. Tracheostomy tube
3. Tube holder
4. Speaking valve/HME
5. Tracheostomy dressings
6. Cleaning wipes
7. Lubricants

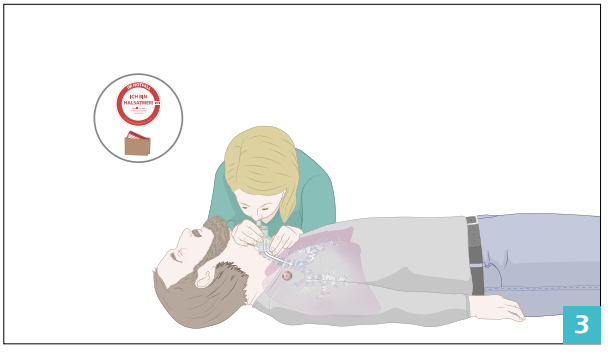




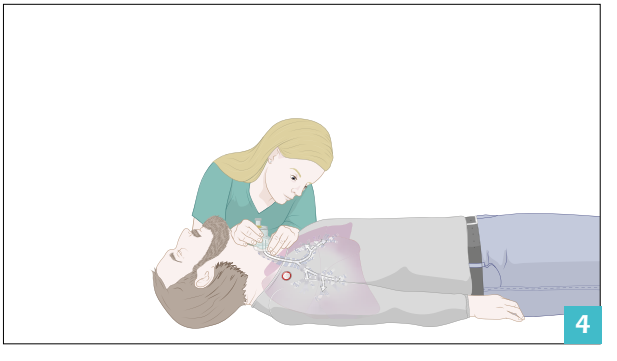
First wash your hands thoroughly. Then disinfect them. If necessary, wear disposable gloves.



Make sure that the suction device is functional. Connect the suction tube, finger tip and suction catheter correctly.

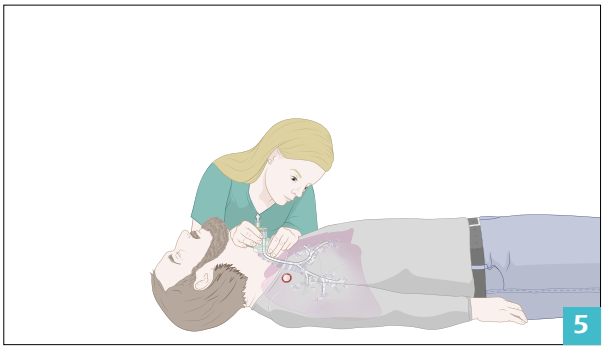


Check the outer as well as the inner cannula for integrity. Wet the inner cannula with the lubricant.

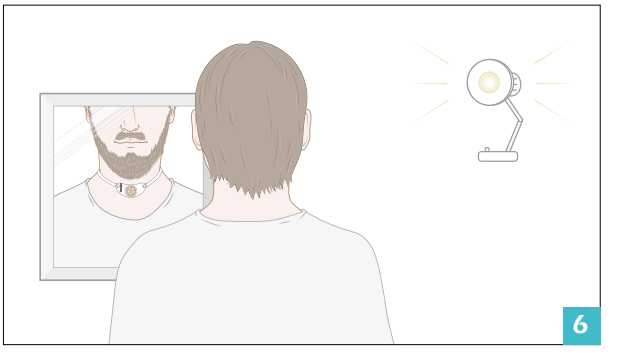


Assemble the cannula. In this process, push the inner cannula forward into the outer cannula until it can be fixated.

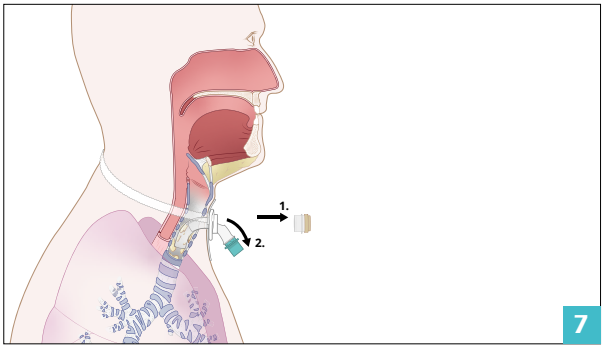
CHANGING THE TRACHEOSTOMY TUBE



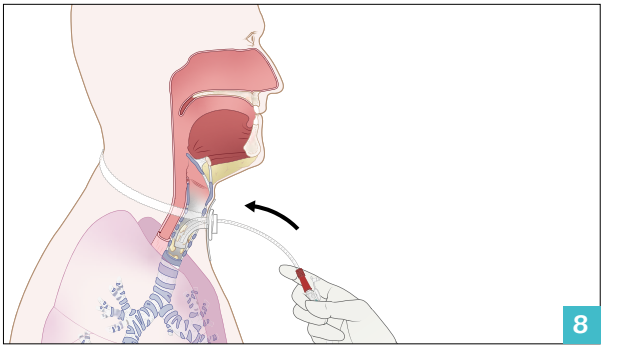
Advance the tube into the tracheal compress. Then attach the cannula tube holder band to one side of the cannula.



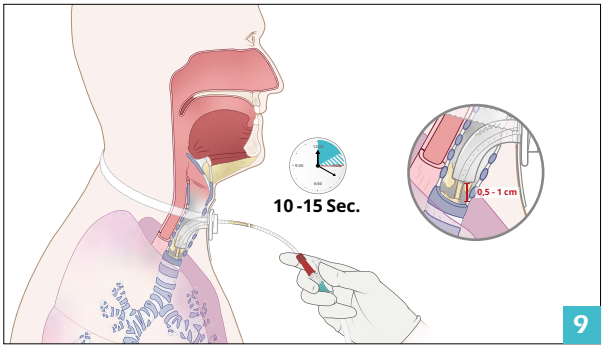
Always change the tracheostomy tube in front of a mirror. Improve your vision with optimal lighting.



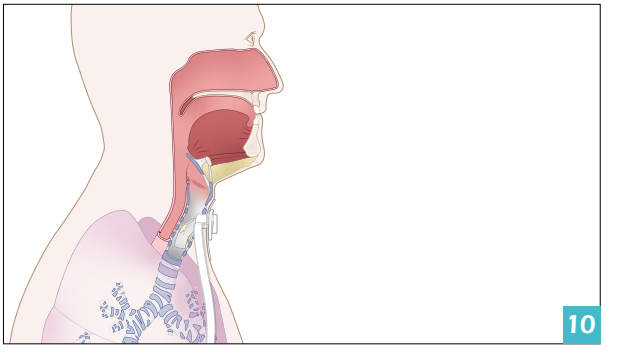
First remove the speaking valve/HME (if applicable) from the currently worn tracheostomy tube. Then pull out the inner cannula from the outer cannula.



For suction of secretion, the catheter is carefully inserted into the trachea through the cannula tube in the tracheostoma. Avoid unnecessary contact with the catheter.

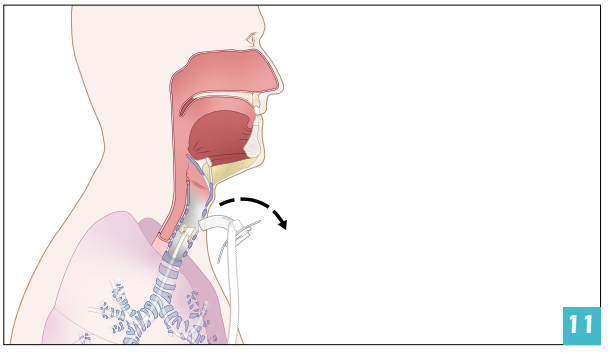


Advance the catheter by no more than 0.5-1 cm above the edge of the cannula tip. Suction is applied through closure of the finger tip.

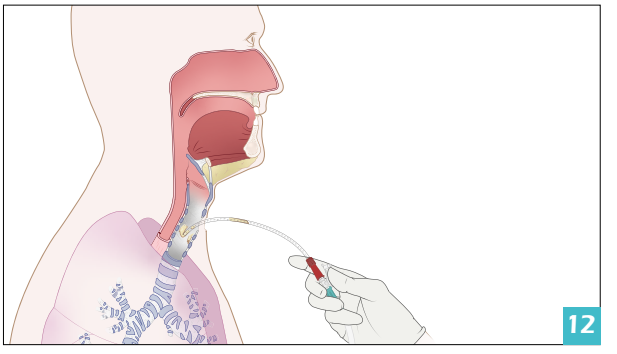


Loosen the cannula support band on one side and ensure that the tracheostomy tube remains in the correct position.

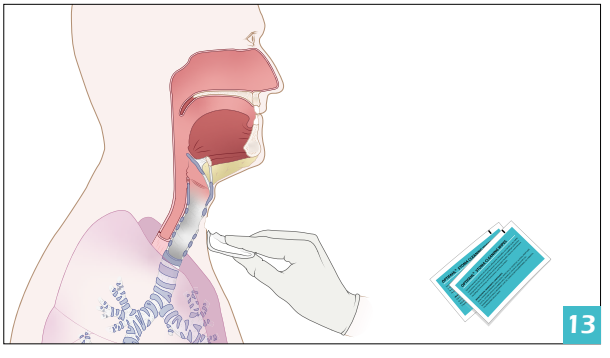
CHANGING THE TRACHEOSTOMY TUBE



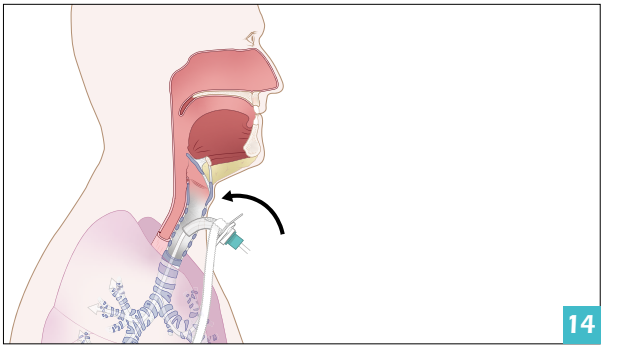
Carefully pull the outer cannula from the tracheostoma while the patient exhales.



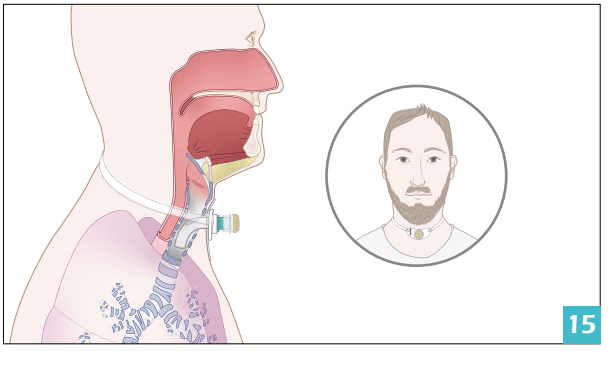
If necessary, repeat endotracheal suctioning (10-15 seconds).



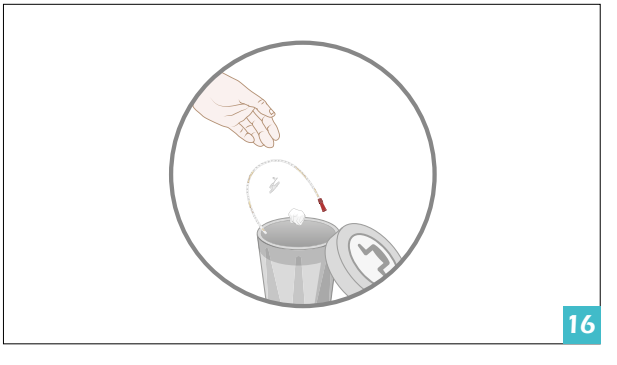
Then clean the skin around the tracheostoma thoroughly with the special cleaning wipes.



Carefully insert the fully assembled tracheostomy tube into the trachea while the patient inhales (see Fig. 5).



Place the tube holding strap around the neck and attach it to the neck flange. Plug the speaking valve/HME onto the uni-connector if applicable.



Used disposable products must be disposed of. Finally, check all materials for completeness for the next change.

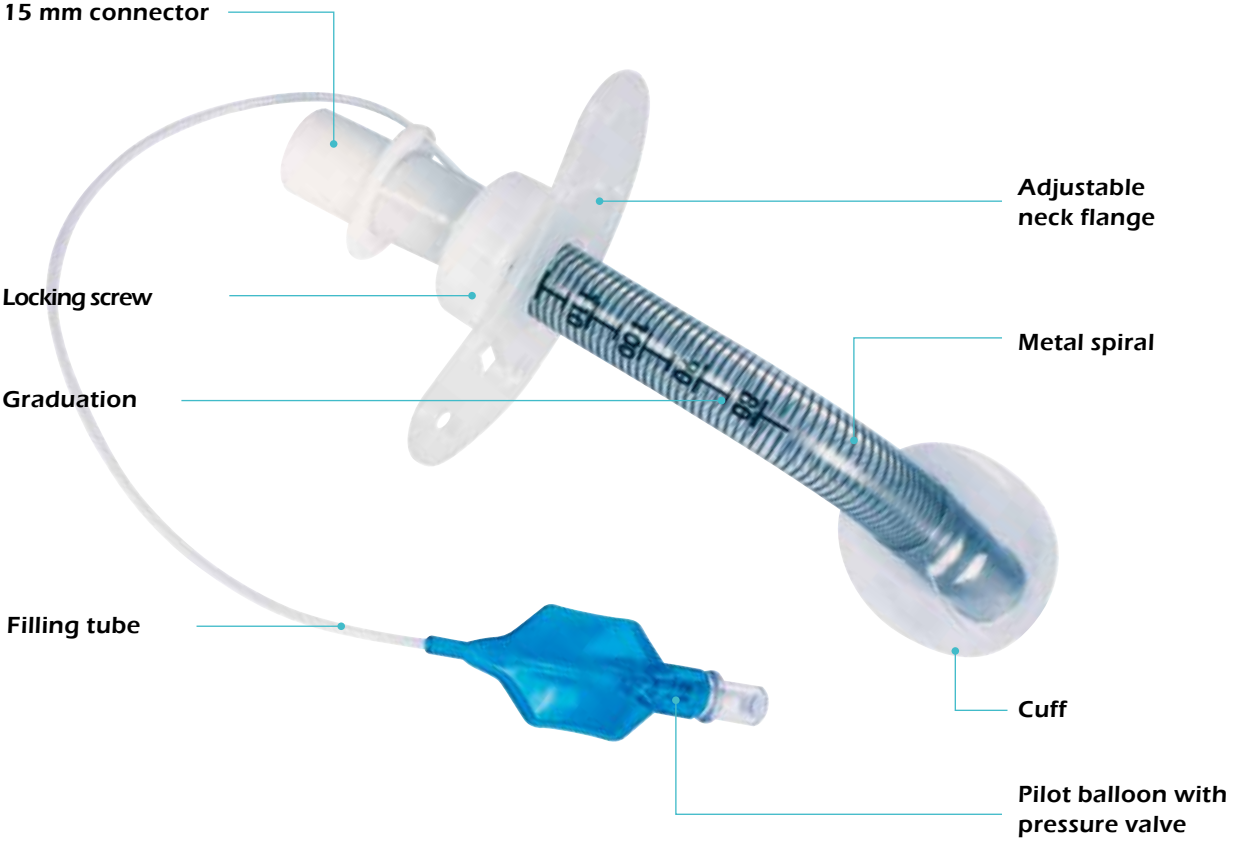
SPIRAFLEX®

STERILE

The SPIRAFLEX® tracheostomy tube – flexible, variably adjustable, soft. This cannula is characterised by its spiral reinforcement and the adjustable neck flange. The spiral reinforcement lends the cannula a high degree of flexibility at simultaneous pressure stability. In addition, the soft material of the plastic sheathing contributes to a high level of wearing comfort. The neck flange is adjustable via an easy-to-use fixation mechanism and can thus be adapted optimally to the anatomy of each individual patient. The SPIRAFLEX® is therefore also the ideal solution for patients with different tracheostoma canal lengths. The clearly visible graduation in 5 mm steps at the top of the cannula tube allows exact and reproducible positioning of the neck flange.

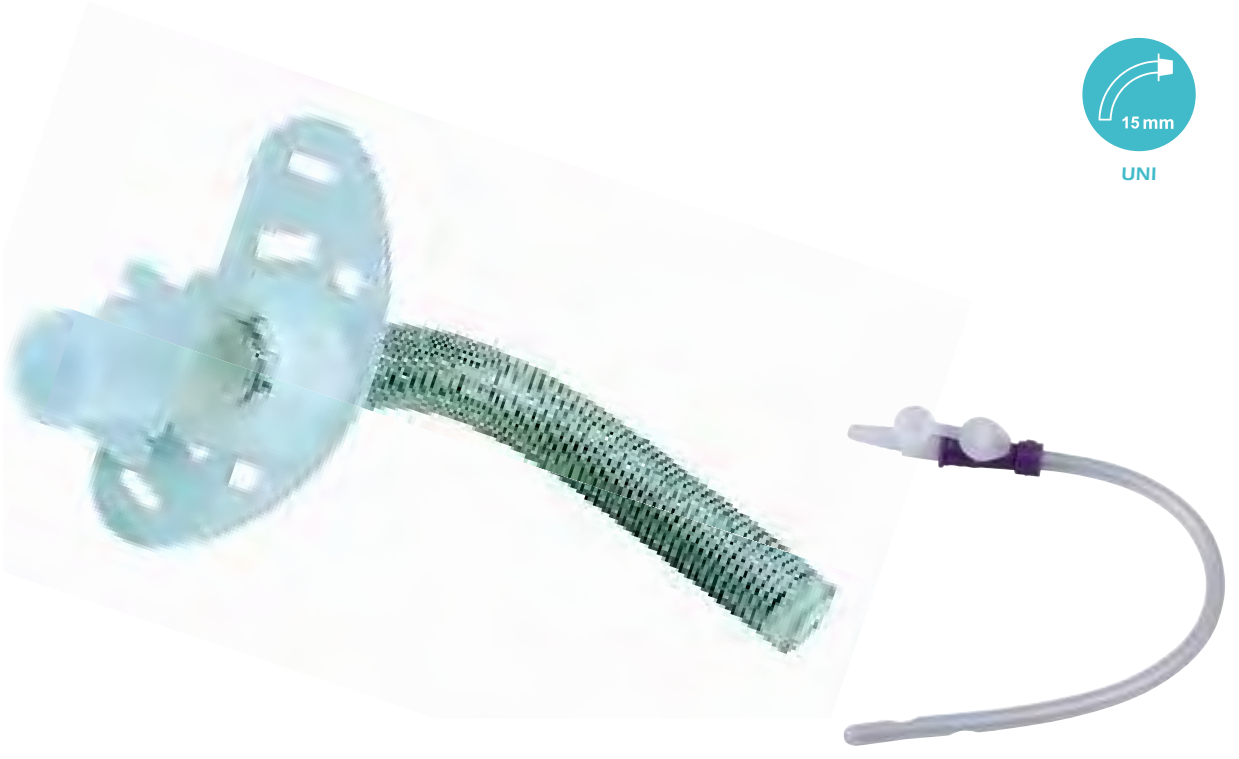
The SPIRAFLEX® cannula is available with and without cuff. The flexible inner cannulas (ICX) are available separately as required.

An extra-long version, the SPIRAFLEX® XL tracheostomy tube, also allows use of the tube for deep-seated stenoses as an example. The plastic spiral reinforcement even enables the use of the SPIRAFLEX® MRT variant during magnetic resonance imaging (MRI).



SPIRAFLEX® UNI

STERILE



Good dimensional stability can be guaranteed with this SPIRAFLEX® UNI tracheostomy tube with integrated spiral reinforcement despite its high flexibility. The neck flange is adjustable and can be fixed to the cannula with a screw fastener. The insertion aid (obturator) included in the set can also be used to aspirate secretion fluids.

A flexible inner cannula (ICX) with flat profile is available separately for the SPIRAFLEX® tracheostomy tubes (REF 17543), whereby the size must be selected according to the outer cannula.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF ICX	REF
06	8.4	8.4	6.0	4.5	60.0	52.0	80°-110°	17543-06	**17504-06**
07	10.2	10.2	7.0	5.5	80.0	68.0	80°-110°	17543-07	**17504-07**
08	11.2	11.2	8.0	6.5	100.0	88.0	80°-110°	17543-08	**17504-08**
09	12.2	12.2	9.0	7.5	130.0	117.0	80°-110°	17543-09	**17504-09**
10	13.2	13.2	10.0	8.5	135.0	118.0	80°-110°	17543-10	**17504-10**
11	14.2	14.2	11.0	9.5	140.0	123.0	80°-110°	17543-11	**17504-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SPIRAFLEX® UNI CUFF

STERILE

The SPIRAFLEX® UNI CUFF tracheostomy tube is fully flexible and adapts to any change in the patient's position. This prevents bruising. The integrated spiral reinforcement ensures that the SPIRAFLEX® cannula retains its shape. A 15 mm connector enables the use of artificial noses and the connection to a ventilation device. The SPIRAFLEX® cannula is equipped with an adjustable neck flange, which allows positiioning of the neck flange on the cannula tube to be varied. This allows the length of the cannula in the tracheostoma to be individually adjusted. The insertion aid (obturator) included in the set can also be used to aspirate secretion fluids. At the end of the insertion aid, there is an additional tube connector/fingertip, with which the suction tube of the suction device is connected to the insertion aid.

A flexible inner cannula (ICX) with flat profile is available separately for the SPIRAFLEX® tracheostomy tubes (REF 17543), whereby the size must be selected according to the outer cannula.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF ICX	REF
06	8.4	8.4	6.0	4.5	60.0	52.0	80°-110°	20.0	17543-06	**17503-06**
07	10.2	10.2	7.0	5.5	80.0	68.0	80°-110°	22.0	17543-07	**17503-07**
08	11.2	11.2	8.0	6.5	100.0	88.0	80°-110°	24.0	17543-08	**17503-08**
09	12.2	12.2	9.0	7.5	130.0	117.0	80°-110°	25.0	17543-09	**17503-09**
10	13.2	13.2	10.0	8.5	135.0	118.0	80°-110°	26.0	17543-10	**17503-10**
11	14.2	14.2	11.0	9.5	140.0	123.0	80°-110°	26.0	17543-11	**17503-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SPIRAFLEX® UNI CUFF XL

STERILE

The SPIRAFLEX® UNI CUFF tracheostomy tube in its extra long version XL is fully flexible and adapts to any change in the patient's position. This prevents bruising. The integrated spiral reinforcement ensures that the SPIRAFLEX® UNI CUFF tracheostomy tube retains its shape. At the same time, the metal spiral acts as an X-ray contrast agent. A 15 mm connector enables the use of artificial noses and the connection to a ventilation device. The SPIRAFLEX® UNI CUFF tracheostomy tube is equipped with an adjustable neck flange, which allows the height of the neck flange on the cannula tube to be varied. This allows the length of the cannula in the tracheostoma to be individually adjusted.

The insertion aid (obturator) included in the set can also be used to aspirate secretion fluids.

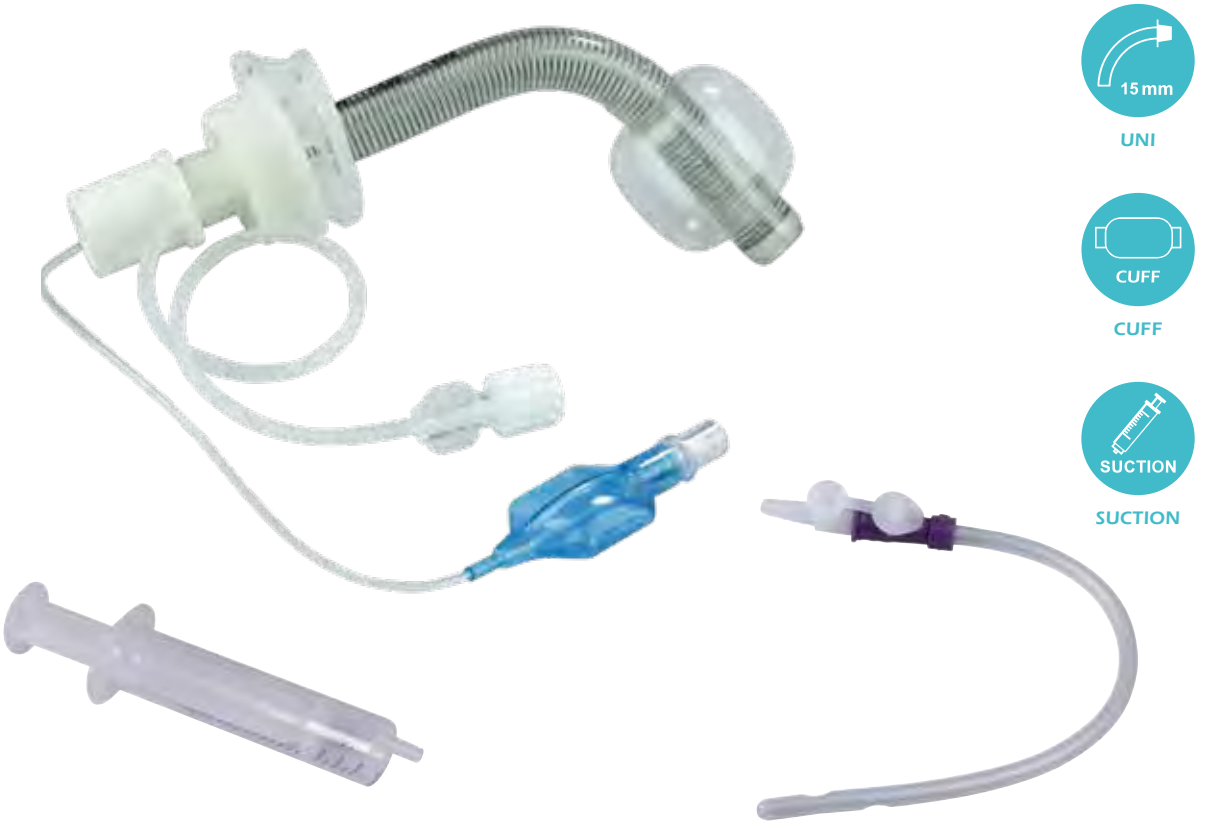
A flexible inner cannula (ICX) with flat profile is available separately for the SPIRAFLEX® tracheostomy tubes (REF 17549), whereby the size must be selected according to the outer cannula.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF ICX	REF
07	10.2	10.2	7.0	5.5	155.0	132.0	80°-110°	22.0	17549-07	**17519-07**
08	11.2	11.2	8.0	6.5	155.0	132.0	80°-110°	24.0	17549-08	**17519-08**
09	12.2	12.2	9.0	7.5	155.0	132.0	80°-110°	25.0	17549-09	**17519-09**
10	13.2	13.2	10.0	8.5	155.0	132.0	80°-110°	26.0	17549-10	**17519-10**
11	14.2	14.2	11.0	9.5	155.0	132.0	80°-110°	26.0	17549-11	**17519-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SPIRAFLEX® UNI CUFF SUCTION

STERILE



The SPIRAFLEX® UNI CUFF SUCTION with suction device is a blockable tracheostomy tube with 15 mm connector, which offers the option of removing secretions collected above the cuff from the trachea through a special tube line. For this purpose, there is an integrated tube in the tracheostomy tube. This is incorporated in such a way that it is not obtrusive and thus avoids additional irritation of the tracheal wall.

A flexible inner cannula (ICX) with flat profile is available separately for the SPIRAFLEX® tracheostomy tubes (REF 17543), whereby the size must be selected according to the outer cannula.

The insertion aid (obturator) included in the set can be used to aspirate secretion fluids. The set also includes a disposable syringe for aspirating subglottic secretion.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF ICX	REF
07	10.2	10.2	7.0	5.5	80.0	68.0	80°-110°	22.0	17543-07	**17523-07**
08	11.2	11.2	8.0	6.5	100.0	88.0	80°-110°	24.0	17543-08	**17523-08**
09	12.2	12.2	9.0	7.5	130.0	117.0	80°-110°	25.0	17543-09	**17523-09**
10	13.2	13.2	10.0	8.5	135.0	118.0	80°-110°	26.0	17543-10	**17523-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SPIRAFLEX® MRT UNI CUFF

STERILE

UNI

CUFF

MRI

The SPIRAFLEX® MRT UNI CUFF tracheostomy tube is fully flexible and adapts to any change in the patient's position. This prevents bruising. The SPIRAFLEX® MRT UNI CUFF tracheostomy tube features a spiral reinforcement made of plastic and even allows the use of the tube during magnetic resonance imaging (MRI). A 15 mm connector enables the use of artificial noses and the connection to a ventilation device. The SPIRAFLEX® MRT UNI CUFF is equipped with an adjustable neck flange, which allows positiioning of the neck flange on the cannula tube to be varied. This allows the length of the cannula in the tracheostoma to be individually adjusted.

The insertion aid (obturator) included in the set can also be used to aspirate secretion fluids.

A flexible inner cannula (ICX) with flat profile is available separately for the SPIRAFLEX® tracheostomy tubes (REF 17543), whereby the size must be selected according to the outer cannula.

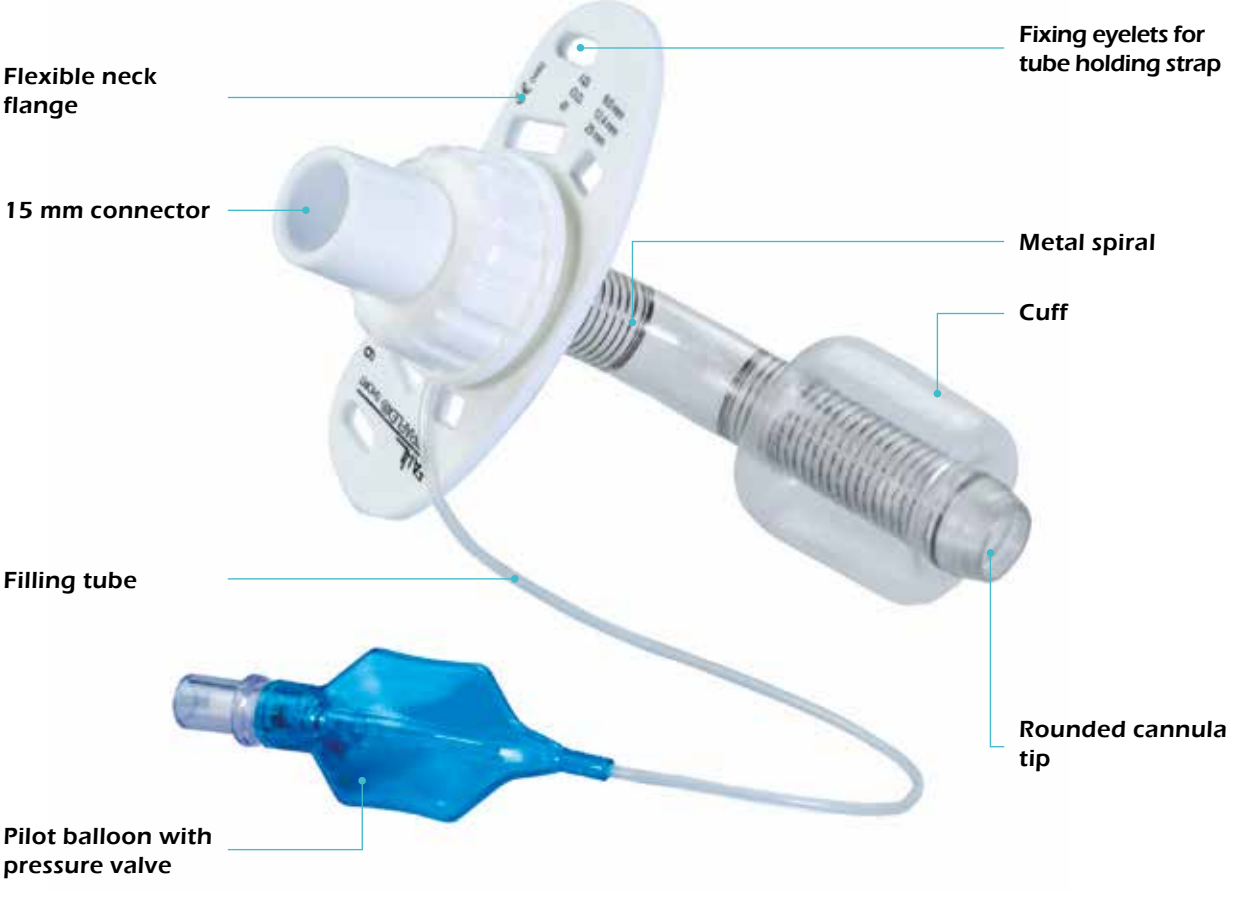
GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF ICX	REF
06	8.4	8.4	6.0	4.5	60.0	52.0	80°-110°	20.0	17543-06	**17520-06**
07	10.2	10.2	7.0	5.5	80.0	68.0	80°-110°	22.0	17543-07	**17520-07**
08	11.2	11.2	8.0	6.5	100.0	88.0	80°-110°	24.0	17543-08	**17520-08**
09	12.2	12.2	9.0	7.5	130.0	117.0	80°-110°	25.0	17543-09	**17520-09**
10	13.2	13.2	10.0	8.5	135.0	118.0	80°-110°	26.0	17543-10	**17520-10**
11	14.2	14.2	11.0	9.5	140.0	123.0	80°-110°	26.0	17543-11	**17520-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SPIRAFLEX® SHORT

STERILE

SPIRAFLEX® SHORT ideally supplements the SPIRAFLEX® system. While cannulas in standard length and extra long make up the established SPIRAFLEX® family, the SPIRAFLEX® SHORT cannula accommodates the wishes of some customers for slightly shorter cannulas. Here, too, spiral reinforcement ensures a high degree of flexibility of the cannula, while at the same time generating a high degree of pressure stability to guarantee an unobstructed flow of air at all times. Two inner cannulas are standard here in each case. They are made of a very flexible yet at the same time sturdy material so as not to impair the flexibility of the cannula. A colour code on the proximal end indicates whether this refers to an inner cannula with or without sieving at first glance. The cannula is available as a variant with or without cuff and with or without fenestration and thus covers a wide range of applications. In addition to the two inner cannulas, each set contains a 15 mm connector to be connected separately and a cough protection cap as well as an obturator, a holding strap and a cannula ID card. In addition, the fenestrated cannulas are supplied with a speaking valve and a sealing cap.



SPIRAFLEX® SHORT UNI

STERILE

The SPIRAFLEX® SHORT UNI tracheostomy tube is a tube without a cuff.

In addition to the tracheostomy tube, the scope of delivery includes two flexible inner cannulas as well as a 15 mm connector and a cough cap, which can be connected to the tracheostomy tube by means of a simple twist closure. An insertion aid (obturator) is also included in the scope of delivery to facilitate the use of the tracheostomy tube.

A flexible inner cannula (ICX) with flat profile is available separately for the SPIRAFLEX® SHORT UNI tracheostomy tubes (REF 17516), whereby the size must be selected according to the outer cannula.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF ICX	REF
06	9.4	9.4	6.0	4.5	75.0	61.0	95°-110°	17516-06	**17506-06**
07	10.4	10.4	7.0	5.5	81.0	67.0	95°-110°	17516-07	**17506-07**
08	11.4	11.4	8.0	6.5	91.0	77.0	95°-110°	17516-08	**17506-08**
09	12.4	12.4	9.0	7.5	91.0	77.0	95°-110°	17516-09	**17506-09**
10	13.4	13.4	10.0	8.5	102.0	88.0	95°-110°	17516-10	**17506-10**
11	14.4	14.4	11.0	9.5	102.0	88.0	95°-110°	17516-11	**17506-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SPIRAFLEX® SHORT UNI LINGO PHON

STERILE

UNI

LINGO

PHON

This version of the SPIRAFLEX® SHORT UNI LINGO PHON tracheostomy tube has a fenestration in the cannula tube to enable the patient to phonate. One of the inner cannulas therefore has an appropriate sieve.

In addition to the tracheostomy tube, the scope of delivery includes two inner cannulas (1x sieved inner cannula and 1x unsieved inner cannula) as well as a closure cap, a speaking valve, a 15 mm connector and a cough cap. An insertion aid (obturator) is also included in the scope of delivery to facilitate the use of the tracheostomy tube.

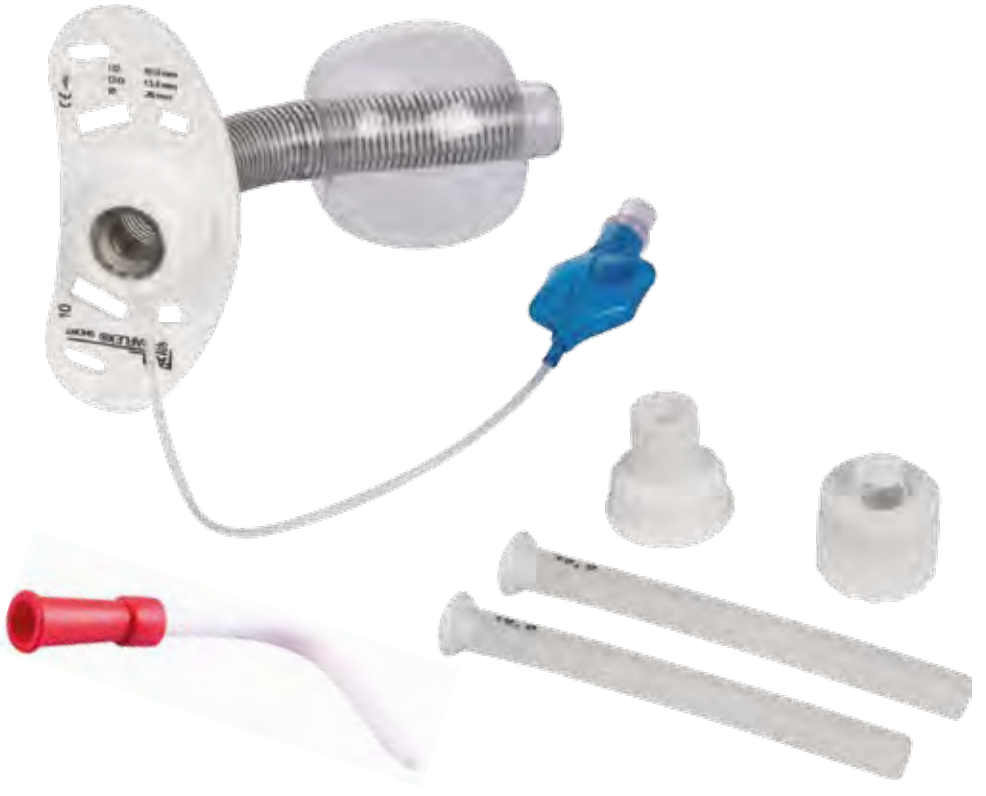
Two flexible inner cannulas (ICX) with flat profile (REF 17516) or with sieving (REF 17517) are available separately for the SPIRAFLEX® SHORT tracheostomy tubes, whereby the size must be selected according to the outer cannula.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF ICX	REF
06	9.4	9.4	6.0	4.5	75.0	61.0	95°-110°	17517-06	**17508-06**
07	10.4	10.4	7.0	5.5	81.0	67.0	95°-110°	17517-07	**17508-07**
08	11.4	11.4	8.0	6.5	91.0	77.0	95°-110°	17517-08	**17508-08**
09	12.4	12.4	9.0	7.5	91.0	77.0	95°-110°	17517-09	**17508-09**
10	13.4	13.4	10.0	8.5	102.0	88.0	95°-110°	17517-10	**17508-10**
11	14.4	14.4	11.0	9.5	102.0	88.0	95°-110°	17517-11	**17508-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SPIRAFLEX® SHORT UNI CUFF

STERILE



UNI

CUFF

The SPIRAFLEX® SHORT UNI CUFF tracheostomy tube with universal attachment and cuff is yet a further option. By inflating the cuff, the tracheostomy tube can be sealed against the tracheal wall inside the tracheostoma, thus preventing the breathing air from flowing past laterally. Choking on secretion fluids passing along the side of the cannula is also largely prevented.

An insertion aid (obturator) is included in the scope of delivery to facilitate the use of the tracheostomy tube. In addition to the tracheostomy tube, the scope of delivery also includes two flexible inner cannulas as well as a 15 mm connector and a cough cap, which can be attached to the tracheostomy tube by means of a simple twist closure.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF ICX	REF
06	9.4	9.4	6.0	4.5	75.0	61.0	95°-110°	20.0	17516-06	**17507-06**
07	10.4	10.4	7.0	5.5	81.0	67.0	95°-110°	22.0	17516-07	**17507-07**
08	11.4	11.4	8.0	6.5	91.0	77.0	95°-110°	24.0	17516-08	**17507-08**
09	12.4	12.4	9.0	7.5	91.0	77.0	95°-110°	25.0	17516-09	**17507-09**
10	13.4	13.4	10.0	8.5	102.0	88.0	95°-110°	26.0	17516-10	**17507-10**
11	14.4	14.4	11.0	9.5	102.0	88.0	95°-110°	28.0	17516-11	**17507-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SPIRAFLEX® SHORT UNI LINGO PHON CUFF STERILE

UNI

CUFF

LINGO


PHON

The SPIRAFLEX® SHORT UNI LINGO PHON cannula with cuff has a fenestration in the cannula tube to enable the patient to phonate. One of the inner cannulas therefore has a sieve appropriate to the fenestration of the outer cannula.

In addition to the tracheostomy tube, the scope of delivery also includes two inner cannulas (1x sieved inner cannula and 1x unsieved inner cannula) as well as a closure cap, a speaking valve, a 15 mm connector and a cough cap. An insertion aid (obturator) is also included in the scope of delivery to facilitate the use of the tracheostomy tube.

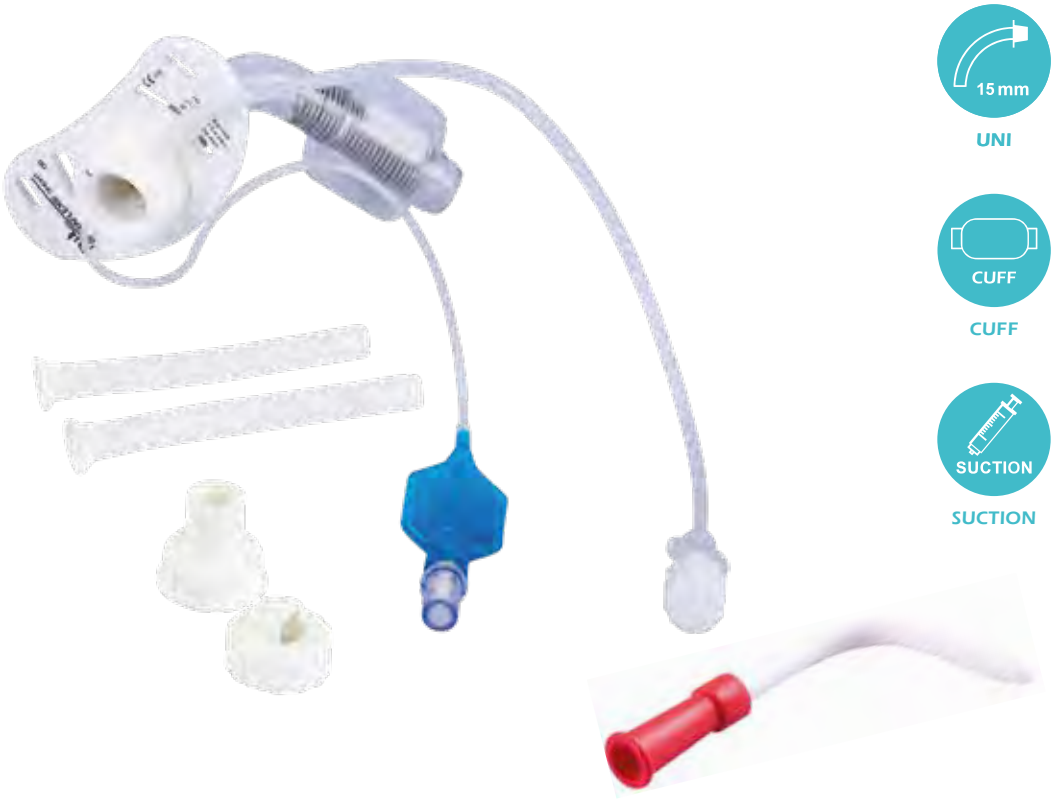
Two flexible inner cannulas (ICX) with flat profile (REF 17516) or with sieving (REF 17517) are available separately for the SPIRAFLEX® SHORT tracheostomy tubes, whereby the size must be selected according to the outer cannula.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF ICX	REF
06	9.4	9.4	6.0	4.5	75.0	61.0	95°-110°	20.0	17517-06	**17509-06**
07	10.4	10.4	7.0	5.5	81.0	67.0	95°-110°	22.0	17517-07	**17509-07**
08	11.4	11.4	8.0	6.5	91.0	77.0	95°-110°	24.0	17517-08	**17509-08**
09	12.4	12.4	9.0	7.5	91.0	77.0	95°-110°	25.0	17517-09	**17509-09**
10	13.4	13.4	10.0	8.5	102.0	88.0	95°-110°	26.0	17517-10	**17509-10**
11	14.4	14.4	11.0	9.5	102.0	88.0	95°-110°	28.0	17517-11	**17509-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SPIRAFLEX® SHORT UNI CUFF SUCTION

STERILE



The SPIRAFLEX® SHORT UNI CUFF SUCTION is a blockable tracheostomy tube with suction device.

In addition to the tracheostomy tube, the scope of delivery includes two unfenestrated inner cannulas as well as a closure cap, a 15 mm connector and a cough cap, which can be connected to the tracheostomy tube by means of a simple twist closure. An insertion aid (obturator) is also included in the scope of delivery to facilitate the use of the tracheostomy tube.

A flexible inner cannula (ICX) with flat profile is available separately for the SPIRAFLEX® SHORT tracheostomy tubes (REF 17516), whereby the size must be selected according to the outer cannula.

GR Size	AD1 Flange	AD2 TIP	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF ICX	REF
06	9.4	9.4	6.0	4.5	75.0	61.0	95°-110°	20.0	17516-06	**17513-06**
07	10.4	10.4	7.0	5.5	81.0	67.0	95°-110°	22.0	17516-07	**17513-07**
08	11.4	11.4	8.0	6.5	91.0	77.0	95°-110°	24.0	17516-08	**17513-08**
09	12.4	12.4	9.0	7.5	91.0	77.0	95°-110°	25.0	17516-09	**17513-09**
10	13.4	13.4	10.0	8.5	102.0	88.0	95°-110°	26.0	17516-10	**17513-10**
11	14.4	14.4	11.0	9.5	102.0	88.0	95°-110°	28.0	17516-11	**17513-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

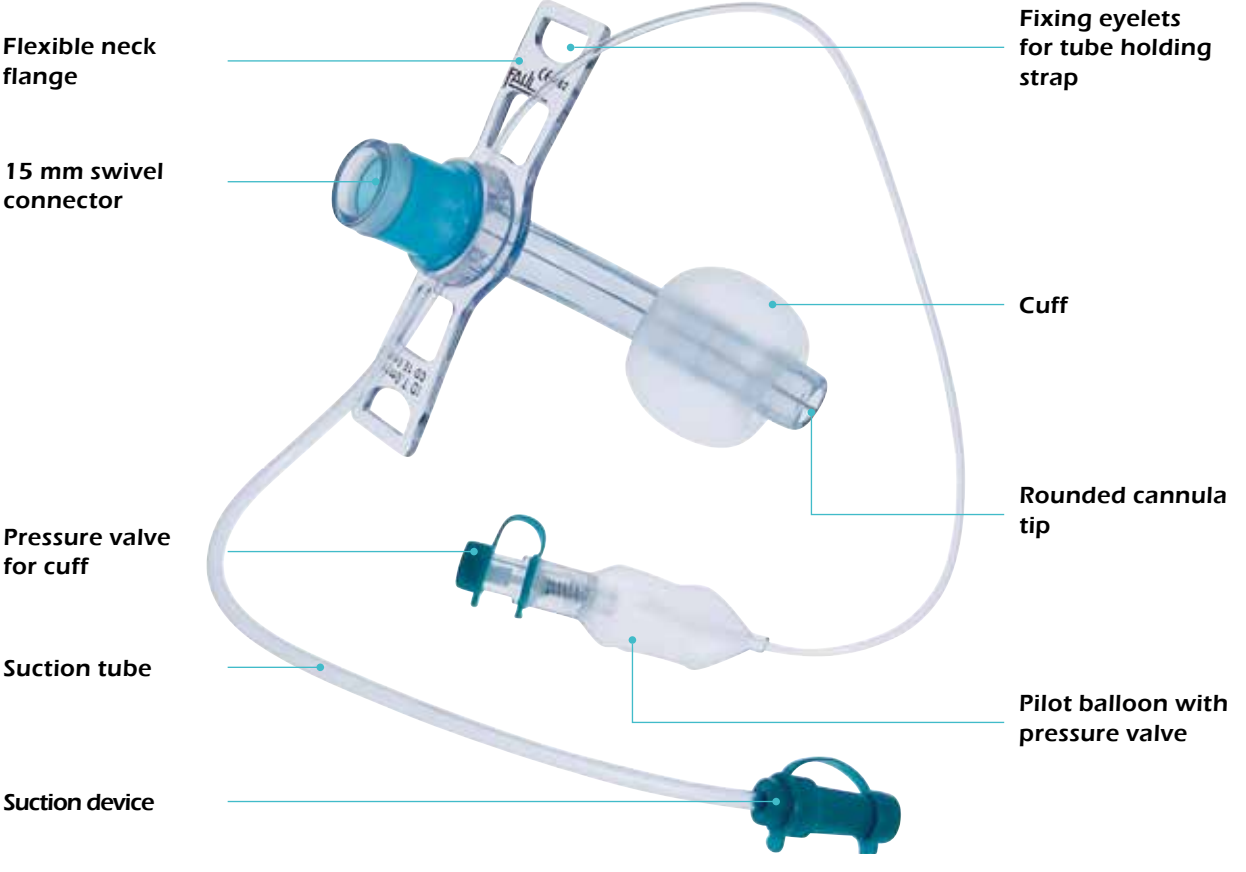
TRACHEOTEC®

As a practical all-round tracheostomy tube, the TRACHEOTEC® tube is particularly indicated when frequent tube changes are necessary. The cannula is available with and without cuff. In addition, it is also available as a version with cuff and integrated suction tube for subglottic suction. The suction tube runs inside the cannula tube to maintain a smooth outer surface. This avoids additional irritation of the trachea and tracheostoma.

An X-ray contrast strip allows verification of the localisation of the cannula in situ.

A 15 mm swivel connector buffers tensile or torsional forces that may be generated by the respiratory tube.

Furthermore, the soft, flexible neck flange contributes to a most atraumatic and comfortable wearing comfort.



TRACHEOTEC® VARIO

STERILE

The TRACHEOTEC® VARIO is a tracheostomy tube with inner cannula.

The integrated universal attachment enables the attachment of heat and moisture exchangers (HMEs), so-called "artifical noses", with 15 mm swivel connector.

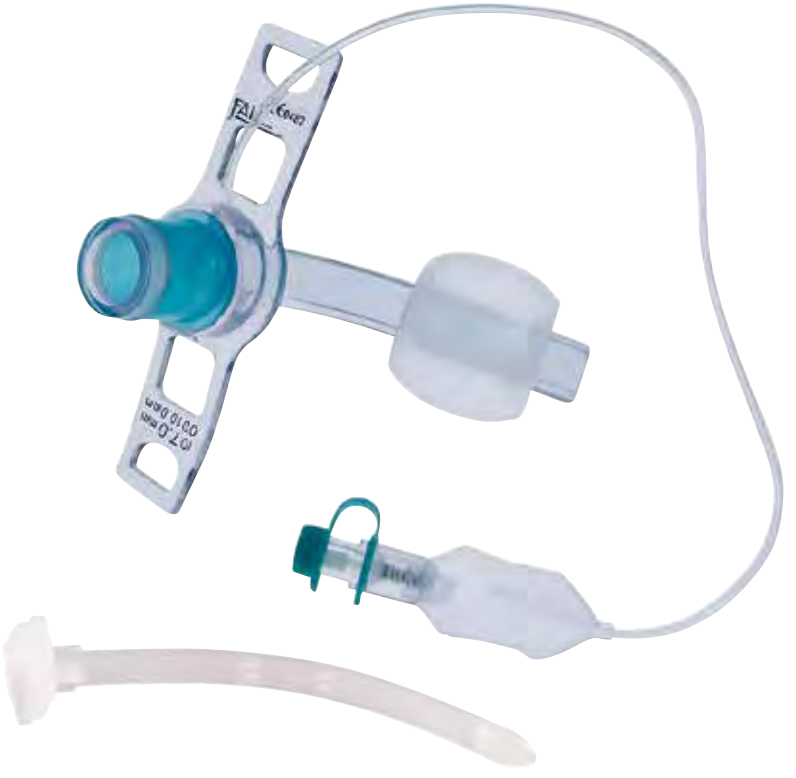
An insertion aid (obturator) is included in the scope of delivery to facilitate the use of the tracheostomy tube.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
03	4.7	4.7	3.0	47.2	43.7	95°	**18560-03**
04	6.0	6.0	4.0	57.1	52.7	95°	**18560-04**
05	7.3	7.3	5.0	61.1	55.7	95°	**18560-05**
06	8.7	8.7	6.0	67.1	60.7	95°	**18560-06**
07	10.0	10.0	7.0	77.0	69.6	95°	**18560-07**
08	11.3	11.3	8.0	87.9	79.5	95°	**18560-08**
09	12.7	12.7	9.0	94.9	85.5	95°	**18560-09**
10	14.0	14.0	10.0	105.3	95.0	95°	**18560-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHEOTEC® VARIO CUFF

STERILE



VARIO

CUFF

The cuff of the TRACHEOTEC® VARIO CUFF tracheostomy tube can be filled through a pilot line with one-way valve and seals the tube to the tracheal wall. The cuff's pilot line is integrated into the outer cannula of the tracheostomy tube, thus achieving a rounded and smooth outer shape. This prevents additional irritation of the mucous membranes.

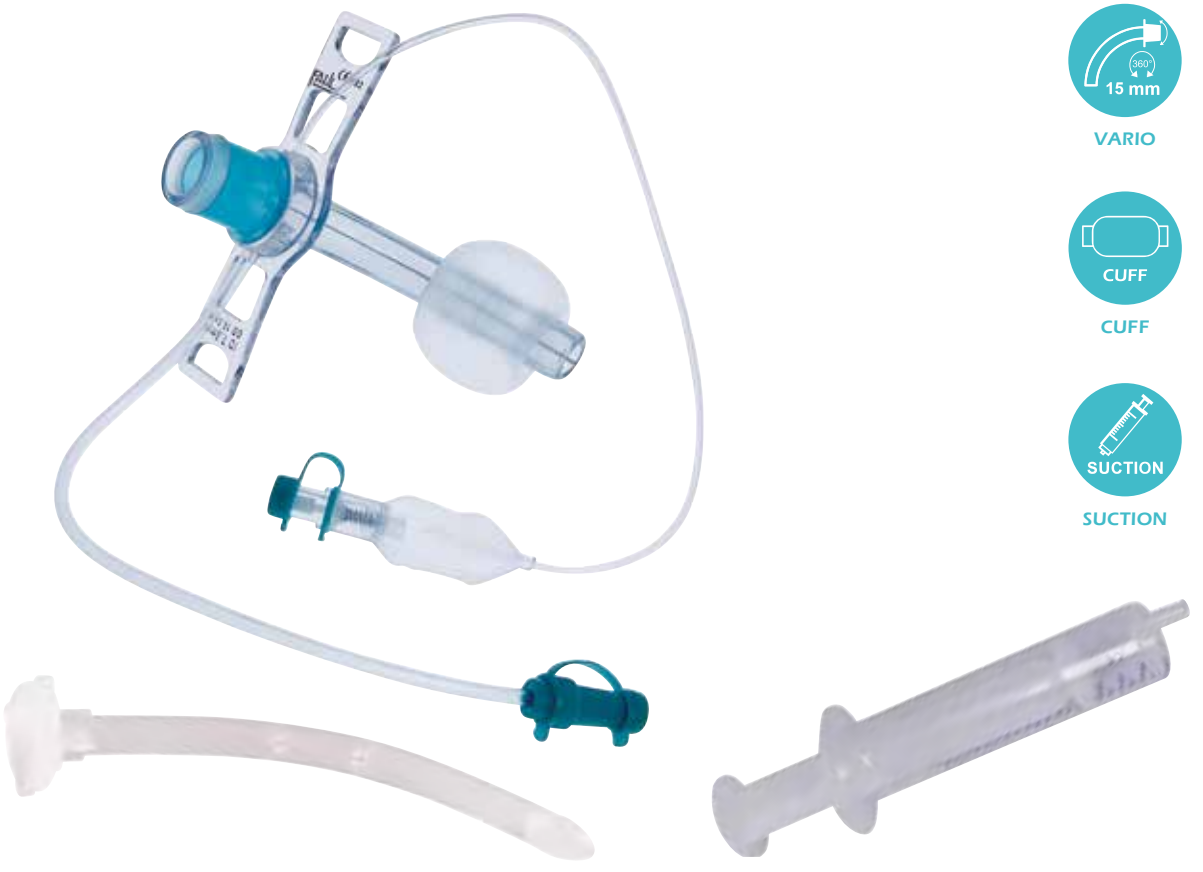
An insertion aid (obturator) is included in the scope of delivery to facilitate the use of the tracheostomy tube.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	Ø CD	REF
03	4.7	4.7	3.0	47.2	43.7	95°	15.0	**18920-03**
04	6.0	6.0	4.0	57.1	52.7	95°	19.0	**18920-04**
05	7.3	7.3	5.0	61.1	55.7	95°	19.0	**18920-05**
06	8.7	8.7	6.0	67.1	60.7	95°	22.0	**18920-06**
07	10.0	10.0	7.0	77.0	69.6	95°	30.0	**18920-07**
08	11.3	11.3	8.0	87.9	79.5	95°	30.0	**18920-08**
09	12.7	12.7	9.0	94.9	85.5	95°	30.0	**18920-09**
10	14.0	14.0	10.0	105.3	95.0	95°	30.0	**18920-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHEOTEC® VARIO CUFF SUCTION

STERILE



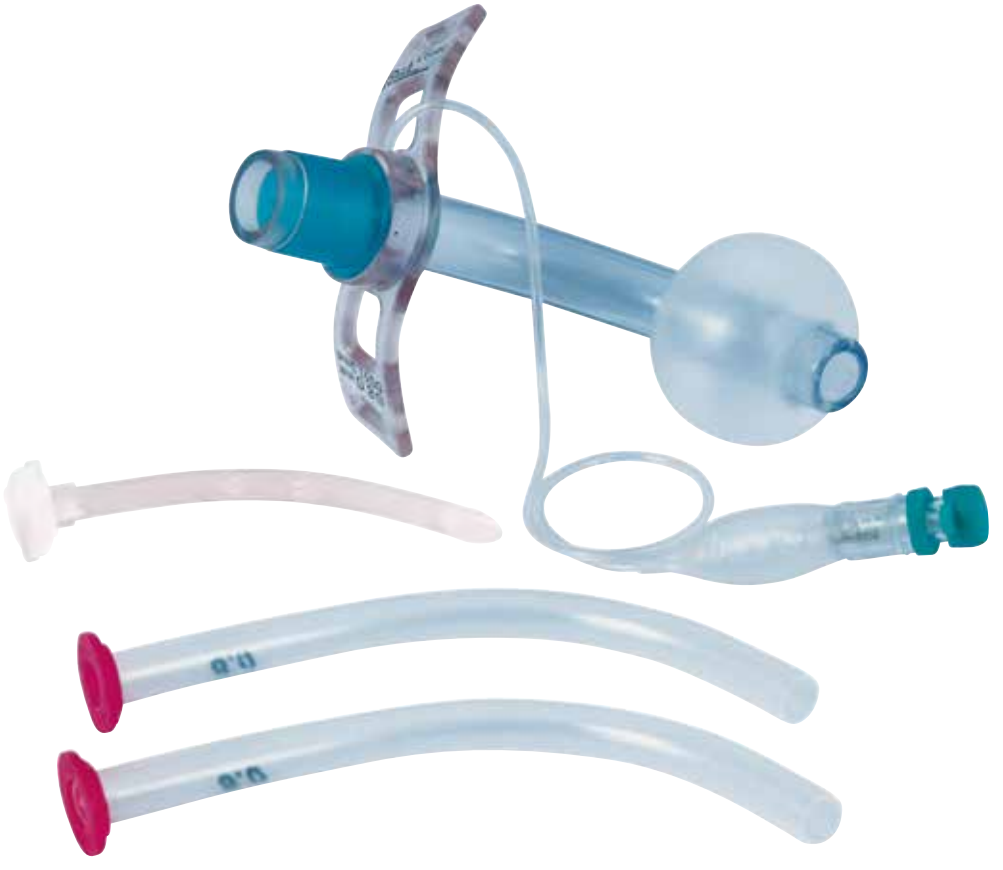
The TRACHEOTEC® VARIO CUFF SUCTION with suction line is a blockable tracheostomy tube with 15 mm swivel connector, which offers the option of removing secretions collected above the cuff from the trachea through a special tube line. For this purpose, there is an integrated tube in the tracheostomy tube. This is incorporated in such a way that it is not obtrusive and thus avoids additional irritation of the tracheal wall. The scope of delivery includes a disposable syringe for aspirating the subglottic secretion, as well as an insertion aid (obturator) which facilitates insertion of the cannula.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	Ø CD	REF
05	7.3	7.3	5.0	61.1	55.7	95°	19.0	**18930-05**
06	8.7	8.7	6.0	67.1	60.7	95°	22.0	**18930-06**
07	10.0	10.0	7.0	77.0	69.6	95°	30.0	**18930-07**
08	11.3	11.3	8.0	87.9	79.5	95°	30.0	**18930-08**
09	12.7	12.7	9.0	94.9	85.5	95°	30.0	**18930-09**
10	14.0	14.0	10.0	105.3	95.0	95°	30.0	**18930-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHEOTEC® PRO VARIO CUFF

STERILE



VARIO

CUFF

The TRACHEOTEC® PRO VARIO CUFF tracheostomy tube is fitted with a standardised 15 mm connector. All essential specifications, e.g. size information, are visible to the user on the flexible neck flange. The TRACHEOTEC® PRO VARIO CUFF can also be used during ventilation. To buffer possible tensile and compressive forces through the ventilation tube, the tracheostomy tube features a 15 mm swivel connector.

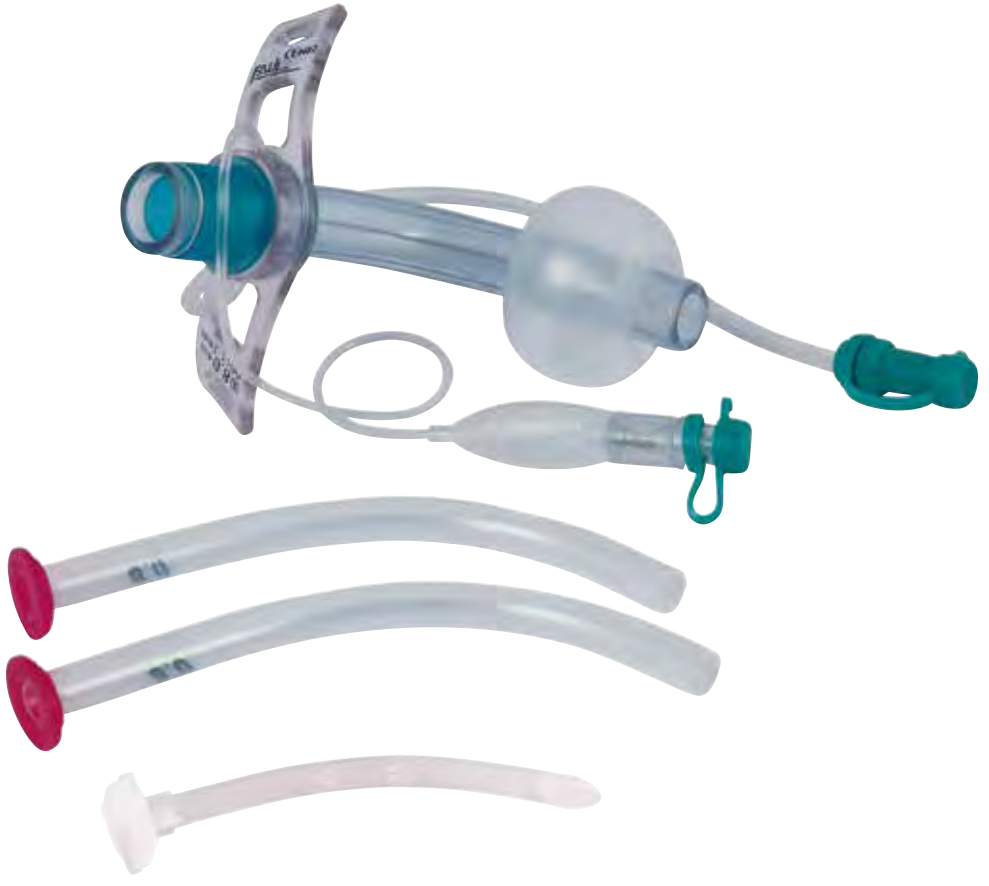
Two inner cannulas with a flat profile are included in the scope of delivery. The inner cannulas are also available separately, the size must be selected according to the outer cannula.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF IC	REF
06	8.7	8.7	6.0	4.2	67.1	60.7	95°	22.0	18933-06	**18922-06**
07	10.0	10.0	7.0	5.1	77.0	69.6	95°	30.0	18933-07	**18922-07**
08	11.3	11.3	8.0	6.0	87.9	79.5	95°	30.0	18933-08	**18922-08**
09	12.7	12.7	9.0	7.0	94.9	85.5	95°	30.0	18933-09	**18922-09**
10	14.0	14.0	10.0	8.0	105.3	95.0	95°	30.0	18933-10	**18922-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHEOTEC® PRO VARIO CUFF SUCTION

STERILE



VARIO

CUFF

SUCTION

The TRACHEOTEC® PRO VARIO CUFF SUCTION with suction line is a blockable tracheostomy tube, which offers the option of removing secretions collected above the cuff from the trachea through a special tube line.

Two inner cannulas with a flat profile are included in the scope of delivery. The inner cannulas are also available separately, the size must be selected according to the outer cannula.

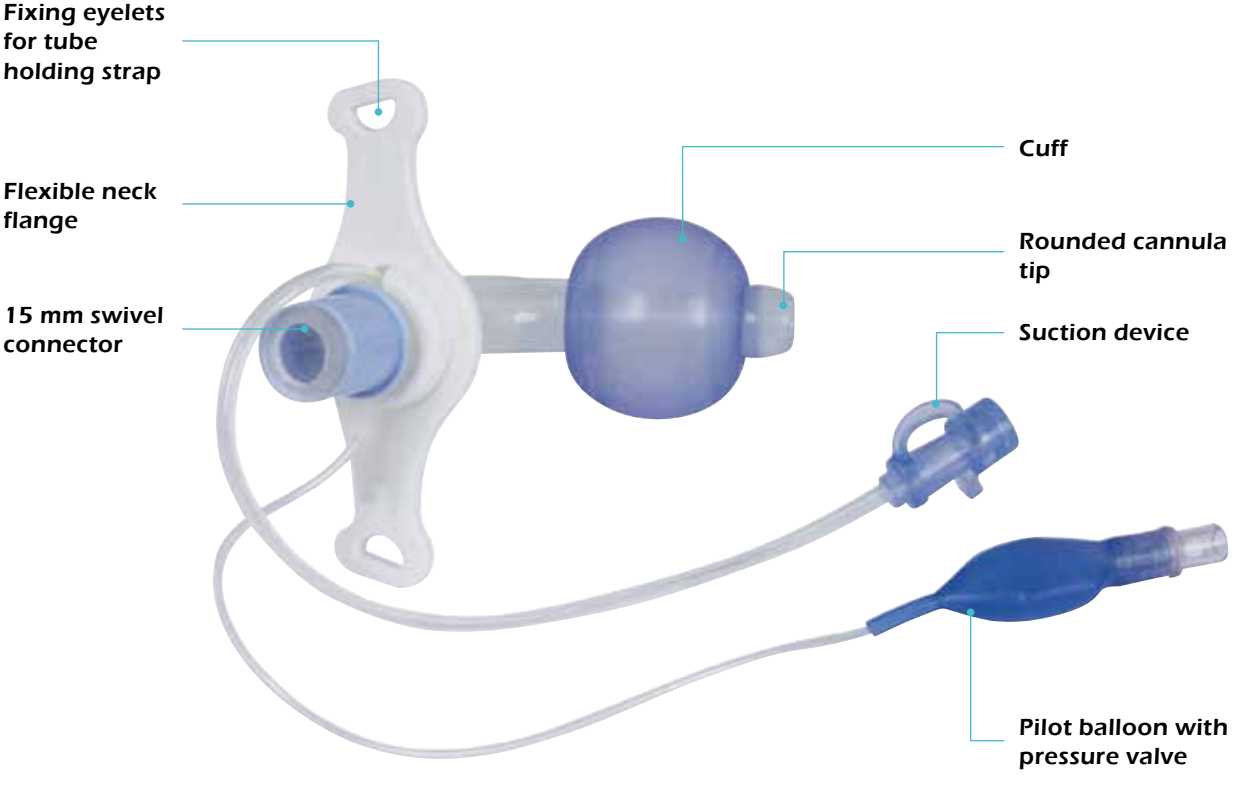
GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF IC	REF
06	8.7	8.7	6.0	4.2	67.1	60.7	95°	22.0	18933-06	**18932-06**
07	10.0	10.0	7.0	5.1	77.0	69.6	95°	30.0	18933-07	**18932-07**
08	11.3	11.3	8.0	6.0	87.9	79.5	95°	30.0	18933-08	**18932-08**
09	12.7	12.7	9.0	7.0	94.9	85.5	95°	30.0	18933-09	**18932-09**
10	14.0	14.0	10.0	8.0	105.3	95.0	95°	30.0	18933-10	**18932-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHEOSILC®

STERILE

The TRACHEOSILC® is a tracheostomy tube made of silicone for special indications. These tracheostomy tubes are made of high quality medical grade silicone. The pleasant material properties of silicone are ideally combined here with the dimensional stability offered by a tracheostomy tube. Furthermore, a soft, flexible neck flange contributes to the comfortable wearing properties. A freely rotating 15 mm swivel connector buffers external torsional forces and reduces the direct transmission of these forces to the sensitive trachea. TRACHEOSILC® tracheostomy tubes are offered with or without a cuff. In addition, a variant with cuff and integrated subglottic suction tube enables it to be used for efficient pneumonia prophylaxis. As a further step towards optimal care, especially for very sensitive patients, this cannula is also offered in half sizes in the common size range.



TRACHEOSILC® VARIO

STERILE

VARIO

The TRACHEOSILC® VARIO tracheostomy tube has a standardised 15 mm swivel connector, which is used to accommodate heat and moisture exchangers (HMEs), so-called "artificial noses", with a 15 mm connector.

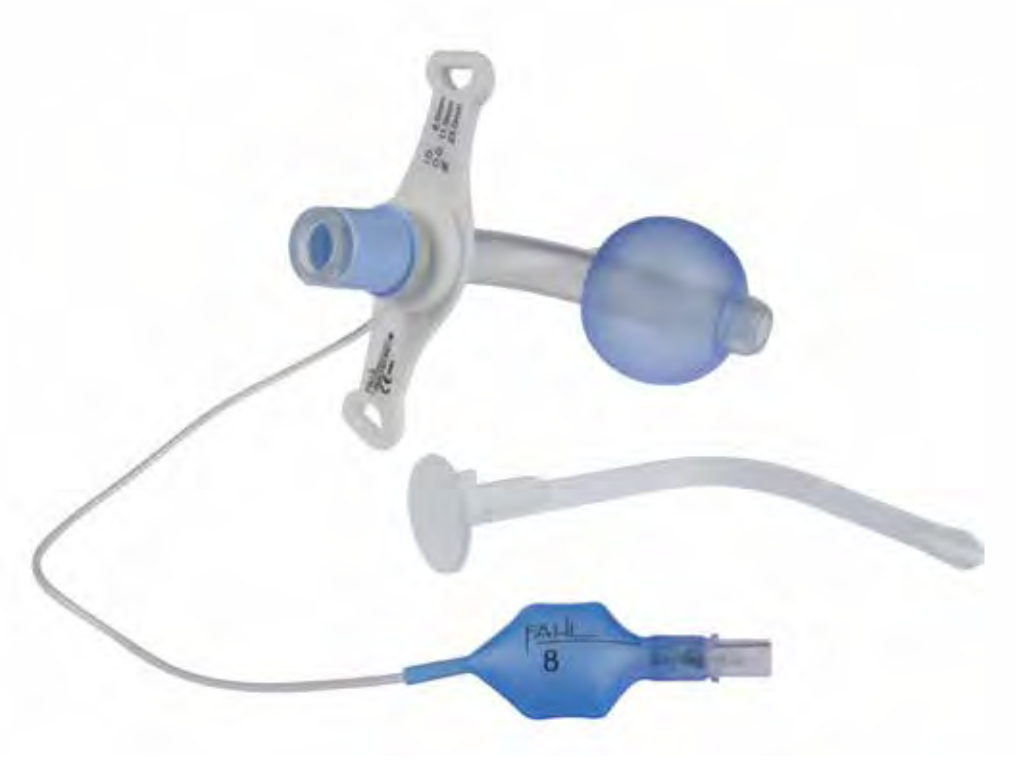
All essential specifications, e.g. the size of the tracheostomy tube, are easily visible to the user on the flexible neck flange.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
05	7.3	7.3	5.0	57.0	52.0	110°	**18820-05**
06	8.7	8.7	6.0	63.0	59.0	110°	**18820-06**
07	10.0	10.0	7.0	71.0	68.0	110°	**18820-07**
7.5	10.7	10.7	7.5	73.0	69.0	110°	**18820-075**
08	11.0	11.0	8.0	75.0	71.0	110°	**18820-08**
8.5	11.7	11.7	8.5	78.0	72.0	110°	**18820-085**
09	12.3	12.3	9.0	80.0	74.0	110°	**18820-09**
9.5	13.3	13.3	9.5	83.0	79.0	110°	**18820-095**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHEOSILC® VARIO CUFF

STERILE



VARIO

CUFF

The TRACHEOSILC® VARIO CUFF tracheostomy tubes are each fitted with a standardised 15 mm swivel connector, which is used to accommodate heat and moisture exchangers (HMEs), so-called "artificial noses", with a 15 mm connector. An insertion aid (obturator) is included in the scope of delivery which facilitates the use of the tracheostomy tube.

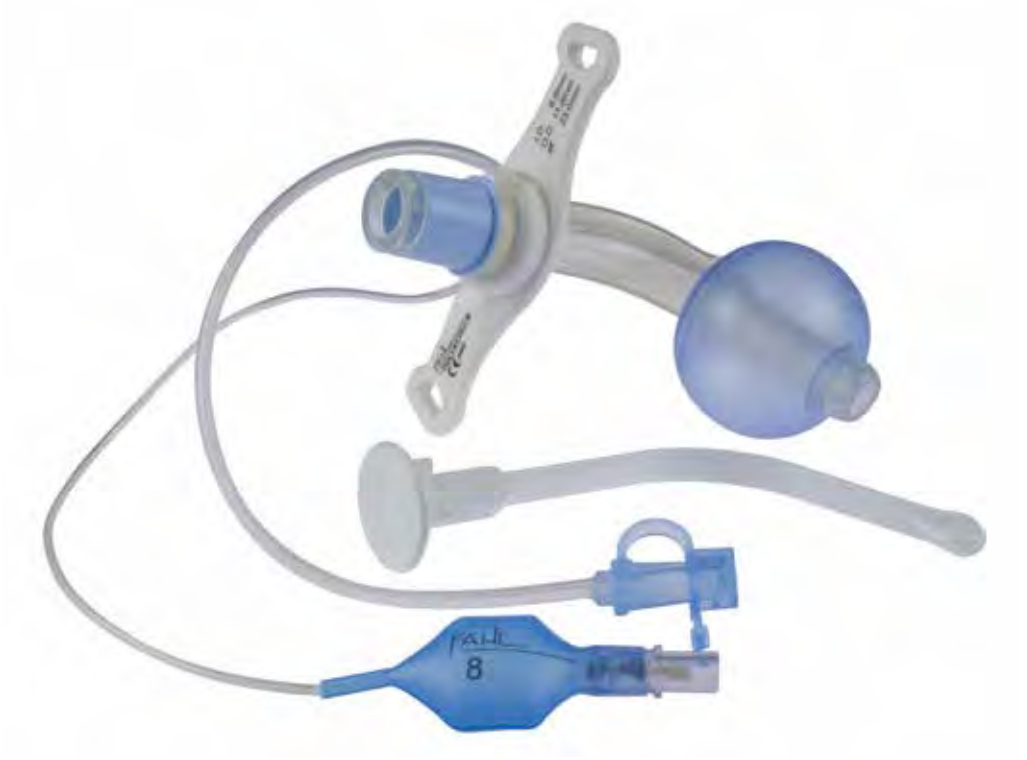
All essential specifications, e.g. the size of the tracheostomy tube, are easily visible to the user on the flexible neck flange.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	Ø CD	REF
05	7.3	7.3	5.0	57.0	52.0	110°	15.0	**18830-05**
06	8.7	8.7	6.0	63.0	59.0	110°	17.0	**18830-06**
07	10.0	10.0	7.0	71.0	68.0	110°	19.0	**18830-07**
7.5	10.7	10.7	7.5	73.0	69.0	110°	23.0	**18830-075**
08	11.0	11.0	8.0	75.0	71.0	110°	23.0	**18830-08**
8.5	11.7	11.7	8.5	78.0	72.0	110°	23.0	**18830-085**
09	12.3	12.3	9.0	80.0	74.0	110°	23.0	**18830-09**
9.5	13.3	13.3	9.5	83.0	79.0	110°	26.0	**18830-095**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHEOSILC® VARIO CUFF SUCTION

STERILE



VARIO

CUFF

SUCTION

The TRACHEOSILC® VARIO CUFF SUCTION is a tracheal cannula with CUFF and suction device, which offers the possibility of removing secretions accumulated above the cuff from the trachea via a separate tube line, e.g. by means of a syringe via the suction device, if required.

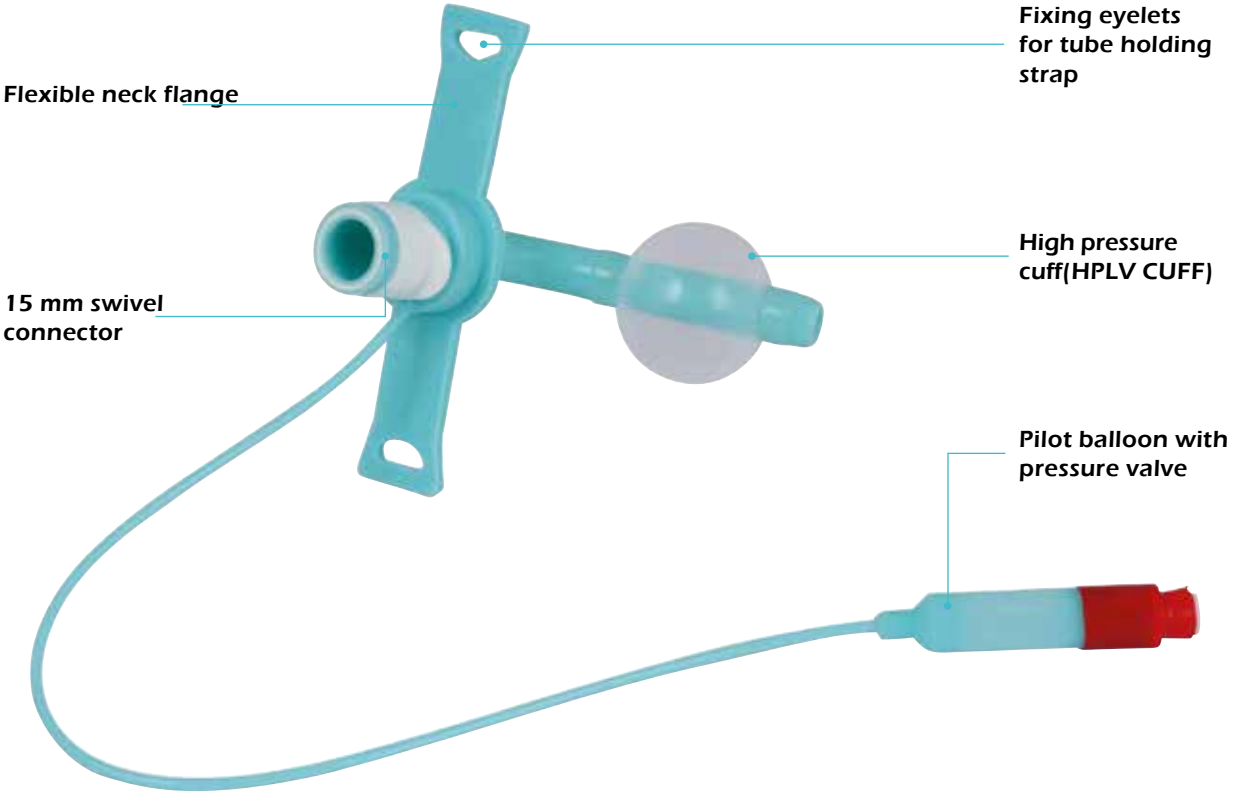
An insertion aid (obturator) is included in the scope of delivery which facilitates the use of the tracheostomy tube.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	Ø CD	REF
05	7.3	7.3	5.0	57.0	52.0	110°	15.0	**18840-05**
06	8.7	8.7	6.0	63.0	59.0	110°	17.0	**18840-06**
07	10.0	10.0	7.0	71.0	68.0	110°	19.0	**18840-07**
7.5	10.7	10.7	7.5	73.0	69.0	110°	23.0	**18840-075**
08	11.0	11.0	8.0	75.0	71.0	110°	23.0	**18840-08**
8.5	11.7	11.7	8.5	78.0	72.0	110°	23.0	**18840-085**
09	12.3	12.3	9.0	80.0	74.0	110°	23.0	**18840-09**
9.5	13.3	13.3	9.5	83.0	79.0	110°	26.0	**18840-095**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHEOTEC® SILC VARIO CUFF STERILE

The TRACHEOTEC® SILC VARIO CUFF is considered to be a truly special cannula: unlike other cannulas, it has a high-pressure cuff (HPLV cuff) which is used for special areas of application. The filling volume of the high pressure cuff is to be determined by the physician. In its unfilled state, the cuff lies very close to the cannula shaft, which allows for particularly easy and atraumatic insertion of the tracheostomy tube.



TRACHEOTEC® SILC VARIO CUFF

STERILE

VARIO

HPLV CUFF

The TRACHEOTEC® SILC VARIO CUFF tracheostomy tube with high-pressure cuff is made of medical-grade silicone, which offers extremely comfortable properties. By inflating the cuff, the cannula can be sealed against the tracheal wall inside the tracheostoma in a targeted and controlled manner. Aspiration of secretion fluid running along the side of the tracheostomy tube is also largely prevented.

An insertion aid (obturator) is included in the scope of delivery which facilitates the use of the tracheostomy tube.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	Ø CD	COLOUR CODE	REF
05	7.3	7.3	5.0	59.0	56.0	107°	18.8		**18850-05**
06	8.7	8.7	6.0	70.0	66.0	107°	20.5		**18850-06**
07	10.0	10.0	7.0	75.0	69.0	107°	22.6		**18850-07**
08	11.0	11.0	8.0	81.0	75.0	108°	28.2		**18850-08**
09	12.3	12.3	9.0	92.0	85.0	108°	29.3		**18850-09**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHLINE®

STERILE

The standard tracheostomy tube with a very broad range of applications! Five variants ensure that this cannula is the tracheostomy tube of choice in numerous common applications. Variants are available with and without cuff, with sieving and unsieved; and in addition, also as a special cannula with integrated suction tube for subglottic suction.

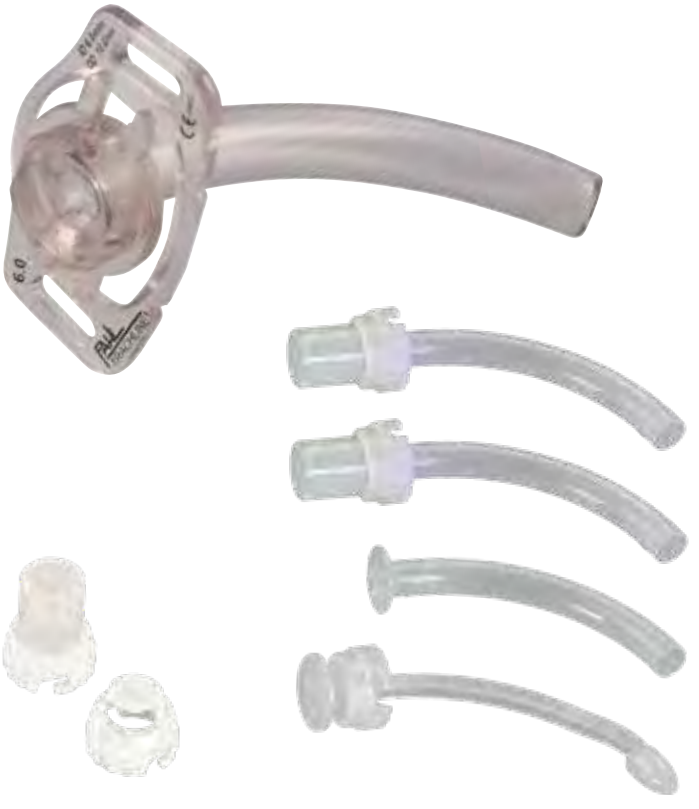
All TRACHLINE® variants contain three inner cannulas, which gives the cannula great flexibility in terms of application and use. The inner cannulas are fixed in the outer cannula using a bayonet lock. Here again, easy handling has been combined with maximum patient safety. The inner cannula with flat profile is secured via a special locking ring. The set of sieved variants includes a speaking valve and a locking cap. For atraumatic insertion of the cannula, all variants include an insertion aid (obturator).

An interesting extra: a cough protection cap protects the patient's surroundings in case of cough stimuli.

TRACHLINE® UNI

STERILE

UNI



The TRACHLINE® UNI comes with a total of three inner cannulas. Two inner cannulas are fitted with a standardised 15 mm connector. And a further inner cannula with flat profile is also included. In addition to the inner cannulas, the scope of delivery also includes a separate 15 mm connector which can be attached to the TRACHLINE® tracheostomy tube without an inner cannula. The connector makes it possible to use HMEs or other accessories with a 15 mm connector. A cough cap is also included. An insertion aid (obturator) is included in the scope of delivery to facilitate the use of the tracheostomy tube.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF
05	9.1	8.1	6.5	5.0	67.0	62.0	115°	**13803-05**
06	10.2	9.1	7.5	6.0	75.0	70.0	110°	**13803-06**
07	11.2	10.1	8.5	7.0	79.0	72.0	105°	**13803-07**
08	12.2	11.5	9.5	8.0	85.0	80.0	100°	**13803-08**
09	13.1	12.0	10.5	9.0	91.0	82.0	95°	**13803-09**
10	14.3	13.6	11.5	10.0	95.0	84.0	90°	**13803-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHLINE® UNI LINGO PHON

STERILE

UNI

LINGO

PHON

The TRACHLINE® UNI LINGO PHON is a tracheostomy tube with sieving that enables voice rehabilitation for tracheotomised patients.

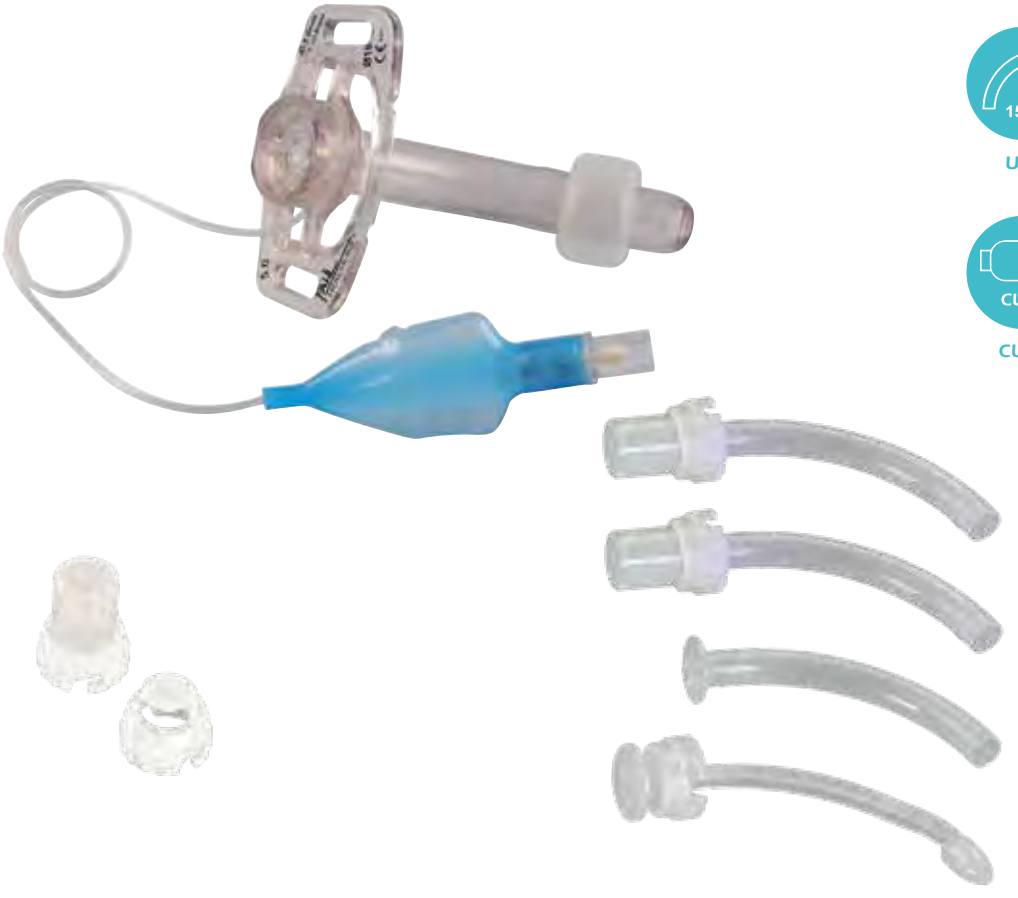
The scope of delivery includes an inner cannula fitted with a standardised 15 mm connector. In addition, there is a sieved flat inner cannula and a sieved inner cannula with a 15 mm connector. In addition to the safety ring, the cough cap and the separate 15 mm connector, the cannula set also includes a red decannulation plug and a speaking valve.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF
05	9.1	8.1	6.5	5.0	67.0	62.0	115°	**13804-05**
06	10.2	9.1	7.5	6.0	75.0	70.0	110°	**13804-06**
07	11.2	10.1	8.5	7.0	79.0	72.0	105°	**13804-07**
08	12.2	11.5	9.5	8.0	85.0	80.0	100°	**13804-08**
09	13.1	12.0	10.5	9.0	91.0	82.0	95°	**13804-09**
10	14.3	13.6	11.5	10.0	95.0	84.0	90°	**13804-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHLINE® UNI CUFF

STERILE



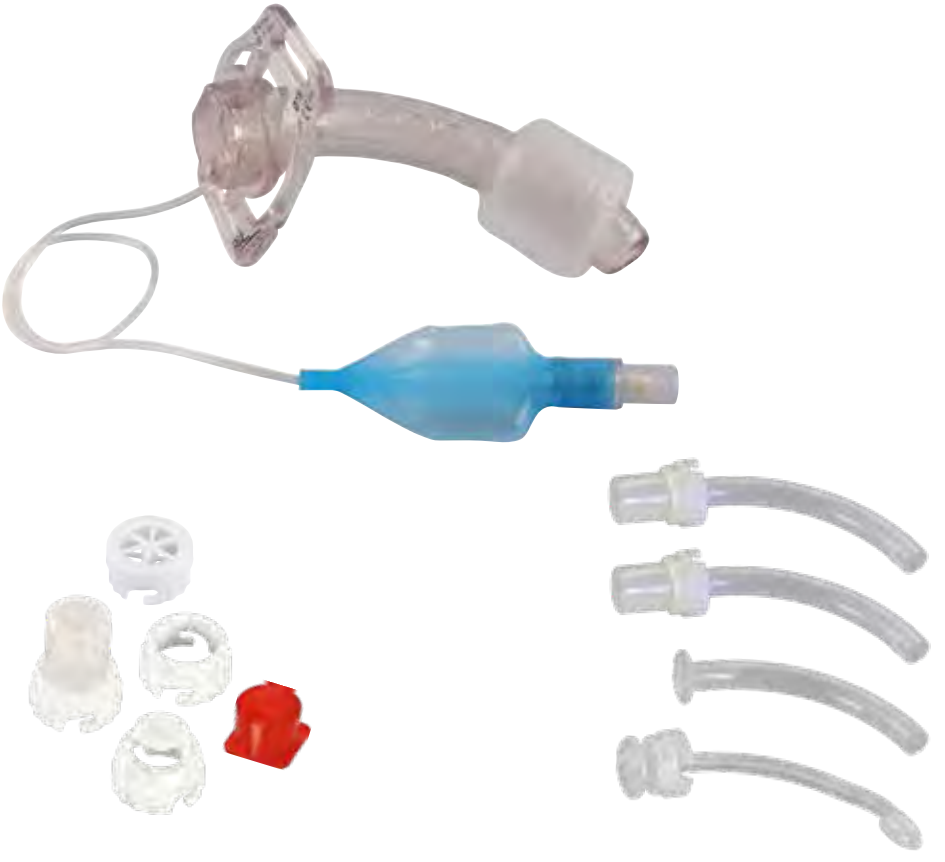
The TRACHLINE® UNI CUFF tracheostomy tube comes with a total of three inner cannulas. Two inner cannulas are fitted with a standardised 15 mm connector. Suitable 15 mm accessories (e.g. "artificial noses") can be attached to this connection. And a further inner cannula with flat profile is also included. In addition to the inner cannulas, the scope of delivery also includes a separate15 mm connector which can be attached to the TRACHLINE® tracheostomy tube without an inner cannula. The connector makes it possible to use HMEs or other accessories with a 15 mm connection. A cough cap is also included. The insertion aid (obturator) facilitates insertion of the cannula.

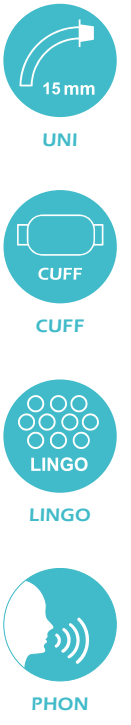
GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF
05	10.6	10.0	6.5	5.0	68.0	62.0	115°	18.0	**13800-05**
06	11.7	11.0	7.5	6.0	76.0	70.0	110°	22.0	**13800-06**
07	12.8	12.2	8.5	7.0	80.0	72.0	105°	22.0	**13800-07**
08	13.8	13.0	9.5	8.0	86.0	80.0	100°	26.0	**13800-08**
09	14.8	14.0	10.5	9.0	92.0	82.0	95°	30.0	**13800-09**
10	15.8	14.5	11.5	10.0	96.0	84.0	90°	32.0	**13800-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHLINE® UNI LINGO PHON CUFF

STERILE





The TRACHLINE® UNI LINGO PHON CUFF is a tracheostomy tube with cuff and sieving that enables voice rehabilitation for tracheotomised patients.

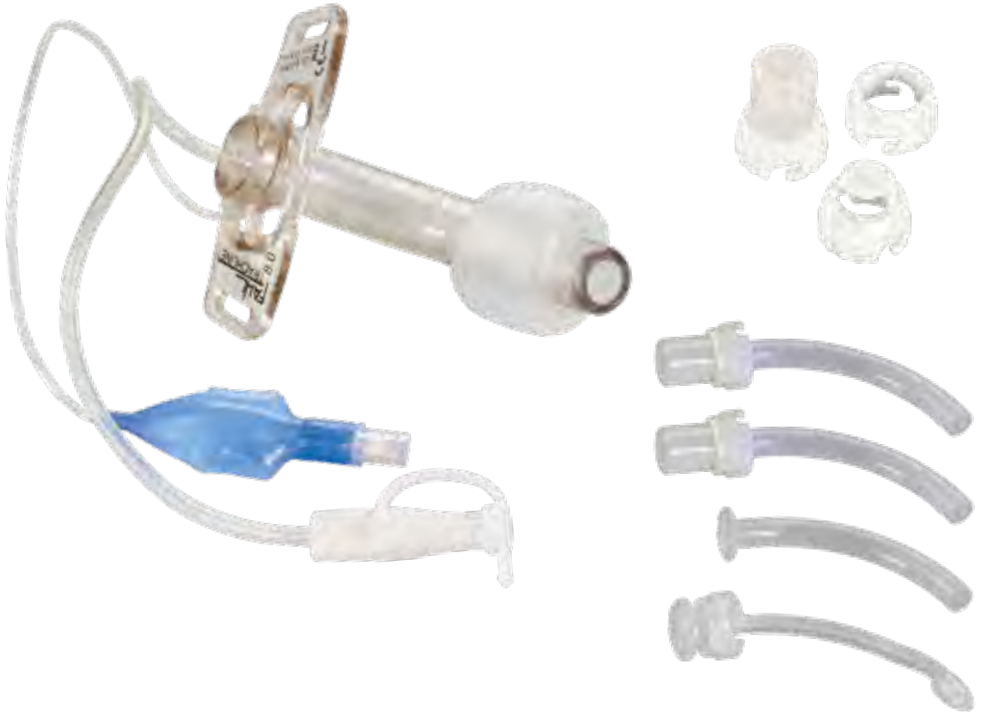
The TRACHLINE® UNI LINGO PHON CUFF tracheostomy tube comes with a total of three inner cannulas. One inner cannula is fitted with a standardised 15 mm connector. In addition, there is a sieved flat inner cannula and a sieved inner cannula with a 15 mm connector. In addition to the safety ring, the cough cap and the separate 15 mm connector, the scope of delivery also includes a red decannulation plug/sealing plug and a speaking valve.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF
05	10.6	10.0	6.5	5.0	68.0	62.0	115°	18.0	**13801-05**
06	11.7	11.0	7.5	6.0	76.0	70.0	110°	22.0	**13801-06**
07	12.8	12.2	8.5	7.0	80.0	72.0	105°	22.0	**13801-07**
08	13.8	13.0	9.5	8.0	86.0	80.0	100°	26.0	**13801-08**
09	14.8	14.0	10.5	9.0	92.0	82.0	95°	30.0	**13801-09**
10	15.8	14.5	11.5	10.0	96.0	84.0	90°	32.0	**13801-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHLINE® UNI CUFF SUCTION

STERILE



UNI

CUFF

SUCTION

The TRACHLINE® UNI CUFF SUCTION tracheostomy tube with suction device is a blockable tracheostomy tube, which offers the option of removing secretions collected above the cuff from the trachea, through a separate tube, if required. For this purpose, the outer cannula contains a fine tube, which can be connected to an external vacuum pump or syringe. Suction accessories can be adapted safely using the suction funnel or Luer connection supplied.

The TRACHLINE® UNI CUFF SUCTION tracheostomy tube comes with a total of three inner cannulas. Two inner cannulas are fitted with a standardised universal adapter. Suitable 15 mm accessories (e.g. "artificial noses") can be attached to this 15 mm connector. And a further inner cannula with flat profile is also included. The flat inner cannula is secured by a locking ring in the outer cannula. In addition to the inner cannulas, the set also includes a separate15 mm connector which can be attached to the TRACHLINE® tracheostomy tube without an inner cannula. The connector makes it possible to use HMEs or other accessories with a 15 mm connector. A cough cap is also included. The insertion aid (obturator) facilitates insertion of the cannula.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	Ø CD	REF
07	12.8	12.2	8.5	7.0	80.0	72.0	105°	22.0	**13802-07**
08	13.8	13.0	9.5	8.0	86.0	80.0	100°	26.0	**13802-08**
09	14.8	14.0	10.5	9.0	92.0	82.0	95°	30.0	**13802-09**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

FAHL® BIESALSKI

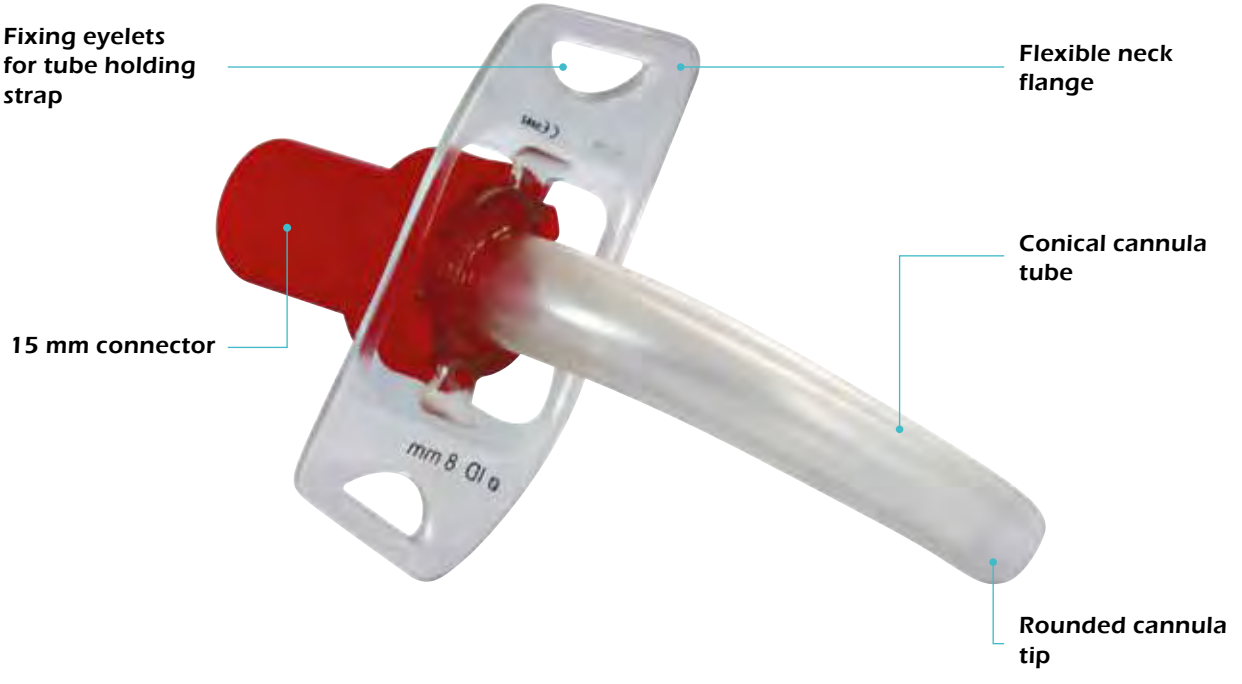
STERILE

Popular and proven: the FAHL® BIESALSKI tracheostomy tube has proven itself in practice for many years due to its uncomplicated, practical design and it is impossible to imagine the FAHL® range being without it.

An extensive range of sizes, from particularly small cannula sizes for use in providing aids for children to adult sizes, enables an individual selection. The cannula features two inner cannulas, a 15 mm connector to be attached separately and a speaking valve.

These elements can also be attached to the outer cannula when an inner cannula is placed, so that all intended uses are possible with one type of inner cannula.

The 15 mm connector, the neck flange and the inner cannula are colour-coded according to their size. The FAHL® BIESALSKI tracheostomy tube is characterised by a unique feature in that the special shape of the cannula enables speaking even though the cannula is not fenestrated. Here, the air to be exhaled flows around the outer cannula.



FAHL® BIESALSKI

STERILE

UNI

PHON

The cannula tube of the FAHL® BIESALSKI tracheostomy tube is conical. This means that the tracheostomy tube has a larger diameter at the neck flange than at the rounded tip of the cannula. The reduced diameter at the tip simplifies insertion of the tracheostomy tube. Due to the conical cannula tube, exhaled air flows around the cannula and enables voice rehabilitation for tracheotomised patients, even though the cannula is not fenestrated.

Two inner cannulas are included, as well as a clip-on speaking valve and a cough cap.

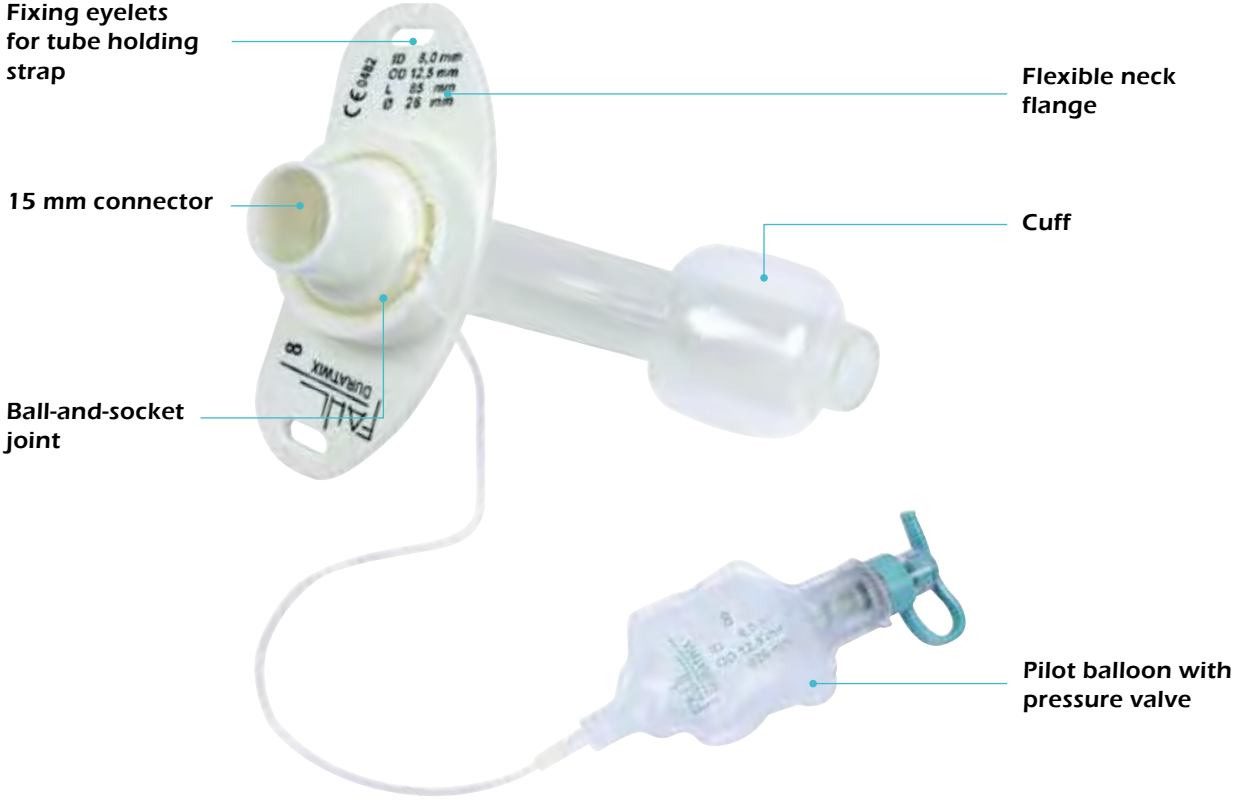
GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	CODE COLOUR	REF IC	REF
04	8.4	5.6	4.0	2.3	44.0	40.0	60°		-	**17900-04**
05	9.0	6.5	5.0	3.3	46.0	43.0	70°		-	**17900-05**
06	9.7	7.7	6.0	3.9	52.0	47.0	70°		17905-06	**17900-06**
07	11.0	8.6	7.0	5.0	60.0	56.0	80°		17905-07	**17900-07**
08	12.0	9.7	8.0	5.9	66.0	62.0	85°		17905-08	**17900-08**
09	14.0	11.5	9.0	7.0	71.0	65.0	85°		17905-09	**17900-09**
10	15.0	12.1	10.0	7.9	75.0	67.0	90°		17905-10	**17900-10**
11	16.0	12.4	11.0	9.2	78.5	67.0	90°		17905-11	**17900-11**
12	17.0	13.9	12.0	9.8	77.0	71.0	90°		17905-12	**17900-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX®

STERILE

The classic among FAHL tracheostomy tubes: made of high-quality medical-grade polyurethane, both with and without cuff and optional sieving, this tube is the ideal solution for intensive care, for patients requiring ventilation, for use in ENT or in the home-care sector. The neck flange in combination with a ball-and-socket joint, rotatable through 360°, allows extensive neck mobility and reduces the pressure of the flange on the neck. Sieving helps to reduce aspiration. Different inner cannulas accommodate different requirements. For example, the inner cannula with rotating 15 mm connector is often used where it is necessary to counteract external torsional and shear forces (ventilation tube). Inner cannulas with a fixed 15 mm connector are preferred, for example, when wearing an HME. Colour coding of the different connectors allows quick differentiation of the individual inner cannulas in situ.



DURATWIX® UNI VARIO

STERILE

UNI

VARIO

In this Duratwix® UNI VARIO tracheostomy tube, the inner cannulas are each fitted with a 15 mm connector. This way, heat and moisture exchangers (HMEs), so-called "artificial noses" or speaking valves can be placed onto the adapter'.

In one inner cannula, the connector is in the form of a swivel version. The 15 mm swivel connector also minimises any possible tractive forces from adapted tube systems, preventing irritation of the mucous membranes.

An insertion aid and a tube holding strap are included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	REF Short	REF
06	11.9	10.3	8.0	6.3	82.0	72.0	-	-	90°	-	**19211-06**
07	11.9	10.8	8.6	7.0	82.0	72.0	72.0	63.0	90°	**19212-07**	**19211-07**
08	12.5	11.4	9.5	8.0	85.0	73.0	75.0	64.0	90°	**19212-08**	**19211-08**
09	13.7	12.5	10.6	9.0	88.0	74.0	78.0	65.0	90°	**19212-09**	**19211-09**
10	15.0	13.8	11.6	10.0	91.0	75.0	81.0	66.0	90°	**19212-10**	**19211-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® UNI VARIO LINGO

STERILE

UNI

VARIO

LINGO

The DURATWIX® UNI VARIO LINGO is a sieved tracheostomy tube for voice rehabilitation. To use the speaking function, you need an additional speaking valve which can be attached to the 15 mm connector of the inner cannula or an additional replacement fenestrated inner cannula with speaking valve (REF. 19841/19842). These articles must be ordered separately if required.

We supply the DURATWIX® LINGO tracheostomy tube with 2 inner cannulas, one with a 15 mm swivel connector and a fenestrated inner cannula with a 15 mm connector.

The swivel connector also minimises any possible tractive forces from adapted tube systems, preventing irritation of the mucous membranes in the trachea.

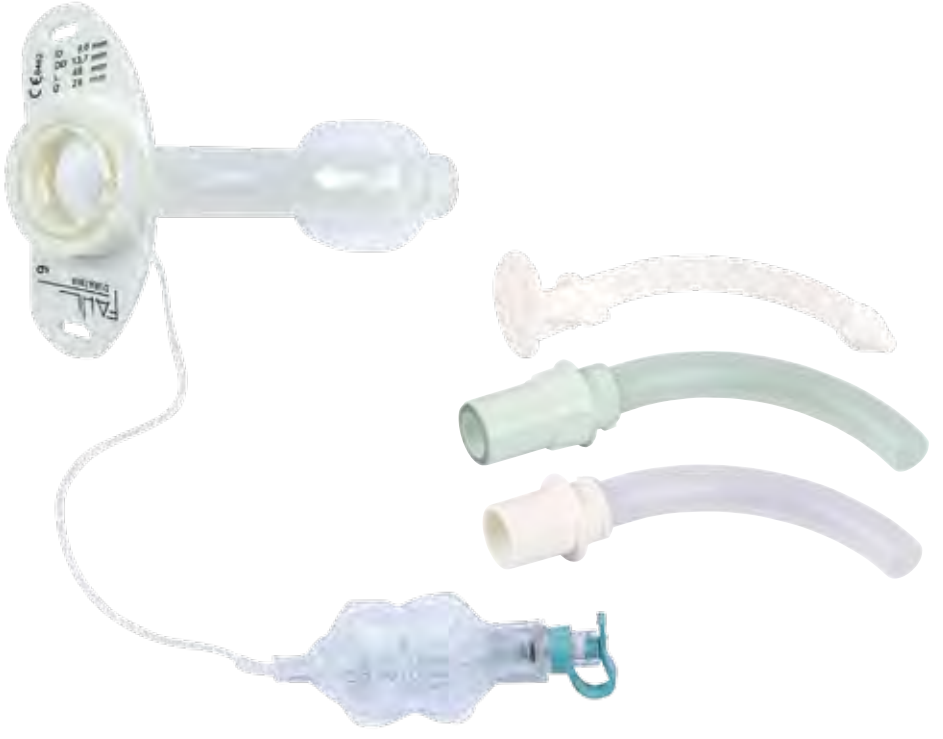
An insertion aid (obturator), a decannulation plug and a tube holding strap are included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	REF Short	REF
06	11.9	10.3	8.0	6.3	82.0	72.0	-	-	90°	-	**19261-06**
07	11.9	10.8	8.6	7.0	82.0	72.0	72.0	63.0	90°	**19262-07**	**19261-07**
08	12.5	11.4	9.5	8.0	85.0	73.0	75.0	64.0	90°	**19262-08**	**19261-08**
09	13.7	12.5	10.6	9.0	88.0	74.0	78.0	65.0	90°	**19262-09**	**19261-09**
10	15.0	13.8	11.6	10.0	91.0	75.0	81.0	66.0	90°	**19262-10**	**19261-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® UNI VARIO CUFF

STERILE



UNI

VARIO

CUFF

DURATWIX® UNI VARIO CUFF tracheostomy tubes with cuff are supplied with two inner cannulas with universal attachment, one with a 15 mm swivel connector and one inner cannula with a 15 mm connector.

Heat and moisture exchangers (HME), so-called "artificial noses" with 15 mm connection can be adapted onto the connector.

In one inner cannula, the connector is in the form of a swivel version. The 15 mm swivel connector also minimises any possible tractive forces from adapted tube systems, preventing irritation of the mucous membranes in the trachea.

Also available as short version DURATWIX® UNI VARIO CUFF short. An insertion aid (obturator) and a tube holder are included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	Ø CD	REF Short	REF
06	11.9	10.3	8.0	6.3	82.0	72.0	-	-	90°	22.0	-	**19611-06**
07	11.9	10.8	8.6	7.0	82.0	72.0	72.0	63.0	90°	22.0	**19612-07**	**19611-07**
08	12.5	11.4	9.5	8.0	85.0	73.0	75.0	64.0	90°	26.0	**19612-08**	**19611-08**
09	13.7	12.5	10.6	9.0	88.0	74.0	78.0	65.0	90°	28.0	**19612-09**	**19611-09**
10	15.0	13.8	11.6	10.0	91.0	75.0	81.0	66.0	90°	30.0	**19612-10**	**19611-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® UNI VARIO LINGO CUFF

STERILE

UNI

VARIO

CUFF

LINGO

The DURATWIX® UNI VARIO LINGO CUFF is a tracheostomy tube with cuff which can be used by tracheotomised patients. To be able to use the basic speaking function of the DURATWIX® tracheostomy tube, you require an additional speaking valve which can be attached to the 15 mm connector of the fenestrated inner cannula. This speaking valve can be ordered separately if required. An additional replacement fenestrated inner cannula with speaking valve (REF 19841/19842) is also available.

We supply the DURATWIX® UNI VARIO LINGO CUFF tracheostomy tube with 2 inner cannulas, one with a 15 mm swivel connector and a fenestrated inner cannula with a 15 mm connector. The swivel connector also minimises any possible tractive forces from adapted tube systems, preventing irritation of the mucous membranes in the trachea.

An insertion aid (obturator), a decannulation plug and a tube holding strap are included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	Ø CD	REF Short	REF
06	11.9	10.3	8.0	6.3	82.0	72.0	-	-	90°	22.0	-	**19661-06**
07	11.9	10.8	8.6	7.0	82.0	72.0	72.0	63.0	90°	22.0	**19662-07**	**19661-07**
08	12.5	11.4	9.5	8.0	85.0	73.0	75.0	64.0	90°	26.0	**19662-08**	**19661-08**
09	13.7	12.5	10.6	9.0	88.0	74.0	78.0	65.0	90°	28.0	**19662-09**	**19661-09**
10	15.0	13.8	11.6	10.0	91.0	75.0	81.0	66.0	90°	30.0	**19662-10**	**19661-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® ICU REPLACEMENT INNER CANNULA STERILE

UNI

The DURATWIX® ICU replacement inner cannula is an inner cannula fitted with a 15 mm connector.

It can be used with all tracheostomy tubes of the DURATWIX® series.

This way, heat and moisture exchangers (HME), so-called "artificial noses" or ventilation tubes can be adapted on this adapter.

GR Size	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	PU	REF Short	REF
06	6.3	82.0	72.0	-	-	90°	3	-	**19811-06**
07	7.0	82.0	72.0	72.0	63.0	90°	3	**19812-07**	**19811-07**
08	8.0	85.0	73.0	75.0	64.0	90°	3	**19812-08**	**19811-08**
09	9.0	88.0	74.0	78.0	65.0	90°	3	**19812-09**	**19811-09**
10	10.0	91.0	75.0	81.0	66.0	90°	3	**19812-10**	**19811-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® ICV REPLACEMENT INNER CANNULA STERILE

The DURATWIX® ICV replacement inner cannula is an inner cannula fitted with a 15 mm swivel connector. The swivel connector also minimises any possible tractive forces from adapted tube systems, preventing irritation of the mucous membranes in the trachea. This way, heat and moisture exchangers (HME), so-called "artificial noses" or ventilation tubes can be adapted on this connector.

VARIO

GR Size	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	PU	REF Short	REF
07	7.0	82.0	72.0	72.0	63.0	90°	3	**19822-07**	**19821-07**
08	8.0	85.0	73.0	75.0	64.0	90°	3	**19822-08**	**19821-08**
09	9.0	88.0	74.0	78.0	65.0	90°	3	**19822-09**	**19821-09**
10	10.0	91.0	75.0	81.0	66.0	90°	3	**19822-10**	**19821-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® ICK REPLACEMENT INNER CANNULA

STERILE

KOMBI

The DURATWIX® ICK replacement inner cannula is an inner cannula fitted with a 22 mm combi-adapter.

It can be used with all tracheostomy tubes of the DURATWIX® series.

The combi-adapter enables the connection of compatible accessories with a 22 mm combi-adapter, e.g., for the use of special filters such as Humidotwin or standard HMEs.

GR Size	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	PU	REF Short	REF
07	7.0	82.0	72.0	72.0	63.0	90°	3	**19832-07**	**19831-07**
08	8.0	85.0	73.0	75.0	64.0	90°	3	**19832-08**	**19831-08**
09	9.0	88.0	74.0	78.0	65.0	90°	3	**19832-09**	**19831-09**
10	10.0	91.0	75.0	81.0	66.0	90°	3	**19832-10**	**19831-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® ICFU REPLACEMENT INNER CANNULA

STERILE

The DURATWIX® ICFU replacement inner cannula is a fenestrated inner cannula fitted with a 15 mm connector. It can be used with all Lingo variants of the DURATWIX® tracheostomy tube series. This way, heat and moisture exchangers (HMEs), so-called "artificial noses" or speaking valves can be placed onto the adapter.

UNI

LINGO

GR Size	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	PU	REF Short	REF
06	6.3	82.0	72.0	-	-	90°	3	-	**19861-06**
07	7.0	82.0	72.0	72.0	63.0	90°	3	**19862-07**	**19861-07**
08	8.0	85.0	73.0	75.0	64.0	90°	3	**19862-08**	**19861-08**
09	9.0	88.0	74.0	78.0	65.0	90°	3	**19862-09**	**19861-09**
10	10.0	91.0	75.0	81.0	66.0	90°	3	**19862-10**	**19861-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® ICFV REPLACEMENT INNER CANNULA STERILE

VARIO

LINGO

The DURATWIX® ICFV replacement inner cannula is a fenestrated inner cannula fitted with a 15 mm swivel connector. It can be used with all LINGO variants of the DURATWIX® tracheostomy tube series.

The swivel connector also minimises any possible tractive forces from adapted tube systems, preventing irritation of the mucous membranes.

GR Size	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	PU	REF Short	REF
06	6.3	82.0	72.0	-	-	90°	3	-	**19871-06**
07	7.0	82.0	72.0	72.0	63.0	90°	3	**19872-07**	**19871-07**
08	8.0	85.0	73.0	75.0	64.0	90°	3	**19872-08**	**19871-08**
09	9.0	88.0	74.0	78.0	65.0	90°	3	**19872-09**	**19871-09**
10	10.0	91.0	75.0	81.0	66.0	90°	3	**19872-10**	**19871-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® ICFK REPLACEMENT INNER CANNULA STERILE

The DURATWIX® ICFK replacement inner cannula is a fenestrated inner cannula fitted with a 22 mm combi-adapter. It can be used with all Lingo variants of the DURATWIX® tracheostomy tube series. The combi-adapter enables the connection of compatible accessories with a 22 mm combi-adapter.

KOMBI

LINGO

GR Size	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	PU	REF Short	REF
07	7.0	82.0	72.0	72.0	63.0	90°	3	**19882-07**	**19881-07**
08	8.0	85.0	73.0	75.0	64.0	90°	3	**19882-08**	**19881-08**
09	9.0	88.0	74.0	78.0	65.0	90°	3	**19882-09**	**19881-09**
10	10.0	91.0	75.0	81.0	66.0	90°	3	**19882-10**	**19881-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® PHON ICF REPLACEMENT INNER CANNULA STERILE

LINGO

PHON

The DURATWIX® PHON ICF replacement inner cannula is a fenestrated inner cannula, fitted with a plastic speaking valve.

It must only be used in combination with a DURATWIX® LINGO tracheostomy tube.

The DURATWIX® PHON ICF replacement inner cannula is packaged sterile.

GR Size	ID2 IC	L1 AB	L2 MB	L1 AB Short	L2 MB Short	Θ BW	PU	REF Short	REF
07	7.0	82.0	72.0	72.0	63.0	90°	2	**19842-07**	**19841-07**
08	8.0	85.0	73.0	75.0	64.0	90°	2	**19842-08**	**19841-08**
09	9.0	88.0	74.0	78.0	65.0	90°	2	**19842-09**	**19841-09**
10	10.0	91.0	75.0	81.0	66.0	90°	2	**19842-10**	**19841-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® SOLO ADAPTER VARIO STERILE

This DURATWIX® universal attachment is a 15 mm swivel connector. This adapter can be fixed to the outer cannula, without an inner cannula. It can be used with all tracheostomy tubes of the DURATWIX® series. This way, heat and moisture exchangers (HMEs), so-called "artificial noses" or speaking valves can be placed onto the adapter.

360°
15 mm

VARIO

ORDER INFORMATION	PU	REF
DURATWIX® SOLO ADAPTER VARIO	3	**19807**

DURATWIX® PLUG — STERILE

The DURATWIX® PLUG decannulation plug is required when tracheotomised patients, with retained larynx, are to be weaned off their tracheotomy tubes. With the aid of the PLUG, the air supply through the tracheostoma is blocked, under medical supervision, for a certain period. This requires the patient to breathe naturally through the nose/mouth, for this period of time. Because natural breathing is fairly strenuous after a tracheotomy, the patient must become accustomed to normal breathing again, step-by-step.

The DURATWIX® PLUG decannulation plug may only be used with the DURATWIX® LINGO series; the outer cannula must be sieved.

ORDER INFORMATION	PU	REF
DURATWIX® PLUG	5	**19805**

DURATWIX® SOLO ADAPTER KOMBI — STERILE

The DURATWIX® KOMBI-ADAPTER SOLO is an adapter which features a 22 mm combi-adapter. This connector can be fixed to the outer cannula, without an inner cannula.

It can be used with all tracheostomy tubes of the DURATWIX® series. The combi-adapter enables the connection of compatible accessories with a 22 mm combi-adapter, e.g., for the use of special filters e.g., Humidotwin, standard HMEs for voice prosthesis users or the HUMIDOPHONE®.speaking valve with filter function, specially developed for tracheotomised patients.

KOMBI

ORDER INFORMATION	PU	REF
DURATWIX® SOLO ADAPTER KOMBI	3	**19808**

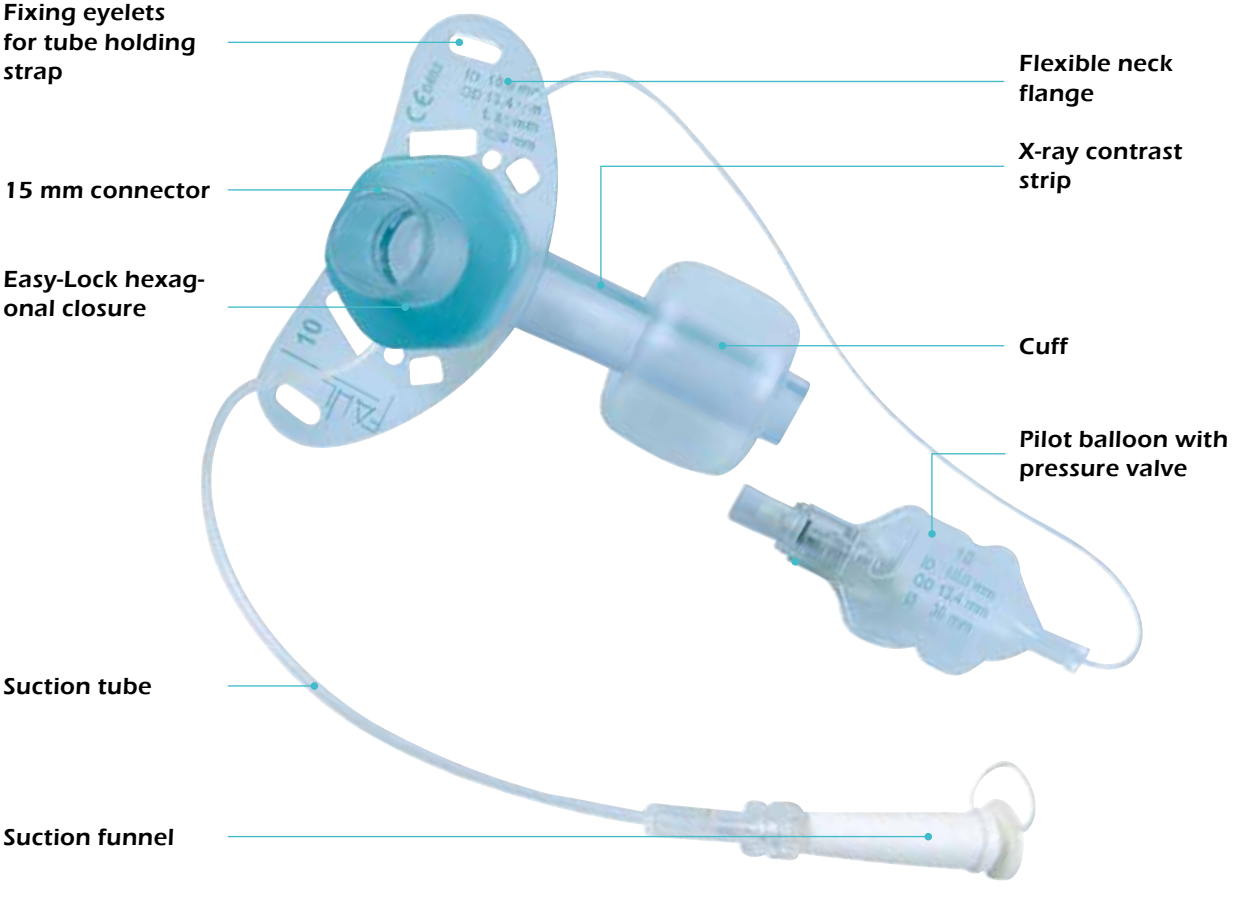
DURACUFF®

STERILE

All DURACUFF® cannulas feature a cuff. They feature two inner cannulas with a 15 mm connector, one with a fixed connector, the other with a rotating connector, to buffer torsional and pressure forces of the ventilation tube. The inner cannulas are fitted into the outer cannula with the proven Easy-Lock hexagonal closure and firmly locked in place with the DURACUFF® Clip to ensure the safety required in ventilation. DURACUFF® cannulas are offered in three different lengths per size: standard, M and XL.

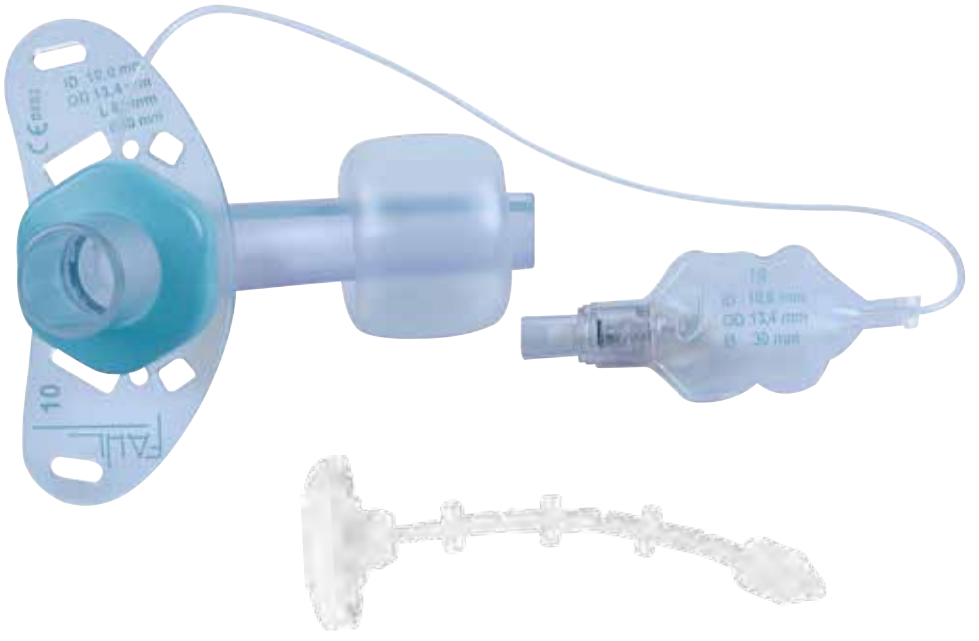
Cannulas with an integrated suction tube are available for subglottic suction.

The speaking cannulas are fitted with the lightweight and easy-to-replace Combiphon® speaking valve.



DURACUFF® VARIO

STERILE



VARIO

CUFF

In the DURACUFF® VARIO tracheostomy tubes, the cannulas are each fitted with a standardised universal adapter. In this version of the DURACUFF® tracheostomy tube, a 15 mm swivel connector is located directly on the outer cannula's neck flange. This way, heat and moisture exchangers (HMEs), so-called "artificial noses" or speaking valves can be placed onto the connector. The swivel connector also minimises any possible tractive forces from adapted tube systems, preventing injury to the mucous membranes.

The DURACUFF® VARIO tracheostomy tube is also available as medium length M.

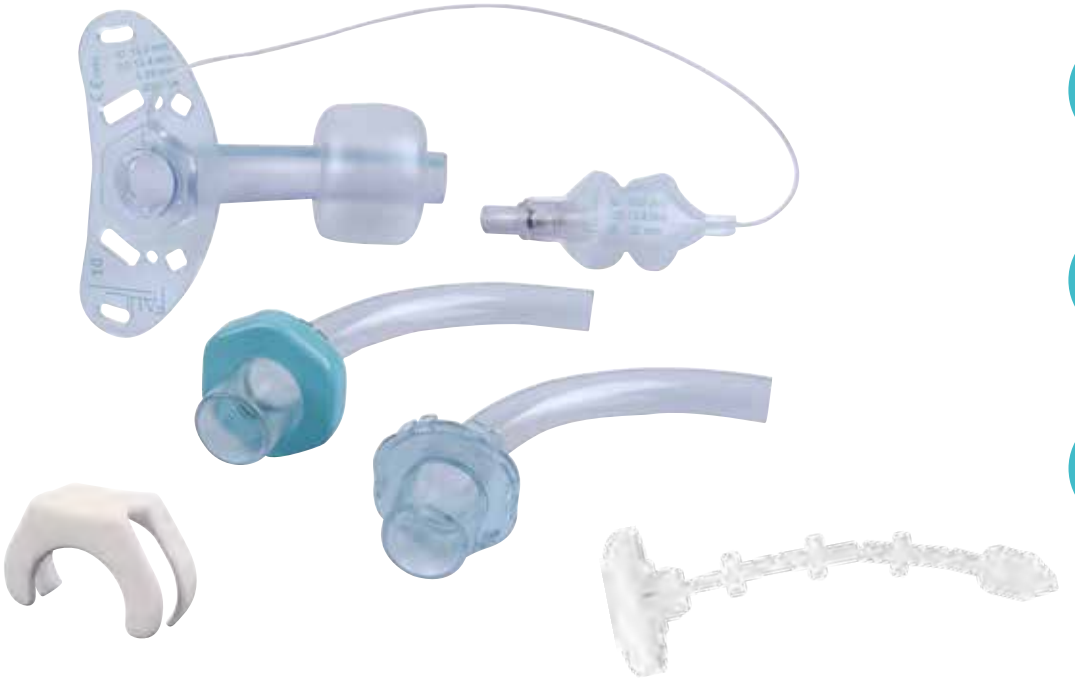
In addition, an insertion aid (obturator) and a tube holding strap are included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	L1 AB M	L2 MB M	Θ BW	Ø CD	REF M	REF
07	10.2	8.8	7.0	65.0	56.0	75.0	66.0	90°	22.0	**13100-07**	**13000-07**
08	11.2	9.8	8.0	70.0	61.0	80.0	73.0	90°	26.0	**13100-08**	**13000-08**
09	12.4	11.2	9.0	75.0	66.0	85.0	77.0	90°	30.0	**13100-09**	**13000-09**
10	13.4	12.2	10.0	85.0	76.0	95.0	86.0	90°	30.0	**13100-10**	**13000-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURACUFF® UNI VARIO

STERILE



UNI

VARIO

CUFF

In this DURACUFF® UNI VARIO tracheostomy tubes, the inner cannula is fitted with a standardised universal adapter in each case. This way, heat and moisture exchangers (HME), so-called "artificial noses" can be adapted on this adapter.

In one inner cannula, the universal adapter is in the form of a swivel connector. The swivel connector also minimises any possible tractive forces from adapted tube systems, preventing injury to the mucous membranes.

The DURACUFF® UNI VARIO tracheostomy tube is also available as medium length M and as XL.

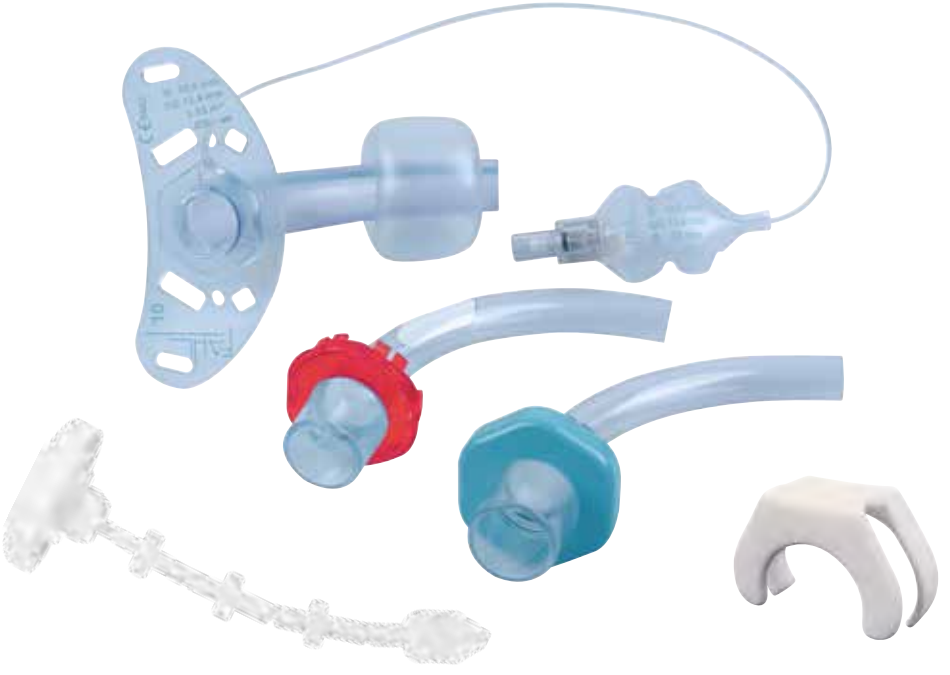
The scope of delivery also includes the DURACUFF® CLIP adapter, for locking the inner cannula, with a 15 mm swivel connector for mechanical ventilation, as well as an obturator (insertion aid) and a tube holding strap.

GR Size	AD1 Flange	AD2 TIP	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB M	L2 MB M	Θ BW	Ø CD	REF M	REF
07	10.2	8.8	7.0	5.5	65.0	56.0	75.0	66.0	90°	22.0	**13102-07**	**13002-07**
08	11.2	9.8	8.0	6.5	70.0	61.0	80.0	73.0	90°	26.0	**13102-08**	**13002-08**
09	12.4	11.2	9.0	7.5	75.0	66.0	85.0	77.0	90°	30.0	**13102-09**	**13002-09**
10	13.4	12.2	10.0	8.5	85.0	76.0	95.0	86.0	90°	30.0	**13102-10**	**13002-10**
11	14.4	13.2	11.0	9.5	87.0	77.0	97.0	91.0	90°	32.0	**13102-11**	**13002-11**
12	15.4	14.2	12.0	10.2	-	-	100.0	91.0	90°	32.0	**13102-12**	-

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURACUFF® UNI VARIO LINGO

STERILE



UNI

VARIO

CUFF

LINGO

The DURACUFF® UNI VARIO LINGO is a sieved tracheostomy tube for voice rehabilitation. To be able to use the speaking function, you require an additional speaking valve which can be attached to the 15 mm connector of the inner cannulas.

We supply the DURACUFF® UNI VARIO LINGO tracheostomy tube with 2 inner cannulas, one with a 15 mm swivel connector and a fenestrated inner cannula with a 15 mm connector.

The DURACUFF® UNI VARIO LINGO tracheostomy tube is also available as medium length M and as XL.

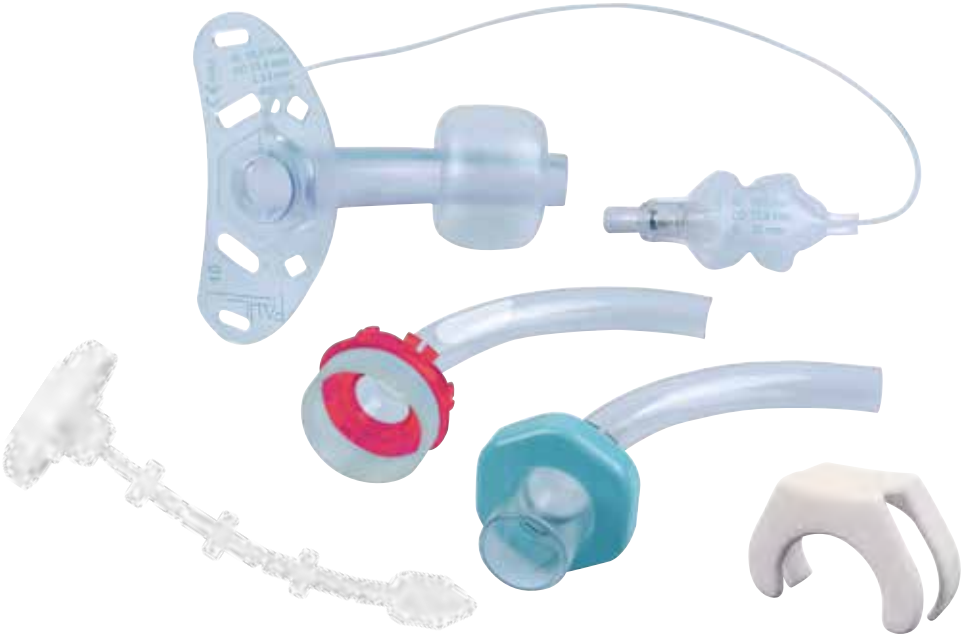
The scope of delivery also includes the DURACUFF® CLIP adapter, for locking the inner cannula, with a 15 mm swivel connector for mechanical ventilation, as well as an obturator (insertion aid) and a tube holding strap.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB M	L2 MB M	Θ BW	Ø CD	REF M	REF
07	10.2	8.8	7.0	5.5	65.0	56.0	75.0	66.0	90°	22.0	**13122-07**	**13022-07**
08	11.2	9.8	8.0	6.5	70.0	61.0	80.0	73.0	90°	26.0	**13122-08**	**13022-08**
09	12.4	11.2	9.0	7.5	75.0	66.0	85.0	77.0	90°	30.0	**13122-09**	**13022-09**
10	13.4	12.2	10.0	8.5	85.0	76.0	95.0	86.0	90°	30.0	**13122-10**	**13022-10**
11	14.4	13.2	11.0	9.5	87.0	77.0	97.0	91.0	90°	32.0	**13122-11**	**13022-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURACUFF® VARIO KOMBI LINGO

STERILE



VARIO

KOMBI

CUFF

LINGO

The DURACUFF® UNI VARIO LINGO is a sieved tracheostomy tube for voice rehabilitation. To be able to use the speaking function, you require an additional speaking valve which can be attached to the 15 mm connector of the inner cannulas.

The DURACUFF® VARIO KOMBI LINGO sieved tracheostomy tube is supplied with 2 inner cannulas. One of these is fenestrated and has a 22 mm combi-adapter; the other inner cannula is equipped with a 15 mm swivel connector. The combi-adapter enables the connection of compatible accessories with a 22 mm combi-adapter, e.g., for the use of special filters, speaking valves and tracheostoma valves. The inner cannula with a 15 mm connector is used when, for example, the respiratory air is to be conditioned using so-called "artificial noses".

The DURACUFF® VARIO KOMBI LINGO tracheostomy tube is also available as medium length M and as XL in size 9.

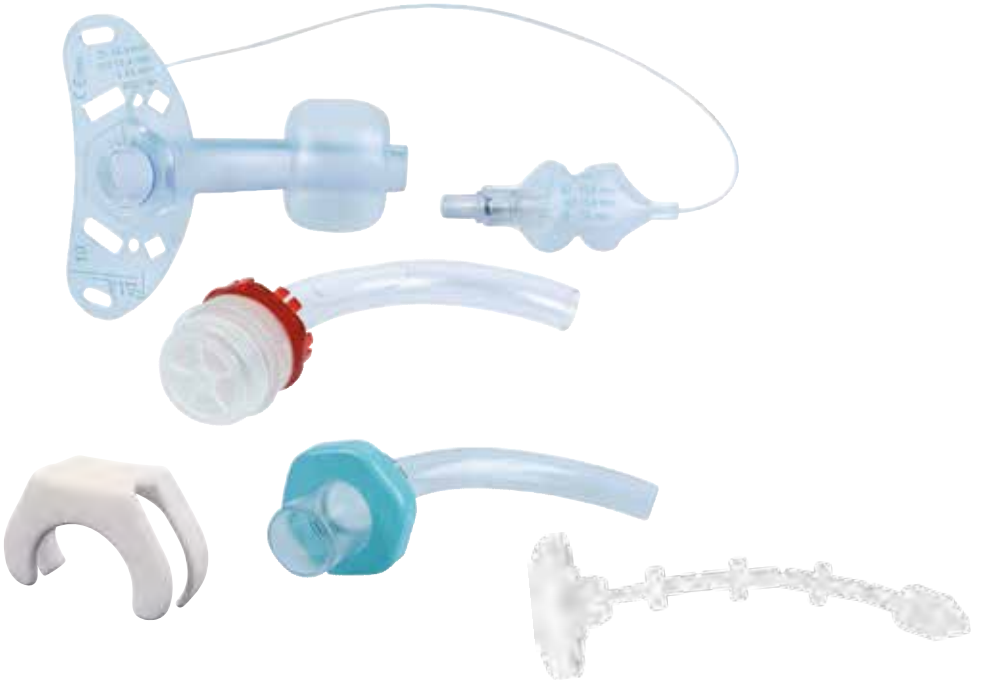
The scope of delivery also includes the DURACUFF® CLIP adapter, for locking the inner cannula, with a 15 mm swivel connector for mechanical ventilation, as well as an obturator (insertion aid) and a tube holding strap.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB M	L2 MB M	Θ BW	Ø CD	REF M	REF
08	11.2	9.8	8.0	6.5	70.0	61.0	80.0	73.0	90°	26.0	**13172-08**	**13072-08**
09	12.4	11.2	9.0	7.5	75.0	66.0	85.0	77.0	90°	30.0	**13172-09**	**13072-09**
10	13.4	12.2	10.0	8.5	85.0	76.0	95.0	86.0	90°	30.0	**13172-10**	**13072-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURACUFF® VARIO KOMBI LINGO PHON

STERILE



VARIO

KOMBI

LINGO

PHON

The Duracuff® VARIO KOMBI LINGO PHON is the speech version of the Duracuff® tracheostomy tube with cuff.

We supply the Duracuff® VARIO KOMBI LINGO PHON with two inner cannulas, one of which features a 15 mm swivel connector and the other a 22 mm combi-adapter to accommodate a silicone speaking valve, for example.

The DURACUFF® VARIO KOMBI LINGO tracheostomy tube is also available as medium length M and as XL in sizes 8 and 9.

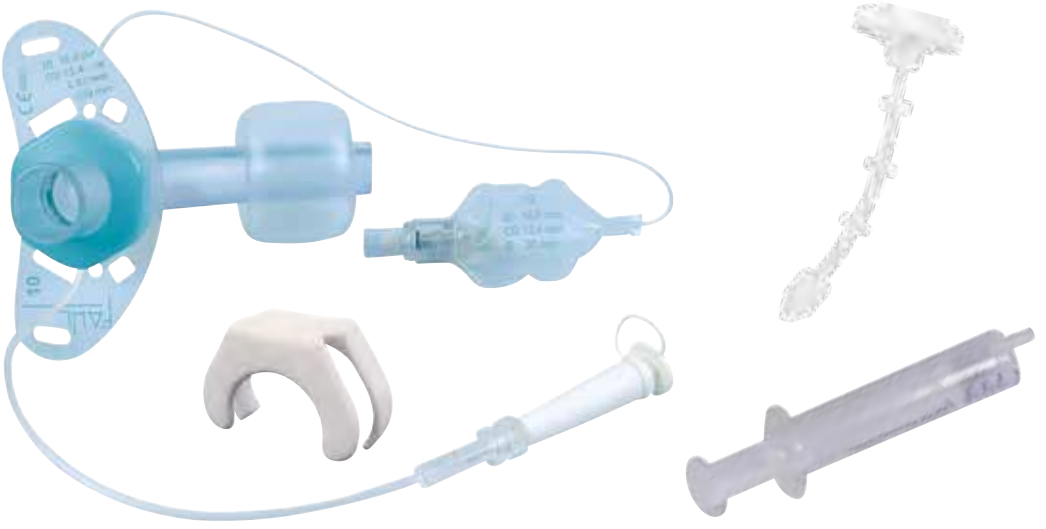
The scope of delivery also includes the DURACUFF® CLIP adapter, for locking the inner cannula, with a 15 mm swivel connector for mechanical ventilation, as well as an obturator (insertion aid) and a tube holding strap.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2MB	L1 AB M	L2MB M	Θ BW	Ø CD	REF M	REF
07	10.2	8.8	7.0	5.5	65.0	56.0	75.0	66.0	90°	22.0	**13112-07**	**13012-07**
08	11.2	9.8	8.0	6.5	70.0	61.0	80.0	73.0	90°	26.0	**13112-08**	**13012-08**
09	12.4	11.2	9.0	7.5	75.0	66.0	85.0	77.0	90°	30.0	**13112-09**	**13012-09**
10	13.4	12.2	10.0	8.5	85.0	76.0	95.0	86.0	90°	30.0	**13112-10**	**13012-10**
11	14.4	13.2	11.0	9.5	87.0	77.0	97.0	91.0	90°	32.0	**13112-11**	**13012-11**
12	15.4	14.2	12.0	10.2	90.0	81.0	-	-	90°	32.0	-	**13012-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURACUFF® VARIO SUCTION

STERILE



VARIO

CUFF

SUCTION

The DURACUFF® VARIO SUCTION tracheostomy tube with suction device is a blockable tracheostomy tube, which offers the option of suctioning secretions collected above the cuff from the trachea, through a separate tube, if required. For this purpose, the outer cannula contains a fine tube with suction funnel which can, for example, be connected to an external suction device. The suction line is incorporated into the outer cannula in such a way that it does not stand out and therefore does not lead to additional irritation of the tracheal wall.

Suction can be carried out using a suction line with vacuum regulator, or the attached disposable syringe. Suction accessories can be adapted safely using the suction funnel or Luer connection. The tracheostomy tube features a 15 mm swivel connector (VARIO).

The DURACUFF® UNI VARIO SUCTION tracheostomy tube is also available as medium length M and as XL.

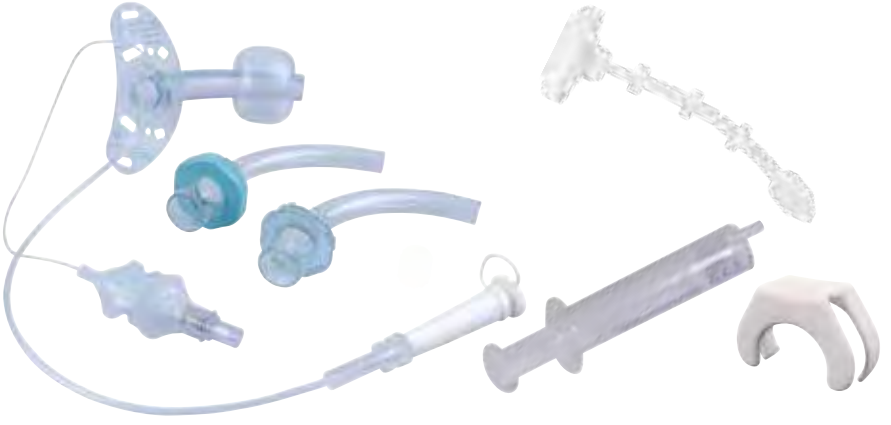
The scope of delivery also includes the DURACUFF® CLIP adapter, for locking the inner cannula, with a 15 mm swivel connector for mechanical ventilation, as well as an obturator (insertion aid) and a tube holding strap.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB M	L2 MB M	Θ BW	Ø CD	REF M	REF
07	10.2	8.8	7.0	5.5	65.0	56.0	75.0	66.0	90°	22.0	**13140-07**	**13040-07**
08	11.2	9.8	8.0	6.5	70.0	61.0	80.0	73.0	90°	26.0	**13140-08**	**13040-08**
09	12.4	11.2	9.0	7.5	75.0	66.0	85.0	77.0	90°	30.0	**13140-09**	**13040-09**
10	13.4	12.2	10.0	8.5	85.0	76.0	95.0	86.0	90°	30.0	**13140-10**	**13040-10**
11	14.4	13.2	11.0	9.5	87.0	77.0	97.0	91.0	90°	32.0	**13140-11**	**13040-11**
12	15.4	14.2	12.0	10.2	90.0	81.0	-	-	90°	32.0	-	**13040-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURACUFF® UNI VARIO SUCTION

STERILE



UNI

VARIO

CUFF

SUCTION

The DURACUFF® UNI VARIO SUCTION tracheostomy tube with suction device is a tracheostomy tube, which offers the option of suctioning secretions collected above the cuff from the trachea, through a separate tube, if required. For this purpose, the outer cannula contains a fine tube with suction funnel which can, for example, be connected to an external suction device. The suction line is incorporated into the outer cannula in such a way that it does not stand out and therefore does not lead to additional irritation of the tracheal wall. The DURACUFF® UNI VARIO SUCTION is supplied, as standard with two inner cannulas with 15 mm connector, where one of the two adapters is a swivel adapter.

Suction can be carried out using a suction line with vacuum regulator, or the attached disposable syringe. Suction accessories can be adapted safely using the suction line or Luer connection.

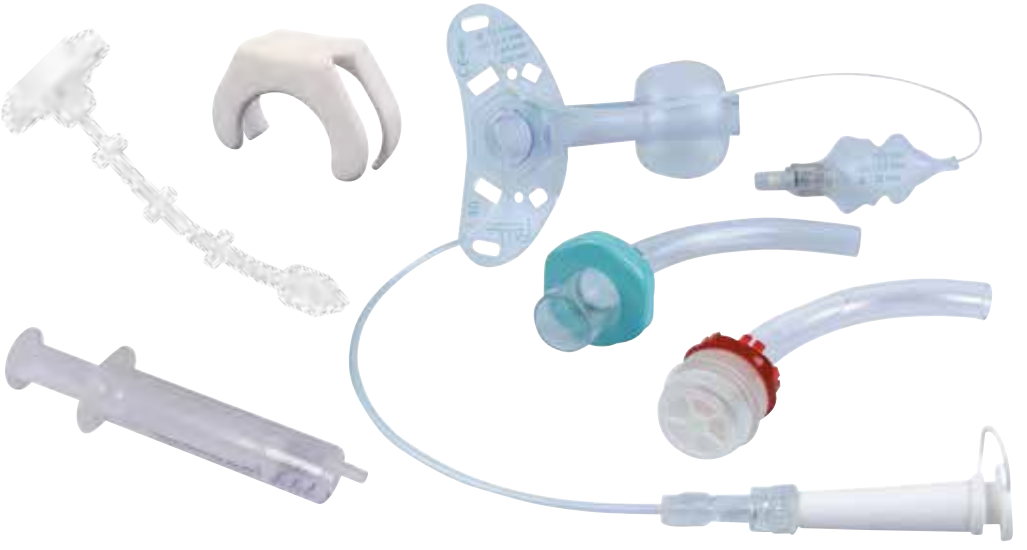
The DURACUFF® UNI VARIO SUCTION tracheostomy tube is also available as medium length M and as XL.

The scope of delivery also includes the DURACUFF® CLIP adapter, for locking the inner cannula, with a 15 mm swivel connector for mechanical ventilation, as well as an obturator (insertion aid) and a tube holding strap.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 OB	L2 CA	L1 AB M	L2 MB M	Θ BW	Ø CD	REF M	REF
07	10.2	8.8	7.0	5.5	65.0	56.0	75.0	66.0	90°	22.0	**13132-07**	**13032-07**
08	11.2	9.8	8.0	6.5	70.0	61.0	80.0	73.0	90°	26.0	**13132-08**	**13032-08**
09	12.4	11.2	9.0	7.5	75.0	66.0	85.0	77.0	90°	30.0	**13132-09**	**13032-09**
10	13.4	12.2	10.0	8.5	85.0	76.0	95.0	86.0	90°	30.0	**13132-10**	**13032-10**
11	14.4	13.2	11.0	9.5	87.0	77.0	97.0	91.0	90°	32.0	**13132-11**	**13032-11**
12	15.4	14.2	12.0	10.2	90.0	81.0	100.0	91.0	90°	32.0	**13132-12**	**13032-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURACUFF® VARIO KOMBI LINGO PHON SUCTION STERILE



VARIO

KOMBI

CUFF

LINGO


PHON

SUCTION

The DURACUFF® VARIO KOMBI LINGO PHON SUCTION is the speech cannula version of the DURACUFF® VARIO KOMBI SUCTION. It combines the features of a blockable DURACUFF® speech cannula with the options of subglottic secretion aspiration.

We supply the DURACUFF® VARIO KOMBI LINGO PHON SUCTION with two inner cannulas, one of which features a 15 mm swivel connector and the other a 22 mm combi-adapter to accommodate a speaking valve.

The version with suction funnel and Luer connection enables the adaptation of the suction accessories so that suction can be performed using either a syringe or a suction device.

The DURACUFF® VARIO KOMBI LINGO PHON SUCTION tracheostomy tube is also available as medium length M and as XL.

The scope of delivery also includes the DURACUFF® CLIP adapter, for locking the inner cannula, with a 15 mm swivel connector for mechanical ventilation, as well as an obturator (insertion aid) and a tube holding strap.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 OB	L2 CA	L1 AB M	L2MB M	Θ BW	Ø CD	REF M	REF
07	10.2	8.8	7.0	5.5	65.0	56.0	75.0	66.0	90°	22.0	**13142-07**	**13042-07**
08	11.2	9.8	8.0	6.5	70.0	61.0	80.0	73.0	90°	26.0	**13142-08**	**13042-08**
09	12.4	11.2	9.0	7.5	75.0	66.0	85.0	77.0	90°	30.0	**13142-09**	**13042-09**
10	13.4	12.2	10.0	8.5	85.0	76.0	95.0	86.0	90°	30.0	**13142-10**	**13042-10**
11	14.4	13.2	11.0	9.5	87.0	77.0	97.0	91.0	90°	32.0	**13142-11**	**13042-11**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURACUFF® CLIP

The DURACUFF® CLIP for locking the inner cannula enables fixation of the inner cannula with 15 mm swivel connector, such that DURACUFF® tracheostomy tubes with inner cannulas and 15 mm swivel connector can be used during mechanical ventilation of a patient.

The DURACUFF® CLIP for locking the inner cannula must be used with all DURACUFF® tracheostomy tubes with inner cannulas with a 15 mm swivel connector when patients are ventilated mechanically!

The DURACUFF® CLIP is attached to the DURACUFF® tracheostomy tube before starting mechanical ventilation. It secures the inner cannula via the lock with the outer cannula and so prevents the inner cannula from accidentally detaching.

ORDER INFORMATION	PU	REF
DURACUFF® CLIP	1	**13299**

DURACUFF® SUCTION FUNNEL

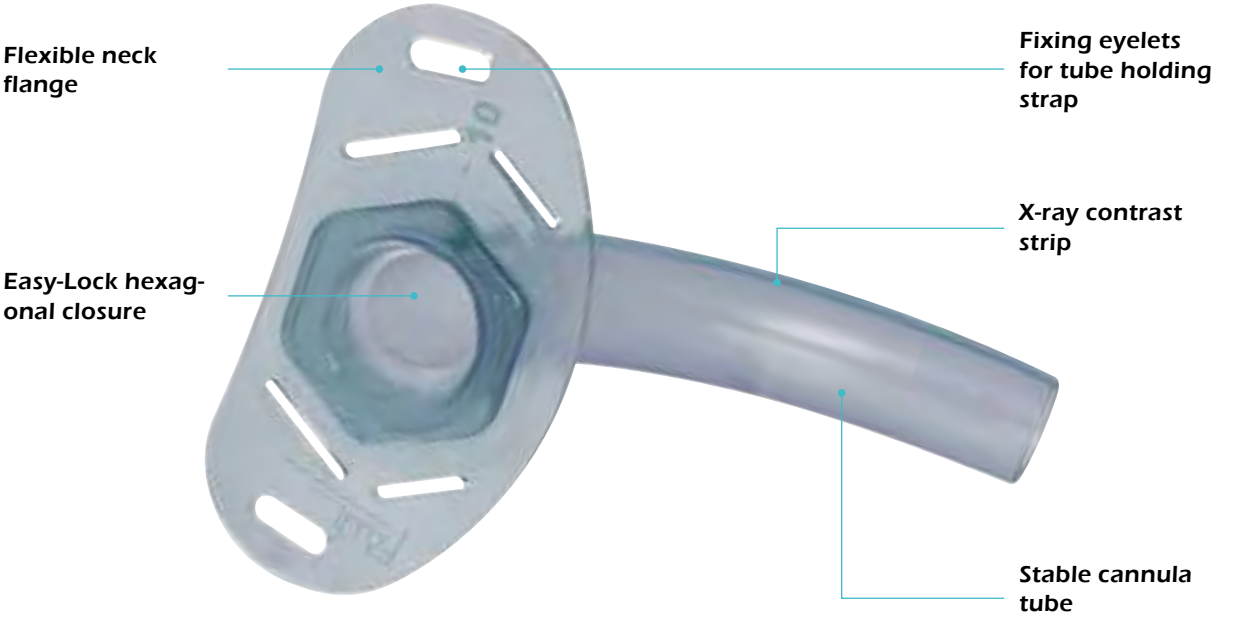
The suction funnel with Luer connection enables the adaptation of the suction accessories for tracheostomy tubes with Luer connection, so that suction can be performed using either a syringe or a vacuum pump.

SUCTION

ORDER INFORMATION	PU	REF
DURACUFF® SUCTION FUNNEL	1	**13995**

DURAVENT®

This tracheostomy tube made of thermoflexible material has already proven itself for many years and offers an excellent solution package for the long-term or permanent cannula wearer with its large number of variants. According to requirements, the wearing time is up to six months. The Easy-Lock hexagonal closure allows the inner cannula to be locked easily into the outer cannula without twisting. Removal is by simple pulling. Such simple and at the same time safe handling is especially advantageous for the patient at home, where trained nursing staff is not always available. The inner cannulas include variants with a flat profile, for example with a 15 mm connector. Two different types of speaking valves are offered for phonation: a metal speaking valve or a push-on COMBIPHON® speaking valve, with a lightweight silicone membrane which is easy to replace. The DURAVENT® tracheostomy tubes are available in standard length and XL versions. We also offer the service of customising DURAVENT® cannulas to customer specifications. The length, sieving and bending angle are variable here.



DURAVENT® UNI

UNI

The DURAVENT® UNI tracheostomy tube consists of an outer cannula and an inner cannula with a standardised 15 mm connector. Here, the connector is used to accommodate heat and moisture exchangers (HME), so-called "artificial noses", or speaking valves with a 15 mm connection.

The DURAVENT® UNI tracheostomy tube is a cannula with an integrated X-ray contrast strip. This allows the cannula to be checked for optimal positioning. The large inner diameter of the cannula allows easier and more comfortable breathing and, despite the thin-walled and flexible tube thickness, provides secure and comfortable wearing without any loss of stability.

The Easy Lock hexagonal connection enables the attachment of the SOLO adapter which is matched to the DURAVENT® cannulas. The DURAVENT® UNI tracheostomy tube is also available as XL version.

Furthermore, a tube holding strap is included in the scope of delivery

GR Size	AD1 Flange	AD2 TIP	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB XL	L2 MB XL	Θ BW	REF XL	REF
03	5.2	3.8	2.7	1.8	55.0	51.0	-	-	90°	-	**11011-03**
3.5	6.2	4.8	3.6	2.7	55.0	51.0	-	-	90°	-	**11011-035**
04	7.2	5.8	4.4	3.3	55.0	51.0	-	-	90°	-	**11011-04**
05	8.4	6.6	5.4	4.3	55.0	51.0	95.0	89.0	90°	**11211-05**	**11011-05**
06	9.4	7.8	6.2	4.9	60.0	55.0	95.0	90.0	90°	**11211-06**	**11011-06**
07	10.2	8.8	7.0	5.5	65.0	59.0	100.0	92.0	90°	**11211-07**	**11011-07**
08	11.2	9.8	8.0	6.5	70.0	61.0	105.0	98.0	90°	**11211-08**	**11011-08**
09	12.4	11.2	9.0	7.5	75.0	67.0	105.0	98.0	90°	**11211-09**	**11011-09**
10	13.4	12.2	10.0	8.5	85.0	75.0	110.0	102.0	90°	**11211-10**	**11011-10**
11	14.4	13.2	11.0	9.5	87.0	78.0	115.0	103.0	90°	**11211-11**	**11011-11**
12	15.4	14.2	12.0	10.2	90.0	82.0	-	-	90°	-	**11011-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAVENT® UNI KOMBI LINGO

UNI

KOMBI

LINGO

The DURAVENT® UNI KOMBI LINGO tracheostomy tube consists of a sieved outer cannula and two inner cannulas. One inner cannula has a 22 mm combi-adapter and is fenestrated. The combi-adapter enables the use of different filter and valve systems with 22 mm combi-adapters.

Insertion of a speaking valve into the housing ring of the inner cannula is also possible. Speaking valves e.g. COMBIPHON can be ordered separately.

The second fenestrated inner cannula is fitted with a 15 mm connector for attaching 15 mm filter systems (e.g. "artificial noses") as an example.

Furthermore, a tube holding strap is included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF
08	11.2	9.8	8.0	6.5	70.0	61.0	90°	**11072-08**
09	12.4	11.2	9.0	7.5	75.0	67.0	90°	**11072-09**
10	13.4	12.2	10.0	8.5	85.0	75.0	90°	**11072-10**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAVENT® UNI LINGO PHON

UNI

LINGO


PHON

The DURAVENT® UNI LINGO PHON speaking cannula consists of an outer cannula and two inner cannulas, one of which has a push-on silver speaking valve. The speaking valve opens on inspiration and air can flow into the trachea. On exhalation, the silver valve closes and the air is directed towards the larynx for speaking. The inner cannula with a speaking valve features an oval opening, the so-called window.

The second inner cannula features a 15 mm connector, which enables the attachment of Heat and Moisture Exchangers (HMEs), so-called "artificial noses".

The DURAVENT® UNI LINGO PHON tracheostomy tube is also available as XL version.

Furthermore, a tube holding strap is included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB XL	L2 MB XL	Θ BW	REF XL	REF
07	10.2	8.8	7.0	5.5	65.0	59.0	-	-	90°	-	**21042-07**
08	11.2	9.8	8.0	6.5	70.0	61.0	105	98.0	90°	**21242-08**	**21042-08**
09	12.4	11.2	9.0	7.5	75.0	67.0	105	98.0	90°	**21242-09**	**21042-09**
10	13.4	12.2	10.0	8.5	85.0	75.0	110	102.0	90°	**21242-10**	**21042-10**
11	14.4	13.2	11.0	9.5	87.0	78.0	-	-	90°	-	**21042-11**
12	15.4	14.2	12.0	10.2	90.0	82.0	-	-	90°	-	**21042-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAVENT® UNI KOMBI LINGO PHON

UNI

KOMBI

LINGO


PHON

The DURAVENT® UNI-KOMBI LINGO PHON speaking cannula consists of an outer cannula and two inner cannulas, one with a 22 mm combi-adapter, the other with a 15 mm connector. The outer cannula features several small holes, which are referred to as a sieve. One of the inner cannulas supplied has a speaking valve attachment. The speaking valve opens on inspiration and air can flow into the trachea. On exhalation, the valve closes and the air is directed towards the larynx for speaking. This inner cannula features an oval opening, the so-called window.

The second inner cannula features a 15 mm connector, which enables the attachment of Heat and Moisture Exchangers (HMEs), so-called "artificial noses".

The DURAVENT® UNI KOMBI LINGO PHON tracheostomy tube is also available as XL version.

Furthermore, a tube holding strap as well as a speaking valve are included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB XL	L2 MB XL	Θ BW	REF XL	REF
05	8.4	6.6	5.4	4.3	55.0	51.0	-	-	90°	-	**21072-05**
06	9.4	7.8	6.2	4.9	60.0	55.0	-	-	90°	-	**21072-06**
07	10.2	8.8	7.0	5.5	65.0	59.0	-	-	90°	-	**21072-07**
08	11.2	9.8	8.0	6.5	70.0	61.0	105.0	98.0	90°	**21272-08**	**21072-08**
09	12.4	11.2	9.0	7.5	75.0	67.0	105.0	98.0	90°	**21272-09**	**21072-09**
10	13.4	12.2	10.0	8.5	85.0	75.0	110.0	102.0	90°	**21272-10**	**21072-10**
11	14.4	13.2	11.0	9.5	87.0	78.0	-	-	90°	-	**21072-11**
12	15.4	14.2	12.0	10.2	90.0	82.0	-	-	90°	-	**21072-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAVENT® SOLO ATTACHMENT FOR TRACHINAZE® PLUS FILTER

The DURAVENT® SOLO attachment specifically for TRACHINAZE® PLUS FILTERS provides the option of a simple way to combine a TRACHINAZE® Plus filter system with a DURAVENT® Standard inner cannula to ensure the optimal conditioning of respiratory air, depending on the current use and requirements. The filter elements are easy to insert into the adapter and equally easy to remove. What is convenient here is that the entire system, including the attachment, can be used relatively inconspicuously. The DURAVENT® SOLO attachment for TRACHINAZE® Plus filters thus provides an alternative for all those patients who wish to use the TRACHINAZE® Plus filter system but do not tolerate adhesive dressings very well.

ORDER INFORMATION	PU	REF
DURAVENT® SOLO ATTACHMENT FOR TRACHINAZE® PLUS FILTER	5	**11991**

DURAVENT® SOLO ADAPTER UNI

To accommodate HMEs and speaking valves with 15 mm connector.

UNI

ORDER INFORMATION	PU	REF
DURAVENT® SOLO ADAPTER UNI SIZES 5–12	5	**11992-XX**

DURAVENT® SOLO ADAPTER KOMBI

KOMBI

The DURAVENT® SOLO combi-adapter is designed to be fixed to the outer cannula. To accommodate HMEs, tracheostoma and speaking valves.

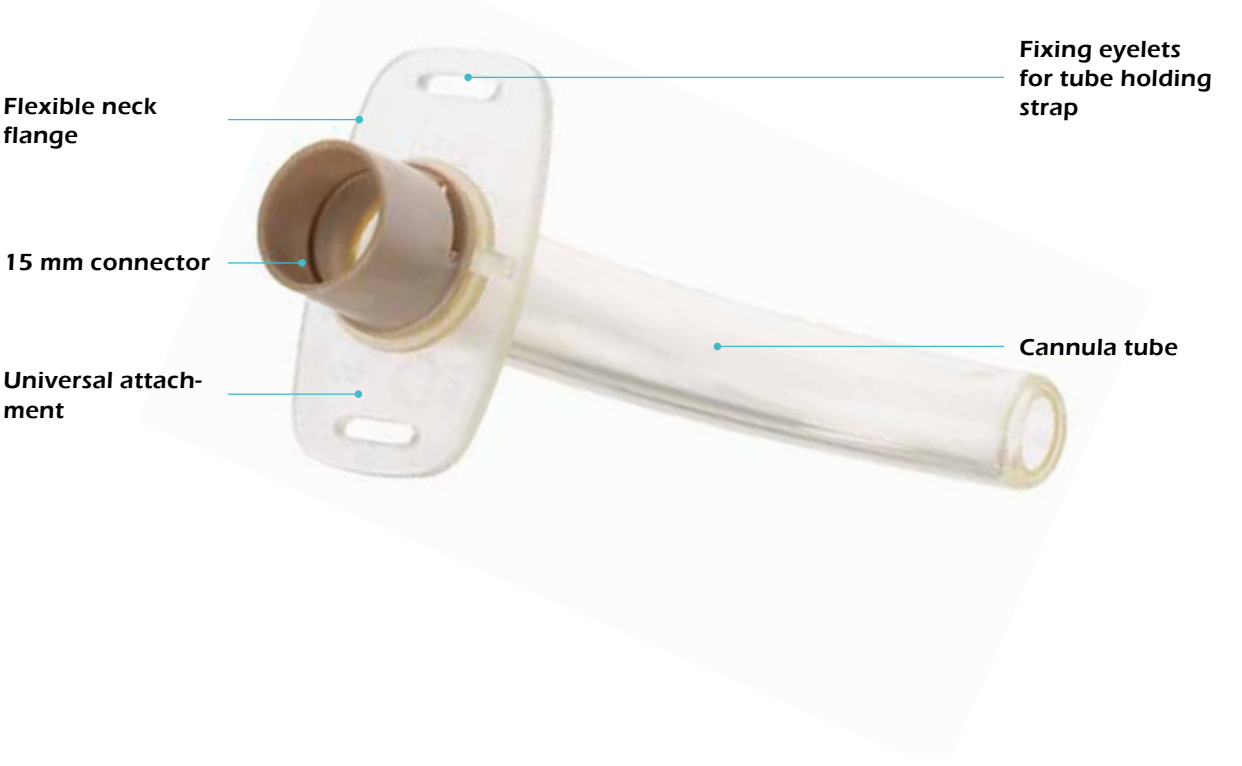
ORDER INFORMATION	PU	REF
DURAVENT® SOLO ADAPTER KOMBI SIZES 5–12	5	**11990-XX**

DURAPUR®

This line of cannulas was designed for long-term and continuous use and is made of a thermosensitive plastic which develops its optimal product properties at body temperature. The outer tube of the cannula is made of one piece, without adhesives or attachments and therefore offers maximum user safety. A multitude of inner cannulas opens up a wide range of applications for the cannula. In addition to the standard flat profile inner cannulas with 15 mm connector, an inner cannula with 22 mm combi-adapter allows the use of, for example, LARYVOX® HMEs with a 22 mm combination adapter, thus providing a variety of different humidification and breathing resistance parameters.

The speaking valve of the speech cannula is located in the inner cannula and is made of high-quality sterling silver. The bactericidal properties of silver contribute to an increased durability of the valve.

The DURAPUR® tracheostomy tube is also available in XL versions for use in tracheomalacia or deep-seated stenoses as examples.



DURAPUR® UNI

UNI

The DURAPUR® UNI tracheostomy tubes are made of an environmentally friendly plastic and are cast in one piece. They are characterised by good wearing properties.

This DURAPUR® tracheostomy tube features an inner cannula with universal attachment. The universal attachment enables the mounting of so-called "artificial noses" (HME) for humidification of the respiratory air.

The DURAPUR® UNI tracheostomy tube is also available as XL version.

Furthermore, a tube holding strap is included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB XL	L2 MB XL	Θ BW	REF XL	REF
07	10.6	8.7	7.2	5.6	65.0	60.0	-	-	90°	-	**23011-07**
08	12.5	10.4	8.2	6.1	70.0	62.0	105.0	95.0	90°	**23211-08**	**23011-08**
09	13.6	11.3	9.3	7.1	75.0	68.0	110.0	100.0	90°	**23211-09**	**23011-09**
10	14.6	12.4	10.0	8.0	85.0	75.0	115.0	104.0	90°	**23211-10**	**23011-10**
11	15.3	13.3	11.1	9.0	87.0	75.0	-	-	90°	-	**23011-11**
12	16.5	14.3	12.3	10.2	90.0	78.0	-	-	90°	-	**23011-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAPUR® KOMBI

KOMBI

The DURAPUR® KOMBI tracheostomy tubes are made of an environmentally friendly plastic and are cast in one piece. They are characterised by good wearing properties.

This tracheostomy tube is supplied as standard with an inner cannula with 22 mm combi-adapter.

The DURAPUR® KOMBI tracheostomy tube is designed for long-term use.

The DURAPUR® KOMBI tracheostomy tube is also available as XL version.

Furthermore, a tube holding strap is included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB XL	L2 MB XL	Θ BW	REF XL	REF
07	10.6	8.7	7.2	5.6	65.0	60.0	-	-	90°	-	**23081-07**
08	12.5	10.4	8.2	6.1	70.0	62.0	105.0	95.0	90°	**23281-08**	**23081-08**
09	13.6	11.3	9.3	7.1	75.0	68.0	110.0	100.0	90°	**23281-09**	**23081-09**
10	14.6	12.4	10.0	8.0	85.0	75.0	115.0	104.0	90°	**23281-10**	**23081-10**
11	15.3	13.3	11.1	9.0	87.0	75.0	-	-	90°	-	**23081-11**
12	16.5	14.3	12.3	10.2	90.0	78.0	-	-	90°	-	**23081-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAPUR® LINGO PHON

LINGO

LINGO

PHON

The DURAPUR® LINGO PHON tracheostomy tubes are made of an environmentally friendly plastic and are cast in one piece. They are characterised by good wearing properties.

This version of the DURAPUR® LINGO PHON tracheostomy tubes consists of a sieved outer cannula and an inner cannula with a sterling silver speaking valve which is secured with a bayonet lock. The speaking valve can be disengaged with a brief turn and can then be removed, e.g. for cleaning the cannula.

The DURAPUR® LINGO PHON tracheostomy tube is also available as XL version.

Furthermore, a tube holding strap is included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	L1 AB XL	L2 MB XL	Θ BW	REF XL	REF
07	10.6	8.7	7.2	5.6	65.0	60.0	-	-	90°	-	**23032-07**
08	12.5	10.4	8.2	6.1	70.0	62.0	105.0	95.0	90°	**23232-08**	**23032-08**
09	13.6	11.3	9.3	7.1	75.0	68.0	110.0	100.0	90°	**23232-09**	**23032-09**
10	14.6	12.4	10.0	8.0	85.0	75.0	115.0	104.0	90°	**23232-10**	**23032-10**
11	15.3	13.3	11.1	9.0	87.0	75.0	-	-	90°	-	**23032-11**
12	16.5	14.3	12.3	10.2	90.0	78.0	-	-	90°	-	**23032-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAPUR® IC

DURAPUR® IC are internal cannulas with integrated spacer for the DURAPUR® tracheostomy tubes.

The inner cannula is not fenestrated, i.e. is closed. The inner cannula must always be used together with a DURAPUR® outer cannula.

The DURAPUR® IC inner cannula is also available as XL version.

GR Size	ID2 IC	L1 AB	L2 MB	L1 AB XL	L2 MB XL	PU	REF XL	REF
07	5.6	65.0	60.0	-	-	1	-	**23801-07**
08	6.1	70.0	62.0	105.0	95.0	1	**23701-08**	**23801-08**
09	7.1	75.0	68.0	110.0	100.0	1	**23701-09**	**23801-09**
10	8.0	85.0	75.0	115.0	104.0	1	**23701-10**	**23801-10**
11	9.0	87.0	75.0	-	-	1	-	**23801-11**
12	10.2	90.0	78.0	-	-	1	-	**23801-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAPUR® ICU

The DURAPUR® ICU inner cannula features a standardised 15 mm connector. The universal attachment enables the mounting of so-called "artificial noses" (HME) for humidification of the respiratory air. The inner cannula is not fenestrated, i.e. is closed. The inner cannula must always be used together with a DURAPUR® outer cannula.

UNI

GR Size	ID2 IC	L1 AB	L2 MB	PU	REF
07	5.6	65.0	60.0	1	**23811-07**
08	6.1	70.0	62.0	1	**23811-08**
09	7.1	75.0	68.0	1	**23811-09**
10	8.0	85.0	75.0	1	**23811-10**
11	9.0	87.0	75.0	1	**23811-11**
12	10.2	90.0	78.0	1	**23811-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAPUR® ICK

KOMBI

DURAPUR® ICK is an inner cannula with 22 mm combination adapter (ICK), e.g. to connect HMEs (22 mm combi-adapter).

The inner cannula is not fenestrated, i.e. is closed. The inner cannula must always be used together with a DURAPUR® outer cannula.

GR Size	ID2 IC	L1 AB	L2 MB	PU	REF
07	5.6	65.0	60.0	1	**23881-07**
08	6.1	70.0	62.0	1	**23881-08**
09	7.1	75.0	68.0	1	**23881-09**
10	8.0	85.0	75.0	1	**23881-10**
11	9.0	87.0	75.0	1	**23881-11**
12	10.2	90.0	78.0	1	**23881-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAPUR® ICFK

The DURAPUR® ICFKs are fenestrated inner cannulas with a 22 mm combi-adapter for DURAPUR® tracheostomy tubes. They allow accommodating speaking valves or HMEs.

The inner cannula must always be used together with a DURAPUR® outer cannula.

KOMBI

LINGO

GR Size	ID2 IC	L1 AB	L2 MB	PU	REF
07	5.6	65.0	60.0	1	**23885-07**
08	6.1	70.0	62.0	1	**23885-08**
09	7.1	75.0	68.0	1	**23885-09**
10	8.0	85.0	75.0	1	**23885-10**
11	9.0	87.0	75.0	1	**23885-11**
12	10.2	90.0	78.0	1	**23885-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAPUR® ICFU

UNI

LINGO

DURAPUR® ICFU is a fenestrated inner cannula for the DURAPUR® tracheostomy tubes with a fixed 15 mm connector (ICFU) for connection to an HME or a speaking valve.

The inner cannula must always be used together with a DURAPUR® outer cannula.

GR Size	ID2 IC	L1 AB	L2 MB	PU	REF
07	5.6	65.0	60.0	1	**23816-07**
08	6.1	70.0	62.0	1	**23816-08**
09	7.1	75.0	68.0	1	**23816-09**
10	8.0	85.0	75.0	1	**23816-10**
11	9.0	87.0	75.0	1	**23816-11**
12	10.2	90.0	78.0	1	**23816-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAPUR® PHON ICF

DURAPUR® phon ICFs are fenestrated inner cannulas with a silver speaking valve, which is attached to the inner cannula via a bayonet lock. The inner cannula must always be used together with a DURAPUR® outer cannula.

LINGO

PHON

GR Size	ID2 IC	L1 AB	L2 MB	PU	REF
07	5.6	65.0	60.0	1	**23808-07**
08	6.1	70.0	62.0	1	**23808-08**
09	7.1	75.0	68.0	1	**23808-09**
10	8.0	85.0	75.0	1	**23808-10**
11	9.0	87.0	75.0	1	**23808-11**
12	10.2	90.0	78.0	1	**23808-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAPUR® PHON ICF O_2

LINGO

LINGO

PHON

O_2

DURAPUR® phon ICF O_2s are fenestrated inner cannulas with a silver speaking valve and lateral oxygen connector.

The speaking valve is fitted with a rotating bayonet lock and can be removed, e.g. for cleaning.

The inner cannula must always be used together with a DURAPUR® outer cannula.

GR Size	ID2 IC	L1 AB	L2 MB	PU	REF
07	5.6	65.0	60.0	1	**23809-07**
08	6.1	70.0	62.0	1	**23809-08**
09	7.1	75.0	68.0	1	**23809-09**
10	8.0	85.0	75.0	1	**23809-10**
11	9.0	87.0	75.0	1	**23809-11**
12	10.2	90.0	78.0	1	**23809-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAPUR® ICF

The DURAPUR® ICFs are fenestrated inner cannulas for the DURAPUR® tracheostomy tubes with flat profile (ICF) when no connection for an HME or speaking valve is required.

The inner cannula must always be used together with a DURAPUR® outer cannula.

LINGO

LINGO

GR Size	ID2 IC	L1 AB	L2 MB	PU	REF
07	5.6	65.0	60.0	1	**23807-07**
08	6.1	70.0	62.0	1	**23807-08**
09	7.1	75.0	68.0	1	**23807-09**
10	8.0	85.0	75.0	1	**23807-10**
11	9.0	87.0	75.0	1	**23807-11**
12	10.2	90.0	78.0	1	**23807-12**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SILVERVENT®

SILVERVENT® is a tracheostomy tube made of sterling silver and continues to impress by its distinctive features such as exceptionally long durability, its thin wall, which ensures an optimal ratio between outer diameter and free inner lumen, or bactericidal properties. The SILVERVENT® cannulas feature all these properties. The cannulas are offered with one or more inner cannulas, including flat profile inner cannulas, with a 15 mm connector for attaching an "artificial nose" or - in the case of the speech cannula - with a removable speaking valve. The SILVERVENT® multi-cannula represents a highlight with its two inner cannulas, one with a 15 mm connector, the other fenestrated with a speaking valve and oxygen connection. In addition to the standard versions, we offer custom-made cannulas for the SILVERVENT®, where several parameters are manufactured according to the customer's wishes.

We also offer a service for refurbishing cannulas that have already been used to optimise wearing time.

SILVERVENT® WITH INNER CANNULA

SILVERVENT® tracheostomy tubes are made of silver and are manufactured from a conical seamless tube. Conical means that the diameter of the cannula tube decreases from the neck flange to the cannula tip. This makes inserting the tracheostomy tube considerably easier.

Silver tracheostomy tubes always contain an inner cannula, so that the entire tracheostomy tube does not have to be exchanged if there is a high production of secretion or encrustation. To temporarily increase the air intake, the free inner lumen of the cannula can be increased by removing the inner cannula.

The inner cannula is secured against falling out by a latch fitted to the outer cannula.

The advantages of silver tracheostomy tubes can be outlined as follows: the thin wall of the cannula ensures a large inner lumen, even with small tracheostomy tubes. In addition, silver also offers an antibacterial effect.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF
07	10.9	9.0	8.2	7.1	65.0	58.0	90°	**10000-07**
08	11.6	9.7	8.9	7.7	70.0	60.0	90°	**10000-08**
09	12.3	10.4	9.6	8.7	75.0	65.0	90°	**10000-09**
10	13.2	11.0	10.2	9.3	80.0	68.0	90°	**10000-10**
11	13.8	11.7	10.9	10.0	90.0	77.0	90°	**10000-11**
12	14.6	12.4	11.6	10.6	90.0	77.0	90°	**10000-12**
13	15.0	13.0	12.2	11.3	90.0	77.0	90°	**10000-13**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SILVERVENT® UNI

UNI

SILVERVENT® UNI tracheostomy tubes with 15 mm connector are intended for patients who need to attach a heat and moisture exchanger (HME or "artificial nose") to their cannula.

The tracheostomy tube consists of an outer cannula and an inner cannula, which has an attachment with a 15 mm connector.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF
07	10.9	9.0	8.2	7.1	65.0	58.0	90°	**10500-07**
08	11.6	9.7	8.9	7.7	70.0	60.0	90°	**10500-08**
09	12.3	10.4	9.6	8.7	75.0	65.0	90°	**10500-09**
10	13.2	11.0	10.2	9.3	80.0	68.0	90°	**10500-10**
11	13.8	11.7	10.9	10.0	90.0	77.0	90°	**10500-11**
12	14.6	12.4	11.6	10.6	90.0	77.0	90°	**10500-12**
13	15.0	13.0	12.2	11.3	90.0	77.0	90°	**10500-13**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SILVERVENT® LINGO PHON

LINGO

LINGO

PHON

The SILVERVENT® LINGO-PHONs are tracheostomy tubes made of sterling silver with a sieve in the outer tube and an oval opening in the inner tube, also referred to as "fenestration". The inner cannula features a removable silver speaking valve, which is specially secured with a chain in addition.

A round valve flap closes off the tube during speaking and expiration. On inhaling, the valve is automatically opened by the incoming airflow. The speaking valve can be slipped out of the holder at any time.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF
07	10.9	9.0	8.2	7.1	65.0	58.0	90°	**20000-07**
08	11.6	9.7	8.9	7.7	70.0	60.0	90°	**20000-08**
09	12.3	10.4	9.6	8.7	75.0	65.0	90°	**20000-09**
10	13.2	11.0	10.2	9.3	80.0	68.0	90°	**20000-10**
11	13.8	11.7	10.9	10.0	90.0	77.0	90°	**20000-11**
12	14.6	12.4	11.6	10.6	90.0	77.0	90°	**20000-12**
13	15.0	13.0	12.2	11.3	90.0	77.0	90°	**20000-13**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

LARYNGOTEC®

STERILE

As the product name suggests, the LARYNGOTEC® tracheostomy tube has been specifically developed for the special requirements and anatomical conditions of laryngectomised patients. The cannula is made of high-quality, soft, medical-grade silicone. The bending angle is wider and the length slightly shorter than a tracheostomy tube of comparable size. The wearing time of this cannula is up to six months. The transparency of the cannula facilitates cleaning and contributes to an inconspicuous appearance. The 22 mm combi-adapter of the LARYNGOTEC® Kombi enables the connection of an HME and/or a hands-free speaking valve, for example from the LARYVOX® series. The cannula is offered both unsieved and sieved.

The LARYNGOTEC® cannula can be modified according to customer requirements.

LARYNGOTEC® KOMBI

STERILE

KOMBI

The LARNYGOTEC® KOMBI version of the LARNYGOTEC® tracheostomy tubes features a combination adapter on the neck flange. It features an opening with a diameter of 22 mm and is thus compatible with standard commercial filter and valve systems with a 22 mm combi-adapter. This allows attaching special filters such as heat and moisture exchangers (HME), so-called "artificial noses". It is possible to provide the tracheostomy tube with additional openings ("sieve") in the cannula tube or to create specialised fenestrations.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
07	10.2	10.2	7.2	44.0	38.0	66°	**14920-0744**
07	10.2	10.2	7.2	62.0	54.0	92°	**14920-0762**
08	11.2	11.2	8.2	44.0	38.0	59°	**14920-0844**
08	11.2	11.2	8.2	62.0	54.0	82°	**14920-0862**
08	11.2	11.2	8.2	70.0	61.0	92°	**14920-0870**
09	12.4	12.4	9.4	44.0	36.0	56°	**14920-0944**
09	12.4	12.4	9.4	62.0	55.0	77°	**14920-0962**
09	12.4	12.4	9.4	75.0	65.0	93°	**14920-0975**
10	13.4	13.4	10.4	44.0	36.0	49°	**14920-1044**
10	13.4	13.4	10.4	62.0	55.0	67°	**14920-1062**
10	13.4	13.4	10.4	85.0	75.0	90°	**14920-1085**
11	14.4	14.4	11.4	44.0	36.0	48°	**14920-1144**
11	14.4	14.4	11.4	62.0	55.0	66°	**14920-1162**
11	14.4	14.4	11.4	87.0	76.0	91°	**14920-1187**
12	15.4	15.4	12.4	44.0	36.0	48°	**14920-1244**
12	15.4	15.4	12.4	62.0	55.0	66°	**14920-1262**
12	15.4	15.4	12.4	90.0	77.0	93°	**14920-1290**
13	16.6	16.6	13.0	44.0	37.0	47°	**14920-1344**
13	16.6	16.6	13.0	62.0	55.0	65°	**14920-1362**
13	16.6	16.6	13.0	90.0	77.0	92°	**14920-1390**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

LARYNGOTEC® KOMBI LINGO

STERILE

KOMBI

LINGO

The LARYNGOTEC® KOMBI LINGO has a combi-adapter on the neck flange. It features an opening with a 22 mm diameter and is thuse compatible with commercially available filter and valve systems with a 22 mm combi-adapter. This allows special filters such as heat and moisture exchangers (HME), so-called "artificial noses" to be attached. In addition, there are numerous small holes ("sieve") in the cannula tube to allow the respiratory air required for speaking to flow out. Tracheostoma valves or speaking valves can also be simply and easily used here.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
07	10.2	10.2	7.2	44.0	38.0	66°	**14720-0744**
07	10.2	10.2	7.2	62.0	54.0	92°	**14720-0762**
08	11.2	11.2	8.2	44.0	38.0	59°	**14720-0844**
08	11.2	11.2	8.2	62.0	54.0	82°	**14720-0862**
08	11.2	11.2	8.2	70.0	61.0	92°	**14720-0870**
09	12.4	12.4	9.4	44.0	36.0	56°	**14720-0944**
09	12.4	12.4	9.4	62.0	55.0	77°	**14720-0962**
09	12.4	12.4	9.4	75.0	65.0	90°	**14720-0975**
10	13.4	13.4	10.4	44.0	36.0	49°	**14720-1044**
10	13.4	13.4	10.4	62.0	55.0	66°	**14720-1062**
10	13.4	13.4	10.4	85.0	75.0	90°	**14720-1085**
11	14.4	14.4	11.4	44.0	36.0	48°	**14720-1144**
11	14.4	14.4	11.4	62.0	55.0	66°	**14720-1162**
11	14.4	14.4	11.4	87.0	76.0	91°	**14720-1187**
12	15.4	15.4	12.4	44.0	36.0	48°	**14720-1244**
12	15.4	15.4	12.4	62.0	55.0	66°	**14720-1262**
12	15.4	15.4	12.4	90.0	77.0	90°	**14720-1290**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

LARYNGOTEC® KOMBI CLIP

STERILE

The LARYNGOTEC® KOMBI CLIP has a combi-adapter on the neck flange. It features an opening with a diameter of 22 mm and is thus compatible with standard commercial filter and valve systems with a 22 mm combi-adapter. This allows attaching special filters such as heat and moisture exchangers (HME), so-called "artificial noses". A feature of the LARYNGOTEC® KOMBI CLIP silicone tube is a beaded ring below the combi-adapter, which enables the use of, for example, fixable base plates so that additional compresses or holding straps are not required. The cannula tip is specially rounded to prevent irritation of the mucous membranes in the trachea.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
07	10.2	10.2	7.2	44.0	38.0	66°	**14830-0744**
08	11.2	11.2	8.2	44.0	38.0	59°	**14830-0844**
08	11.2	11.2	8.2	62.0	54.0	82°	**14830-0862**
09	12.4	12.4	9.4	44.0	36.0	56°	**14830-0944**
09	12.4	12.4	9.4	62.0	55.0	77°	**14830-0962**
09	12.4	12.4	9.4	75.0	65.0	93°	**14830-0975**
10	13.4	13.4	10.4	44.0	36.0	49°	**14830-1044**
10	13.4	13.4	10.4	62.0	55.0	67°	**14830-1062**
10	13.4	13.4	10.4	85.0	75.0	90°	**14830-1085**
11	14.4	14.4	11.4	44.0	36.0	48°	**14830-1144**
11	14.4	14.4	11.4	62.0	55.0	66°	**14830-1162**
11	14.4	14.4	11.4	87.0	76.0	91°	**14830-1187**
12	15.4	15.4	12.4	44.0	36.0	48°	**14830-1244**
12	15.4	15.4	12.4	62.0	55.0	66°	**14830-1262**
13	16.6	16.6	13.0	44.0	37.0	47°	**14830-1344**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

LARYNGOTEC® KOMBI CLIP LINGO

STERILE

KOMBI

LINGO

The LARYNGOTEC® KOMBI CLIP LINGO version features a 22 mm combi-adapter and is thus compatible with commercially available filter and valve systems with a 22 mm combi-adapter. This allows attaching special filters such as heat and moisture exchangers (HME), so-called "artificial noses". In addition, there are numerous small holes ("sieve") in the cannula tube to allow the respiratory air required for speaking to flow out. Tracheostoma valves or speaking valves can also be simply and easily used here.

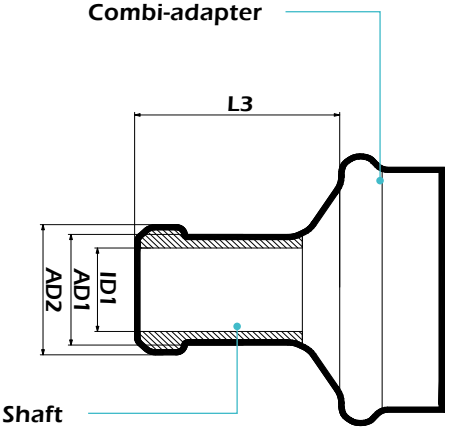
A feature of the LARYNGOTEC® KOMBI CLIP LINGO silicone tube is a beaded ring below the combi-adapter, which enables the use of, for example, fixable base plates so that additional compresses or holding straps are not required. The cannula tip is specially rounded to prevent irritation of the mucous membranes in the trachea.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
07	10.2	10.2	7.2	44.0	38.0	66°	**14820-0744**
07	10.2	10.2	7.2	62.0	54.0	92°	**14820-0762**
08	11.2	11.2	8.2	44.0	38.0	59°	**14820-0844**
08	11.2	11.2	8.2	62.0	54.0	82°	**14820-0862**
09	12.4	12.4	9.4	44.0	36.0	56°	**14820-0944**
09	12.4	12.4	9.4	62.0	55.0	77°	**14820-0962**
10	13.4	13.4	10.4	44.0	36.0	49°	**14820-1044**
10	13.4	13.4	10.4	62.0	55.0	66°	**14820-1062**
10	13.4	13.4	10.4	85.0	75.0	90°	**14820-1085**
11	14.4	14.4	11.4	44.0	36.0	48°	**14820-1144**
11	14.4	14.4	11.4	62.0	55.0	66°	**14820-1162**
12	15.4	15.4	12.4	44.0	36.0	48°	**14820-1244**
12	15.4	15.4	12.4	62.0	55.0	66°	**14820-1262**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

LARYNGOTEC® KOMBI STOMA BUTTON FIX

KOMBI



The LARYNGOTEC® KOMBI STOMA BUTTON FIX made of flexible silicone is used to keep the tracheostoma open and is ideally suited for patients who can do without a tracheostomy tube.

The fastening eyelets on the LARYNGOTEC® KOMBI STOMA BUTTON FIX for a tube holder are fitted at a specific angle so that the minimum of pressure is placed on the button, making it comfortable for the patient to wear. At the same time, the position and stability of the button in the tracheostoma are optimised.

The 22 mm combi-adapter allows the attachment of compatible accessories and special filters, such as heat and moisture exchangers (HME), so-called "artificial noses".

GR Size	AD1	AD2	ID1	L3	L3 Short	REF Short	REF
08	11.0	13.0	8.0	22.0	15.0	**15960-08**	**15950-08**
09	12.0	14.0	9.0	22.0	15.0	**15960-09**	**15950-09**
10	13.0	15.0	10.0	22.0	15.0	**15960-10**	**15950-10**
11	14.0	16.0	11.0	22.0	15.0	**15960-11**	**15950-11**
12	15.0	17.0	12.0	22.0	15.0	**15960-12**	**15950-12**

AD1 = outer diamter shaft | AD2 = outer diameter tip | ID1 = inner diamter shaft | L3= length across the shaft. All dimensions in mm

LARYNGOTEC® PRO

As the product name suggests, the LARYNGOTEC® Pro tracheostomy tube has been specifically developed for the special requirements and anatomical conditions of laryngectomised patients. The cannula is made of high-quality, soft, medical-grade silicone. The bending angle is wider and the length slightly shorter than a tracheostomy tube of comparable size. The wearing time of this cannula is up to six months. The transparency of the tracheostomy tube facilitates cleaning and contributes to an inconspicuous appearance.

The LARYNGOTEC® PRO KOMBI LINGO version features several small holes ("sieve") on the cannula tube to provide a speech function.

In the LARYNGOTEC® PRO cannula, the transition between the 22 mm combi-adapter and the cannula shaft is designed as a proximal cone. The tracheostoma is thus optimally sealed and the cannula is perfectly fixed with the carrying strap included in the scope of delivery.

LARYNGOTEC® PRO KOMBI

KOMBI

The LARYNGOTEC® PRO KOMBI silicone tube is available in various sizes and lengths. The especially rounded tip of the LARYNGOTEC® PRO tracheostomy tubes protects the trachea against injury. The transition between the 22 mm combi-adapter and the cannula shaft is designed as a proximal cone. There are two lateral fastening eyelets on the neck flange for attaching a tube holder.

The size designation is printed on the cone of the 22mm combi-adapter. This facilitates size determination.

The 22 mm combi-adapter enables attaching various filter systems.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
08	12.0	12.0	9.5	42.0	36.0	54°	**14922-0836**
08	12.0	12.0	9.5	65.5	55.0	74°	**14922-0855**
09	13.5	13.5	10.5	42.0	36.0	54°	**14922-0936**
09	13.5	13.5	10.5	65.5	55.0	74°	**14922-0955**
10	15.0	15.0	12.0	42.0	36.0	54°	**14922-1036**
10	15.0	15.0	12.0	65.5	55.0	74°	**14922-1055**
12	17.0	17.0	13.5	42.0	36.0	54°	**14922-1236**
12	17.0	17.0	13.5	65.5	55.0	74°	**14922-1255**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

LARYNGOTEC® PRO KOMBI LINGO

22 mm
KOMBI

LINGO
LINGO

In the LARYNGOTEC® PRO KOMBI LINGO version there are numerous small holes ("sieve") in the cannula tube to allow the respiratory air required for speaking to flow out. The 22 mm combi-adapter enables attaching various filter systems, speaking valves can also be inserted easily and conveniently here.

The size designation is printed on the cone of the 22mm combi-adapter. This facilitates size determination.

The LARYNGOTEC® PRO KOMBI LINGO silicone tube is available in various sizes and lengths.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
08	12.0	12.0	9.5	42.0	36.0	54°	**14722-0836**
08	12.0	12.0	9.5	65.5	55.0	74°	**14722-0855**
09	13.5	13.5	10.5	42.0	36.0	54°	**14722-0936**
09	13.5	13.5	10.5	65.5	55.0	74°	**14722-0955**
10	15.0	15.0	12.0	42.0	36.0	54°	**14722-1036**
10	15.0	15.0	12.0	65.5	55.0	74°	**14722-1055**
12	17.0	17.0	13.5	42.0	36.0	54°	**14722-1236**
12	17.0	17.0	13.5	65.5	55.0	74°	**14722-1255**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

LARYNGOTEC® PRO KOMBI CLIP/LINGO CLIP

KOMBI

LINGO

The LARYNGOTEC® PRO KOMBI CLIP silicone tube is a tracheostomy tube made of soft and flexible silicone for laryngectomees and tracheotomees.

The LARYNGOTEC® PRO KOMBI CLIP silicone cannula is characterised by a turquoise ring behind the proximal cone of the cannula, which allows the use of fixable base plates.

The LARYNGOTEC® PRO KOMBI CLIP has a 22 mm combi-adapter on the neck flange. It features an opening with a diameter of 22 mm and is thus compatible with standard commercial filter and valve systems, for example, heat and moisture exchangers (HME), so-called "artificial noses" with a 22 mm connection.

The LARYNGOTEC® PRO KOMBI CLIP silicone tube is available in various sizes and lengths. In addition, custom-made products are possible.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF KOMBI CLIP	REF LINGO
08	12.0	12.0	9.5	42.0	36.0	54°	**14835-0836**	**14825-0836**
08	12.0	12.0	9.5	65.5	55.0	74°	**14835-0855**	**14825-0855**
09	13.5	13.5	10.5	42.0	36.0	54°	**14835-0936**	**14825-0936**
09	13.5	13.5	10.5	65.5	55.0	74°	**14835-0955**	**14825-0955**
10	15.0	15.0	12.0	42.0	36.0	54°	**14835-1036**	**14825-1036**
10	15.0	15.0	12.0	65.5	55.0	74°	**14835-1055**	**14825-1055**
12	17.0	17.0	13.5	42.0	36.0	54°	**14835-1236**	**14825-1236**
12	17.0	17.0	13.5	65.5	55.0	74°	**14835-1255**	**14825-1255**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer bend | L2-MB = length over central arch Θ - BW = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

WEANING FROM THE TRACHEOSTOMY TUBE

After a severe illness with the necessity of a tracheostomy and sometimes a long treatment period, possibly with ventilation, there is a clearly defined objective for many patients and their relatives: weaning off the tracheostomy tube. After all, the altered airway brings with it many changes and functional limitations. Understandably, the desire to live without this aid in the long term, and if possible, without a tracheostoma, is therefore profound.

Achieving this goal depends on several factors. Decisive factors include the indication for the tracheostomy, i.e. the underlying disease, the progress made during the necessary therapy and the anatomical conditions.

To achieve the goal of permanent decannulation, it is important that physicians and therapists, but also the aid supplier, the nursing staff as well as the patient and relatives work closely together. Intensive speech therapy is particularly important in this context.

Speech therapy is conducted step by step to restore physiological swallowing, breathing and coughing functions. There are various approaches to therapy, which in principle depend on the respective underlying disease and the patient's resources.

HOW IS WEANING DONE IN PRACTICE?

In most cases the tracheostomy tube or phonation cannula is generally unblocked first, i.e. the sealing of the trachea with the cuff is dispensed with. In addition, the affected person is provided with a speaking valve. By using the speaking valve, exhalation is again directed through the larynx, mouth and nose. On the one hand, this makes it possible for the person affected to speak, and on the other hand, the frequency of swallowing is increased. Normally, a person swallows 2000 times a day on average. People who are permanently provided with a tracheostomy tube swallow significantly less often. The reason being that the lack of airflow in the mouth and throat means that important perceptual impulses are missing, which are necessary to trigger the swallowing reflex. By using the speaking valve, the nerves in the mouth and throat receive increased stimulation again, which can lead to an increase in the frequency of swallowing.

In addition, it is useful to stimulate the swallowing reflex through special logopaedic exercises. In addition to the exercises for swallowing, which concern both the frequency of swallowing and strengthening of the muscles involved in swallowing, coughing is also trained. Coughing is a protective reflex which is triggered involuntarily when you choke. In patients who have been wearing a tracheostomy tube for a long period of time, the force of coughing is mostly not strong enough as the supporting respiratory muscles have often atrophied. These muscles can be strengthened and developed again in the long term through specific exercises.

Among other things, efficient breathing exercises are performed in logopaedic therapy as part of the weaning process.

All therapeutic measures are intended to prepare the patient for leaving the tracheostomy tube unblocked for increasingly longer periods of time.

It also makes sense to gradually reduce the diameter of the tracheostomy tube during this phase. A combination of specially selected medical aids and regularly performed exercises should lead to a

HOW IS WEANING DONE IN PRACTICE?

continuous improvement of physiological functions such as swallowing, coughing and speaking. In this context, the reduction of secretions also constitutes an important part of therapy, which can be achieved through targeted measures, such as the continuous use of HMEs. With all therapeutic exercises, it is important to make sure that the patient is able to tolerate the individual measures well, so that the patient can noticeably benefit from therapy.

If therapy progresses appropriately, the next step can be to replace the blockable tracheostomy tube with a tracheostomy tube without cuff or a placeholder/button. Subsequently, a cap is then placed instead of the speaking valve. This largely restores an almost physiological anatomy of the airways. In this constellation, breathing no longer takes place via the tracheostoma but again exclusively via the mouth, nose and throat, the basic prerequisite for permanent decannulation and possible subsequent closure of the tracheostoma. The final decision as to whether decannulation is possible is ultimately made by the attending physician after reviewing all the necessary medical criteria.

The weaning process is constantly monitored by the responsible physician and accompanied by regular endoscopic examinations of the airways to determine which therapeutic measures can be performed and at which point in time.

Both the time needed and the decision on whether decannulation is ultimately possible must be made very individually for each patient. Decannulation itself is by necessity performed under inpatient conditions. There, the first step is to examine whether the permanent cessation of cannulation can in fact be medically advised.

HOW IS DECANNULATION ACTUALLY PERFORMED?

Under permanent monitoring, the tracheostomy tube is removed and the tracheostoma is initially closed with a bandage/patch system. In some cases, as is usually the case with dilated puncture tracheostoma, the stoma closes by itself after a short period of time. However, if a tracheostoma has been created surgically, then it often has to be closed again surgically. In general, it is advisable to initially allow the tracheostoma to shrink for 10 to 14 days to enable a possible spontaneous closure. Even if this is not the case, the tracheostoma has usually shrunk so much during this time that the necessary subsequent surgical closure only leaves a small scar.

Decannulation is usually not possible in patients with progressive degenerative diseases or also in patients who need to be ventilated 24 hours a day. Nevertheless, intensive logopaedic therapy is strongly recommended especially for these patients to maintain existing bodily functions as best possible and maybe even improve them.

The indication-appropriate attempt to wean the patient from the tracheostomy tube is an elementary part of patient-oriented, professionally planned and accompanied tracheostoma care in the interdisciplinary team consisting of medicine, nursing, therapy and aid suppliers.

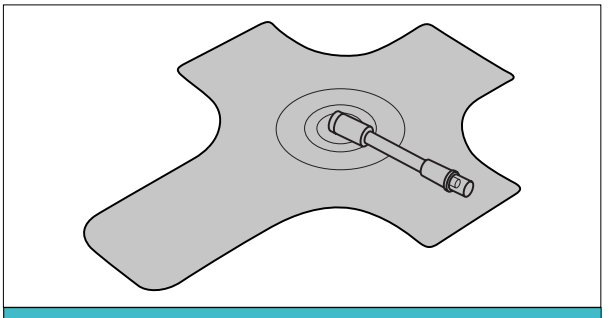
FAHL® DECANNULATION TAPE COMFORT

- Soft, fabric-like material with high adhesive strength
- Special material property facilitates handling, particularly in the case of fixation in problematic tracheostoma situations
- Particularly suitable during physical activity owing to the good adhesive strength

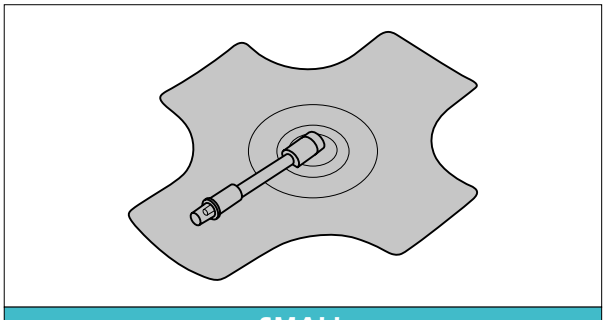
FAHL® DECANNULATION TAPE FLEXIBLE

- Material that adapts flexibly to contours and is gentle to the skin
- Particularly suitable for sensitive skin
- Skin-friendly and gentle removal of the plaster

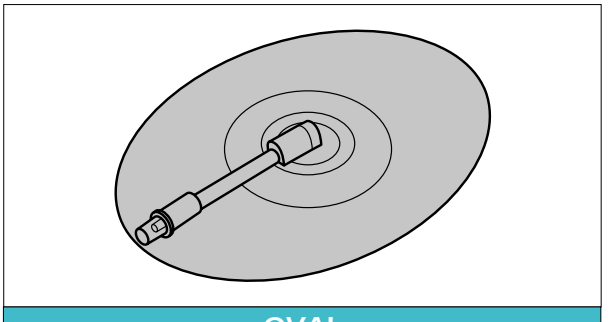
FAHL® DECANNULATION TAPE



LARGE



SMALL

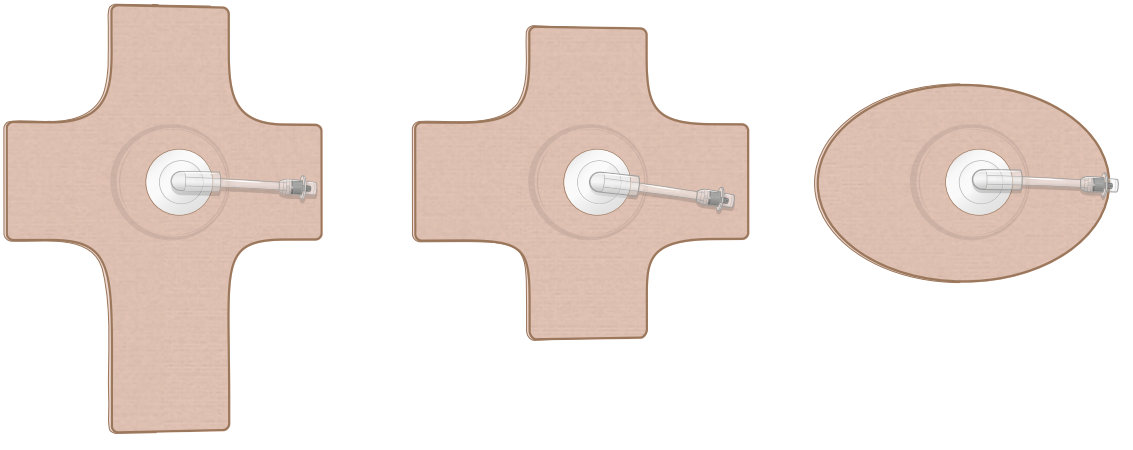


OVAL

The FAHL® DECANNULATION TAPE is a decannulation patch and is used to close the tracheostoma when weaning from a tracheostomy tube. The patch adapts perfectly to the shape of the tracheostoma due to the cuff, which is on the back of the patch and rests on the tracheostoma.

Due to its large contact surface and the individually inflatable cuff, the patch seals the area of the tracheostoma well and ensures that no air escapes when speaking. The cuff is inflated with air via a special valve device, e.g. by means of a syringe or cuff pressure gauge.

The FAHL® DECANNULATION TAPE may only be used for tracheostomised patients and is contraindicated for laryngectomised patients.



FAHL® DECANNULATION TAPE COMFORT

The skin-coloured FAHL® DECANNULATION TAPE COMFORT is available in three different versions for optimal adaptation to the tracheostoma. The material used is breathable and thus offers the highest wearing comfort.

The individually fillable cuff enables creating customised pressure closure which influences voice formation (phonation) and its optimisation.

ORDER INFORMATION	PU	REF
FAHL® DECANNULATION TAPE COMFORT, large	5	**48000-01**
FAHL® DECANNULATION TAPE COMFORT, small	5	**48000-02**
FAHL® DECANNULATION TAPE COMFORT, oval	5	**48000-03**

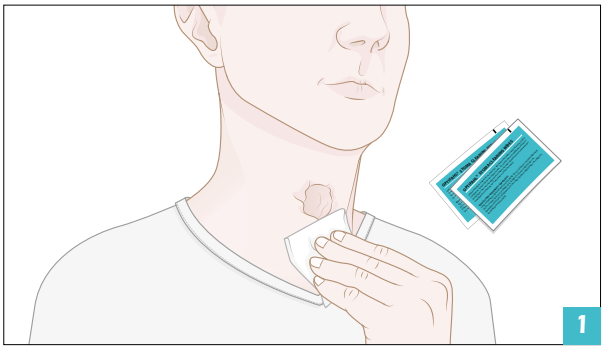
FAHL® DECANNULATION TAPE FLEXIBLE

The white FAHL® DECANNULATION TAPE FLEXIBLE is available in three different versions for optimal adaptation to the tracheostoma. The thin, breathable material offers the highest possible adhesive properties.

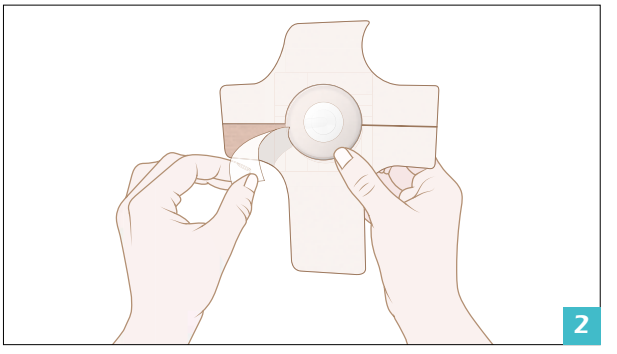
The individually inflatable cuff enables creating customised pressure closure which influences voice formation (phonation) and its optimisation.

ORDER INFORMATION	PU	REF
FAHL® DECANNULATION TAPE FLEXIBLE, large	5	**48001-01**
FAHL® DECANNULATION TAPE FLEXIBLE, small	5	**48001-02**
FAHL® DECANNULATION TAPE FLEXIBLE, oval	5	**48001-03**

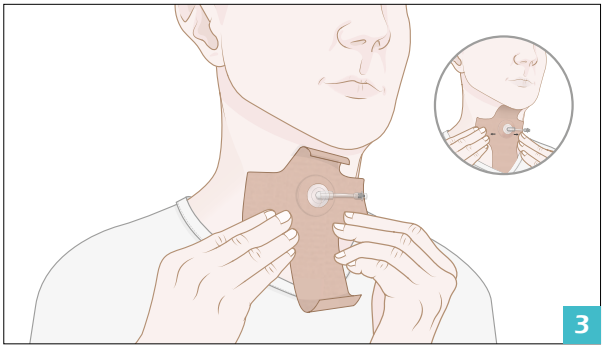
FAHL® DECANNULATION TAPE APPLICATION



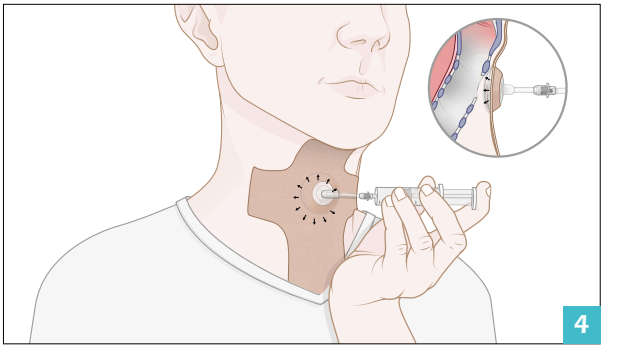
Clean, degrease and dry the parastomal skin with an OPTIFAHL® stoma cleaning wipe.



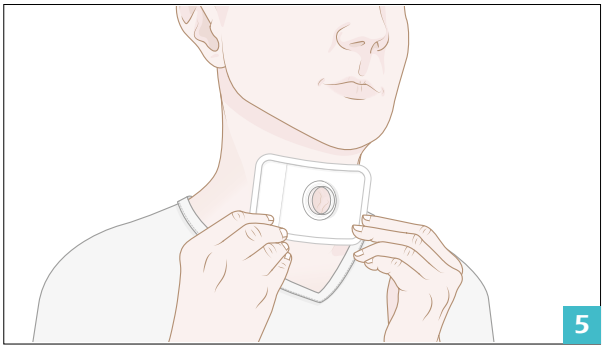
Remove the protective film from the back of the FAHL® DECANNULATION TAPE.



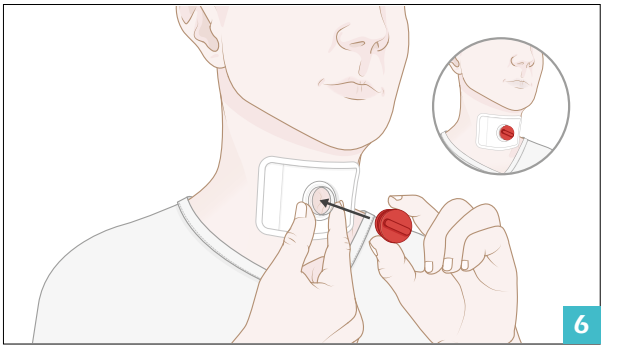
Fasten the FAHL® DECANNULATION TAPE over the tracheostoma.



Fill the cuff with 10 ml of air using a disposable syringe via the lateral filling tube to seal the tracheostoma.



As an alternative, a LARYVOX® TAPE extra fine can also be used in conjunction with a FAHL® MULTI PLUG. To do this, stick the LARYVOX® TAPE extra fine onto the tracheostoma.



Then fix the FAHL® MULTI PLUG to the 22 mm combination adapter of the LARYVOX® TAPE EXTRA FINE to close the tracheostoma and ensure safe decannulation.

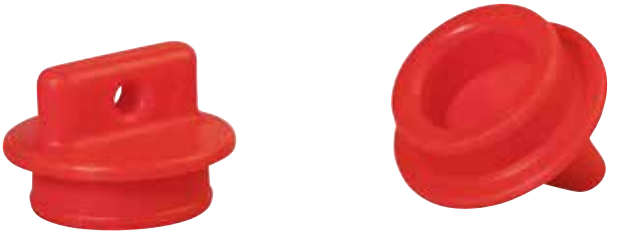
FAHL® DECANNULATION SET

The set consists of a transparent and extremely thin base plate with excellent adhesive properties for optimal adaptation to the movements of the neck region. This can be used in combination with the FAHL® MULTI PLUG for weaning from the tracheostomy tube. Furthermore, the set includes a speaking valve with oxygen connection, which can be inserted into the base plate.

SCOPE OF DELIVERY			
15	LARYVOX® TAPE EXTRA FINE	1	FAHL® MULTI PLUG
1	COMBIPHON® O_2		

ORDER INFORMATION	REF
FAHL® DECANNULATION SET	**48005**

FAHL® MULTI PLUG



The FAHL® MULTI PLUG serves to seal a tracheostomy tube/base plate and enables safe decannulation. The FAHL® MULTI PLUG has a bar for easier handling during insertion/removal. An opening integrated in the bar allows the attachment of a strap to protect against loss, e.g. in case of a coughing fit. The FAHL® MULTI PLUG is compatible with all common 22 mm combi-adapters, e.g. LARYVOX® tape base plate and 15 mm connector, e.g. SPIRAFLEX® UNI. The FAHL® MULTI PLUG cannot be used in conjunction with TRACHEOTEC®, TRACHEOTEC® PRO/SILC and TRACHEOSILC®.

ORDER INFORMATION	PU	REF
FAHL® MULTI PLUG	1	**49812**

FAHL® TRACHEO-SAFE STERILE

FAHL® TRACHEO-SAFE is a tracheostoma stent (placeholder), made of soft silicone, which is inserted into the tracheostoma and can be applied for various indications. The FAHL® TRACHEO-SAFE placeholder consists of a cannula tube that merges at the lower end of the cannula into an elongated semi-tube adapted to the trachea. This semi-tube fits anatomically against the wall of the trachea and is therefore gentle on the tracheal mucous membranes. On the cannula tube is a neck flange with two lateral openings, for the attachment of a tube holder. This securely fixes the stent in the tracheostoma and prevents it sliding into the trachea. The neck flange is variable and can be adjusted into different positions on the cannula so that the space between the skin/trachea and the neck flange can be individually determined.

A detachable sealing plug is located at the upper end of the stent, which sticks out of the tracheostoma. This enables the tracheostoma to be sealed, e.g., when weaning a patient off the tracheotomy after long-term ventilation. By removing the plug, it is possible to suction tracheal secretions through the cannula tube. The Tracheo-Safe tracheostomy tube gently holds the tracheostoma open and helps to secure the airways.

Two different lengths are available.

ORDER INFORMATION	PU	REF
FAHL TRACHEO-SAFE C, SIZE 45 mm	1	**20895**
FAHL TRACHEO-SAFE P, SIZE 70 mm	1	**20898**

SPEAKING VALVES

Speaking valves enable patients with a partially or fully preserved larynx to speak without having to use their fingers and consist of a plastic housing with valve function. When breathing in, the valve membrane of the speaking valve opens. After exhalation, the valve closes, thereby enabling the user to speak. The pressure rise during expiration supports the valve closure process.

Speaking valves with 15 mm connector
To ensure a connection with a 15 mm connector, the plastic housing features a central opening with a 15 mm inner diameter facing the patient side.

Speaking valves with 22 mm combi adapter
In addition, there is also the variant of a 22 mm combi-adapter, which is compatible with all commonly used 22 mm receptacle systems.

Speaking valves with multi-adapter
Speaking valves fitted with the so-called multi-adapter combine these two variants (15 and 22 mm).

Speaking valves low resistance
Low resistance speaking valves are fitted with a laterally suspended valve membrane. The valve membrane is slightly opened in resting condition and only a small blowing pressure is required to close the speaking valve.

Caution! Speaking valves may only be used by patients with a partially or fully preserved larynx!

COMBIPHON®

COMBIPHON® is a compact, transparent speaking valve with a silicone membrane. The COMBIPHON® speaking valve enables tracheotomised patients with an intact larynx to speak. The special feature of this speaking valve is the basic position of the valve membrane. It is closed and is briefly opened during inspiration. This makes the increased blowing pressure for closing the valve, otherwise required for forming speech, unnecessary. The valve flap opens on inspiration. The exhaled airflow causes the valve to close, which enables phonation/speech.

The functional multi-adapter of the COMBIPHON® speaking valve features both a standardised central opening for attaching to a tracheostomy tube with a 15 mm connector as well as a 22 mm combination adapter. This makes the COMBIPHON® speaking valve ideally suited for use in conjunction with fenestrated/sieved tracheostomy tubes. The transparent valve housing offers an unobtrusive appearance.

The COMBIPHON® speaking valve must only be used by patients with partially or fully preserved larynx!

ORDER INFORMATION	PU	REF
COMBIPHON®	1	**27131**

COMBIPHON® O_2

15 MM CONNECTOR

The COMBIPHON® O_2 speaking valve can be plugged onto all tracheostomy tubes and tubes with a 15 mm connector and also features a lateral oxygen connection piece (plug-in connection 5 mm), which enables connection to an oxygen device if required.

The COMBIPHON® O_2 speaking valve must only be used by patients with partially or fully preserved larynx!

ORDER INFORMATION	PU	REF
COMBIPHON® O_2	1	**27132**

COMBIPHON® SLIM

15 MM CONNECTOR

The plastic COMBIPHON® SLIM speaking valve is suitable for tracheostomised patients. It features a central opening and can be attached to all tracheostomy tubes and tubes with a 15 mm connector (UNI). A valve flap closes the speaking valve during exhalation and speaking and opens automatically during inhalation.

The COMBIPHON® SLIM speaking valve must only be used by patients with partially or fully preserved larynx!

ORDER INFORMATION	PU	REF
COMBIPHON® SLIM	1	**27108**

COMBIPHON® SLIM O_2

15 MM CONNECTOR

The COMBIPHON® SLIM O_2 speaking valve is a variant of the COMBIPHON® slim with an additional connection piece (plug-in connection 5 mm) for connection to an oxygen device. The oxygen connection tube required for connection is available as an accessory.

The COMBIPHON® SLIM O_2 speaking valve must only be used by patients with partially or fully preserved larynx!

ORDER INFORMATION	PU	REF
COMBIPHON® SLIM O_2	1	**27109**

PHON VALVE

15 MM CONNECTOR

The PHON VALVE is a compact speaking valve for patients with a partially or completely preserved larynx without having to use their fingers. The speaking valve with silicone valve can only be used in combination with a phonation cannula. The central opening with 15 mm inner diameter ensures connection with a 15 mm connector.

The PHONE VALVE speaking valve must only be used by patients with partially or fully preserved larynx!

ORDER INFORMATION	PU	REF
PHON VALVE	3	**27140**

TRACHLINE® PHON VALVE

The TRACHLINE® PHON VALVE is a particularly flat speaking valve for patients with a partially or completely preserved larynx without having to use their fingers. The speaking valve with its unobtrusive design is perfectly matched to the properties of the TRACHLINE® tracheostomy tube series. The bayonet lock ensures a secure connection on the TRACHLINE® tracheostomy tubes. The speaking valve with silicone valve can only be used in combination with a TRACHLINE® phonation cannula.

The TRACHLINE® PHONE VALVE speaking valve must only be used by patients with a partially or fully preserved larynx!

ORDER INFORMATION	PU	REF
TRACHLINE® PHON VALVE	3	**27141**

HUMIDOPHONE®

The HUMIDOPHONE® is a compact speaking valve with filter function. By using the HUMIDOPHONE®, the air is filtered when inhaled. The housing contains an open-pored polyurethane sponge. The filter medium is located in front of the speaking valve flap on the patient side.

The HUMIDOPHONE® speaking valve with filter function is designed for adaptation to a tracheostomy tube with 22 mm combination adapter or base plate/stoma filter patch. The HUMIDOIPHONE® speaking valve enables tracheotomised patients with an intact larynx to speak. The valve membrane of the HUMIDOPHONE® speaking valve is suspended laterally in the valve cap and is always slightly open at rest. Thus, only slight blowing pressure is necessary to close the valve for voice formation.

The HUMIDOPHONE® speaking valve must only be used by patients with a partially or fully preserved larynx!

ORDER INFORMATION	PU	REF
HUMIDOPHONE®	30	**46480**

HUMIDOPHONE® TYP 15

The HUMIDOPHONE® speaking valve with filter function is also available as HUMIDOPHONE® TYP 15 speaking valve with filter function. In this version, the speaking valve is designed for adaptation to a 15 mm connector.

The HUMIDOPHONE® TYP 15 speaking valve must only be used by patients with a partially or fully preserved larynx!

ORDER INFORMATION	PU	REF
HUMIDOPHONE® TYP 15	30	**46485**

HUMIDOPHONE® PLUS

The HUMIDOPHONE® PLUS is a compact speaking valve with filter function. By using the HUMIDOPHONE® PLUS, the air is filtered when inhaled. The housing contains an open-pored polyurethane sponge. The filter medium is located in front of the speaking valve flap on the patient side.

The HUMIDOPHONE® PLUS is designed for adaptation to a 15 mm connector as well as to a 22 mm combination adapter or a base plate. The HUMIDOIPHONE® PLUS speaking valve enables tracheotomised patients with an intact larynx to speak.

The HUMIDOPHONE® PLUS is equipped with an optimised valve function, which enables easier speech formation. An inconspicuous appearance in a beige-coloured design provides a further advantage. The special feature of this speaking valve is the central suspension as well as the basic position of the valve membrane. It is closed and is briefly opened during inspiration. This makes the increased blowing pressure for closing the valve, otherwise required for forming speech, unnecessary.

The HUMIDOPHONE® PLUS speaking valve must only be used by patients with a partially or fully preserved larynx!

ORDER INFORMATION	PU	REF
HUMIDOPHONE® PLUS	30	**46487**

HUMIDOPHONE® PLUS O_2

As a further variant, the HUMIDOPHONE® PLUS is also available as HUMIDOPHONE® PLUS O_2. In addition it features a lateral connection piece (plug-in connection 5 mm), which enables connection to an oxygen device if required.

The HUMIDOPHONE® PLUS O_2 speaking valve must only be used by patients with a partially or fully preserved larynx!

ORDER INFORMATION	PU	REF
HUMIDOPHONE® PLUS O_2	30	**46489**

TRACHEOSTOMA VALVES

An adjustable tracheostoma valve allows patients with a partially or completely preserved larynx as well as voice prosthesis (shunt valve) wearers to speak without having to use their fingers after laryngectomy.

It consists of a plastic housing, a silicone diaphragm disc and a flexible housing ring, with which the closing sensitivity of the silicone diaphragm can be adjusted.

The valves are fitted with a 22 mm combination adapter and can therefore be used in combination with a phonation cannula with 22 mm combination adapter as well as with base plates.

LARYVOX® HANDS FREE VALVE KOMBI HME LOW

The LARYVOX® HANDS FREE VALVE KOMBI HME is a variably adjustable tracheostoma valve for tracheotomised patients with a partially or fully preserved larynx and for voice prosthesis wearers after laryngectomy. The **LOW RESISTANCE** version features low closing resistance. An integrated rotation mechanism, which enables the regulation of the inflowing air, allows the adjustable speaking valve to be adjusted to the patient's individual requirements.

A special aspect is the integrated 22 mm combination adapter to accommodate commercially available filter cassettes. This provides the additional option of combining vocal rehabilitation with the typical properties of an HME: warming, moistening and filtering, in a meaningful manner.

ORDER INFORMATION	PU	REF
LARYVOX® HANDS FREE VALVE KOMBI HME, LOW RESISTANCE	1	**21982**

LARYVOX® HANDS FREE VALVE KOMBI HME NORMAL

The LARYVOX® HANDS FREE VALVE KOMBI HME is a variably adjustable tracheostoma valve with integrated 22 mm combination adapter for tracheotomised patients with a partially or fully preserved larynx and for voice prosthesis wearers after laryngectomy. In the **NORMAL RESISTANCE** version, the valve flap provides higher resistance to be closed for speaking.

An integrated rotation mechanism, which enables the regulation of the inflowing air, allows the adjustable speaking valve to be adjusted to the patient's individual requirements. There is the additional option of combining vocal rehabilitation with the typical properties of an HME: warming, moistening and filtering, in a meaningful manner.

ORDER INFORMATION	PU	REF
LARYVOX® HANDS FREE VALVE KOMBI HME, NORMAL RESISTANCE	1	**21983**

LARYVOX® HANDS-FREE VALVE LOW RESISTANCE

The LARYVOX® HANDS-FREE VALVE LOW RESISTANCE is a variably adjustable tracheostoma valve with integrated 22 mm combination adapter for tracheotomised patients with a partially or fully preserved larynx and for voice prosthesis wearers after laryngectomy. The **LOW RESISTANCE** version is an adjustable speaking valve, which only requires a relatively small amount of pressure, in order to close it. An integrated rotation mechanism, which enables the regulation of the inflowing air, allows the membrane of the speaking valve to be adjusted to the patient's individual requirements. A special feature is a bracket extending over the housing, which on the one hand facilitates manual fine-tuning of the membrane setting and on the other hand offers more safety as a spacer.

The spacer prevents the blockage of the respiratory flow with tracheostoma protection fabric.

ORDER INFORMATION	PU	REF
LARYVOX® HANDS-FREE VALVE Low Resistance	1	**21984**

LARYVOX® HANDS-FREE SET

The LARYVOX® HANDS-FREE SET contains all the necessary aids to enable the best possible conditions for speaking without having to use your fingers.

SCOPE OF DELIVERY

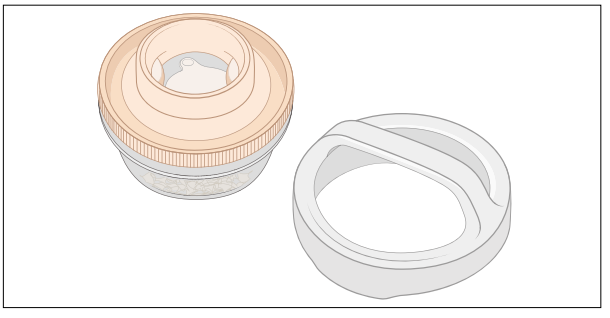
1	LARYVOX® HANDS-FREE VALVE COMBI-HME Low Resistance	5	LARYVOX TAPE®, COMFORT XL oval, individually
1	LARYVOX® DUO BRUSH ETUI Size 10, pack with 6 pieces	5	OPTIGARD® Skin protection wipe individually
5	LARYVOX® HME HighFlow individually	5	OPTICLEAR® Patch adhesive remover individually

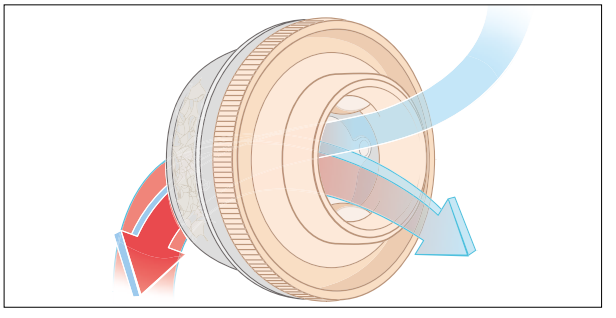
ORDER INFORMATION	REF
LARYVOX® HANDS-FREE SET	**21986**

BLOM-SINGER® SPEAKFREE™ HME HANDS FREE VALVE

The BLOM-SINGER® SPEAKFREE™ HME HANDS FREE VALVE is an innovative product combination consisting of a speaking valve and a permanently integrated HME filter. For laryngectomised patients with a voice prosthesis, this product combines all the advantages of an HME, i.e. heating, humidifying and filtering the breathing air, with the advantage of a speech option without requiring the use of fingers.

The BLOM-SINGER® SPEAKFREE™ HME HANDS FREE VALVE is the first to offer an HME cassette with an integrated, customisable disposable speaking valve. The primary product feature, the HME function, is intended for pulmonary rehabilitation.





The device contains a foam filter for heat and moisture exchange and a detachable crossbar. The purpose of the crossbar is to prevent unintended airway obstruction.

The filter cassettes store the moisture and warmth of the exhaled air in the filter medium and emit these to the inhaled air again during inspiration.

Two different HME filter qualities (Classic Flow® or Easy Flow®) are available to choose from to be able to use the appropriate breathing resistance for a comfortable breathing and speech situation. The Classic Flow® HME achieves high humidification, warming, filtering of the breathing air and adequate breathing resistance after laryngectomy. The lower resistance of the Easy Flow®HME is suitable for use during physical exertion while providing suitable breathing gas conditioning results at the same time (heating, moistening, filtering). If the HME filter is soiled by secretion or dirt particles, it must be changed for hygienic reasons.

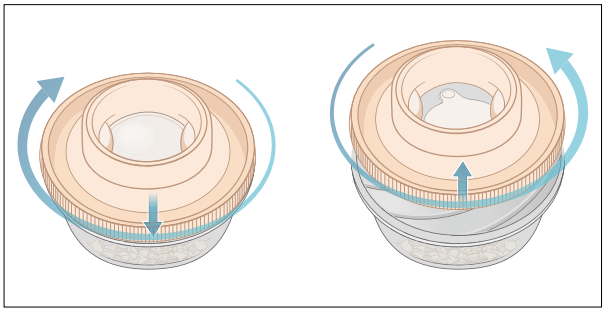
Classic Flow®

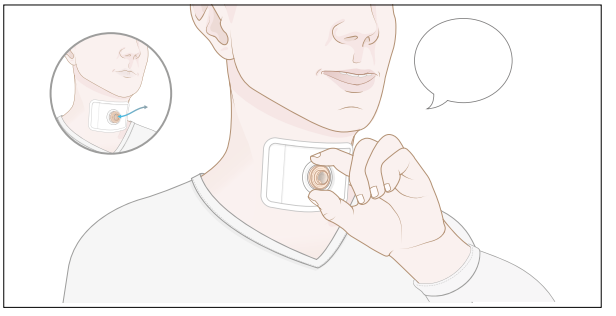
Easy Flow®

The secondary product feature of the BLOM-SINGER® SPEAKFREE™ HME HANDS FREE VALVE, the speech valve, promotes voice rehabilitation. A special internal speaking membrane allows unhindered inhalation and exhalation in the open membrane position. Only when the blowing pressure is in-

BLOM-SINGER® SPEAKFREE™ HME HANDS FREE VALVE

creased does the speaking valve close automatically and make phonation possible via voice prosthesis. The very individual adjustment options via the two HME variants and the grid-free adjustment of the membrane opening enable exceptionally good phonation results. Particularly in everyday situations, this system simplifies adjustment of the membrane opening as required.





The device is designed to accommodate the speech and breathing requirements of each individual user by rotating the outer ring of the device clockwise or counterclockwise.

As the user exhales to speak, the airflow pushes the valve into the closed position to provide a seal for speech.

The smoothly turning housing enables the best possible adjustment of the internal speech membrane during use. This way, the membrane opening can be optimised during use according to the situation, for example during physical exertion. A satisfactory speaking result is achieved or restored immediately without the use of fingers. In addition, the BLOM-SINGER® SPEAKFREE™ HME HANDS FREE VALVE eliminates the need for daily cleaning of the speaking valve in support of hygienically beneficial single use. The transparent and particularly flat design also ensures a skin-colour-friendly match and makes for a very discreet appearance. The BLOM-SINGER® SPEAKFREE™ HME HANDS FREE VALVE is compatible with all tracheostomy tubes or base plates with a 22 mm connector.

ORDER INFORMATION	PU	REF
BLOM-SINGER® SPEAKFREE™ HME, CLASSIC FLOW	30	**BE1090EZ**
BLOM-SINGER® SPEAKFREE™ HME, EASY FLOW	30	**BE1090EF**

LARYVOX® ADHESIVE FOAM DISC

The LARYVOX® ADHESIVE FOAM DISCS are filled with foam and are adhesive on both sides. The adhesive areas have a protective paper, which can easily be pulled off.

The LARYVOX® ADHESIVE FOAM DISCS are first attached to the underside of the base plate. Then the base plate with the adhering LARYVOX® ADHESIVE FOAM DISCS is bonded to the tracheostoma after removing the second protective paper beforehand.

The LARYVOX® ADHESIVE FOAM DISCS cushion the base plate flexibly and softly against the skin.

ORDER INFORMATION	PU	REF
LARYVOX® ADHESIVE FOAM DISC, small	30	**48460**
LARYVOX® ADHESIVE FOAM DISC, large	30	**48461**

LARYVOX® FOAM

LARYVOX® FOAM is a ring-shaped foam disc with a central opening and is used to equalise the skin level of an irregular, deep tracheostoma. There is an adhesive contact surface on one of the sides to allow easy application over the tracheostoma. In combination with LARVOX® TAPE, the contact surface of the tape is optimised, thus enabling a longer wearing time. In addition, the speech option can be improved as unwanted air loss can be reduced.

ORDER INFORMATION	PU	REF
LARYVOX® FOAM, small	10	**48420**
LARYVOX® FOAM, medium	10	**48430**
LARYVOX® FOAM, large	10	**48440**

TRACHEOSTOMA PROTECTION

The placement of a tracheostoma is a medical intervention with widely differing consequences for the body, its functions and the patient's way of life.

Quite obviously, the physical integrity of the patient is affected. The externally visible breathing opening on the neck is an irritating visual change, first of all for the patient, but of course also for relatives as well as strangers. The desire to cleverly conceal this handicap is quite understandable and, in addition, makes medical sense.

After all, the tracheotomy virtually eliminates the important nasal functions (warming, humidifying, filtering the respiratory air and maintaining the necessary breathing resistance). Consequently, it is necessary to compensate for these lost bodily functions in the best possible way through effective aids. Different products, made from special foams, discreetly cover the tracheostoma and condition the inhaled air through heating and humiification. They also offer effective filtration of airborne particles, e.g. dust, pollen, etc..

There are also special risks associated with a tracheostoma. Water penetration through the tracheostoma poses a significant risk to the affected person. Without special tracheostoma protection, water could enter unhindered into the lungs, as the body's own safety barriers no longer exist.

As a consequence, lifestyles, habits or hobbies need to be modified after a tracheostomy or professionally adapted using special aids (e.g. shower protection) to be able to return to a noticeably safe way of life.

sdecoret/Shutterstock.com

LARYNGOFIX®

LARYNGOFIX® is an elegant and functional filter for neck breathers. LARYNGOFIX® assures filtering, moistening and warming of the respiratory air and - after careful cleaning of the tracheostoma with OPTICLEAR® patch adhesive remover and/or the OPTIFAHL® stoma cleaning wipe - is attached to the skin above the tracheostoma using adhesive strips.

The rounded shape of LARYNGOFIX® enables an excellent fit to the tracheostoma, providing good cover and secure protection from the ingress of dirt particles, insects, etc. The design and the colour scheme of the material enable inconspicuous use of this particle filter.

ORDER INFORMATION	PU	REF
LARYNGOFIX® S BEIGE, 4.0 x 5.5 cm	10	**45900**
LARYNGOFIX® L BEIGE, 4.8 x 6.7 cm	10	**45950**
LARYNGOFIX® S WHITE, 4.0 x 5.5 cm	10	**45905**
LARYNGOFIX® S WHITE, 4.8 x 6.7 cm	10	**45955**

LARYNGOFIX® PLUS

LARYNGOFIX® PLUS is a functional filter for neck breathers. It provides filtration, humidification and warming of the respiratory air and is attached to the skin over the tracheostoma with adhesive strips.

The skin-friendly medical adhesive strip enables daily use of LARYNGOFIX® PLUS. This is attached in two strips, in the upper as well as lower area, and ensures particularly stable fixing of the tracheostoma protection over the tracheostoma. If necessary, LARYNGOFIX® PLUS can nevertheless be easily loosened at the lower adhesive strip, e.g. to allow coughing, provides good coverage and secure protection against the ingress of dirt particles, insects, etc.

ORDER INFORMATION	PU	REF
LARYNGOFIX® PLUS S BEIGE, 4.0 x 5.5 cm	10	**45902**
LARYNGOFIX® PLUS L BEIGE, 4.8 x 6.7 cm	10	**45952**

TRACHEOSTOMA-FIX®

TRACHEOSTOMA-FIX® is a popular tracheostoma protection made of foam which - after careful cleaning of the tracheostoma with OPTICLEAR® patch adhesive remover and/or the OPTIFAHL® stoma cleaning wipe - is stuck over the neck opening. The 4 mm thick, breathable fabric ensures optimal filtering, humidification and warming of the respiratory air. TRACHEOSTOMA-FIX® is intended for single use only.

Please note that TRACHEOSTOMA-FIX® can only be worn over a tracheostomy tube with restrictions.

ORDER INFORMATION	PU	REF
TRACHEOSTOMA-FIX® S, BEIGE, 6.0 x 6.5 cm	10	**45000**
TRACHEOSTOMA-FIX® L, BEIGE, 7.0 x 7.5 cm	10	**45100**
TRACHEOSTOMA-FIX® L, BEIGE, 7.0 x 7.5 cm, 5 mm thick	10	**45101**

TRACHEOFIX®

TRACHEOFIX® is a special foam filter of 3 mm thickness. It was designed for neck breathers, who no longer require a tracheostomy tube. TRACHEOFIX® is worn over the tracheostoma and attached to the skin using the adhesive strip, located at the upper edge. TRACHEOFIX® filters, warms and humidifies the respiratory air and, at the same time, protects the tracheostoma against the ingress of foreign matter, e.g. dust and insects, chills and drying out.

In the TRACHEOFIX® PLUS version, the foam filter is provided with two adhesive strips for fastening in the upper and lower areas. Please note that TRACHEOFIX® PLUS and TRACHEOFIX® can only be worn over a tracheostomy tube with restrictions.

ORDER INFORMATION	PU	REF
TRACHEOFIX® S BEIGE, 5.5 x 6.0 cm	10	**45400**
TRACHEOFIX® L BEIGE, 7.0 x 7.0 cm	10	**45500**
TRACHEOFIX® S PLUS BEIGE, 5.5 x 6.0 cm	10	**45505**
TRACHEOFIX® L PLUS BEIGE, 7.0 x 7.0 cm	10	**45510**

LARYTAPE® TOUCH

LARYTAPE® TOUCH provides filtering, moistening and warming of the respiratory air and is completely attached to the skin around the tracheostoma using adhesive strips - after careful cleaning of the tracheostoma with OPTICLEAR® patch adhesive remover and/or the OPTIFAHL® stoma cleaning wipe. To make it easier for laryngectomised patients with a voice prosthesis to speak, LARYTAPE® TOUCH also features a button. When the button is depressed slightly with a finger, the tracheostoma is closed and vocalisation is enabled. In addition, it offers secure protection against dirt particles, insects etc.

The design and colour of the material enable inconspicuous use of the particle filter.

ORDER INFORMATION	PU	REF
LARYTAPE® TOUCH S, 4.0 x 5.5 cm	10	**45970**
LARYTAPE® TOUCH L, 4.8 x 6.7 cm	10	**45972**
LARYTAPE® TOUCH XL, 6.0 x 8.5 cm	10	**45973**

LARYTAPE®

LARYTAPE® provides filtering, moistening and warming of the respiratory air and is completely attached to the skin around the tracheostoma using adhesive strips - after careful cleaning of the tracheostoma with OPTICLEAR® patch adhesive remover and/or the OPTIFAHL® stoma cleaning wipe.

The rounded shape of LARYTAPE® enables an excellent fit to the tracheostoma, providing good cover and secure protection from the ingress of dirt particles, insects, etc. The design and the colour scheme of the material enable inconspicuous wear of this particle filter.

ORDER INFORMATION	PU	REF
LARYTAPE® S, 4.0 x 5.5 cm	10	**45960**
LARYTAPE® L, 4.8 x 6.7 cm	10	**45962**
LARYTAPE® XL, 6.0 x 8.5 cm	10	**45963**

PROTECTION FOR YOU & OTHERS

Generally speaking, the same hygiene & behaviour rules apply to neck breathers as they do to the rest of the population.

An HME combined with textile tracheostoma protection as well as mouth-nose protection is explicitly recommended by physicians.

As a matter of principle, always change the HME after every out-of-home stay & wash the tracheostoma protection scarf (e.g. at 30°) & the everyday mouth protection (at 60-90°) daily. Please observe your local recommendations.

When out and about, use a sealable protective bag to dispose of used tissues/HMEs to avoid further contamination.

Think of the DHM+V+A-rule of Federal Ministry of Health: "Distancing + Hygiene + Mask + Ventilation + App".

Everyday mouth-nose protection or medical mask

+

Artificial nose/ HME

+

Fabric tracheostoma protection

FABRIC TRACHEOSTOMA PROTECTION

We supply textile tracheostoma protection in various designs, e.g. as a scarf or a turtleneck, woven or knitted and in many colours and patterns.

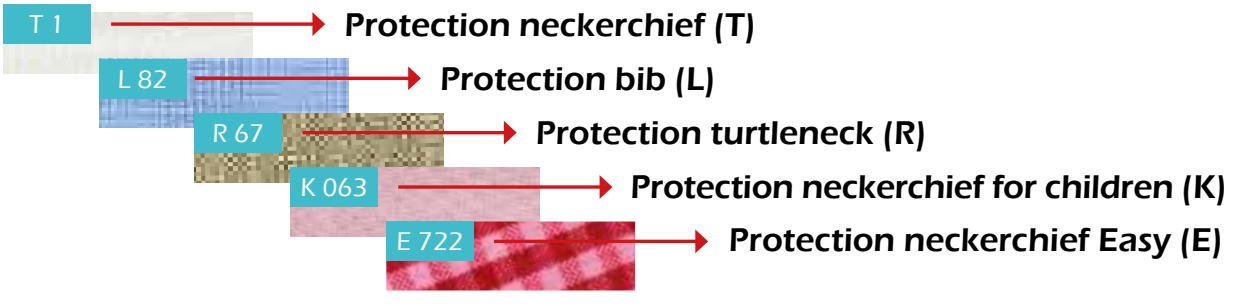
Our colour sample card only gives you a partial overview of the entire colour range of textile tracheostoma protection scarves. The colour/design no. for the respective colour is indicated at the top left of the depicted sample. This furthermore shows you which item is available in which colour.

We will be glad to customise our tracheostoma protection items to your individual wishes upon request. If you need protective neckerchiefs or scarves for particularly small or large neck sizes, then we will supply you with these custom-made items according to your specifications without surcharge.

Please take into account that the colour samples depicted here may deviate from the original due to the printing process.

YOU CAN FIND THE CURRENT COLOUR SAMPLE CARD HERE:

Please scan the QR code with your smartphone.



INFORMATION ON FABRIC QUALITY:	
0	particularly high air permeability, made of pure cotton
I	particularly high air permeability, made of polyester/viscose
II	air permeability normal to very high, made of cotton jersey; soft quality, feels very comfortable on the skin
III	normal air permeability, made of pure cotton
IV	normal air permeability, made of mixed cotton/polyester fabric
VI	normal air permeability, made of mixed cotton/viscose fabric
VII	normal air permeability, made of 100% polyester
VIII	very high air permeability and light, made of Trevira-Georgette fabric
IX	very high air permeability, made of multi-layer polyester mesh fabric

TRACHEOTEX® BIB

The TRACHEOTEX® BIB stoma protection bib covers and protects the tracheostoma for neck breathers. The multiple layers of fine polyester mesh fabric of the particularly breathable bib ensure that the inspired air is warmed, humidified and filtered at the same time.

TRACHEOTEX® BIBs reliably absorb escaping tracheal secretions and provide effective protection from the ingress of foreign matter, e.g., dust and insects. The stoma protection bibs are available in the following thicknesses: 3-layer (3L), 5-layer (5L), 8-layer (8L) and 12-layer (12L). This enables optimal coordination with each seasonal climate. TRACHEOTEX® BIB is closed with a velcro fastener.

An additional adjustment element enables the neck width to be individually set to a size between 34 cm and 46 cm. TRACHEOTEX® BIBs are washable and can be used numerous times. For reasons of hygiene, they should be changed daily.

If no colour is specified, we will supply the TRACHEOTEX® BIB in white.

Excerpt from the colour sample card (more colour variations can be found in our colour sample card or on our homepage www.fahl.com):

L 00 White IX

L 81 Dark blue IX

L 82 Light blue IX

L 83 Bordeaux red IX

L 84 Brown IX

L 85 Black IX

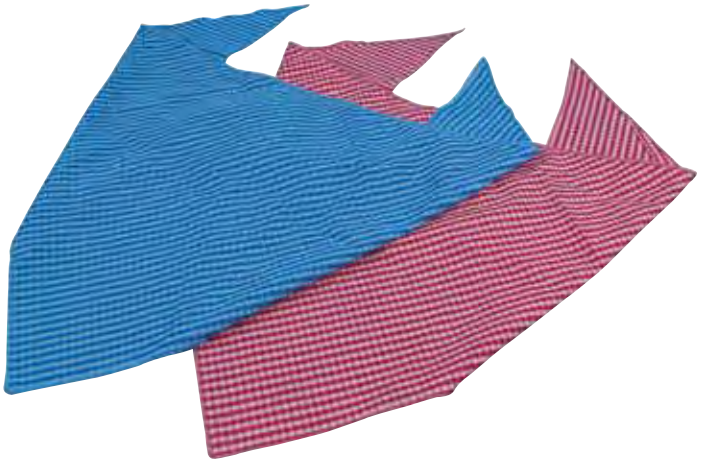
L 86 Beige IX

ORDER INFORMATION	PU	REF
TRACHEOTEX® BIB 3L	1	**40100**
TRACHEOTEX® BIB 5L	1	**40200**
TRACHEOTEX® BIB 8L	1	**40300**
TRACHEOTEX® BIB 12L	1	**40400**

Please additionally specify colour no. when ordering (see colour sample card)

TRACHEOTEX® EASY

TRIANGULAR SHAPE FOR KNOTTING



The TRACHEOTEX® EASY stoma protection neckerchief is intended to cover the tracheostoma and prevents the air entering the tracheostoma unprotected. The ingress of dust, insects, etc. is reliably prevented. TRACHEOTEX® EASY contains an insert, made of multiple layers of fine mesh fabric, which filters, warms and humidifies the respiratory air. At the same time, escaping tracheal secretions are reliably absorbed.

TRACHEOTEX® EASY is cut in the shape of a fashionable triangular neckerchief and is available in various colours and patterns. The neckerchief is fastened by knotting the tips at the back of the neck. TRACHEOTEX® EASY is washable at 30 °C and suitable for multiple use. For reasons of hygiene, should be changed daily.

Grey III

Dark red III

Blue-grey IV

Grey-aluminium IV

Silver-grey, matt IV

Beige-sand IV

Pastel blue IV

Pastel blue chequered III

Blue, chequered III

Silver-grey, chequered III

Turquoise, chequered III

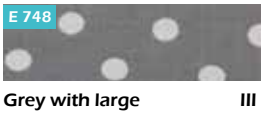
Beige-sand with small white polka dots III

Silver-grey with, small white polka dots III

Graphite-grey with small white polka dots III

Dark brown with small white polka dots III

Black with large white polka dots III



Grey with large white polka dots III

ORDER INFORMATION	PU	REF
TRACHEOTEX® EASY	1	**42002**
Please additionally specify colour no. when ordering (see colour sample card)		

TRACHEOTEX® SCARF

The TRACHEOTEX® stoma protection neckerchief is tied around the neck using an approx. 1 cm wide cotton strap. The neckerchief lies over the tracheostoma. The centrally incorporated insert, made of multiple layers of fine mesh fabric, warms, humidifies and, at the same time, filters the air.

The stoma protection neckerchief prevents the ingress of foreign matter, e.g., dust and insects, into the tracheostoma and reliably catches escaping tracheal secretions.

The stoma protection neckerchief is equipped with an adjustment clip on the fixing strap, which enables the adjustment to different neck sizes. It is attached using an adherent fastener.

The stoma protection neckerchief is available in many colours and patterns, matching your wardrobe. Stoma protection neckerchiefs are available in different fabric qualities, from normal to highly breathable.

Stoma protection neckerchiefs are washable and do not lose their shape. For reasons of hygiene, they should be changed daily.

Excerpt from the colour sample card (more colour variations can be found in our colour sample card or on our homepage www.fahl.com):

T 1 White IV	T 2 Black IV	T 3 Silver-grey, mottled IV	T 4 Beige IV
T 9 Dark blue IV	T 10 Light blue IV	T 15 Blue, with small white polka dots III	T 16 Black, with small white polka dots III
T 18 Bordeaux red I	T 26 Brown VIII	T 51 Apricot IV	T 63 Light pink IV
T 67 Blue-grey IV	T 68 Grey-aluminium IV	T 69 Silver-grey, matt IV	T 70 Beige-sand IV

TRACHEOTEX® SCARF

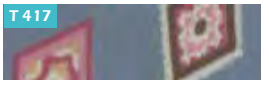

T 71
Dove grey IV


T 72
Turquoise IV


T 383
Cream-turquoise, Floral pattern VIII


T 406
Salmon red, chequered VIII


T 408
Kiwi, Tie pattern VIII


T 417
Stone-grey, Classic VIII


T 418
Caramel, Classic VIII

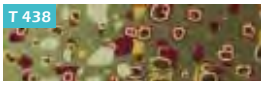

T 425
Brown-white, Tie pattern VIII


T 432
Design, antique pink mottled type I VIII


T 433
Leather look, natural VIII


T 434
Leather look, dark VIII


T 437
Violet, multi-coloured VIII


T 438
Olive, multi-coloured VIII


T 439
Grey-orange multi-coloured VIII


T 440
Blue, Starry pattern VIII


T 441
White, brilliant, small pattern IV


T 443
Bright lilac, Brilliant, patterned IV


T 446
Ochre, Tie pattern VIII


T 447
Marine red Tie pattern VIII

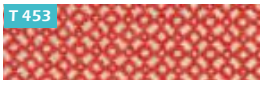

T 448
Silver-grey, Striped pattern VIII


T 449
Brown-red, Striped pattern VIII


T 450
Mid-blue, Striped pattern VIII


T 451
Sand-apricot, Circle pattern VIII


T 452
Yellow-green, Ring pattern VIII


T 453
Dark orange, patterned VIII


T 454
Mint, Butterfly pattern VIII


T 455
Cream-pink, Floral pattern VIII


T 456
Red-blue Camouflage VIII

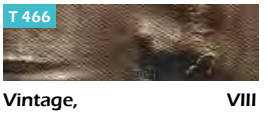

T 457
Brown-grey, Camouflage VIII


T 458
Dark blue, with small white horses VIII


T 459
Grey, Macro modern VIII

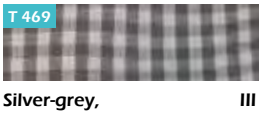

T 462
Blue-red Glencheck VIII


T 463
Black-white, Glencheck VIII


T 466
Vintage, jeans-brown VIII


T 467
Pastel blue chequered III


T 468
Blue, chequered III


T 469
Silver-grey, chequered III


T 470
Turquoise, chequered III


T 471
Beige-sand with small white polka dots III


T 472
Silver-grey with, small white polka dots III

ORDER INFORMATION	PU	REF
TRACHEOTEX® SCARF	1	42000
Please additionally specify colour no. when ordering (see colour sample card)		

TRACHEOTEX® SHIRT

MADE OF COTTON JERSEY

The TRACHEOTEX® SHIRT, made of soft cotton jersey, is especially breathable and kind to skin. Heavy sweating is avoided due to good breathability. The TRACHEOTEX® SHIRT is pleasantly light and does not ride up under clothing. The standing collar is elastic throughout and therefore, extremely stretchy. This provides a comfortable fit and adjusts to different neck sizes.

The special and well-proven design of the TRACHEOTEX® Shirt ensures easy handling. The TRACHEOTEX® shirt is simply pulled over the head and closed with a velcro fastener at the back. It reliably fulfils the functions of filtering, humidifying and warming the respiratory air.

R 900 White II	R 901 Natural II	R 902 Light blue II	R 904 Marine blue II
R 905 Black II	R 906 Wine red II	R 907 Olive green II	R 911 Mottled grey II
R 912 Red II	R 914 Dark brown II		

ORDER INFORMATION	PU	REF
TRACHEOTEX® SHIRT	1	**43301**
Please additionally specify colour no. when ordering (see colour sample card)		

TRACHEOTEX® ROLLI KLETT JERSEY MADE OF COTTON JERSEY

The TRACHEOTEX® ROLLI KLETT JERSEY is a stoma protection turtleneck made of soft cotton yarn, which is worn over the tracheostoma. The stoma protection turtleneck is available in many colours, matching your wardrobe. The incorporated insert, made of multiple layers of fine mesh fabric, warms, humidifies and, at the same time, filters the air. The stoma protection turtleneck prevents the ingress of foreign matter, e.g., dust and insects, into the tracheostoma and reliably catches escaping tracheal secretions.

The TRACHEOTEX® ROLLI KLETT JERSEY is closed with a velcro fastener. The elastic cuff ensures a good fit and makes it comfortable to wear. The skin-friendly, soft and elastic material is well tolerated by the skin and protects the tracheostoma against cooling.

R 900 White II	R 901 Natural II	R 902 Light blue II	R 904 Marine blue II
R 905 Black II	R 906 Wine red II	R 907 Olive green II	R 911 Mottled grey II
R 912 Red II	R 914 Dark brown II		

ORDER INFORMATION	PU	REF
TRACHEOTEX® ROLLI KLETT JERSEY	1	**43001**
Please additionally specify colour no. when ordering (see colour sample card)		

TRACHEOTEX® ROLLI ZIP

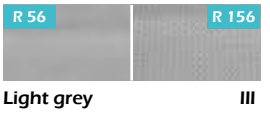
WITH ZIPPER

The TRACHEOTEX® ROLLI ZIP is a stoma protection turtleneck made of soft cotton yarn, which is worn over the tracheostoma. A protective insert, made of a fine mesh fabric and specially folded, is sewn into the front of the turtleneck. This protective insert, which lies over the tracheostoma, filters, humidifies and warms the inhaled air. This way, foreign matter is kept away from the tracheostoma and escaping tracheal secretions are collected reliably.

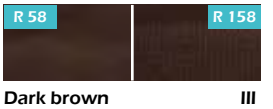
The TRACHEOTEX® ROLLI ZIP feature a zip fastener on the back, which allows the turtleneck to be put on and taken off easily and without any difficulties.

The material structure of the TRACHEOTEX® ROLLI ZIP ensures an adequate supply of air, while the fine, knitted fabric makes it comfortable to wear and prevents chafing.

White III
FINE NORMAL

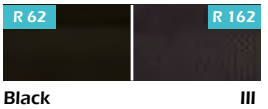


Light grey III
FINE NORMAL



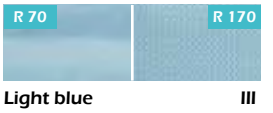
Dark brown III
FINE NORMAL

Marine III
FINE NORMAL

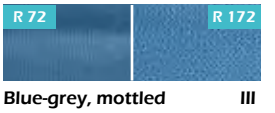


Black III
FINE NORMAL

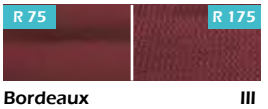
Sand III
FINE NORMAL



Light blue III
FINE NORMAL



Blue-grey, mottled III
FINE NORMAL



Bordeaux III
FINE NORMAL

Green III
FINE NORMAL

ORDER INFORMATION	PU	REF
TRACHEOTEX® ROLLI ZIP	1	**43302**
Please additionally specify colour no. when ordering (see colour sample card)		

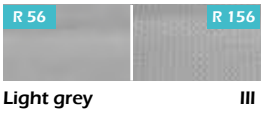
TRACHEOTEX® ROLLI KLETT

The TRACHEOTEX® ROLLI KLETT is made of soft cotton yarn, which is worn over the tracheostoma. The stoma protection turtleneck is available in many colours, matching your wardrobe. The incorporated insert, made of multiple layers of fine mesh fabric, warms, humidifies and, at the same time, filters the air. The TRACHEOTEX® ROLLI KLETT prevents the ingress of foreign matter, e.g., dust and insects, into the tracheostoma and reliably catches escaping tracheal secretions.

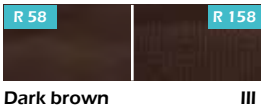
The TRACHEOTEX® ROLLI KLETT is closed with an adherent fastener, which must still be sewn to the ends, according to your neck size. The elastic cuff ensures a good fit and makes it comfortable to wear.

The warming knitted material is particularly suitable for wearing in cold weather and protects the tracheostoma from chills.

White III
FINE NORMAL

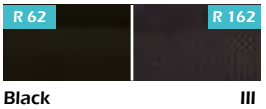


Light grey III
FINE NORMAL



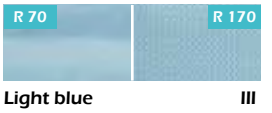
Dark brown III
FINE NORMAL

Marine III
FINE NORMAL

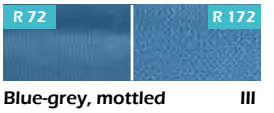


Black III
FINE NORMAL

Sand III
FINE NORMAL



Light blue III
FINE NORMAL



Blue-grey, mottled III
FINE NORMAL

Bordeaux III
FINE NORMAL

Green III
FINE NORMAL

ORDER INFORMATION	PU	REF
TRACHEOTEX® ROLLI KLETT	1	**43000**
Please additionally specify colour no. when ordering (see colour sample card)		

Tracheostoma protection turtleneck velcro

LARYVOX® SECUTRACH® SHOWER GUARD

The LARYVOX® SECUTRACH® shower guard consists of a plastic housing and serves to protect the tracheostoma while showering and washing hair. The shower guard prevents water from entering the tracheostoma.

The shower guard features a central opening with a 15 mm inner diameter, allowing connection to a 15 mm connector. The outer diameter of the end piece/connector is 22 mm, and is thus also compatible with all commonly used 22 mm mounting systems.

Please note that the LARYVOX® SECUTRACH® shower guard is only intended for the protection of the tracheostoma while showering and washing hair. It does not provide protection when taking a bath. Only use the LARYVOX® SECUTRACH® shower guard in combination with the respective recommended aids, such as the LARYVOX® TAPE Flexible base plates, so that a sufficient connection and seal to the tracheostoma can be established.

ORDER INFORMATION	PU	REF
LARYVOX® SECUTRACH® SHOWER GUARD	1	**47400**

SECUTRACH® SHOWER GUARD

SHOWER GUARD

The SECUTRACH® shower guard offers functionality and protection in excellent product quality. The SECUTRACH® shower guard is placed around the neck and closed with a button fastener. The bulbous plastic cap lies over the neck opening.

In addition, there is a thin protective rim on the side of the cap which fits seamlessly against the skin and thus reliably seals the tracheostoma and protects it from splashing water.

The integrated struts enable the SECUTRACH® shower guard to retain its shape, even during showering, as they stabilise the plastic cap so that it cannot collapse. Nevertheless, the material is flexible and gentle on the skin, making it comfortable to wear.

The SECUTRACH® shower guard is not suitable for bathing and swimming.

The air opening is located in the lower area of the cap. The air flows in through it.

The SECUTRACH® shower guard is adjustable for different neck sizes. It allows tracheotomised and laryngectomised patients to shower and wash their hair.

ORDER INFORMATION	PU	REF
SECUTRACH® SHOWER GUARD	1	**47000**

HME FILTERS

A tracheotomy or laryngectomy leads to a loss of breathing through the mouth and nose, in other words, the natural functions of the upper respiratory tract such as filtering, warming and humidifying the air we breathe can only be used to a limited extent or have been lost. To prevent irritation of the airways due to dry air, dust or harmful substances contained in the respiratory air, an external filter is required. After surgery, tracheotomised and laryngectomised patients often suffer from increased production of mucus and an urge to cough.

These symptoms can impair breathing as well as voice rehabilitation. The continuous use of a filter system for 24 hours a day, such as an HME filter cartridge, alleviates symptoms and promotes pulmonary rehabilitation. HME (Heat-Moisture-Exchanger-) filter cassettes are used to exchange heat and moisture in the respiratory air and to filter same.

For example, HMEs consist of a plastic housing with an internal foam with water-binding properties, which is available in different variants. The filter cassettes are placed directly on the tracheostomy tube or on the connector of a base plate (e.g. LARYVOX® Tape) and the air flows through them during inhalation and exhalation. Heat as well as moisture from the exhaled air is stored in the filter and released again during subsequent inhalation. This storage feature warms and moistens the respiratory air.

Various versions with different breathing resistances are available. HMEs with normal breathing resistance, Medium, HighFlow or Sport. The HighFlow design is particularly suitable in the case of significant physical strain and for new HME users.

The filter cassette is intended for single use and should be replaced after 24 hours. Suitable for day and night use, depending on the specification.

Aleksandar Tasevski/Shutterstock.com

LARYVOX® HME

The LARYVOX® HME filter cassette has a foam filter, which is integrated into a sturdy plastic housing. The plastic housing is compatible with all common 22 mm combi-adapters or base plates with a holding ring. The filter cassette can be easily and quickly closed with a finger to enable laryngectomised patients with voice prosthesis to speak. The LARYVOX® O_2 HME filter cassette also provides the option of connecting an oxygen tube in addition. An oxygen connection nozzle (5 mm plug connection) for this purpose is located on the side of the filter cassette casing. This can be connected to an oxygen device or an oxygen tank via a connecting tube as required. Thanks to the option of an oxygen connection to the HME filter cassette, the patient can also continue to benefit from the convenience of an HME filter cassette, such as speech using the voice prosthesis during oxygen therapy.

ORDER INFORMATION	PU	REF
LARYVOX® HME	30	**49800**
LARYVOX® O_2 HME	30	**49802**

LARYVOX® HME HIGHFLOW

The LARYVOX® HME HighFlow filter cassette features a special foam with excellent filtering properties. This foam filter presents a relatively low respiration resistance and thus facilitates the optimum adaptation to the constant usage of HME filter cassettes, preferably for 24 hours per day and the resulting advantages for the lower airways (e.g. lower secretion production and a decreased urge to cough, etc.). Thanks to its lower respiration resistance, the LARYVOX® HME HighFlow is also particularly suitable during strenuous activity. The plastic housing is compatible with all common 22 mm combi-adapters or LARYVOX® Tape base plates.

ORDER INFORMATION	PU	REF
LARYVOX® HME HIGHFLOW	30	**49810**

LARYVOX EXTRA HME FILTER CASSETTES

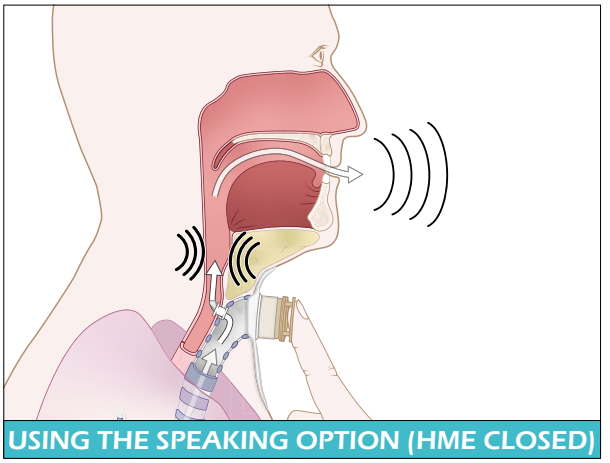
LARYVOX® EXTRA HME (Heat-Moisture Exchanger) supplements the LARYVOX® SYSTEM as a filter cassette and provides all functions of a conventional filter cassette. It filters, warms and humidifies the respiratory air. In addition, LARYVOX® EXTRA HME is equipped with an easy-to-operate speaking option for patients with voice prostheses, and features an unobtrusive design. By virtue of four different versions, the LARYVOX® MY EXTRA HME can be selected to suit individual activities and needs:. The SPORT variant, for example, is particularly suitable for sporting activities such as endurance sports due to its very low breathing resistance.

UNOBTRUSIVE DESIGN AND EASY APPLICATION

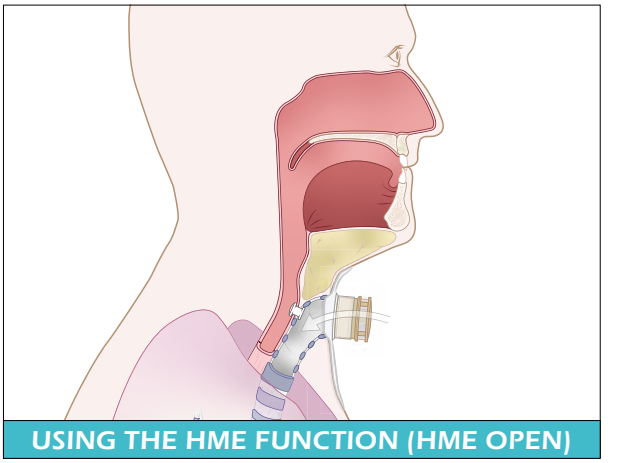
LARYVOX® EXTRA HME consists of a beige plastic housing and a flat closing lid. Thanks to LARYVOX® EXTRA's plain shape and unobtrusive colour design, the HME-filter cassette is very inconspicuous. Lateral breathing apertures enable largely unhindered air flow even if the cassette is covered with clothing or additional tracheostoma protection material, thus enabling easy breathing. The HME filter cassette can be attached to all conventional base plates or silicone tracheostomy tubes with a 22 mm combi-adapter. The finger ledge on the housing enables easy handling and quick removal of the LARYVOX® EXTRA HME filter cassette from the holding ring, thereby facilitating expectoration and stoma care.

EASY SPEAKING OPTION WITH A SHUNT VALVE

The rounded recess in the lid of LARYVOX® EXTRA HME additionally facilitates deliberate closure of the tracheostoma and renders the optimal finger position easy to feel. By exerting slight finger pressure on the HME lid, the patient is able to accomplish a very precise closure of the tracheostoma, for instance for speaking. The HME is thus sealed particularly tightly, preventing unintentional air loss from the side of the HME. Unpleasant side noises are reduced. The device can be operated even through clothing covering it.



USING THE SPEAKING OPTION (HME CLOSED)



USING THE HME FUNCTION (HME OPEN)

LARYVOX EXTRA HME FILTER CASSETTE VARIANTS

NORMAL ▶ Normal breathing resistance for situations requiring normal physical activity

MEDIUM ▶ Breathing resistance for physical activities

HIGHFLOW ▶ Reduced breathing resistance for situations with strong physical exertion

SPORT ▶ Very low respiratory resistance specifically for sporting activities

Among other things, the four versions differ in that they have different foam material filters.

The standard version LARYVOX® EXTRA HME is suitable for patients immediately after laryngectomy in situations with normal physical exertion. LARYVOX® EXTRA HME Medium features medium breathing resistance and can thus be used for situations involving physical activities. A HighFlow version is available in addition. By virtue of its low breathing resistance, this version is particularly suitable for situations with strong physical exertion and for new HME users. The LARYVOX® EXTRA HME SPORT has the lowest breathing resistance so that sufficient air is available even during great exertion, e.g. during sporting activities.

NORMAL VARIANT

MEDIUM VARIANT

HIGHFLOW VARIANT

SPORT VARIANT

LARYVOX® EXTRA HME NORMAL WITH SPEAKING OPTION

The filter medium integrated in the LARYVOX® EXTRA HME housing serves for exchanging heat and moisture and filters the respiratory air. Due to the loss of nasal breathing, filtration, warming and humidification of the respiratory air must be ensured in order to prevent irritation of the airways due to dry air, dust, or harmful substances contained in the respiratory air. After surgery, tracheotomised/laryngectomised patients often suffer from increased production of mucus and irritation of the airways associated with an urge to cough. These symptoms can impair breathing and voice rehabilitation. Regular use of HME filter cassettes alleviates the symptoms through reduction of viscous secretions in the lungs and promotes pulmonary rehabilitation.

LARYVOX® EXTRA HME can be worn both during the day and at night.

ORDER INFORMATION	PU	REF
LARYVOX® EXTRA HME NORMAL	30	**49860**

LARYVOX® EXTRA HME MEDIUM WITH SPEAKING OPTION

The filter medium with **medium breathing resistance** for physical activities integrated in the LARYVOX® EXTRA HME housing serves for exchanging heat and moisture and filters the respiratory air. Due to the loss of breathing by mouth and nose, filtration, warming and humidification of the respiratory air must be ensured in order to prevent irritation of the airways due to dry air, dust, or harmful substances contained in the respiratory air. After surgery, tracheotomised/laryngectomised patients often suffer from increased production of mucus and irritation of the airways associated with an urge to cough. Regular use of HME filter cassettes alleviates the symptoms through reduction of viscous secretions in the lungs and promotes pulmonary rehabilitation. LARYVOX® EXTRA HME can be worn both during the day and at night.

ORDER INFORMATION	PU	REF
LARYVOX® EXTRA HME MEDIUM	30	**49862**

LARYVOX® EXTRA HME HIGHFLOW WITH SPEAKING OPTION

The filter medium with **reduced breathing resistance** for high levels of physical exertion integrated in the LARYVOX® EXTRA HME HIGHFLOW housing serves for exchanging heat and moisture and filters the respiratory air. Due to the loss of breathing by mouth and nose, filtration, warming and humidification of the respiratory air must be ensured in order to prevent irritation of the airways due to dry air, dust, or harmful substances contained in the respiratory air. After surgery, tracheotomised/laryngectomised patients often suffer from increased production of mucus and irritation of the airways associated with an urge to cough. These symptoms can impair breathing and voice rehabilitation. Regular use of HME filter cassettes alleviates the symptoms through reduction of viscous secretions in the lungs and promotes pulmonary rehabilitation.

LARYVOX® EXTRA HME HIGHFLOW can be worn both during the day and at night.

ORDER INFORMATION	PU	REF
LARYVOX® EXTRA HME HIGHFLOW	30	**49861**

LARYVOX® EXTRA HME SPORT WITH SPEAKING OPTION

The filter medium with **a very low breathing resistance** for sporting activities integrated in the LARYVOX® EXTRA HME SPORT housing serves for exchanging heat and moisture and filters the respiratory air. Due to the loss of breathing by mouth and nose, filtration, warming and humidification of the respiratory air must be ensured in order to prevent irritation of the airways due to dry air, dust, or harmful substances contained in the respiratory air. After surgery, tracheotomised/laryngectomised patients often suffer from increased production of mucus and irritation of the airways associated with an urge to cough. These symptoms can impair breathing and voice rehabilitation. Regular use of HME filter cassettes alleviates the symptoms through reduction of viscous secretions in the lungs and promotes pulmonary rehabilitation.

ORDER INFORMATION	PU	REF
LARYVOX® EXTRA HME SPORT	30	**49863**

LARYVOX® MY EXTRA HME

The filter medium integrated in the LARYVOX® EXTRA HME housing serves for exchanging heat and moisture and filters the respiratory air. Due to the loss of breathing by mouth and nose, filtration, warming and humidification of the respiratory air must be ensured in order to prevent irritation of the airways due to dry air, dust, or harmful substances contained in the respiratory air. After surgery, tracheotomised/laryngectomised patients often suffer from increased production of mucus and irritation of the airways associated with an urge to cough. Regular use of HME filter cassettes alleviates the symptoms through reduction of viscous secretions in the lungs and promotes pulmonary rehabilitation.

You can now create your own personal MY EXTRA HME. To do this, first select your filter: Normal, Medium, HighFlow or Sport. You can then determine the colour of the housing and the speech button (lid).

You can choose from 23 different colours and over 500 different colour combinations. The colours of the cover and housing can be combined in any combination. This gives you the option to choose your HME daily to go with your clothes.

HERE YOU CAN FIND THE CURRENT LARYVOX® MY EXTRA HME COLOUR SAMPLE CARD:

Please scan the QR code with your smartphone.

HOW TO CREATE YOUR OWN PERSONAL HME

1 Select the LARYVOX® MY EXTRA HME filter

Normal	49860-XXXX
HighFlow	49861-XXXX
Medium	49862-XXXX
Sport	49863-XXXX

2 Choose the housing colour

Silver — Colour code **99**

3 Choose the colour of the lid

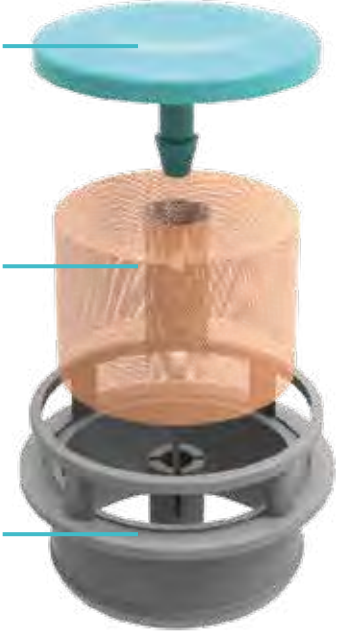
Turquoise — Colour code **65**

4 Example

Filter: HighFlow REF **49861**
Colour housing: Silver 99
Colour of lid: Turquoise 65

5 Result

REF 49861-9965



Excerpt from the colour sample card (more colour variations can be found in our colour sample card or on our homepage www.fahl.com):

Classic/blue

Dark blue/green

Green/white

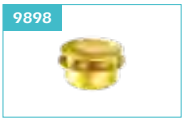
Orange/natural beige

Purple/black

Turquoise/turquoise

Red/white

Yellow/purple



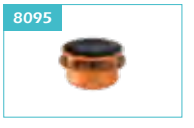
Gold/gold

White/dark brown

Black/natural beige

Turquoise/silver

Cream/caramel



Brown/black

Red/blue

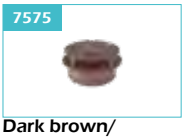
Yellow/black

White/classic

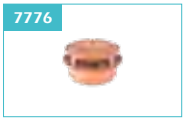
Dark blue/gold

Green/orange

Purple/white



Dark brown/Dark brown



Honey/cream

Gold/turquoise

Blue/blue

LARYVOX® MY EXTRA HME

COLOUR SHADES

Yellow

Orange

Red

Purple

Dark blue

Blue

Green

Turquoise

Brown

White

Black

Gold

Silver

Classic

Vanilla

Soft Beige

Natural Beige

Gold Beige

Sand

Cream

Honey

Caramel

Dark brown

ORDER INFORMATION	PU	REF
LARYVOX® MY EXTRA HME NORMAL	5	**49860-XXXX**
LARYVOX® MY EXTRA HME MEDIUM	5	**49862-XXXX**
LARYVOX® MY EXTRA HME HIGHFLOW	5	**49861-XXXX**
LARYVOX® MY EXTRA HME SPORT	5	**49863-XXXX**

Please additionally specify colour no. when ordering (see colour overview)

LARYVOX® STYLE

HME SPEAKING OPTION AND DESIGN

LARYVOX® STYLE offers all the functionality of an HME filter cassette, individual colour selection, as well as a simple option for speaking by closing with the finger without applying pressure. LARYVOX® STYLE is made up of the following components: LARYVOX® STYLE HME; LARYVOX® STYLE TOP lamella; LARYVOX® STYLE CAP round.

LARYVOX® STYLE HME is available with normal breathing resistance and in a HighFlow variant with low breathing resistance. The HighFlow version is particularly suitable in the case of significant physical strain and for new HME users. Both versions can be worn both during the day as well as at night. The HME may only be used in combination with LARYVOX® STYLE TOP and must always be secured using an appropriate tube or a base plate.

The combination of LARYVOX® STYLE TOP lamella and LARYVOX® STYLE CAP round also enables speaking for laryngectomised patients with a voice prosthesis. With LARYVOX® STYLE CAP, speech is enabled by closing the tracheostoma with the finger - even through clothing - without applying pressure. LARYVOX® STYLE TOP lamella channels the respiratory air in a diffuse manner away from the tracheostomy and prevents the inadvertent suction of clothing or scarves during inhalation. LARYVOX® STYLE TOP lamella and LARYVOX® STYLE CAP round can be colour-coordinated with one another in accordance with your individual wishes.

01

TOP - blue metallic

02

TOP - gold

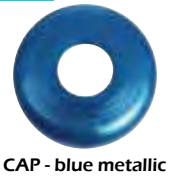
03

TOP - silver

04

TOP - beige

01



CAP - blue metallic

02

CAP - gold

03

CAP - silver

04

CAP - beige

ORDER INFORMATION	PU	REF
LARYVOX® STYLE HME HIGHFLOW	30	**49880**
LARYVOX® STYLE HME	30	**49881**
LARYVOX® STYLE HME HIGHFLOW SET	30	**49880-90**
LARYVOX® STYLE HME SET	30	**49881-90**
LARYVOX® STYLE TOP LAMELLA SET	9	**49830-90**
LARYVOX® STYLE CAP ROUND SET	9	**49820-90**
LARYVOX® STYLE CAP ROUND **Please additionally specify colour when ordering!**	3	**49820**
LARYVOX® STYLE TOP LAMELLA **Please additionally specify colour when ordering!**	3	**49830**

LARYVOX® TOUCH HME FILTER CASSETTE WITH SPEAKING OPTION

The LARYVOX® TOUCH HME is equipped with an easy-to-operate closure device, thereby providing a speaking option in addition to the classical functions of a filter cassette.

LARYVOX® TOUCH HME is available as HighFlow version with low respiratory resistance and is particularly suitable in the case of strong physical exertion and for new HME users.

LARYVOX® TOUCH HME is available in a variety of colours. The plastic housing is compatible with the common 22 mm combi-adapters. The opening in the side of the housing enables unhindered and easy breathing. In addition you prevent the inadvertent suction of clothing or scarves during inhalation.

The closure mechanism and the flexible material of the cover of LARYVOX® TOUCH HME facilitate speaking for laryngectomised patients with voice prosthesis. To close the HME, you only need to press the speaking button slightly. When you let go of the speaking button, it immediately returns to the open breathing position.

The special design ensures that the closed front offers protection from wind and cold.

01

blue metallic

02

gold

03

beige

04

silver

13

clear

ORDER INFORMATION	PU	REF
LARYVOX® TOUCH HME HIGHFLOW, BLUE METALLIC	30	**49850-01**
LARYVOX® TOUCH HME HIGHFLOW, GOLD	30	**49850-02**
LARYVOX® TOUCH HME HIGHFLOW, SILVER	30	**49850-03**
LARYVOX® TOUCH HME HIGHFLOW, BEIGE	30	**49850-04**
LARYVOX® TOUCH HME HIGHFLOW, CLEAR	30	**49850-13**

LARYVOX® PRO HME

The LARYVOX® PRO HME filter cassette consists of a transparent plastic housing, with integrated HME filter and beige closing lid.

Also integrated into the housing is a guard under the filter insert, which is designed to prevent secretions from coming into contact with the foam HME filter. It also prevents secretions from reaching the patient's fingers or clothing. Owing to its low profile and operation through the clothing, the HME filter cassette is very inconspicuous. The HME filter cassette can be easily fixed over the tracheostoma using fixable base plates or a tracheostomy tube with 22 mm combi-adapter. The LARYVOX® PRO HME filter cassette itself can easily be removed from the 22 mm combi-adapter at any time.

LARYVOX® PRO HME enables laryngectomised patients, who have been surgically provided with a so-called voice prosthesis, to speak. The weaning plug, when closed, enables speech; when open, it enables breathing. By exerting slight finger pressure on the closing lid, the patient is able to switch between these two positions. A special feature is the additional lateral ventilation slits in the housing, which enable an optimal air supply, even when covered by clothing/tracheostoma protection.

Due to the special foam filter, the LARYVOX® PRO HME is also a heat and moisture exchanger at the same time. This has a positive effect on the mucous membranes of the trachea. The filter increases breathing resistance and thereby supports the function of the lungs. Secretion production, coughing and encrustations are reduced.

LARYVOX® PRO HME is available with normal breathing resistance and in a HighFlow variant with low breathing resistance. The HighFlow version is particularly suitable in the case of significant physical strain and for new HME users.

ORDER INFORMATION	PU	REF
LARYVOX® PRO HME HIGHFLOW	30	**49840**
LARYVOX® PRO HME	30	**49841**

HUMIDOTWIN®

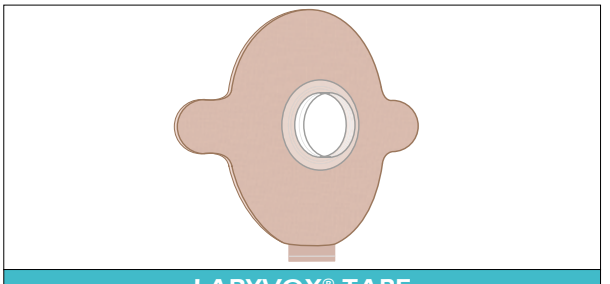
WITH OVERPRESSURE VALVE

The HUMIDOTWIN® "artificial nose" is a moisture and heat exchanger with a filter function for spontaneously breathing patients. It filters, warms and humidifies the respiratory air. The use of the "artifical nose" reduces the drying out of the mucous membranes in the tracheostoma and regulates the production of secretions, which prevents encrustations.

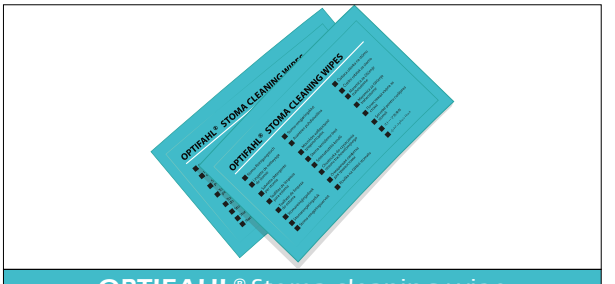
The housing contains an open-pored polyurethane sponge with hygroscopic characteristics. The HUMIDOTWIN® is very compact, unobtrusive and light, and is very comfortable to wear. The functional multi-adapter of the HUMIDOTWIN® "artificial nose" features both a standardised, central opening for the attachment onto a tracheostomy tube with 15 mm connector, as well as a 22 mm combi-adapter. The cover element of the HUMIDOTWIN® is also equipped with a star-slotted safety overpressure valve in case of strong coughs.

ORDER INFORMATION	PU	REF
HUMIDOTWIN®	30	**46460**

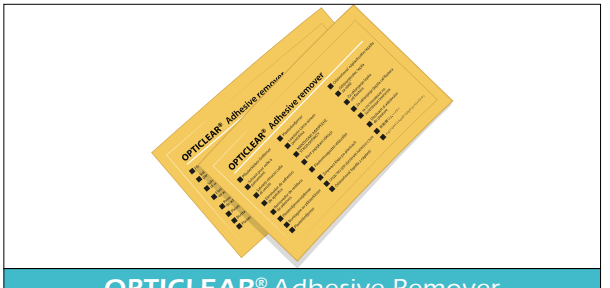
LARYVOX® TAPE



LARYVOX® TAPE



OPTIFAHL® Stoma cleaning wipe

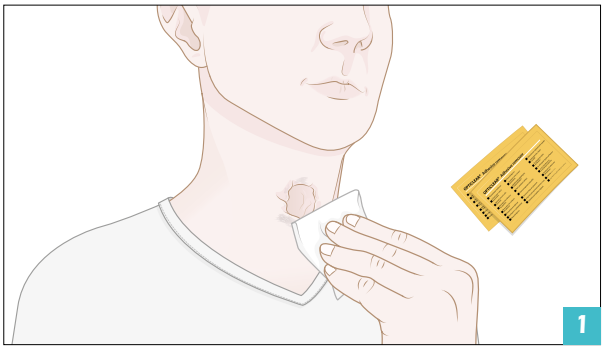


OPTICLEAR® Adhesive Remover

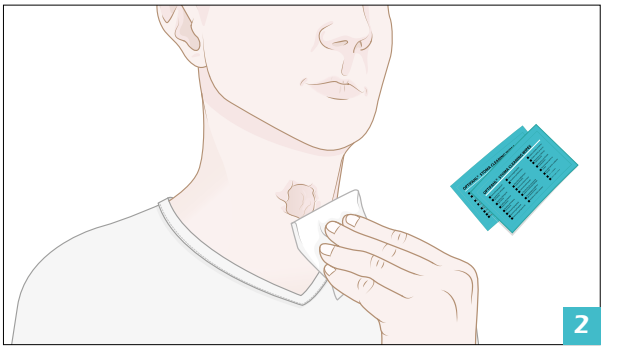
OPTIGARD® Skin protection wipes

LARYVOX® TAPE

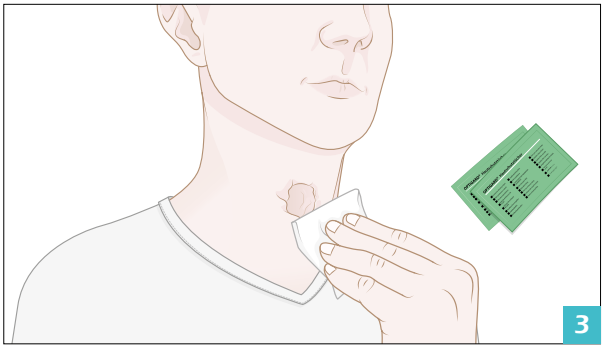
APPLICATION



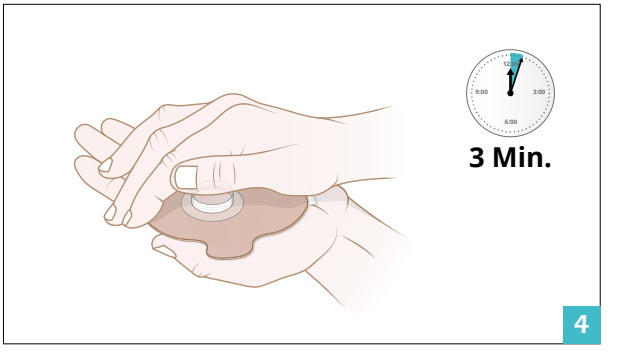
If necessary, clean adhesive residues from the skin with an OPTICLEAR® (REF 33500).



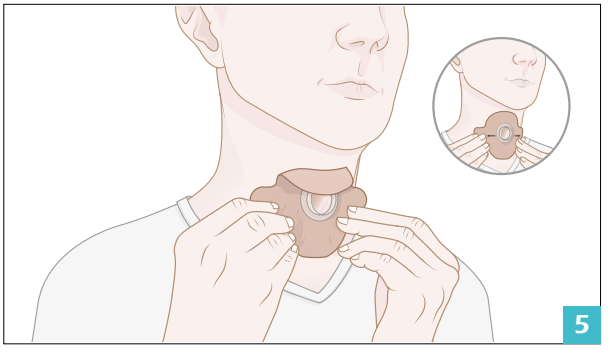
Clean, degrease and dry the parastomal skin with an OPTIFAHL® stoma cleaning wipe.



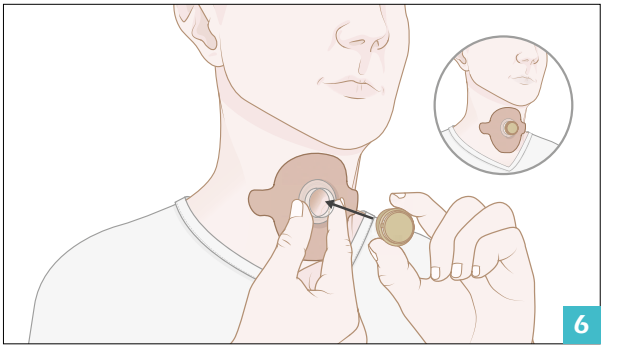
Apply OPTIGARD® (REF 33600) around the tracheostoma to protect against skin irritation.



Warm the base plate to strengthen the adhesive power. Then remove the protective film from the back of the LARYVOX® TAPE.

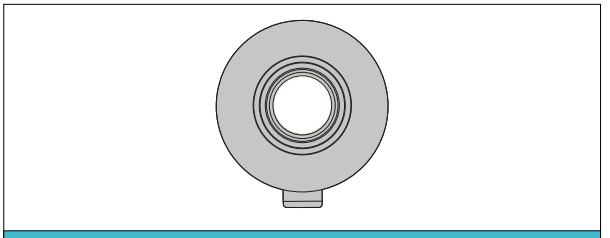


Carefully stroke the tape with your fingers for 5 minutes on the skin. This lets you achieve an optimal hold and avoid air inclusions.

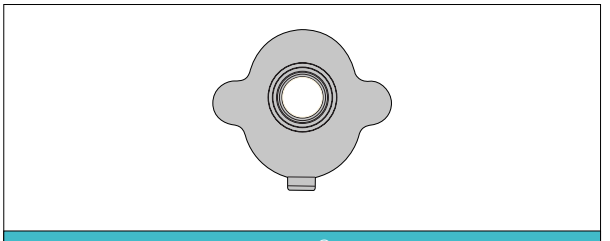


Fix the LARYVOX® TAPE with two fingers and carefully insert the filter cassette.

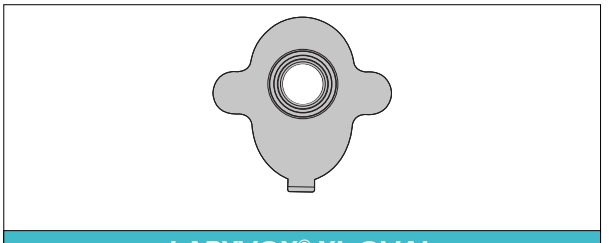
LARYVOX® TAPE



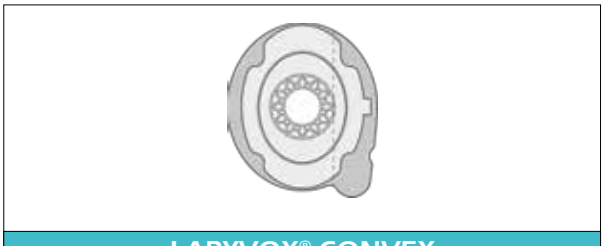
LARYVOX® ROUND



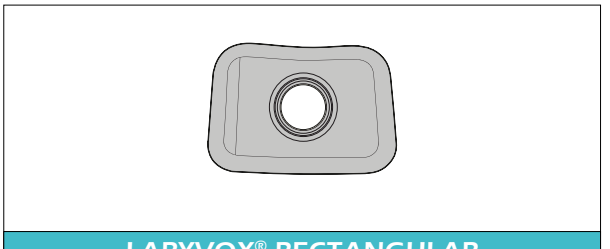
LARYVOX® OVAL



LARYVOX® XL OVAL



LARYVOX® CONVEX



LARYVOX® RECTANGULAR

BASE PLATES FOR EVERY SKIN TYPE

Base plates are a special attachment system for daily use of filter cassettes. The self-adhesive LARYVOX® Tapes are selected individually according to the anatomical situation of the tracheostoma and the patient's type of skin in order to achieve an optimal wearing period as well as fixation. The filter cassette is fitted in place in a 22 mm combi-adapter and can be changed separately from the base plate if required. The combination with a special silicone cannula, the so-called "Clip System" (e.g. LARYNGOTEC® Kombi Clip) or a suitable shower protection is also possible in principle. We offer the tapes in various shapes and sizes, made of different materials and with different adhesive strengths.

The special skin preparation of the tracheostoma region as well as the professional placement of the base plate on the tracheostoma are essential prerequisites for the application duration of the various base plates.

In addition, care should be taken to ensure that the LARYVOX® Tape is removed properly and gentle to the skin. Special accessory items such as OPTICLEAR® plaster adhesive remover, OPTIGARD® skin protection and OPTIFAHL® stoma cleaning wipes support the professional changing of base plate. In addition, a peel-off aid facilitates rapid removal of the protective film as well as gentle removal of the base plate from the skin.

Our qualified sales representatives will be pleased to assist you with the individually suitable selection of the base plate, the professional preparation of the tracheostoma as well as the correct handling of the LARYVOX® tapes in a personal appointment on your premises.

LARYVOX® TAPE STANDARD

- Transparent look with water-repellent effect
- Adhesive property ensures a secure hold around the tracheostoma
- Suitable for unproblematic tracheostoma anatomy and normal skin constitution
- Three different shapes available: round, oval, XL oval

LARYVOX® TAPE HYDROSOFT

- Hydrocolloid-based material that adapts flexibly to contours and is gentle to the skin
- Hydrocolloid encloses fluids/secretions to maintain the overall moisture environment of the skin
- Particularly suitable for sensitive skin
- Skin-friendly and gentle removal of the plaster
- Three different shapes available: round, oval, XL oval

LARYVOX® TAPE COMFORT

- Inconspicuous appearance: thin, breathable, skin-coloured material
- High flexibility facilitates handling even in the case of a difficult tracheostoma anatomy
- Adapts flexibly to the skin, thus enabling longer wearing periods
- Ideal for physical activity
- Three different shapes available: round, oval, XL oval

LARYVOX® TAPE FLEXIBLE

- Soft, fabric-like material with high adhesive strength
- Special material property facilitates handling, particularly in the case of fixation in problematic tracheostoma anatomies
- Particularly suitable during physical activity owing to the good adhesive strength
- Three different shapes available: round, oval, XL oval

LARYVOX® TAPE HYPOALLERGEN

- Particularly for sensitive skin
- Can reduce the occurrence of allergic skin reactions
- Adapts comfortably to movements
- Very good adhesive properties
- Three different shapes available: round, oval, XL oval

LARYVOX® TAPE EXTRA FINE

- Unobtrusive look: transparent and extremely thin
- Very good adhesive properties
- Water-repellent material
- Covers a large skin area around the tracheostoma
- Adapts optimally to the movements of the neck region due to high flexibility
- Shape: rectangular

LARYVOX® TAPE STANDARD — ROUND, OVAL, XL OVAL

LARYVOX® TAPE STANDARD is available in three different shape variations for optimal adaptation to the tracheostoma region. The base plate features a transparent look with water-repellent effect. The very flexible 22 mm combi-adapter simplifies removal of the filter cassette for the user. The adhesive property ensures a secure hold. If a few adhesive residues remain on the skin area when the tape is changed, these are easy to remove.

The LARYVOX® TAPE STANDARD is suitable for unproblematic tracheostoma anatomy and normal skin constitution.

ORDER INFORMATION	PU	REF
LARYVOX® TAPE STANDARD, round	15	**48100**
LARYVOX® TAPE STANDARD, oval	15	**48200**
LARYVOX® TAPE STANDARD, XL oval	15	**48300**

LARYVOX® TAPE FLEXIBLE — ROUND, OVAL, XL OVAL

LARYVOX® TAPE FLEXIBLE with flexible 22 mm combi-adapter is available in three different shape variants (round, oval, oval XL) for optimal adaptation to the tracheostoma region.

The base plate consists of a soft, fabric-like material with high adhesive strength. The special material property facilitates handling, particularly in the case of fixation in problematic tracheostoma situations, i.e. deep position, irregular or similar.

ORDER INFORMATION	PU	REF
LARYVOX® TAPE FLEXIBLE, round	15	**48120**
LARYVOX® TAPE FLEXIBLE, oval	15	**48220**
LARYVOX® TAPE FLEXIBLE, XL oval	15	**48320**

LARYVOX® TAPE HYDROSOFT — ROUND, OVAL, XL OVAL

LARYVOX® TAPE HYDROSOFT is available in three different shape variations for optimal adaptation to the tracheostoma region (round, oval, XL oval).

The special, very supple and skin-friendly hydrocolloid-based material offers a high level of fixation comfort. A special effect is given by the ability of the hydrocolloid to enclose fluids/secretions to maintain the overall moisture environment of the skin. This product proves to be particularly useful for sensitive skin, e.g. directly after surgery.

ORDER INFORMATION	PU	REF
LARYVOX® TAPE HYDROSOFT, round	15	**48130**
LARYVOX® TAPE HYDROSOFT, oval	15	**48230**
LARYVOX® TAPE HYDROSOFT, XL oval	15	**48330**

LARYVOX® TAPE COMFORT — ROUND, OVAL, XL OVAL

LARYVOX® TAPE COMFORT is available in three different shape variations for optimal adaptation to the tracheostoma region. The thin, breathable and beige-coloured material offers the highest possible adhesive properties. The high flexibility of the tape simplifies handling particularly for the treatment of a difficult tracheostoma anatomy, e.g. irregular or deeply positioned tracheostomata.

This is complemented by the very flexible 22 mm combi-adapter.

ORDER INFORMATION	PU	REF
LARYVOX® TAPE COMFORT, round	15	**48140**
LARYVOX® TAPE COMFORT, oval	15	**48240**
LARYVOX® TAPE COMFORT, XL oval	15	**48340**

LARYVOX® TAPE HYPOALLERGEN — ROUND, OVAL, XL OVAL

LARYVOX® TAPE HYPOALLERGEN is available in three different shape variations for optimal adaptation to the tracheostoma region (round, oval, XL oval). LARYVOX® Tape HYPOALLERGEN is especially suitable for sensitive skin and reduces the occurrence of allergic skin reactions. The flexible material adapts comfortably to movement and has very good adhesive properties. This enables a prolonged wearing time.

This is complemented by the very flexible 22 mm combi-adapter.

ORDER INFORMATION	PU	REF
LARYVOX® TAPE HYPOALLERGEN, round	15	**48050**
LARYVOX® TAPE HYPOALLERGEN, oval	15	**48150**
LARYVOX® TAPE HYPOALLERGEN, XL oval	15	**48250**

LARYVOX® TAPE EXTRA FINE — RECTANGULAR

LARYVOX® TAPE EXTRA FINE is a distinctively thin base plate and is available in rectangular shape only. The generous adhesive surface allows optimal adaptation even to large tracheostomata. The special rectangular shape and water-repellent material offer an alternative to the shape and features of other base plates.

Particularly during movement of the tracheostomy environment, the extremely thin base plate adapts well to the neck region, thus providing stable coverage and thus longer wearing time. LARYVOX® TAPE EXTRA FINE is suitable for normal skin conditions and is optimal for physical exertion.

ORDER INFORMATION	PU	REF
LARYVOX® TAPE EXTRA FINE, rectangular	15	**48400**

LARYVOX® PAD

Tracheostomy placement, i.e., the displacement or shortening of the airway, is now regularly performed in many medical specialties based on a variety of indications. Accordingly, the need for the measure may only be short-term or it may also be permanent. Subsequent care of the tracheostoma, the opening for breathing, quite often poses special challenges for physicians, nurses, patients and relatives.

"Every person is an individual - and so is every tracheostoma."

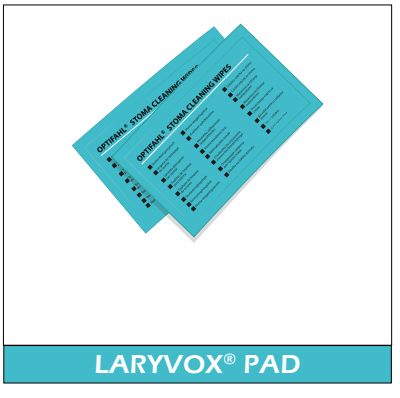
Professional tracheostoma care is always performed with a view to the best possible adaptation of the aids to the patient's individual circumstances and needs. For example, good adaptation of the tracheostomy tube to the anatomy is important for comfortable use of the aid, as is care and maintenance of the health of the parastomal skin as well as good sealing of the tracheostoma to prevent unwanted loss of breath for a satisfactory voice result.

What are the particular challenges of providing care?

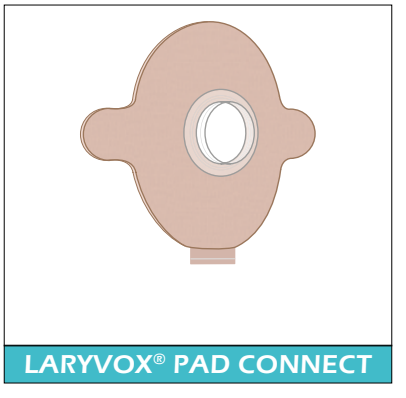
Different aspects influence the shape, size, uniformity and depth of the skin level of a tracheostoma. Even the intraoperative creation of the tracheostoma can be performed using different techniques, which then influence the later appearance of the airway opening. Subsequent radiation therapy may also impact skin structure or tracheostoma size over time. These can be both permanent or of a temporary nature. Even the use of the tracheostomy tube and its fixation with a tube holding strap can, under certain circumstances, lead to a change in the shape of the tissue if handled incorrectly. Typical problems occur at different times in patients and not infrequently require a very individualised supply of aids, which sometimes only produces the desired results after multiple product changes. For example, a deeply positioned, irregular tracheostoma is difficult to care for as no sealing effect can be achieved with the tracheostomy tube, or the base plates cannot find an even contact surface to provide the longest possible hold.

"LARYVOX® PAD can offer alternative solutions in various designs."

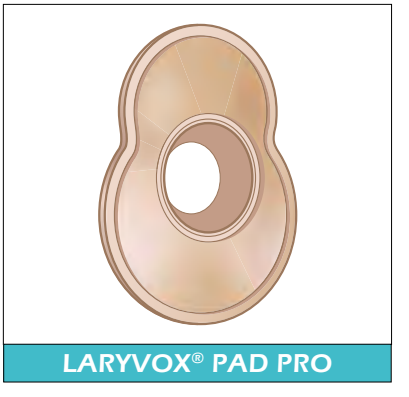
The self-adhesive, skin-coloured silicone pads are used to adjust the skin level of an irregular tracheostoma. Their high degree of suppleness ensures good placement on the tracheostoma and may possibly provide an optimised support surface for a base plate.



LARYVOX® PAD



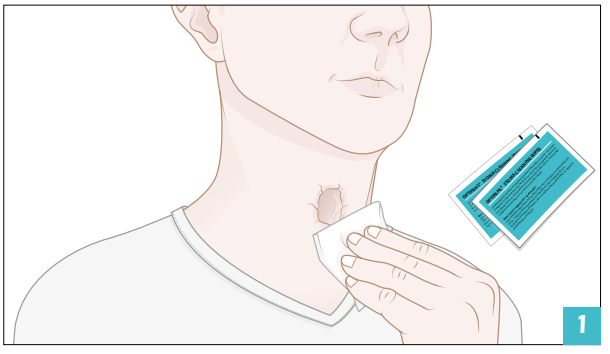
LARYVOX® PAD CONNECT



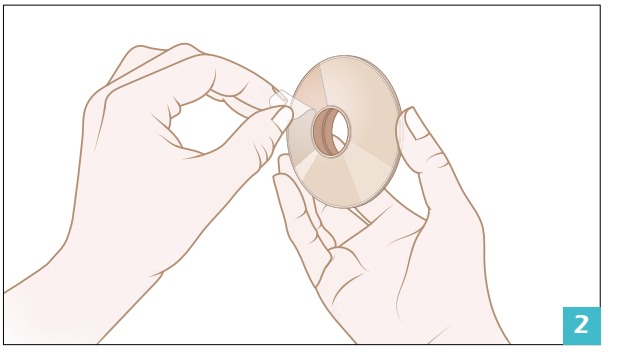
LARYVOX® PAD PRO

LARYVOX® PAD

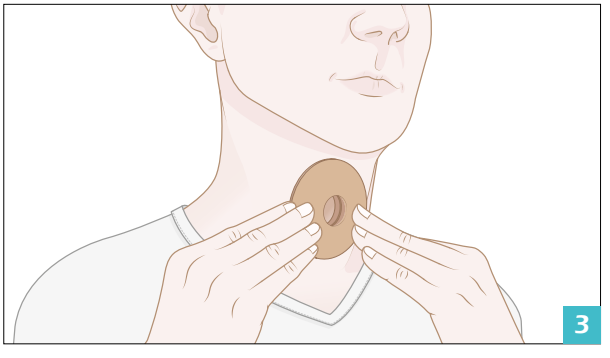
APPLICATION



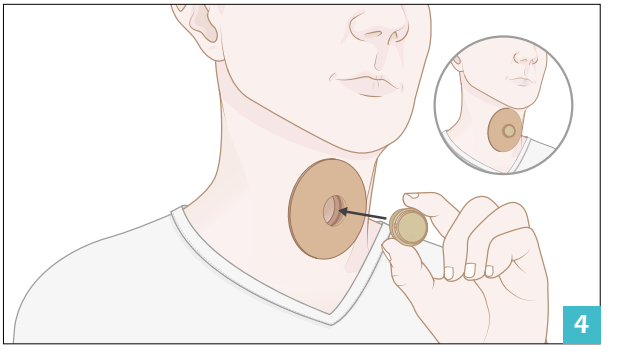
Clean, degrease and dry the parastomal skin (the skin surrounding the tracheostoma) with an OPTIFAHL® stoma cleaning wipe.



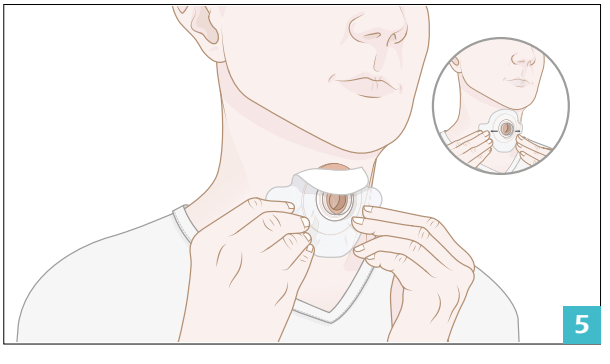
Remove the protective film from the back of the LARYVOX® PAD.



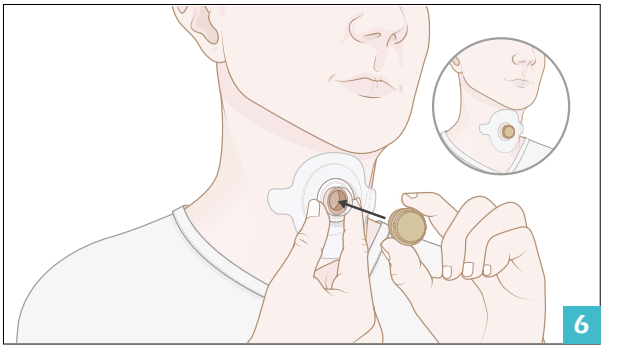
Fix the LARYVOX® PAD with slight pressure around the stoma.



With a LARYVOX® PAD Connect, an HME can be attached directly via the integrated 22 mm combi-adapter.



With a LARYVOX® PAD/LARYVOX® PAD PRO, a base plate must also be glued to the PAD to use an HME.



After bonding the base plate over the LARYVOX® PAD/LARYVOX® PAD PRO, an HME can be attached to the base plate with a 22 mm combi-adapter.

LARYVOX® PAD CONNECT

LARYVOX® PAD CONNECT is a self-adhesive sealing plate made of soft, skin-coloured medical silicone with an integrated 22 mm combi-adapter. Due to the skin-friendly material, the skin around the tracheostoma is less irritated and the skin level of an irregular tracheostoma is adjusted. A matching HME filter ("artificial nose") can easily be inserted directly into the PAD on the integrated 22 mm combi-adapter, thus eliminating the need for an additional base plate. In addition to reduced leakage of secretion, the lateral flow of breathing air can also be minimised.

ORDER INFORMATION	PU	REF
LARYVOX® PAD CONNECT	2	**48710**

LARYVOX® PAD

LARYVOX® PAD is a self-adhesive sealing pad made of soft, skin-coloured, medical silicone and is used to equalise the skin level in the case of an irregular, deeply positioned tracheostoma. This creates a flat support surface for easy fixation of a base plate. The conical air channel centres the air flow through the HME during exhalation and minimises the pressure on the base plate. Following medical consultation, the LARYVOX® PAD can also be used as a seal between the tracheostoma and tracheostomy tube. The plano-convex shape of the LARYVOX® PAD ensures high quality sealing and at the same time provides cushioning between the tracheostomy tube and the tracheostoma.

ORDER INFORMATION	PU	REF
LARYVOX® PAD	2	**48700**

LARYVOX® PAD PRO

LARYVOX® PAD PRO is a self-adhesive sealing pad made of soft, skin-coloured, medical silicone and is used to equalise the skin level in the case of an irregular, deeply positioned tracheostoma. This creates a flat support surface for easy fixation of a base plate which can be combined with an HME. The conical air channel centres the air flow through the HME during exhalation and minimises the pressure on the base plate. The asymmetric design allows the PAD to be used for patients with an irregular tracheostoma and offers different placement options to achieve a good fit to the anatomical conditions.

ORDER INFORMATION	PU	REF
LARYVOX® PAD PRO	2	**48720**

LARYVOX® TAPE CONVEX

LARYVOX® TAPE CONVEX is an oval base plate made of a transparent and water-repellent material, which is particularly suitable for a deeply positioned tracheostoma. The base plate with honeycomb core offers a strong overall structure. Due to this flexible honeycomb core, the LARYVOX® TAPE CONVEX offers a high level of wearing comfort. The ergonomically shaped tear-off tab allows for easy placement. The LARYVOX® TAPE CONVEX provides a reliable seal with its broad adhesive surface, which simplifies voice formation. A fastening system with a 22 mm combi-adapter is integrated.

ORDER INFORMATION	PU	REF
LARYVOX® TAPE CONVEX	10	**48500**

LARYVOX® CONNECT — 22 MM TO 15 MM

LARYVOX® CONNECT for base plates allows the attachment of special devices with a standard 15 mm connector to a base plate or a KOMBI tracheostomy tube (22 mm combi-adapter).

This enables the use of, for example, heat and moisture exchangers, so-called "artificial noses", without having to wear a tracheostomy tube with a 15 mm connector.

ORDER INFORMATION	PU	REF
LARYVOX® CONNECT, 22 mm to 15 mm	1	**48915**

LARYVOX® ADAPT — 15 MM TO 22 MM

This LARYVOX® adapter for tracheostomy tubes allows the attachment of special aids with a standard 22 mm combi-adapter to a tracheostomy tube with 15 mm connector.

This enables the use of, for example, HME filter cassettes (LARYVOX® HME) without having to use a base plate or a tracheostomy tube with combination attachment.

ORDER INFORMATION	PU	REF
LARYVOX® ADAPT, 15 mm to 22 mm	3	**48920**

LARYVOX® EXTRA HME HIGHFLOW STARTER SET

The LARYVOX® EXTRA HME HIGHFLOW STARTER SET is used to select the optimal base plate in combination with the LARYVOX® EXTRA HME HighFlow. The anatomical conditions, skin condition and breathing situation of the patient need to be taken into account.

SCOPE OF DELIVERY (PIECES)			
3	LARYVOX® TAPE EXTRA FINE	3	LARYVOX® TAPE FLEXIBLE
3	LARYVOX® TAPE STANDARD	3	LARYVOX® TAPE COMFORT
3	LARYVOX® TAPE HYDROSOFT	1	LARYVOX® SECUTRACH shower guard
15	OPTICLEAR® patch adhesive remover	15	LARYVOX® EXTRA HME HIGHFLOW
15	OPTIGARD® skin protection wipe		

ORDER INFORMATION	REF
LARYVOX® EXTRA HME HIGHFLOW STARTER SET	**48840**

FAHL® SILICONE GLUE

30 ML

FAHL® SILICONE GLUE is a liquid medical silicone adhesive for application to the skin. The skin adhesive is used to reinforce the adhesive strength of base plates and epitheses for secure fixation.

A brush/applicator in the lid of the adhesive allows for easy application of the silicone adhesive to the skin

Not suitable for sensitive skin. The use of a skin protection product such as FAHL OPTIGARD is recommended.

ORDER INFORMATION	PU	REF
FAHL® SILICONE GLUE	30 ml	**29810**

PASSIVE RESPIRATORY AIR CONDITIONING

Due to the different clinical pictures and their requirements for the corresponding supply of aids, a large number of product variations have been developed and designed in recent years. All combine the four important basic functions: heating, humidifying, filtering the respiratory air and breathing resistance. The matching HME model in each case essentially depends on the individual application situation.

Large-volume "artificial noses" are recommended especially for the postoperative phase due to strong secretion. The connection on the tracheostomy tube is usually made with a 15 mm connector. In addition to heating and humidifying the respiratory air, these "artificial noses" also focus on the particle-filtering effect of the filter medium. Particularly in the area of long-term ventilation, the complication rate can be reduced significantly by consistent conditioning of the respiratory air with HME and particle filters.

Generally speaking, the continuous use of the "artificial noses" noticeably reduces secretion due to the well-moistened tracheal mucosa. Therefore, the use of HME filters also improves the respiratory situation of patients in the context of temporarily necessary tracheotomies or laryngectomies.

Both tracheotomised and laryngectomised patients prefer small, inconspicuous models to avoid emphasising their own handicap. This need can also be satisfied with a variety of products and their designs. In addition to humidification and heating of the respiratory air, O_2 connection, speech option and 22 mm combi-adapter are important further product features which are available for indication-appropriate care. There are also special products in the portfolio to address the special needs of infants and children.

In general, the HME must be exchanged several times a day during the first period of use, depending on secretion production. In continuous use, for 24 hours per day, there is a rapid reduction in secretion with a correspondingly lower material consumption. A daily requirement of 1-2 HMEs is realistic in the long term.

Symonenko Viktoriia/shutterstock.com

Monkey Business Images/Shutterstock.com

HUMIDOTRACH®

WITH OVERPRESSURE VALVE

This heat and moisture exchanger (HME) for tracheotomised patients has a foam filter, which is integrated into a sturdy plastic housing. The plastic housing is designed in grid form, to enable the greatest amount of air to enter. HUMIDOTRACH® is equipped with a central, standardised adapter, which enables attachment to a tracheostomy tube with 15 mm connector. The inhaled air is filtered, warmed and humidified by the artificial nose.

In addition, the lid of the housing contains an overpressure valve. This enables the coughing out of secretions, even without removing the "artificial nose". A lateral connection piece (5 mm plug-in connection) on the housing enables connection for the oxygen supply.

ORDER INFORMATION	PU	REF
HUMIDOTRACH®	30	**46450**

HUMIDOTRACH® ISO

WITH OVERPRESSURE VALVE

This heat and moisture exchanger for tracheotomised patients has a foam filter, which is integrated into a sturdy plastic housing. The plastic housing is designed in grid form, to enable the greatest amount of air to enter. HUMIDOTRACH® ISO is equipped with a central, standardised opening, which enables attachment to the tracheostomy tube with 15 mm connector.

In addition, the lid of the housing contains an overpressure valve. This enables the coughing out of secretions, even without removing the "artificial nose". A lateral connection piece on the housing of the HUMIDOTRACH® ISO, which is designed as an ISO plug-in connection/nipple in 6 mm, enables connection for the oxygen supply.

ORDER INFORMATION	PU	REF
HUMIDOTRACH® ISO	30	**46455**

HUMIDOTRACH® PRO

WITH OVERPRESSURE VALVE

This **round** heat and moisture exchanger for tracheotomised patients features a foam filter, which is integrated into a sturdy plastic housing. The plastic housing is designed in grid form, to enable the greatest amount of air to enter. HUMIDOTRACH® PRO is equipped with a central, standardised opening, which enables attachment to the tracheostomy tube with 15 mm connector.

In addition, the lid of the housing contains an overpressure valve. This enables the coughing out of secretions, even without removing the "artificial nose". A lateral connection piece on the housing of the HUMIDOTRACH® PRO "artificial nose" enables a connection for the oxygen supply.

ORDER INFORMATION	PU	REF
HUMIDOTRACH® PRO	30	**46456**

HUMIDUAL®

STERILE

The HUMIDUAL® "artificial nose" is a heat and moisture exchanger (HME) consisting of a plastic housing with two opposing foam filters, a safety pressure relief valve and a connection for the oxygen supply.

The plastic housing has a connection opening for attachment to the 15 mm connector of a tracheostomy tube or an endotracheal tube.

HUMIDUAL® is intended for patients with spontaneous breathing. The humidification effect sets in after only a few breaths. HUMIDUAL® is a product for single use.

ORDER INFORMATION	PU	REF
HUMIDUAL®	30	**46470**

TRACHLINE® HUMIDOSTOM® MINI

TRACHLINE® HUMIDOSTOM® MINI is a heat and moisture exchanger (HME = Heat-Moisture Exchanger) that is perfectly matched to the properties of the TRACHLINE® tracheostomy tube series. The bayonet lock ensures a secure connection. Moisture and heat of the expired air is stored in the filter medium. On inhalation, the filter returns this moisture as well as heat. TRACHLINE® HUMIDOSTOM® MINI thus filters the respiratory air and prevents dirt particles from entering the respiratory tract. On the other hand, the formation of viscous secretions in the airways is reduced. The oxygen connecting piece fitted at the side of the housing (5mm plug-in connection) enables a connecting tube to be connected, also in combination with an external oxygen source. The low weight of only approx. 3 g rounds off the pleasant wearing features.

ORDER INFORMATION	PU	REF
TRACHLINE® HUMIDOSTOM® MINI	30	**46860**

HUMIDOSTOM O_2

The HUMIDOSTOM® O_2 consists of a foam filter and a plastic housing. The plastic housing is equipped on the patient side with a central opening with 15 mm internal diameter, thereby allowing for connection to a 15 mm connector. The HUMIDOSTOM® O_2 filters the respiratory air and thus reduces the penetration of particles into the patient's airways, which leads to a reduced formation of viscous secretions in the lungs.

In addition, the HUMIDOSTOM® O_2 features an oxygen connection for connecting an oxygen source.

ORDER INFORMATION	PU	REF
HUMIDOSTOM O_2	30	**46150**

HUMIDOFIX®

The HUMIDOFIX® "artificial nose" serves as a heat and moisture exchanger and is attached to the 15 mm connector of a tracheostomy tube. It retains exhaled heat and moisture, stores it and releases it back into the respiratory air when inhaling. The high moisturising performance reduces the risk of encrustations in the tracheostoma.

The functional design of the artificial nose, with integrated paper filter, ensures maximum comfort. The HUMIDOFIX® is intended for patients with spontaneous breathing.

For reasons of hygiene, the "artificial nose" must be replaced regularly.

ORDER INFORMATION	PU	REF
HUMIDOFIX®	30	**46440**

OXYGEN CONNECTION FOR HUMIDOFIX®

To supply patients with oxygen at the same time, the HUMIDOFIX® can be combined with a special oxygen adapter.

This consists of a holder for attachment at the "artificial nose" and a transparent plastic tube for the oxygen supply.

ORDER INFORMATION	PU	REF
OXYGEN CONNECTION FOR HUMIDOFIX®	10	**46441**

CANNULA ACCESSORIES

We have assembled an extensive range of tracheostoma tube accessories for you. A **tube holding strap** is indispensable for securely fixing the tube in the tracheostoma.

Tube holders are available in a large selection and should be matched to the tracheostoma tube, as far as possible. We provide tube holders in differing material qualities and fastening techniques.

- H - with plastic hook
- HM – with metal hook
- K - with velcro fastener
- PED – Tube holding strap for children

Different versions of **tracheal compresses** are available, to absorb tracheal secretions and to cushion the tracheal neck flange against the skin. The compresses have a circular hole through which the cannula tube can be passed and are also available with an additional slit opening, for fast compress changing.

- SLIT – with slit
- ALU – with aluminium coating
- UNO – single-layer
- DUO – two-layer
- PED – specifically for children

KACLIP® H — SINGLE-PART

The tube holding strap is available in two different versions, with metal (HM) or plastic hooks (H), with a choice of white or beige-coloured strap. Both versions are also available with normal or wide hooks.

ORDER INFORMATION	PU	REF
KACLIP® H beige, adjustable from 30 - 50 cm	1	**32000**
KACLIP® H beige, adjustable from 30 - 50 cm	1	**32005**
KACLIP® H white, adjustable from 30 - 50 cm	1	**32005-02**
KACLIP® tube holding strap with wide plastic hook, beige	1	**32005-03**
KACLIP® tube holding strap with wide plastic hook, white	1	**32005-04**

KACLIP® K — TWO-PART

This is an approximately 1 cm wide, elastic tube holder, which ensures the secure fit of your tracheostomy tube. There is a velcro fastener at both ends of the tube holding strap which is used to attach it to the tracheostomy tube.

The velcro strips are simply hooked into the lateral eyelets at the neck flange of the tracheostomy tube. The tube holder can be adjusted for neck widths of approx. 30 cm to 50 cm. Optimal comfort is achieved when there is still around 1 cm of space between the throat and the tube holding strap.

Tracheostomy tubes made of silicone may only be used in conjunction with a tube holding strap with velcro fastener (K). The holding straps are adjustable for different neck sizes.

ORDER INFORMATION	PU	REF
KACLIP® K white, adjustable from 30 - 50 cm	1	**32010**
KACLIP® K beige, adjustable from 30 - 50 cm	1	**32011**

KACLIP® CLEAR H — SINGLE-PART

KACLIP® CLEAR H are elastic holding straps about 1 cm wide that ensure a secure fit of your tracheostomy tube. Two plastic hooks are attached to both ends of the tube holder for the fixation of the tracheostomy tube.

The unobtrusive design provides the patient with increased comfort as the transparent KACLIP® CLEAR H tube holding strap adapts well to the neck and is thereby barely recognisable.

The hooks are simply hooked into the lateral eyelets at the neck flange of the tracheostomy tube. The tube holder can be adjusted for neck widths of approx. 29 cm to 52 cm.

You will achieve ideal comfort when there is still around 1 cm of space between the throat and the tube holder.

ORDER INFORMATION	PU	REF
KACLIP® CLEAR H transparent, adjustable from 29 - 52 cm	1	**32015**

LARYVOX® SIMPLY FIX — TWO-PART

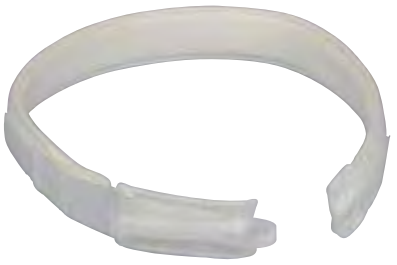
The LARYVOX® SIMPLY FIX tube holder impresses with its inconspicuous design and offers the best possible wearing comfort due to the high-quality processed materials. In combination with a tracheostomy tube, the LARYVOX® SIMPLY FIX tube holder can be variably positioned on the neck area and attached by sticking on.

The skin around the tracheostoma must be cleaned and free of adhesive residues to be able to fix the tube holder permanently. For this purpose, use our products OPTIFAHL® ostomy cleaning wipe and OPTICLEAR® plaster adhesive remover. The fastening strips are threaded and fixed to the neck flange. The low weight and minimal contact surface of the LARYVOX® SIMPLY FIX tube holder prevent skin irritation.

ORDER INFORMATION	PU	REF
LARYVOX® SIMPLY FIX	40	**32680**

OPTIFLAUSCH® K

TWO-PART



The OPTIFLAUSCH® K tube holding strap enables the secure fixation of tracheostomy tubes. It is distinguished by its very comfortable wearing properties. OPTIFLAUSCH® K consists of a light foam core, which is surrounded by a skin-friendly non-woven fabric. The materials used are comfortably soft. The stretch-fabric provides a snug fit. The circumferential border is particularly soft and supports wearing comfort.

The holding strap is placed around the neck and the velcro fastener enables it to be easily and quickly adjusted to the desired neck size. The ends of the OPTIFLAUSCH® K tube holding strap feature thin velcro strips, which are threaded into the eyelets of the tracheostomy tube. For fastening, the Velcro strips are turned over and fixed to the fluffy side of the tube holder. If the tube holder is too long, it can be shortened to the desired length by cutting it. This ensures a secure fit of the tracheostomy tube.

The OPTIFLAUSCH® K is available both in white and beige. The tube holder is approx. 4 mm thick and 2.5 cm wide.

Also available as OPTIFLAUSCH® Slim K with a width of 1.7 cm.

ORDER INFORMATION	PU	REF
OPTIFLAUSCH® K, adjustable from 24 - 45 cm	1	**32550**
OPTIFLAUSCH® K BEIGE, adjustable from 24 - 45 cm	1	**32553**
OPTIFLAUSCH® SLIM K, adjustable from 24 - 42 cm	1	**32552**

OPTIFLAUSCH® H

TWO-PART

Alternatively, the OPTIFLAUSCH® tube holding strap is available with plastic hooks (H), which is particularly suited for fast attachment to the tracheostomy tube. It is distinguished by its very comfortable wearing properties. OPTIFLAUSCH® consists of a light foam core, which is surrounded by a skin-friendly non-woven fabric.

ORDER INFORMATION	PU	REF
OPTIFLAUSCH® H, adjustable from 24 - 47 cm	1	**32551**

NECKFIX® K

SINGLE-PART

The design of the NECKFIX® tube holding strap enables the secure fixation of the tracheostomy tube. The tube holder is pleasantly soft and flexible. It can be adjusted to different neck sizes. The light foam core of the tube holder is surrounded by a skin-friendly non-woven fabric.

Fastening straps made of Velcro are located at the ends of the tube holder. This enables fast fixing of the tube holder to the neck flange of the tracheostomy tube. The tube holding strap is available in different colours, namely white, beige and blue

ORDER INFORMATION	PU	REF
NECKFIX® K, WHITE, adjustable, 45 cm, approx. 2.5 cm wide	1	**32620**
NECKFIX® BLUE K, adjustable, 45 cm, approx. 3.5 cm wide	1	**32610**
NECKFIX® BEIGE K, 46 cm	1	**32622**
NECKFIX® BEIGE K XL, 50 cm	1	**32623**

NECKFIX® DUO K

TWO-PART

The design of the NECKFIX® Duo tube holding strap enables the secure fixation of the tracheostomy tube.

The two-part tube holder is pleasantly soft and flexible. It can be adjusted to different neck sizes. The light foam core of the tube holder is surrounded by a skin-friendly non-woven fabric.

Fastening straps made of Velcro are located at the ends of the tube holder. This enables fast fixing of the tube holder to the neck flange of the tracheostomy tube.

ORDER INFORMATION	PU	REF
NECKFIX® DUO K, white, adjustable from 40 - 53 cm, approx. 3.5 cm wide	1	**32630**
NECKFIX® DUO K, beige, adjustable from 40 - 53 cm, approx. 3.5 cm wide	1	**32631**
NECKFIX® DUO K PLUS, white, adjustable from 40 - 53 cm	1	**32629-01**

SUPRAFIX® K

SINGLE-PART

SUPRAFIX® K enables a secure and comfortable fixation of the tracheostomy tube. It consists of an approx.3 cm wide white foam strap surrounded by soft, non-woven fabric. The fastening straps are elastic and equipped with an adjustable clip.

In the version with adherent fastener, the ends of the tube holder have thin Velcro strips, which are threaded into the eyelets of the tracheal neck flange, in order to fix the cannula. This fastener method is particularly suitable in the use of plastic cannulas as the velcro strap enables fixation while being gentle on the material.

ORDER INFORMATION	PU	REF
SUPRAFIX® 18 K, adjustable from 20 - 40 cm	1	**32502**
SUPRAFIX® 25 K, adjustable from 32 - 48 cm	1	**32500**
SUPRAFIX® 30 K, adjustable from 37 - 53 cm	1	**32501**
SUPRAFIX® 36 K, adjustable from 43 - 57 cm	1	**32503**

SUPRAFIX® H

SINGLE-PART

The SUPRAFIX® H version features plastic hooks at the ends of the tube holding strap which are hooked onto the lateral fastening eyes of the neck flange to fix the tracheostomy tube. In addition, an adjustment clip is attached to the foam strap, with which the length of the tube holding strap can be adjusted variably.

ORDER INFORMATION	PU	REF
SUPRAFIX® 18 H, adjustable from 22 - 41 cm	1	**32301**
SUPRAFIX® 25 H, adjustable from 35 - 42 cm	1	**32300**
SUPRAFIX® 30 H, adjustable from 34 - 54 cm	1	**32305**
SUPRAFIX® 36 H, adjustable from 40 - 58 cm	1	**32303**

SENSOTRACH® ALU — ALUMINIUM-COATED

SENSOTRACH® ALU is a compress, made of non-woven fabric, for tracheostomy tube users. The relatively light non-woven underlay is aluminium-vapour coated on one side. SENSOTRACH® ALU absorbs tracheal secretions well and acts as a cushion between the skin and neck flange. The silver-grey matt side of the tracheal compress consists of a non-woven viscose fabric, with finely aluminium-vapour coated fibres. This smooth surface prevents adhesion secretion residues and does not stick to the skin.

The tracheostomy tube is pushed through the provided opening in the tracheal compress, with the aluminium-vapour coated side on the skin.

A version with an additional slit (SLIT), for fast changing of compresses, is available. The cannula does not need to be removed here before changing the compress.

ORDER INFORMATION	PU	REF
SENSOTRACH® ALU, 8 x 10 cm	10	**30000**
SENSOTRACH® ALU SLIT, 8 x 10 cm	10	**30030**

SENSOTRACH® UNO

The SENSOTRACH® UNO tracheal compress is a single layer, comfortably soft and suitable for tube wearers with low secretion.

Through a special shape, the SENSOTRACH® UNO, with its smooth surface, perfectly adapts to the anatomy of the neck/tracheostoma, softly and securely cushions the neck flange against the skin and thereby ensures the highest comfort.

The tracheal compress without a slit is intended for a change in compresses with a change of cannula. The compress with a slit (SLIT) is designed for comfortable compress changing without a change of tube.

ORDER INFORMATION	PU	REF
SENSOTRACH® UNO, 9 x 9.8 cm	10	**30520**
SENSOTRACH® UNO SLIT, 9 x 9.8 cm	10	**30521**

SENSOTRACH® DUO

The SENSOTRACH® DUO tracheal compress for tracheostomy tube users consists of two compress layers of equal thickness, fixed together. The two-layer SENSOTRACH® DUO ALU is suitable for tracheostomy tube users with moderate to low secretion production. The side close to the skin is marked by the green stripe on the side. In addition, the compress quickly absorbs secretions from the skin between the tracheostoma and the tube. This keeps the skin dry and warm. With its special shape, the SENSOTRACH® DUO ALU tracheal compress adapts perfectly to the neck region.

The SENSOTRACH® DUO tracheal compress cushions the tube softly and securely against the tracheostoma and the skin. It meets the very highest demands on function, aesthetics and comfort.

A version with a slit (SLIT), for fast changing of compresses, is available in addition.

ORDER INFORMATION	PU	REF
SENSOTRACH® DUO, 9 x 9.8 cm	10	**30608**
SENSOTRACH® DUO SLIT, 9 x 9.8 cm	10	**30609**

SENSOTRACH® DUO ALU

ALUMINIUM-COATED

The SENSOTRACH® DUO ALU compress is a high quality, especially absorbent and dimensionally stable tracheal compress, which has an aluminium-vapour coating on one side. The metallic coating prevents sticking to the skin with blood and secretions. The two-layer SENSOTRACH® DUO ALU is suitable for tracheostomy tube users with moderately low secretion production. Due to the strength of its materials, the SENSOTRACH® DUO ALU remains smooth and stable even when saturated. With its special anatomically rounded shape, the SENSOTRACH® DUO ALU tracheal compress adapts perfectly to the neck region.

The SENSOTRACH® DUO tracheal compresses are also available as a version with slit (SLIT).

ORDER INFORMATION	PU	REF
SENSOTRACH® DUO ALU, 9 x 9.8 cm	10	**30662**
SENSOTRACH® DUO ALU SLIT, 9 x 9.8 cm	10	**30663**

SENSOTRACH® DUO SKIN

SENSOTRACH® DUO SKIN is a two-layer tracheal compress which, due to its special shape, adapts excellently to the neck area. The skin-typical colour ensures that the tracheal compress can barely be seen when wearing and is therefore highly inconspicuous. SENSOTRACH® DUO SKIN consists of two compress bodies attached together, which quickly and reliably absorb any secretions. The rear compress layer, near to the skin, is especially soft and ensures that the skin is kept dry and warm, by quickly absorbing secretions. The SENSOTRACH® DUO SKIN compress is available as a variant with additional slit opening.

The practical slit in the SENSOTRACH® DUO SKIN SLIT enables convenient and quick changing of the compress, without the need to remove the cannula from the tracheostoma beforehand.

ORDER INFORMATION	PU	REF
SENSOTRACH® DUO SKIN, 9 x 9.8 cm	10	**30668**
SENSOTRACH® DUO SKIN SLIT, 9 x 9.8 cm	10	**30669**

SENSOTRACH® 3-PLUS

The SENSOTRACH® 3-Plus is a special coated compress and is suitable for tracheostomy tube users with normal and heavy secretion production. The layer close to the skin, recognisable by the green stripe on the side, effectively absorbs secretion from the skin. The coating of the upper side of the compress increases wearing comfort. The side away from the skin has a special moisture-repellent, white coating, which prevents saturation of the compress and thereby provides excellent protection for clothing as well as providing pleasant wearing comfort.

A variation is the SENSOTRACH® 3-Plus SLIT compress with an additional slit opening, so that a change of compress is possible without changing cannulas.

ORDER INFORMATION	PU	REF
SENSOTRACH® 3-PLUS, 9 x 9.8 cm	10	**30770**
SENSOTRACH® 3-PLUS SLIT, 9 x 9.8 cm	10	**30780**

1-KAM®

The 1-KAM® tracheal compress features a single layer, is comfortably soft and highly absorbent. Its surfaces are lint-free.

The 1-KAM® tracheal compress is primarily designed for care in the clinic and during inpatient treatment, especially when frequent cannula and compress changes are necessary. However, these compresses can also be used, at home, by patients with low secretion levels or if a lighter cannula underlay is required or desired.

There are two variants available to choose from: the tracheal compress without a slit is intended for a renewal of the compress with exchange of the tracheostomy tube. The compress with a slit is designed for comfortable compress changing without a change of tube. The 1-KAM® tracheal compress retains its shape, even when wet, and provides the user with good protection for clothing.

ORDER INFORMATION	PU	REF
1-KAM®, 9 x 9.8 cm	10	**30400**
1-KAM® SLIT, 9 x 9.8 cm	10	**30500**

2-KAM®

The 2-KAM® double-chamber tracheal compress for tracheostomy tube users consists of 2 connected compress layers of different thicknesses and made of different non-woven fabrics. The front compress body very quickly and reliably absorbs secretions, which leak straight from the cannula. Its surface is reinforced and therefore washable without pilling. The 2-KAM double-chamber tracheal compress is an excellent clothing protector. The rear compress body, close to the skin, is especially soft. It quickly absorbs secretions from the skin between the tracheostoma and the tube. This keeps the skin dry and warm and avoids the formation of a moist chamber between the compress and the skin.

ORDER INFORMATION	PU	REF
2-KAM®, 9 x 9.8 cm	10	**30600**
2-KAM® SLIT, 9 x 9.8 cm	10	**30601**

SENSOFOAM®

STERILE

The SENSOFOAM® tracheal compress softly and securely cushions the tracheostomy tube against the skin and thereby prevents sores. At the same time, this stabilises the fit of the tracheostomy tube in the tracheostoma.

The SENSOFOAM® tracheal compress is constructed in multiple layers, whereby the skin-coloured, breathable top layer prevents saturation of the compress. In addition, the spongy material is especially soft and is comfortable to wear. Secretions are absorbed quickly, safely and extremely efficiently. This avoids adhesion or sticking to the skin and makes the compress easier to remove.

The SENSOFOAM® is also available in a smaller version

ORDER INFORMATION	PU	REF
SENSOFOAM®, 10.0 x 9.0 x 0.5 cm	10	**30860**
SENSOFOAM® SMALL STERILE, 6.5 x 6.5 x 0.5 cm	10	**30861**

SENSOFOAM® PAD PROFESSIONAL

STERILE

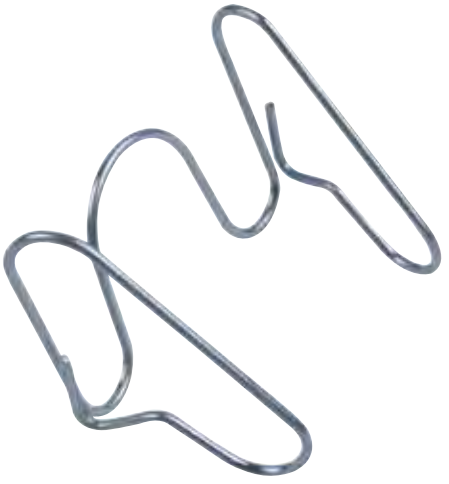
The SENSOFOAM® tracheal compress is constructed in multiple layers, whereby the skin-coloured, breathable top layer prevents saturation of the compress.

The absorbent foam absorbs secretions quickly and safely, thus avoiding adhesion or sticking to the skin and making the compress easier to remove.

The additional punched holes on the side allow the tube to be fixed together with the SENSOFOAM® PAD Professional using a tube sholding strap. Furthermore, the SENSOFOAM® PAD features a slit which allows a quick change of compresses, whereby the tracheostomy tube can remain in the tracheostoma and does not have to be removed before changing the compress.

ORDER INFORMATION	PU	REF
SENSOFOAM®, PAD PROFESSIONAL 7.8 x 3.8 cm	10	**30864**

LARYVOX® DISTANCE HOLDER



The LARYVOX® DISTANCE HOLDER is a curved stainless steel spacer which prevents the opening of the tube from being blocked by wearing tracheostoma protection and consequently making breathing difficult.

The LARYVOX® DISTANCE HOLDER is pushed onto the neck flange and thus ensures the necessary distance between the cannula opening and, for example, a stoma protection cloth (e.g. TRACHEOTEX® SCARF) or a stoma protection bib (e.g. TRACHEOTEX® BIB).

The LARYVOX® DISTANCE HOLDER is dimensionally stable and resistant against cleaning.

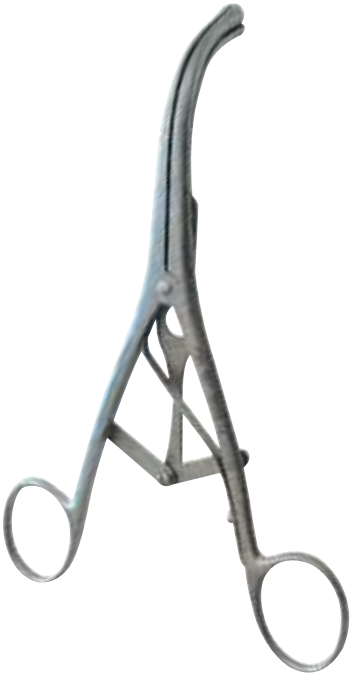
ORDER INFORMATION	PU	REF
LARYVOX® DISTANCE HOLDER	1	**34000**

LARYVOX® TRACHEAL DILATOR

The LARYVOX® tracheostoma dilator enables the dilation and temporary safety of the tracheostoma in tracheotomised and laryngectomised patients. Inserting the tracheostomy tube is much considerably easier through the dilated tracheostoma, as a "contraction" of the tracheostoma, especially in unstable openings, is prevented.

The LARYVOX® tracheal dilator is made of stainless steel. The tips of the tracheal dilator are specially shaped and rounded, in order to minimise the risk of injury when inserting it into the tracheostoma. Due to the special construction with the three spreadable wings, the tracheostoma can be opened evenly in all directions during cannula changing.

The LARYVOX® tracheal dilator is an aid for tracheostomy tube users and should always be close to hand for a fast cannula change. The LARYVOX® tracheal dilator is also indispensable in emergencies, in a deformation of the tube, in order to safeguard the airway.



ORDER INFORMATION	PU	REF
LARYVOX® TRACHEAL DILATOR	1	**35500**

LARYVOX® TWEEZERS

If you suffer from severe encrustation formation, the LARYVOX® TWEEZERS encrustation tweezers, made of robust stainless steel, can help you to care for your tracheostoma. The encrustations of tough secretions can be quickly and safely gripped and removed from the tracheostoma. The rounded tips of the encrustation tweezers enable gentle operation and minimise the risk of injury.

The LARYVOX® TWEEZERS encrustation tweezers are angled, to give you a clear view of the tracheostoma in front of the mirror.

ORDER INFORMATION	PU	REF
LARYVOX® TWEEZERS	1	**35000**

LARYVOX® SPECULUM

The LARYVOX® SPECULUM is a stainless steel instrument for dilating and expanding a body orifice.

It features two spreadable wings. Among other things, the LARYVOX® SPECULUM facilitates the insertion of a tracheostomy tube in case of a narrow tracheostoma and also prevents an unstable tracheostoma from collapsing. In case of a collapsing tracheostoma, the LARYVOX® SPECULUM is an indispensable aid for emergency airway protection.

ORDER INFORMATION	PU	REF
LARYVOX® SPECULUM	1	**35100**

MUCOPROTECT® CUFF PRESSURE GAUGE

The MUCOPROTECT® CUFF PRESSURE GAUGE cuff pressure gauge is suited for blocking and controlling pressure in tracheostomy tubes with a cuff. The MUCOPROTECT® CUFF PRESSURE GAUGE can be used for all control balloons with Luer-lock closure (market standard).

Using this easy-to-handle pressure gauge, the cuff pressure can be correctly set and controlled. It is easy to detect over-pressure, for example caused by diffusion of the anaesthetic gases, and correct these with a lateral release button.

The large surface area allows for precise reading to achieve maximum accuracy. The optimal pressure range (20-30 cm water column) is clearly visible through the turquoise-coloured area in the display.

We supply the MUCOPROTECT® CUFF PRESSURE GAUGE complete with connecting hose and fastening hook.

ORDER INFORMATION	PU	REF
MUCOPROTECT® CUFF PRESSURE GAUGE	1	**19500**

MUCOPROTECT® CONNECTION TUBE

The connection tube for the MUCOPROTECT® cuff pressure measuring device can also be ordered separately. This tube connects the cuff pressure gauge to the filling valve of tracheostomy tubes with cuff.

ORDER INFORMATION	PU	REF
MUCOPROTECT® CONNECTION TUBE FOR CUFF PRESSURE GAUGE	1	**19506**

Edgar G Biehle/Shutterstock.com

LARYVOX® OLFACTORY TUBE

The LARYVOX® OLFACTORY TUBE smelling aid with combi-adapter was developed for patients after larynx surgery, to provide a short-term ability to smell. Particular value was placed on comfortable and simple operation of this aid.

The LARYVOX® OLFACTORY TUBE smelling-aid with combi-adapter consists of a flexible plastic tube, which can easily be moved in different directions. One end of the smelling aid has a detachable mouthpiece, which is brought to the mouth. A special combi-adapter is located at the other end.

This combi-adapter offers various uses: for one, it enables the attachment of a silicone tracheostoma mask, through which a mouth-tracheostoma connection can be made, which enables smelling. Fixation and pressing the neck mask on are required for this to create an airtight seal to the tracheostoma.

On the other hand, the combi-adapter with simultaneous use of standard base plates, e.g., LARYVOX® TAPE, enables a firm connection to the tracheostoma, which frees the user's hands during smelling.

In this case, the smelling tube is attached to the stoma patch with the 22 mm connection This creates a firm and airtight connection to the tracheostoma, which can, if necessary, be released by loosening the adapter.

The LARYVOX® OLFACTORY TUBE smelling aid with combi-adapter can also be perfectly connected to a 22 mm combi-adapter of the tracheostomy tube. For this purpose, the free ends of the smelling aid is inserted into the mounting of the combi-connector.

A mouthpiece and a silicone tracheostoma mask are also included in the scope of delivery.

ORDER INFORMATION	PU	REF
LARYVOX® OLFACTORY TUBE	1	**75130**

CLEANSING AND CARE OF THE TRACHEOSTOMY TUBES

Professional care of tracheostomy tubes includes not only the correct selection of the individually fitting tracheostomy tube, but also regular and correct care of the medical device. For reasons of hygiene, to avoid the risk of infection and to maintain product quality, it is important here to observe the correct procedure according to general recommendations as well as the specific manufacturer's instructions.

What is generally involved in the care of the tracheostomy tube?

Even the distinction between blocked and unblocked tracheostomy tubes requires different care and, if necessary, change intervals, as secretion residues and incrustation in the tube form the breeding ground for germs and narrow the inner lumen. At the same time, it should be noted that a tracheostomy tube change always means stress for the patient and should consequently be performed as infrequently as possible. Generally, a change should therefore be planned accordingly and performed professionally and, for reasons of safety, should be performed by two people if possible.

In general, an unblocked tracheostomy tube should be changed at least twice a day and more frequently if necessary, e.g. in case of heavy secretion. Blocked tracheostomy tubes usually remain in the tracheostoma longer because changing the tube with a cuff is more stressful for the patient.

CLEANSING AND CARE OF THE TRACHEOSTOMY TUBES

Accordingly, tracheostomy tubes with an internal cannula system prove suitable for simplified secretion management. These can be conveniently removed for cleaning in case of soiling and obstruction, while the outer cannula remains in the tracheostoma.

What should be taken into consideration when cleaning a tracheostomy tube?

First, all components of the tracheostomy tube should be rinsed under running water for cleaning. Then they should be soaked completely covered in a lukewarm cleaning solution. A cannula cleaning tub with a sieve insert is ideally suited for this purpose. The dosage of the detergent and the exposure time of the solution are given in the manufacturer's instructions. Exceeding the exposure time can lead to material damage, especially in the case of plastic cannulas. Detergents other than those approved by the manufacturer, such as high-proof alcohol, denture cleaners, aggressive household detergents, etc., must also not be used in order to avoid health hazards and not to negatively influence the durability of the cannula. Furthermore, dishwashers, steam cookers, microwave ovens, washing machines, etc. must not be used to clean the tracheostomy tubes. Poorer compatibility of the inner and outer cannula can already be a sign of an incorrect cleaning procedure. Silver tracheostomy tubes oxidise with prolonged use and exhibit black spots on the material. These do not affect the material and can usually be removed manually in a silver immersion bath. Regular cannula reprocessing by the manufacturer is recommended.

After the cleaning bath, it is important to thoroughly remove all detergent residues. Remaining secretions can be removed with a size-adapted cannula cleaning brush. Inappropriately large cleaning brushes can damage the cannula. To avoid damage to the cannula tip, the brush should always be inserted retrogradely, i.e. from the cannula tip to the neck flange. Too frequent or careless cleaning techniques can also lead to cracks or the formation of sharp edges. Checking the tip of the cannula for irregularities with the finger is of great importance and should be performed regularly.

When is disinfection indicated?

For patients with special pathogenic microbes (e.g. MRSA, ORSA, etc.), where there is an increased risk of reinfection, simple cleaning of the outer cannula is not sufficient to meet the special hygiene requirements for the prevention of infections. In these cases, disinfect the tracheostomy tube with a tube disinfectant according to the manufacturer's instructions.

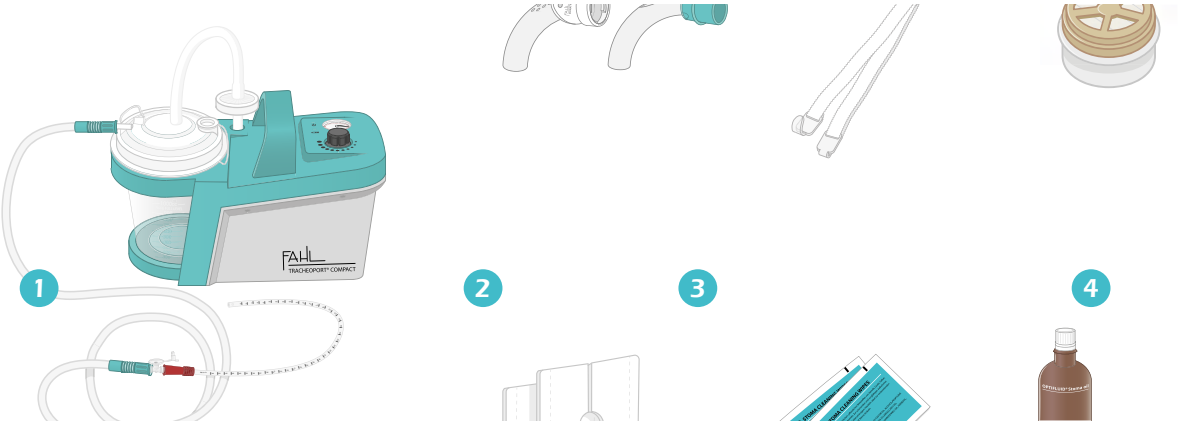
"When caring for tracheostomy tubes, one must distinguish between cleaning and disinfection."

Under no circumstances should disinfectants be used that release chlorine, or contain strong alkalis or phenol derivatives, as these can cause considerable damage to the cannulas. Disinfection of outer cannulas with a cuff should be avoided if possible, as the cuff may become damaged and porous.

After drying the tracheostomy tube, the inner and outer cannula should be wetted with stoma oil or a water-soluble lubricant. The oil prevents the inner and outer cannula from sticking together and makes it easier for insertion into the tracheostoma later on. At the same time, it keeps the cannula material of plastic cannulas supple. Cannulas not in use should be stored in a dry environment away from sunlight and/or heat.

Caring for the tracheostomy tube, same as skin care of the tracheostoma, forms an elementary part of professional care.

CLEANING AND CARE OF CANNULAS

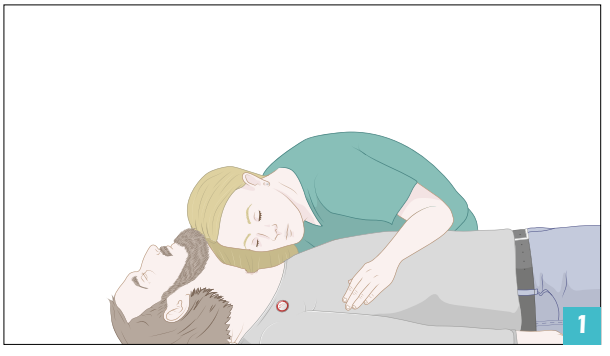


1 **CANNULA-CLEANING TUB**

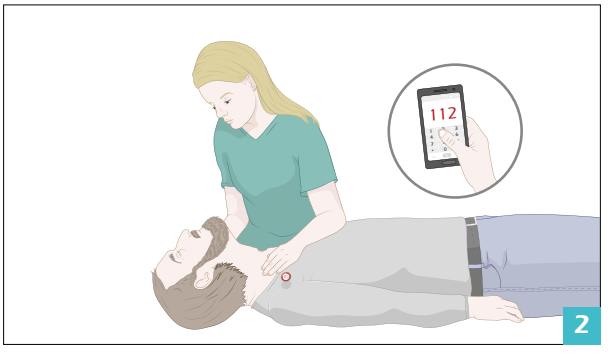
2 **CANNULA-CLEANING POWDER**

3 **CANNULA-CLEANING BRUSH**

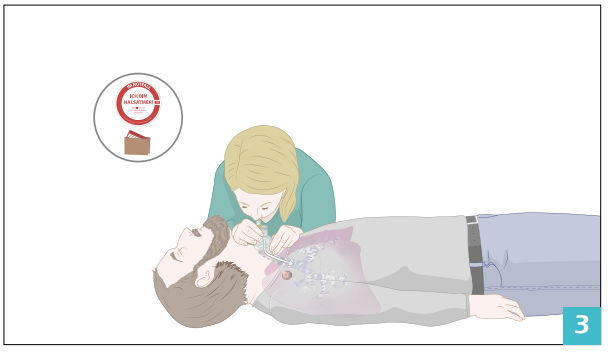
4 **LUBRICANTS**



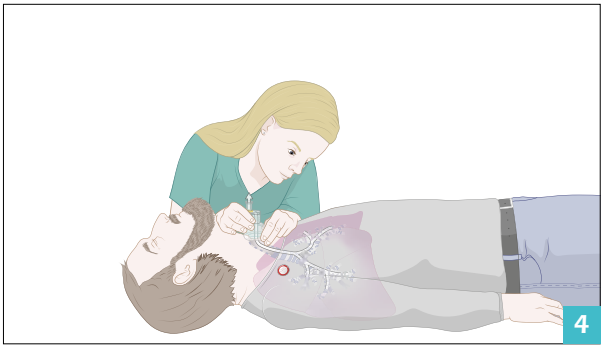
First wash your hands thoroughly. Then disinfect them. If necessary, wear disposable gloves.



Bend the cannula cleaning brush into shape according to the curvature of the cannula.

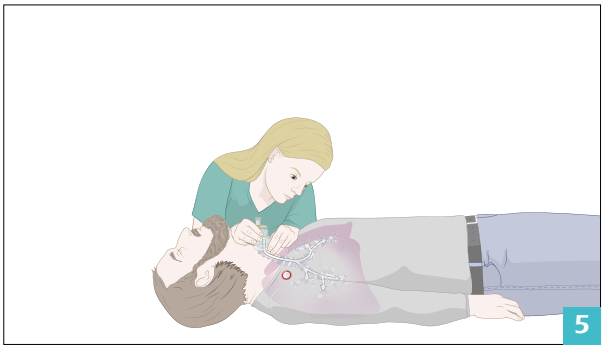


Rinse the outer as well as the inner cannula with lukewarm clean water.

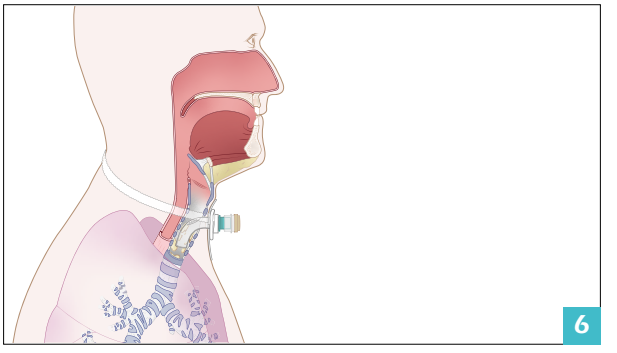


Place both the outer and inner cannula together in the cannula cleaning tub with the prepared lukewarm cleaning solution.

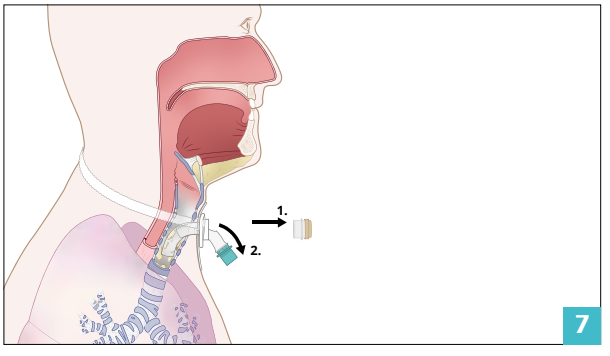
CLEANING AND CARE OF CANNULAS



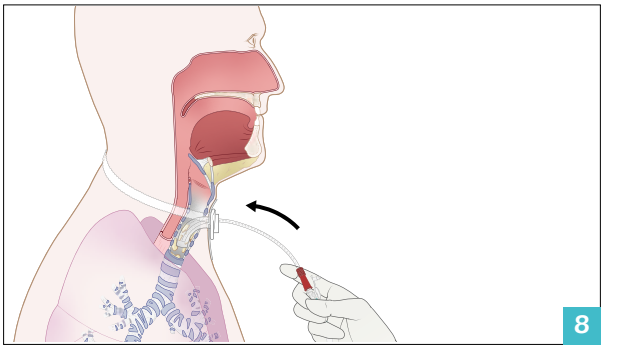
The tracheostomy tube is cleaned using the cleaning brush in a uniform forward and backward motion from the tip to the shield.



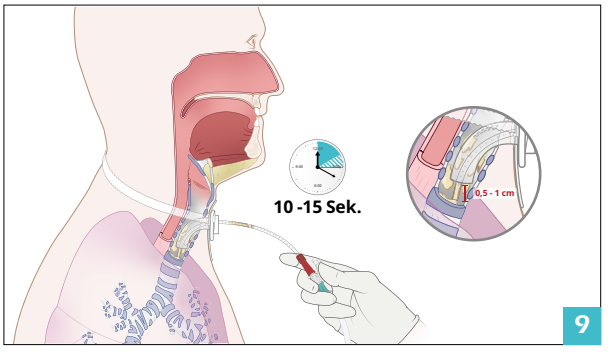
Rinse the outer as well as the inner cannula again with lukewarm clean water. Then dry well.



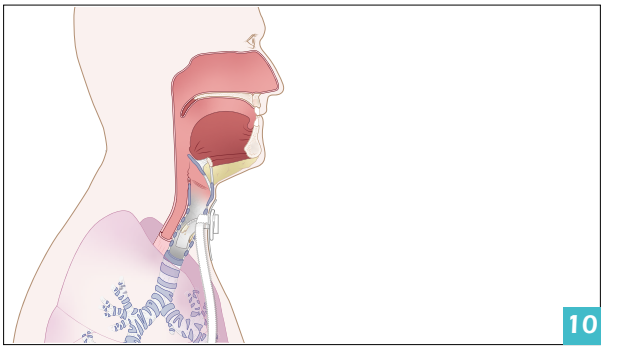
Check the outer as well as the inner cannula for integrity. Wet the inner cannula with the lubricant.



Assemble the cannula. In this process, push the inner cannula forward into the outer cannula until it can be fixated.



Place the complete tracheostomy tube in the designated tub for storage.



Clean the cleaning brush with lukewarm clean water. Then air-dry upright in a glass.

OPTIBRUSH® CONT — CANNULA-CLEANING TUB

The OPTIBRUSH® CONT cannula-cleaning tub, made of plastic, has a diameter of 10 cm and a practical sieve insert as well as a screw lid.

The sieve insert can be removed from the box and enables the tracheostomy tube to be carefully dipped into the cleaning solution. Per cleaning bath, only one tracheostomy tube, consisting of an inner and outer cannula, should be placed into the sieve insert of the cannula-cleaning tub, to avoid damage and to exclude confusion later, when assembling the tube.

ORDER INFORMATION	PU	REF
OPTIBRUSH® CONT	1	**31200**
OPTIBRUSH® CONT XL	1	**31300**

OPTIBRUSH® CLEAN — CANNULA-CLEANING POWDER

The OPTIBRUSH® CLEAN cannula-cleaning powder is intended for the preparation of a cleaning solution for tracheostomy tubes. This cleaning solution enables fast and intensive cleaning. One measuring spoon of OPTIBRUSH® CLEAN is required per cleaning bath.

The measuring spoon is already in the box. The measured amount of OPTIBRUSH® CLEAN is placed in the OPTIBRUSH® CONT cannula cleaning tub and filled with lukewarm water.

The cleaning solution created is suitable for the removal of blood and secretion remainders on tracheostomy tubes. This cleaning process is especially thorough and gentle on the material. Please note the cleaning instructions of the respective cannula manufacturer in the instructions for use! **The cannula cleaning powder has no disinfecting effect.**

ORDER INFORMATION	PU	REF
OPTIBRUSH® CLEAN	100 g	**31110**

OPTIBRUSH® SET

We offer you a practical set containing the OPTIBRUSH® CLEAN cannula cleaning powder (100 g) together with the OPTIBRUSH® CONT cannula cleaning tub and 4 OPTIBRUSH® cannula cleaning brushes. The brushes are available in sizes 8, 10 and 12.

This provides you with the most important aids for the quick, thorough and material-friendly cleaning of tracheostomy tubes.

ORDER INFORMATION	REF
OPTIBRUSH® SET, cannula cleaning brushes with 8 mm	**31011-08**
OPTIBRUSH® SET, cannula cleaning brushes with 10 mm	**31011-10**
OPTIBRUSH® SET, cannula cleaning brushes with 12 mm	**31011-12**

OPTIBRUSH® PLUS SET

We offer you a practical set containing the OPTIBRUSH® CLEAN cannula cleaning powder (100 g) together with the OPTIBRUSH® CONT cannula cleaning tub and 4 OPTIBRUSH® PLUS cannula cleaning brushes. Here the brushes are padded with a textile fibre tuft at the brush tip and are available in sizes 8, 10 and 12.

This provides you with the most important aids for the quick, thorough and material-friendly cleaning of tracheostomy tubes.

ORDER INFORMATION	REF
OPTIBRUSH® PLUS SET, cannula cleaning brushes with 8 mm	**31012-08**
OPTIBRUSH® PLUS SET, cannula cleaning brushes with 10 mm	**31012-10**
OPTIBRUSH® PLUS SET, cannula cleaning brushes with 12 mm	**31012-12**

OPTISWAB SET LARGE

"The OPTISWAB SET LARGE contains our extra large cannula cleaning box OPTIBRUSH® CONT XL with 800 ml capacity, our cannula cleaning powder OPTIBRUSH® CLEAN in a 400g tin for the preparation of a cleaning solution for cleaning tracheostomy tubes and our Optibrush Swab, which is particularly gentle on materials and can be used to remove contamination lint and fibre-free from the tracheostomy tube.

This set provides you with the most important aids for the quick, thorough and material-friendly cleaning of tracheostomy tubes."

SCOPE OF DELIVERY (PIECES)			
1	OPTIBRUSH® CONT XL	1	OPTIBRUSH® CLEAN
1	OPTIBRUSH® SWAB		

ORDER INFORMATION	REF
OPTISWAB® SET LARGE	**31015**

OPTISWAB® SET XL

The OPTISWAB SET XL contains our extra large cannula cleaning box OPTIBRUSH® CONT XL with 800 ml capacity, our cannula cleaning powder OPTIBRUSH® CLEAN in a 400g tin for the preparation of a cleaning solution for cleaning tracheostomy tubes and our OPTIBRUSH SWAB XL, which is particularly gentle on materials and can, in particular, be used to remove contamination lint and fibre-free from especially large tracheostomy tubes.

SCOPE OF DELIVERY (PIECES)			
1	OPTIBRUSH® CONT XL	1	OPTIBRUSH® CLEAN
1	OPTIBRUSH® SWAB XL		

ORDER INFORMATION	REF
OPTISWAB® SET XL	**31020**

OPTISWAB® SET PURE

"The OPTISWAB® SET PURE contains our extra large cannula cleaning box OPTIBRUSH® CONT XL with 800 ml capacity, our cannula cleaning and disinfecting agent OPTICIT® for stubborn contamination of the tracheostomy tube and safe protection against bacteria, fungi and viruses. Also included in the set are our OPTIBRUSH® SWABS, which are particularly gentle on materials and can be used to remove contamination lint and fibre-free from the tracheostomy tube.

This set provides you with the most important aids for the quick, thorough and material-friendly cleaning of tracheostomy tubes."

SCOPE OF DELIVERY (PIECES)	
1 OPTIBRUSH® CONT XL	1 OPTICIT®
1 OPTIBRUSH® SWAB	

ORDER INFORMATION	REF
OPTISWAB® SET PURE	**31025**

OPTISWAB® SET PURE XL

The OPTISWAB SET PURE XL contains our extra large cannula cleaning box OPTIBRUSH® CONT XL with 800 ml capacity, our cannula cleaning and disinfecting agent OPTICIT® against stubborn contamination of the tracheostomy tube and safe protection against bacteria, fungi and viruses. Also included in the set are our OPTIBRUSH® SWABS XL, which are particularly gentle on materials and can, in particular, be used to remove contamination lint and fibre-free from especially large tracheostomy tubes.

SCOPE OF DELIVERY (PIECES)	
1 OPTIBRUSH® CONT XL	1 OPTICIT®
1 OPTIBRUSH® SWAB XL	

ORDER INFORMATION	REF
OPTISWAB® SET PURE XL	**31030**

OPTICIT®

CLEANING AND DISINFECTION

The cleaning and disinfecting agent OPTICIT® is a highly effective and gentle disinfectant for cleaning and disinfecting tracheostomy tubes. Due to its special contamination dissolving formula, even persistent dirt caused by blood and protein substances is removed gently and quickly. OPTICIT® acts reliably against bacteria, fungi and viruses.

As a disinfectant, the product meets the current requirements of the DGHM (German Society for Hygiene and Microbiology), is VAH (Association for Applied Hygiene) certified and listed. OPTICIT® is available as a liquid concentrate containing 250 ml.

The disinfectant concentrate is diluted with water to produce a disinfectant solution. A measuring cup is included in the scope of delivery to simplify dosing.

Following the disinfection bath, the cannulas must be rinsed thoroughly.

ORDER INFORMATION	PU	REF
OPTICIT®	250 ml	**31180**

OPTIBRUSH® SWAB

The OPTIBRUSH® SWAB cleaning swab consists of a flexible plastic stick, which has a sponge-like, particularly absorbent cap, made of polyurethane foam firmly attached to one end. This aid is especially well suited for the gentle cleaning of tracheostomy tubes made of soft plastic.

OPTIBRUSH® SWAB is available in two variants. One with a slim foam cap for cleaning tracheostomy tubes with a very small diameter, such as tracheostomy tubes for children. The other variant (XL) has a cap in a bulbous shape.

ORDER INFORMATION	PU	REF
OPTIBRUSH® SWAB	30	**31910**
OPTIBRUSH® SWAB XL	30	**31920**

OPTIBRUSH®

CANNULA-CLEANING BRUSH

The design of the OPTIBRUSH® cannula-cleaning brush shows a number of distinct advantages, in comparison to conventional cannula-cleaning brushes.

The OPTIBRUSH® cannula-cleaning brush is approx. 21 cm long overall.

The brush section extends from the tip of the brush to the handle. This means that the entire wire net is surrounded by protective bristles, which considerably facilitates cleaning, and provides additional protection from damaging the tracheostomy tube. The bristles are made of extremely stable and soft nylon.

OPTIBRUSH® cannula-cleaning brushes are available in ten different sizes, with diameters from 5 to 14 mm at the brush section.

The brush should be bent into the appropriate shape before using it for the first time.

ORDER INFORMATION	PU	REF
OPTIBRUSH®, 04 mm	4	**31850-04**
OPTIBRUSH®, 05 mm	4	**31850-05**
OPTIBRUSH®, 06 mm	4	**31850-06**
OPTIBRUSH®, 07 mm	4	**31850-07**
OPTIBRUSH®, 08 mm	4	**31850-08**
OPTIBRUSH®, 09 mm	4	**31850-09**
OPTIBRUSH®, 10 mm	4	**31850-10**
OPTIBRUSH®, 11 mm	4	**31850-11**
OPTIBRUSH®, 12 mm	4	**31850-12**
OPTIBRUSH®, 13 mm	4	**31850-13**
OPTIBRUSH®, 14 mm	4	**31850-14**

OPTIBRUSH® PLUS WITH FIBRE TOP

The OPTIBRUSH® PLUS with fibre top is a logical further development of the OPTIBRUSH® cannula cleaning brush. It is distinguished by a very flexible wire mesh and is equipped with sturdy soft nylon bristles which - as is usual with our OPTIBRUSH® cannula cleaning brushes - extend continuously from the tip of the brush to the handle.

The main feature is the brush tip, which is sheathed with a fibre top. The fibre top is especially wipe-active and its absorbent fabric fibres ensure effective and gentle cannula cleaning. The core of the OPTIBRUSH® PLUS cannula-cleaning brush with fibre top, made of stainless steel wire, can be individually adapted to the tracheostomy tube, which makes the cleaning process substantially easier. Damage or scratching of the sensitive cannula material can be largely avoided using the OPTIBRUSH® PLUScannula-cleaning brush with fibre top.

OPTIBRUSH® PLUS cannula-cleaning brushes are available in nine different sizes, with diameters from 5 to 14 mm at the brush section.

The brush should be bent into the appropriate shape before using it for the first time.

ORDER INFORMATION	PU	REF
OPTIBRUSH® PLUS, 05 mm	4	**31855-05**
OPTIBRUSH® PLUS, 06 mm	4	**31855-06**
OPTIBRUSH® PLUS, 07 mm	4	**31855-07**
OPTIBRUSH® PLUS, 08 mm	4	**31855-08**
OPTIBRUSH® PLUS, 09 mm	4	**31855-09**
OPTIBRUSH® PLUS, 10 mm	4	**31855-10**
OPTIBRUSH® PLUS, 11 mm	4	**31855-11**
OPTIBRUSH® PLUS, 12 mm	4	**31855-12**
OPTIBRUSH® PLUS, 14 mm	4	**31855-14**

OPTIBRUSH® BASIC

CANNULA-CLEANING BRUSH

A special feature of the OPTIBRUSH® Basic are the robust bristles on the twisted wire handle and the dense and approx. 1 cm wide fibre top at the brush tip. This fibre top made of soft textile fibres surrounds the wire mesh of the brush like a protective sheath and thus largely prevents damage or scratching of the sensitive cannula material during cleaning. The fibre top is very absorbent and wipe-active, so that even firmly attached secretions can be easily absorbed and removed.

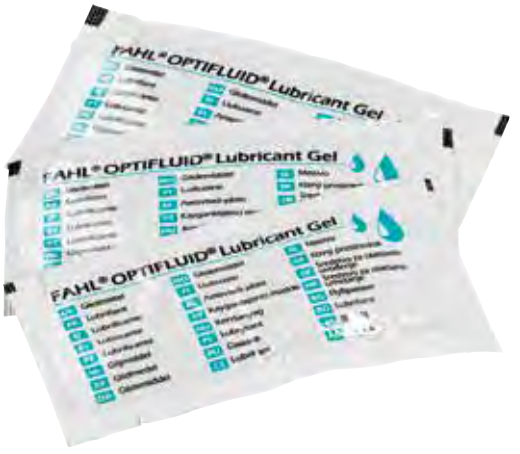
OPTIBRUSH® BASIC cannula cleaning brushes are available in four different sizes with diameters of 6 mm, 8 mm, 10 mm and 12 mm at the brush section.

The brush should be bent into the appropriate shape before using it for the first time.

ORDER INFORMATION	PU	REF
OPTIBRUSH® BASIC, 06 mm	4	**31800-06**
OPTIBRUSH® BASIC, 08 mm	4	**31800-08**
OPTIBRUSH® BASIC, 10 mm	4	**31800-10**
OPTIBRUSH® BASIC, 12 mm	4	**31800-12**

FAHL® OPTIFLUID® LUBRICANT GEL 3g

LUBRICANTS



FAHL® OPTIFLUID® LUBRICANT GEL is a colourless water-based lubricant and is used in particular to facilitate the insertion of tracheostomy tubes into the tracheostoma.

When using tracheostomy tubes with an inner cannula, rubbing the inner cannula with the lubricant facilitates insertion into the outer cannula. The care instructions from the cannula manufacturer must always be observed before using the gel for the first time.

We offer FAHL® OPTIFLUID® lubricant gel in a practical sachet for on the go, e.g. when travelling.

ORDER INFORMATION	PU	REF
FAHL® OPTIFLUID® LUBRICANT GEL, 3 g	100	**36105**

FAHL® OPTIFLUID® LUBRICANT GEL 20g

LUBRICANTS

FAHL® OPTIFLUID® LUBRICANT GEL in the practical 20 g tube is a colourless water-based lubricant and is used in particular to facilitate the insertion of tracheostomy tubes into the tracheostoma.

When using tracheostomy tubes with an inner cannula, rubbing the inner cannula with the lubricant facilitates insertion into the outer cannula. The care instructions from the cannula manufacturer should always be observed before using the gel for the first time.

We offer FAHL® OPTIFLUID® LUBRICANT GEL in a practical tube for repeated use.

ORDER INFORMATION	PU	REF
FAHL® OPTIFLUID® LUBRICANT GEL	20 g	**36100**

OPTIFLUID® STOMA OIL 25ml

LUBRICANTS

OPTIFLUID® Stoma oil is a colourless, neutral oil and serves as a lubricant for tracheostomy tubes. OPTIFLUID® is also ideally suited as a care product for plastic tracheostomy tubes. In two-part cannulas, OPTIFLUID® is wiped onto the outer surface of the dry inner cannula, after thorough cleaning. The thus created lubricant film facilitates the connection of the inner and outer cannulas and prevents them sticking and thus damaging the material.

OPTIFLUID® Stoma oil has been tested for tolerability and been declared safe for the indication.

The bottle features a dropper, which enables sparing dosage of the oil, so that the 100 ml bottle can last a long time.

ORDER INFORMATION	PU	REF
OPTIFLUID® STOMA OIL, 25 ml	25 ml	**31525**

OPTIFLUID® STOMA OIL TOWEL 4ml

LUBRICANTS

The OPTIFLUID® stoma oil towel does not drip or fluff and guarantees hygienic lubrication of the cannula.

A dosage of 4 ml OPTIFLUID® Stoma oil is bound in a soft, skin-friendly non-woven towel measuring approx. 13.5 x 20 cm. This provides the optimum amount of OPTIFLUID® stoma oil in a practical manner and prevents overdosing.

This special dosage form makes the OPTIFLUID® stoma oil towel ideal for travelling.

ORDER INFORMATION	PU	REF
OPTIFLUID® STOMA OIL TOWEL	30	**31550**

CLEANSING AND CARE OF THE TRACHEOSTOMA

The skin in the region of the tracheostoma is permanently exposed to many unfavourable factors. The escaping secretion often irritates large areas of the tracheostomy environment, mechanical stress on the skin during cleaning and different pressure and traction effects from the tracheostomy tubes or base plates can cause significant skin damage. Special cleaning and care items are therefore particularly important for daily trachestoma care. Various products are also available for the cleaning and care of tracheostomas. These are, for example, special cleaning wipes, which are essential if using fixable base plates with an HME filter cassette, for filtering, warming and humidifying the respiratory air.

Syoma Antonov/Shutterstock.com

OPTIFAHL® STOMA CLEANING WIPES

CLEANING WIPES

The OPTIFAHL® STOMA CLEANING WIPE is a disposable cotton wipe, which is soaked in a mild cleansing lotion, made of natural, herbal ingredients.

The OPTIFAHL® STOMA CLEANING WIPE is ideal for cleaning and caring for sensitive skin area around the tracheostoma. Excessive skin oils and dirt particles are gently removed from the skin with the soft and lint-free wipe. The remainders of skin adhesive can also be removed with this special cleaning wipe.

The OPTIFAHL® STOMA CLEANING WIPE is well suited for preparatory skin care before the application of aids such as LARYNGOFIX® and fixable base plates e.g. LARYVOX® Tape with HME filter cassettes.

The OPTIFAHL® STOMA CLEANING WIPE is a useful and recommendable aid, in particular for targeted skin care and for use when travelling.

ORDER INFORMATION	PU	REF
OPTIFAHL® STOMA CLEANING WIPES	30	**33200**

OPTIFAHL® STOMA CLEANING WIPES BOX

Our practical OPTIFAHL® STOMA CLEANING WIPES are also available in a dispenser box with 60 wipes for use at home.

The wipes can be removed easily and hygienically individually from the dispenser. A lid prevents the wipes from drying out.

ORDER INFORMATION	PU	REF
OPTIFAHL® STOMA CLEANING WIPES BOX	60	**33260**

OPTICLEAR®

PATCH ADHESIVE REMOVER

OPTICLEAR® is a special wipe for removing all kinds of skin adhesives. The soft non-woven cleaning wipe impregnated with an alcohol-based cleaning lotion is particularly large, moist and non-slip.

Remnants of adhesives are quickly and gently removed from the skin and absorbed. OPTICLEAR® is therefore particularly suitable for cleaning the skin after removing base plates or filter systems, e.g. LARYNGOFIX®.

ORDER INFORMATION	PU	REF
OPTICLEAR®	30	**33500**

OPTIGARD®

SKIN PROTECTION WIPES

OPTIGARD® is a special wipe for preparatory skin care when using fixable base plates or filter systems, e.g. LARYNGOFIX®.

OPTIGARD® protects against skin irritations, which can be caused by skin adhesive.

The relevant area of skin is first cleaned as normal, and subsequently carefully wiped with the OPTIGARD® special wipe.

The skin is covered with a thin film, which dries after a few seconds. In a change of plate, the film does not necessarily need to be removed, but it can be washed off with cleaning lotion and water. At the same time, OPTIGARD® increases the adhesive power of the skin adhesive.

ORDER INFORMATION	PU	REF
OPTIGARD®	30	**33600**

FAHL® GAUZE DRESSING 8-FOLD

The gauze compress consists of an 8-layered, especially breathable non-woven fabric and aids in the care and cleaning of the tracheostoma. The gauze-compress enables gentle, hygienic and, above all, lint-free skin cleansing.

The gauze compress is especially suitable for coughing out tracheal secretions. The secretions can be quickly and reliably caught and wiped away. The gauze compress is also well suited for the lubrication of tracheostomy tubes with stoma oil. For reasons of hygiene, the compress should be used only once.

ORDER INFORMATION	PU	REF
FAHL® GAUZE DRESSING 8-FOLD, 10 X 10 cm	100	**30200**

FAHL® NON-WOVEN COMPRESS 4-FOLD

Non-woven compresses, like gauze compresses, aid in the care and cleaning of the tracheostoma. They consist of a 4-layered, soft and lint-free non-woven fabric, which is particularly absorbent and gentle on skin.

ORDER INFORMATION	PU	REF
FAHL® NON-WOVEN COMPRESS 4-FOLD, 10 X 10 cm	100	**30300**

REHABILITATION AFTER LARYNGECTOMY

The rehabilitation of laryngectomised patients is very complex and includes several subtopics.

The first steps as part of rehabilitation are already taken in the acute clinic. The main aim here is to prepare the person concerned for an independent life in their own home.

Further rehabilitation, such as follow-up treatment, can then be applied for after the stay in hospital. As a rule, the pension insurance provider pays for the costs incurred. The objectives of the rehabilitation measure are to treat the impairments that have arisen due to the illness as well as possible and, in the best case, how to overcome them. In the case of patients who have undergone laryngeal surgery, voice rehabilitation is of great importance. In some cases, the desired objective is also to regain the ability to work and to find one's way back into a working life.

The individual rehabilitation objectives are firmly intertwined and cannot be separated from each other. The individual subtopics are explained in more detail in the following.

VOICE REHABILITATION

After removal of the larynx, the affected person is initially without a voice, as the vocal cords were also removed with the larynx.

The aim of voice rehabilitation is to find a replacement voice which is suitable for the person concerned. The ability to communicate is one of our basic needs. Regaining this ability and thus participation in everyday social life is therefore a central objective of rehabilitation. There are different ways to create a voice, but none of them can perfectly reproduce one's own previous voice. For this reason, it is important to consciously deal with the changed voice sound within the context of voice rehabilitation as well as the fact that part of one's personality has also changed with it.

There are four common, well-established options for vocal rehabilitation.

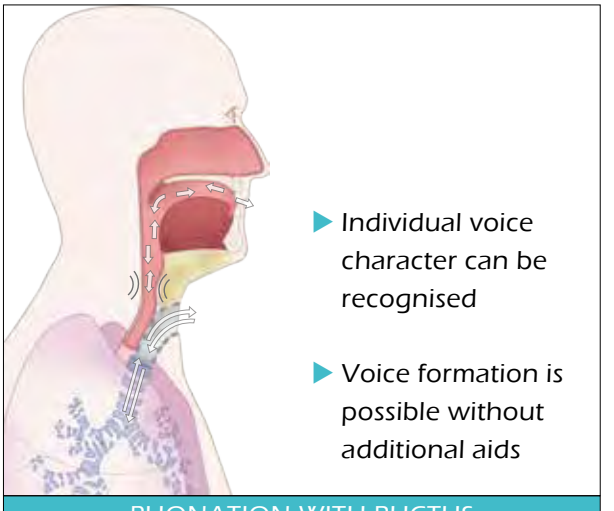
PSEUDO WHISPERING

Pseudo whispering is not only a form of vocal rehabilitation, but also simultaneously provides the basis for learning two other vocal options (ructus voice or speaking with the electronic speech aid). In this process, the patient uses the air that is present in the oral cavity and over-articulates it through the mouth movements.

Voiced vowels (e.g. a, e, i, o, u) are read from the lips. Consonants that produce a rubbing or explosive sound can be understood and heard very well through pseudo whispering (e.g. k, t, p, sh, s). Pseudo whispering can be learned quite quickly and is a very useful form of communication shortly after surgery.

PHONATION RUCTUS VOICE

In the ructus voice (oesophageal substitute voice), the air in the mouth is inhaled or pressed into the upper part of the oesophagus. This air remains there for a short period and is then transported back out of the oesophagus into the mouth in a controlled manner. This causes folds of mucous membrane at the upper edge of the oesophagus to vibrate. This vibration creates a sound, which can then be articulated through movement of the mouth. The advantages of the ructus voice are that one has both hands free when speaking and does not need any additional aids. Regular speech therapy is highly recommended to learn this substitute voice.

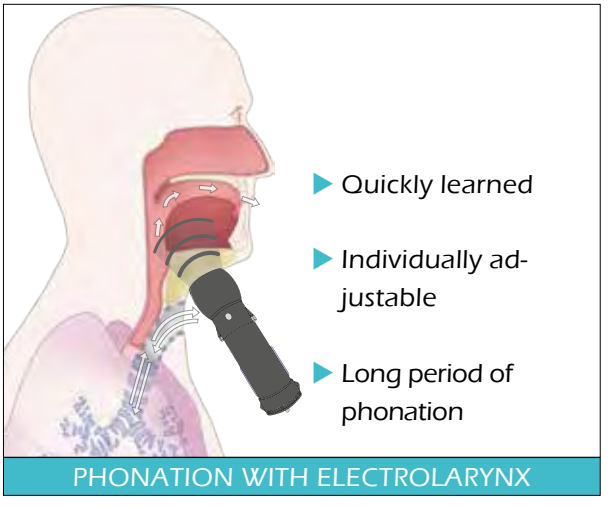


- Individual voice character can be recognised
- Voice formation is possible without additional aids

PHONATION WITH RUCTUS

SPEAKING WITH AN ELECTRONIC SPEECH AID

This method employs an electronic device to produce a sound for speaking. The device is held against the cheek, chin or neck, where it generates sound vibrations which are transmitted to the air in the mouth and throat, where they can be used for speaking. Once a suitable contact point has been found on the soft parts of the throat for the device, learning this substitute voice is possible quite quickly and without complications. In the course of speech therapy, the length of utterances, intonations and handling of the device are practised and adjusted individually.



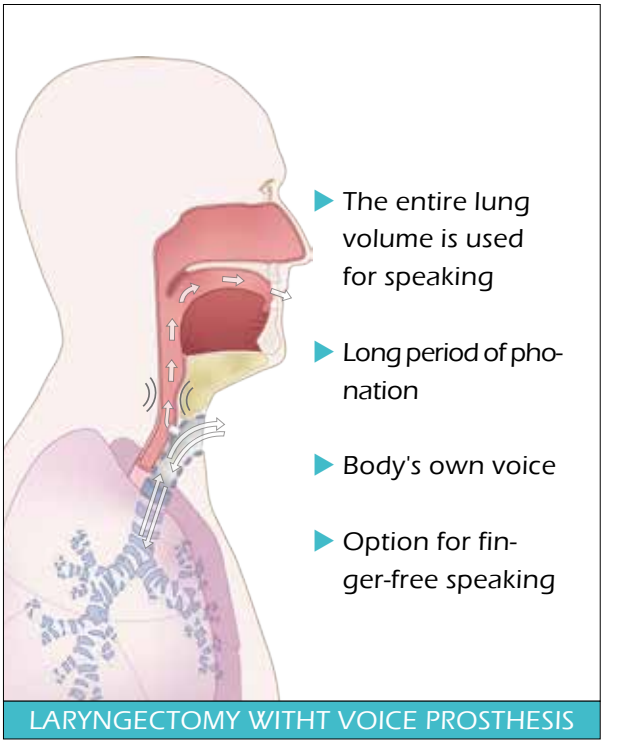
- Quickly learned
- Individually adjustable
- Long period of phonation

PHONATION WITH ELECTROLARYNX

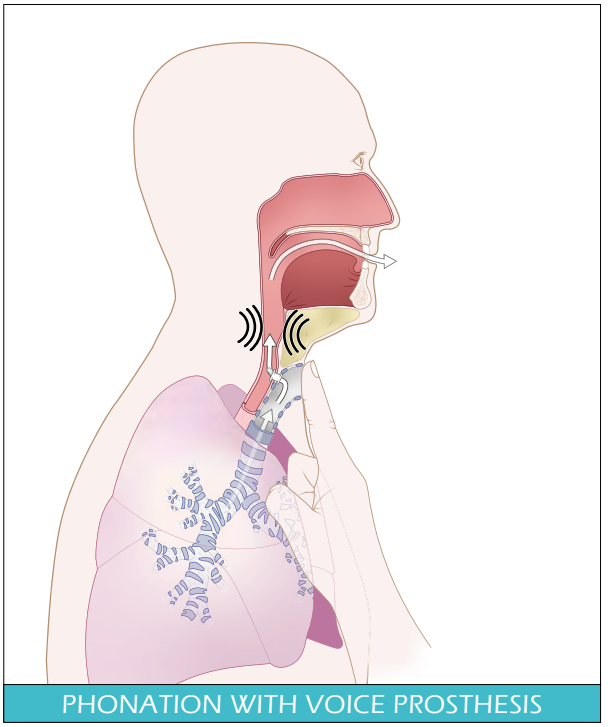
SPEAKING WITH A VOICE PROSTHESIS

The voice prosthesis (shunt valve) is a placeholder with a small valve that sits between the trachea and oesophagus in a so-called fistula channel. This voice prosthesis is used either in primary surgery for laryngectomy, or in another, later surgery. This is a one-way valve that prevents food and liquids from passing from the oesophagus into the trachea. This valve, when handled correctly, e.g. by a manual tracheostoma closure, allows air to enter the oesophagus during exhalation. As with the ructus voice, the " vocal segment" is made to vibrate to create a sound. This sound can then be articulated and used for speaking. With this substitute voice, the long duration of expression is a great advantage, as all the exhaled air can be used for speaking.

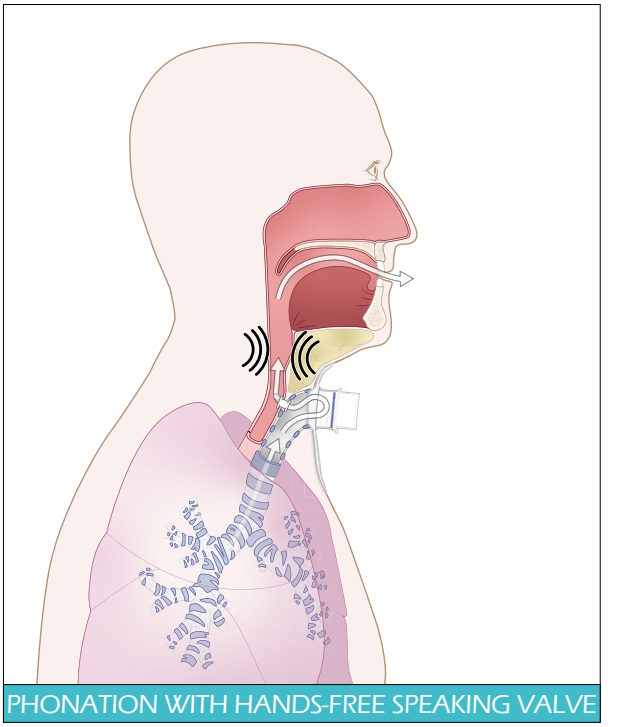
With the aid of additional free-hand valves, finger-free speech can be learned so that both hands remain uninvolved when speaking.



LARYNGECTOMY WITHT VOICE PROSTHESIS



PHONATION WITH VOICE PROSTHESIS



PHONATION WITH HANDS-FREE SPEAKING VALVE

SUMMARY

Which forms of substitute voice are suitable for which patient should be decided together individually with the person concerned. Decisive factors for the decision include the extent of the surgical laryngectomy, the patient's individual life situation and the general state of health of the person concerned.

Of course, those affected do not have to make this important decision alone. The various options for vocal rehabilitation are explained and presented in discussions with the physician and speech therapist. A joint decision is then made together with the person concerned as to which variant is most suitable. The physician already takes this decision into account during surgery, as far as possible (for example, by placing a voice prosthesis). During the subsequent speech therapy, they cooperate in learning the new form of communication. In close cooperation between the speech therapists, physicians and providers of medical aids, the most suitable medical aids and therapy for the individual patient are coordinated appropriately.

Individual patient care with needs-based aids is of elementary importance for voice rehabilitation. This can facilitate vocalisation as well as significantly improve voice quality.

ELECTRONIC SPEECH AID

After successful laryngectomy, it is most important for the patient to be able to speak as quickly as possible and to be well understood. That is why we recommend speech facilitation with a speech therapist.

The speech therapist will usually start speech facilitation with the oesophageal voice (or ructus voice). In parallel to this, speaking with an electronic speech aid can also be a part of voice rehabilitation.

The electronic speech aid generates sound oscillations, through special electronic switching, which are transmitted to the mouth-pharynx area, when the device is applied to the throat, and can thereby transform the normal articulation motions into well comprehensible speech.

BLOM-SINGER® ELECTROLARYNX SPEECH AID

The BLOM-SINGER® ELECTROLARYNX is a handy and functional speech aid for laryngectomised patients and is easy to handle due to its light weight.

The speech aid is applied to the user's throat and generates sound oscillations, which are transmitted to the pharyngeal, oral and nasal area through a membrane. These oscillations are converted through natural speaking motions and form an understandable replacement voice.

The pitch settings as well as the volume control of the speech aid can be individually and optimally adjusted to the user's circumstances via easy-to-operate control knobs. A rotating head attachment enables fine-tuning of the sound quality.

If contact to the neck or the floor of the mouth is not possible due to surgery or radiation, an oral adapter is included in the scope of delivery. This is placed at the corner of the mouth and directs the sound directly into the oral cavity through a short tube.

The BLOM-SINGER® ELECTROLARYNX does not require a special charger and is powered by a standard household 9 V block battery. A spare battery can always be kept ready for use without any problems. The supplied carrying strap enables comfortable transport of the speech aid.

TECHNICAL DATA	
Frequency range	40 Hz to 170 Hz
Dimensions of the device	129 mm x 36 mm
Weight	85 g (without battery)
Battery capacity	600 mAh
Type of battery	9 Volts

SCOPE OF DELIVERY			
1	BLOM-SINGER® ElectroLarynx Digital Speech Aid	1	Carrying strap
1	9-Volt battery	1	Battery lid
1	Oral adapter		

ORDER INFORMATION	REF
BLOM-SINGER ELECTROLARYNX DIGITAL SPEECH AID	**EL1000**

LABEX DIGITAL

SPEECH AID

TECHNICAL DATA	
Variable sound frequency	yes
Variable volume	yes
Frequency range	55–155 Hz
Volume	60–83 dB
Speaking time	up to 4 hours per charge
Dimensions of the device	34 x 98 mm
Weight	72 g without battery
Battery capacity	600 mAh
Type of battery	rechargeable, 9 V, Li-Ion
Charger	2 charging compartments for 9 V, Li-Ion
Charging time	4 h 30 min, with Labex charging unit

LABEX HARMONY/INSPIRATION — SPEECH AID

Inspired by the classic speech aid, LABEX HARMONY has all the features which make up an efficient product for providing a good voice substitute result. The metal housing gives the speaking aid a very high-quality look. It is possible to set the two speaking keys to an individual volume and pitch so that one can quickly adjust one's voice for different everyday situations. The device offers a long operation time and very clear digital sound generation.

The LABEX INSPIRATION is easy to control via a touch control panel, whereas the LABEX HARMONY can be operated with two buttons.

SCOPE OF DELIVERY			
1	LABEX Harmony – electrolarynx	1	Carrying strap
1	Rechargeable battery – 9 V, Li-Ion, 600 mAh	1	Charger

ORDER INFORMATION	REF
LABEX HARMONY	**442204**
LABEX INSPIRATION	**442235**

LABEX DIGITAL/COMFORT — SPEECH AID

The LABEX DIGITAL is a handy and functional electronic speech aid for laryngectomised patients. The speech aid has only one button, which makes it easy to use. The housing of the LABEX DIGITAL is made of plastic, making it ideal for everyday use. This speech aid is suitable for patients who prefer a user-friendly, compact classic speech aid.

The LABEX COMFORT features two buttons which can be used to set two different pitches.

SCOPE OF DELIVERY			
1	LABEX Digital – electrolarynx	1	Carrying strap
1	Rechargeable battery – 9 V, Li-Ion, 600 mAh	1	Charger

ORDER INFORMATION	REF
LABEX DIGITAL	**442082**
LABEX COMFORT	**442044**

VOICETEC®

VOICE AMPLIFIER

Transmitter unit

Microphone input socket

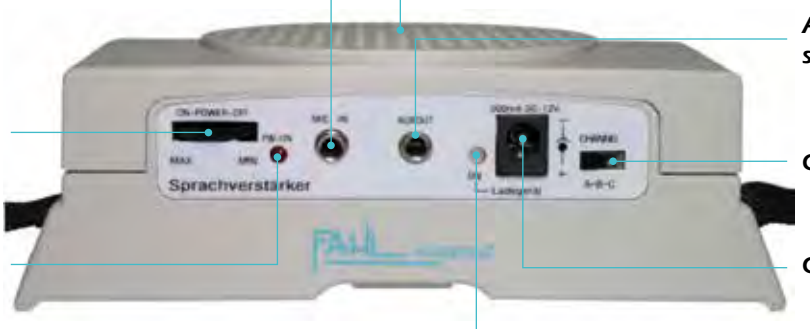
Volume control

Control lamp

Channel switch

ON/OFF switch

Receiver unit



Microphone input socket

Volume control ON/OFF switch

Control lamp

Loudspeaker

Audio output socket

Channel switch

Charging socket

Charge status lamp

TECHNICAL DATA	
Transmitter unit	
Power supply	2 x 1.5 V, type AA
Housing dimensions	90 x 60 x24 mm
Weight	70 g (without battery)
Receiver unit	
Power supply connector	110–240 V AC, 300 NI/50–60 Hz
Power supply	6 x 1.2 V, 1000 mAh, NI-MH, type AA
Receiving frequency	863–865 MHz (choice of 3)
Range	approx. 10 m
Housing dimensions	140 x 80 x45 mm
Weight	270 g
Operating time	approx. 6-10 hours
Charging time	approx. 5-7 hours

VOICETEC®

VOICE AMPLIFIER

The VOICETEC® voice amplifier can be used whenever a louder conversation volume is desired, to, e.g., be understood even with high levels of background noise. With the aid of the VOICETEC® voice amplifier, this is also possible without strenuous attempts to speak loudly.

The wireless, radio-controlled transmitter unit enables greatest possible mobility. This extends the patient's comfort and field of application.

An unpleasant side effect in many voice amplifiers is the feedback, which is very noticeable with a loud whistling noise. These annoying background noises are reduced to a minimum with the VOICETEC® speech amplifier.

The audio connection cable included is a useful accessory and enables the connection of an external amplifier/mixer. It is particularly suitable when speaking in front of many people, e.g., when giving a speech at an event.

SCOPE OF DELIVERY			
1	Receiver unit	2	1.5-V batteries
1	Transmitter unit	2	1.2-V batteries
1	Audio connecting cable	1	Clip-on microphone
1	Power unit	1	Hand microphone
1	Headband	1	Operating Instructions

ORDER INFORMATION	REF
VOICETEC® VOICE AMPLIFIER	**77350**

VOICE PROSTHESES

After the loss of the larynx through a laryngectomy, the restoration of voice is the prime focus of rehabilitation. For many years, voice prosthesis care for patients has been successfully established at German clinics.

Two major functions of the missing larynx are replaced by using a voice prosthesis (shunt valve) between the trachea and oesophagus. On the one hand, it enables air flow. This allows the entire lung air volume to be used for speaking, from the lungs via the oesophagus into the throat. Whereby the expired air is used for speaking. On the other hand, the shunt valve seals the connection to the trachea when swallowing foods and drinks. This protects the user from accidentally swallowing nutrients. Voice prostheses are not implants and are changed by the physician when they lose their functionality. Different causes can make a prosthesis replacement necessary. For example, bacterial colonisation of the material (e.g. with Candida albicans) can lead to unwanted leaks, or changes in the tissue situation of the shunt canal may require replacement. These days, voice prostheses are available in a large variety with very different product features.

If you would like to have details about surgical voice rehabilitation, you should contact the attending physician directly.

A voice prosthesis passport for managing your voice prosthesis data is included with every initial delivery of a voice prosthesis or can be reordered under article number 28999.

LARYVOX® UNIEK ULTRA LOW RESISTANCE VOICE PROSTHESIS

The LARYVOX® UNIEK Ultra Low Resistance voice prosthesis made of medical silicone is an indwelling prosthesis with very low flow resistance, which means that only a low phonetic blowing pressure is required for speaking.

It has a semicircular, smooth-running slit valve on the oesophageal side for directing the airflow towards the throat and mouth.
The silicone of the LARYVOX® UNIEK Ultra Low Resistance voice prosthesis is completely mixed with barium sulphate and thus ensures excellent radiographic imaging if required.

The voice prosthesis is changed anterograde through the tracheostoma with the LARYVOX® INSERTER UNIEK. Here, the tracheal flange of the voice prosthesis is placed on the head of the placement instrument and the safety thread is fixed. The voice prosthesis is then inserted into the applicator and placed correctly in the shunt canal by slowly advancing it. Alternatively, retrograde insertion with the LARYVOX® GUIDEWIRE is also possible.

The voice prosthesis is available in shaft thicknesses of 21 Fr. and 24 Fr. and in sizes 5 mm – 11 mm and 13 mm in sterile version.

The correct selection and change of the voice prosthesis is done by a physician.

SIZE	SHAFT THICKNESS Ø mm 21 FR.	SHAFT THICKNESS Ø mm 24 FR.	LENGTH mm	REF 24 FR.	REF 21 FR.
5	7.0	8.0	5.0	25020-05	25010-05
6	7.0	8.0	6.0	25020-06	25010-06
7	7.0	8.0	7.0	25020-07	25010-07
8	7.0	8.0	8.0	25020-08	25010-08
9	7.0	8.0	9.0	25020-09	25010-09
10	7.0	8.0	10.0	25020-10	25010-10
11	7.0	8.0	11.0	25020-11	25010-11
13	7.0	8.0	13.0	25020-13	25010-13

The colour of the item number corresponds to the colour of the inserter to be used.

LARYVOX® INSERTER UNIEK

UNIEK

The LARYVOX® INSERTER UNIEK consists of a placement instrument as well as an adapter and facilitates the perfect anterograde placement or replacement of the LARYVOX® UNIEK voice prosthesis/shunt valve. Additionally, the rounded applicator tip promotes gentle placement and makes changing the voice prosthesis as comfortable as possible.

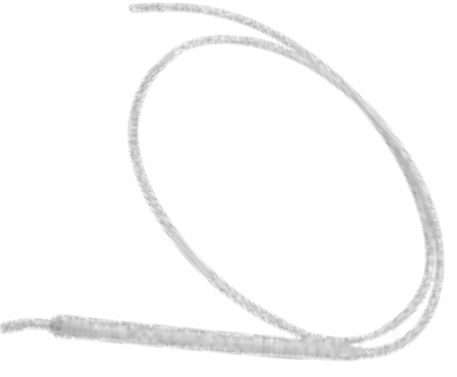
The applicator of the LARYVOX® INSERTER enables effortless insertion of the voice prosthesis and is readily prepared in a few steps.

ORDER INFORMATION	PU	REF
LARYVOX® INSERTER UNIEK	1	**25925**

LARYVOX® GUIDEWIRE STERILE

The LARYVOX® GUIDEWIRE is a sterile guidewire. It is used for retrograde placement of a voice prosthesis as part of a primary or secondary puncture after laryngectomy as well as for the retrograde change of a voice prosthesis.

The voice prosthesis is attached to the angled fixation end within the context of a primary puncture and positioned retrogradely. The straight fixation end is used to fix and guide the voice prosthesis within the context of the secondary puncture.



Special anatomical conditions may make a retrograde voice prosthesis change necessary. The curved shape of one fixation end facilitates the advancement of the guidewire in cranial direction (towards the head) to allow subsequent tissue-sparing retrograde prosthesis passage (from the mouth to the shunt canal).

ORDER INFORMATION	PU	REF
LARYVOX® GUIDEWIRE	1	**25100**

INHEALTH 22.5 FR INDWELLING VOICE PROSTHESIS

The InHealth 22.5 Fr indwelling voice prosthesis made of medical silicone is an indwelling prosthesis with special product features.

As part of general voice prosthesis placement after laryngectomy, problems such as premature leakage through the valve (valve defect) or involving the voice prosthesis (widened shunt canal) occur time and again.

The InHealth 22.5 Fr. indwelling voice prosthesis features a special silicone valve flap which contains silver oxide. This substance exhibits resistance to material-related candida colonisation (fungal infestation), which results in greater durability and longevity of the voice prosthesis. In addition, an internal titanium ring gives the prosthesis body greater dimensional stability. This way, early candida-related valve defects can be avoided.

A significantly enlarged, oesophageal retaining flange prevents an unwanted transfer of fluid from the oesophagus into the trachea if the shunt canal is widened or has changed its shape.

By using a gel capsule during placement, the voice prosthesis slides easily into the shunt canal and facilitates the change, which is performed from the front through the tracheostoma.

The correct selection and change of the voice prosthesis is done by a physician.

The voice prosthesis is available exclusively in the shaft thickness 22.5 Fr. and in the sizes 6 mm – 12 mm.

SIZE	SHAFT THICKNESS Ø mm 22.5 FR.	LENGTH mm	REF
6	7.5	6.0	VP2206-LEF
8	7.5	8.0	VP2208-LEF
10	7.5	10.0	VP2210-LEF
12	7.5	12.0	VP2212-LEF

The colour of the item number corresponds to the colour of the inserter to be used.

BLOM-SINGER® CLASSIC™ INDWELLING VOICE PROSTHESIS

The BLOM-SINGER® Classic™ indwelling voice prosthesis made of medical silicone is an indwelling prosthesis which remains in a surgically created shunt (surgically created opening between the trachea and oesophagus) and enables laryngectomy patients to speak. The BLOM-SINGER® Classic™ Indwelling voice prosthesis is a valve system that requires a low blowing pressure for comfortable speaking. By using a gel capsule during placement, the voice prosthesis slides easily into the shunt canal and facilitates the change, which is performed from the front through the tracheostoma.

The BLOM-SINGER® rinsing pipette enables easy and gentle cleaning of the voice prosthesis. The pipette can be filled with water or air and placed on the voice prosthesis. The powerful jet of water or air when compressing the pipette flushes out contaminants, e.g. stuck secretions, from the prosthesis.

In addition, the slightly modified version, the BLOM-SINGER® Classic™ Indwelling voice prosthesis in a sterile version, is available for use in an intraoperative primary placement. The safety thread on the shunt valve has been adapted in its shape to simplify fixation during primary puncture. This sterile version is available in shaft thicknesses of 16 Fr. and 20 Fr. with lengths (= sizes) between 8 mm and 14 mm.

The correct selection and change of the voice prosthesis is done by a physician.

SIZE	SHAFT THICKNESS Ø mm 16 FR.	SHAFT THICKNESS Ø mm 20 FR.	LENGTH mm	REF 16 FR.	REF 20 FR.	REF 16 FR. STERILE	REF 20 FR. STERILE
4	5.3	6.6	4.0	IN1604-NS	IN2004-NS	-	-
6	5.3	6.6	6.0	IN1606-NS	IN2006-NS	-	-
8	5.3	6.6	8.0	IN1608-NS	IN2008-NS	IN1608-SO	IN2008-SO
10	5.3	6.6	10.0	IN1610-NS	IN2010-NS	IN1610-SO	IN2010-SO
12	5.3	6.6	12.0	IN1612-NS	IN2012-NS	IN1612-SO	IN2012-SO
14	5.3	6.6	14.0	IN1614-NS	IN2014-NS	IN1614-SO	IN2014-SO
16	5.3	6.6	16.0	IN1616-NS	IN2016-NS	-	-
18	5.3	6.6	18.0	IN1618-NS	IN2018-NS	-	-
20	5.3	6.6	20.0	IN1620-NS	IN2020-NS	-	-

The colour of the item number corresponds to the colour of the inserter to be used.

BLOM-SINGER® CLASSIC™ INDWELLING LEF VOICE PROSTHESIS

The BLOM-SINGER® LEF (Large Oesophageal Flange) is an indwelling prosthesis and has an enlarged esophageal flange (19 mm diameter) for the indication-specific treatment of periprosthetic leaks. A large flange variant is also available. Both the oesophageal and tracheal flanges are enlarged (LF). Both shunt valves are available as 16 and 20 Fr. variants in sizes 4 mm – 14 mm.

The correct selection and change of the voice prosthesis is done by a physician.

SIZE	SHAFT THICKNESS Ø mm 16 FR.	SHAFT THICKNESS Ø mm 20 FR.	LENGTH mm	REF 16 FR.	REF 20 FR.
4	5.3	6.6	4.0	**IN1604-LEF**	IN2004-LEF
6	5.3	6.6	6.0	**IN1606-LEF**	IN2006-LEF
8	5.3	6.6	8.0	**IN1608-LEF**	IN2008-LEF
10	5.3	6.6	10.0	**IN1610-LEF**	IN2010-LEF
12	5.3	6.6	12.0	**IN1612-LEF**	IN2012-LEF
14	5.3	6.6	14.0	**IN1614-LEF**	IN2014-LEF

The colour of the item number corresponds to the colour of the inserter to be used.

BLOM-SINGER® CLASSIC™ INDWELLING LF VOICE PROSTHESIS

The BLOM-SINGER® LF (Large Flange) is an indwelling prosthesis and has an enlarged tracheal and esophageal flange (19 mm diameter) for the indication-specific treatment of periprosthetic leaks. The voice prosthesis is available as a 16 Fr and 20 Fr version in sizes 4 mm – 14 mm. The correct selection and change of the voice prosthesis is done by a physician.

SIZE	SHAFT THICKNESS Ø mm 16 FR.	SHAFT THICKNESS Ø mm 20 FR.	LENGTH mm	REF 16 FR.	REF 20 FR.
4	5.3	6.6	4.0	**IN1604-LF**	IN2004-LF
6	5.3	6.6	6.0	**IN1606-LF**	IN2006-LF
8	5.3	6.6	8.0	**IN1608-LF**	IN2008-LF
10	5.3	6.6	10.0	**IN1610-LF**	IN2010-LF
12	5.3	6.6	12.0	**IN1612-LF**	IN2012-LF
14	5.3	6.6	14.0	**IN1614-LF**	IN2014-LF

The colour of the item number corresponds to the colour of the inserter to be used.

BLOM-SINGER® CLASSIC™ IR VOICE PROSTHESIS

The BLOM-SINGER® CLASSIC™ IR (Increased Resistance) is an indwelling prosthesis and features a special high resistance valve. This valve is equipped with a reinforced silicone flap hinge and prevents unintentional opening of the valve in the event of excessively high tracheo-oesophageal suction pressure. The voice prostheses are available as 16 Fr. and 20 Fr. variants in sizes 6 mm – 12 mm.

The correct selection and change of the voice prosthesis is done by a physician.

SIZE	SHAFT THICKNESS Ø mm 16 FR.	SHAFT THICKNESS Ø mm 20 FR.	LENGTH mm	REF 16 FR.	REF 20 FR.
6	5.3	6.6	6.0	**IN1606-IR**	**IN2006-IR**
8	5.3	6.6	8.0	**IN1608-IR**	**IN2008-IR**
10	5.3	6.6	10.0	**IN1610-IR**	**IN2010-IR**
12	5.3	6.6	12.0	**IN1612-IR**	**IN2012-IR**

The colour of the item number corresponds to the colour of the inserter to be used.

BLOM-SINGER® CLASSIC™ LEIR VOICE PROSTHESIS

The BLOM-SINGER® CLASSIC™ LEIR (Large Esophageal Flange Increased Resistance) is an indwelling prosthesis and features a special high resistance valve. This valve features a reinforced silicone flap hinge and prevents unintentional opening of the valve in the event of excessively high tracheo-oesophageal suction pressure. This variant (LEIR) also features an enlarged oesophageal flange. The voice prosthesis is available as a 16 Fr and 20 Fr version in sizes 4 mm – 8 mm. The correct selection and change of the voice prosthesis is done by a physician.

SIZE	SHAFT THICKNESS Ø mm 16 FR.	SHAFT THICKNESS Ø mm 20 FR.	LENGTH mm	REF 16 FR.	REF 20 FR.
4	5.3	6.6	4.0	**IN1604-LEIR**	**IN2004-LEIR**
6	5.3	6.6	6.0	**IN1606-LEIR**	**IN2006-LEIR**
8	5.3	6.6	8.0	**IN1608-LEIR**	**IN2008-LEIR**

The colour of the item number corresponds to the colour of the inserter to be used.

BLOM-SINGER® CLASSIC™ INDWELLING LETO VOICE PROSTHESIS

The BLOM-SINGER® Large Esophageal Flange TEP Occluder (LETO) is an indwelling prosthesis substitute and is used for the non-invasive closure of the shunt canal without further phonation option. The valve flap is sealed and a large oesophageal flange achieves a good seal during shunt dilatation. The BLOM-SINGER® Large Esophageal Flange/TEP Occluder (LETO) is available in 16 Fr. and 20 Fr. variants and in sizes 4 mm – 14 mm. The correct selection and change of the voice prosthesis is done by a physician.

SIZE	SHAFT THICKNESS Ø mm 16 FR.	SHAFT THICKNESS Ø mm 20 FR.	LENGTH mm	REF 16 FR.	REF 20 FR.
4	5.3	6.6	4.0	**IN1604-LETO**	**IN2004-LETO**
6	5.3	6.6	6.0	**IN1606-LETO**	**IN2006-LETO**
8	5.3	6.6	8.0	**IN1608-LETO**	**IN2008-LETO**
10	5.3	6.6	10.0	**IN1610-LETO**	**IN2010-LETO**
12	5.3	6.6	12.0	**IN1612-LETO**	**IN2012-LETO**
14	5.3	6.6	14.0	**IN1614-LETO**	**IN2014-LETO**

The colour of the item number corresponds to the colour of the inserter to be used.

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BLOM-SINGER® ADVANTAGE® VOICE PROSTHESIS

The BLOM-SINGER® ADVANTAGE® hard valve assembly voice prosthesis made of medical silicone is an indwelling prosthesis. It is distinguished by special material durability and longevity. The silicone valve contains silver oxide, a substance which prevents biofilm colonisation. This material is therefore better protected against candida infection. This enables the changing intervals for the shunt valve to be lengthened. In addition, a stabilising titanium ring is integrated into the inner lumen of the prosthesis shaft, which leads to prolonged dimensional stability and material durability.

By using a gel capsule during placement, the voice prosthesis slides easily into the shunt canal and facilitates the change, which is performed from the front through the tracheostoma

The BLOM-SINGER® ADVANTAGE® hard valve assembly voice prosthesis is available in the shaft diameter 20 Fr. and in each of the sizes 4 mm – 14 mm.

The correct selection and change of the voice prosthesis is done by a physician.

SIZE	SHAFT THICKNESS Ø mm 20 FR.	LENGTH mm	REF 20 FR.
4	6.6	4	AD2004-NS
6	6.6	6	AD2006-NS
8	6.6	8	AD2008-NS
10	6.6	10	AD2010-NS
12	6.6	12	AD2012-NS
14	6.6	14	AD2014-NS

The colour of the item number corresponds to the colour of the inserter to be used.

BLOM-SINGER® DUAL VALVE™ INDWELLING VOICE PROSTHESIS

The BLOM-SINGER® DUAL VALVE™ INDWELLING indwelling prosthesis features two independent sequential low-pressure valves made of silicone containing silver oxide. Should one of the two valves fail due to candida infestation, then the second valve ensures that proper functioning is maintained. The BLOM-SINGER® DUAL VALVE™ INDWELLING is available as a 20 Fr. variant in sizes 6 mm – 14 mm.

The correct selection and change of the voice prosthesis is done by a physician.

SIZE	SHAFT THICKNESS Ø mm 20 FR.	LENGTH mm	REF 20 FR.
6	6.6	6.0	**DV2006-NS**
8	6.6	8.0	**DV2008-NS**
10	6.6	10.0	**DV2010-NS**
12	6.6	12.0	**DV2012-NS**
14	6.6	14.0	**DV2014-NS**

The colour of the item number corresponds to the colour of the inserter to be used.

BLOM-SINGER® DUAL VALVE™ LF INDWELLING VOICE PROSTHESIS

The BLOM-SINGER® DUAL VALVE™ LF (Large Flange) indwelling prosthesis represents a functional extension to the BLOM-SINGER® DUAL VALVE™. This prosthesis is additionally equipped with two enlarged flanges (oesophageal and tracheal flanges) for treatment of peri-prosthetic leakages as appropriate for the indication. The BLOM-SINGER® DUAL VALVE™ ILF is available as a 20 Fr. variant in sizes 6 mm – 14 mm. The correct selection and change of the voice prosthesis is done by a physician.

SIZE	SHAFT THICKNESS Ø mm 20 FR.	LENGTH mm	REF 20 FR.
6	6.6	6.0	**DV2006-LF**
8	6.6	8.0	**DV2008-LF**
10	6.6	10.0	**DV2010-LF**
12	6.6	12.0	**DV2012-LF**
14	6.6	14.0	**DV2014-LF**

The colour of the item number corresponds to the colour of the inserter to be used.

BLOM-SINGER® LOW PRESSURE VOICE PROSTHESIS

The BLOM-SINGER® Low Pressure voice prosthesis made of medical silicone is an interchangeable prosthesis characterised by a valve system that requires a particularly low blowing pressure for comfortable speaking.

The BLOM-SINGER® Low Pressure voice prosthesis can be changed by the patients themselves after receiving professional instruction and training.

SIZE	SHAFT THICKNESS Ø mm 16 FR.	SHAFT THICKNESS Ø mm 20 FR.	LENGTH mm	REF 16 FR.	REF 20 FR.
6	5.3	6.6	6	**BE 6009**	**BE 2014**
8	5.3	6.6	8	**LP16-008**	**LP20-008**
10	5.3	6.6	10	**BE 6010**	**BE 2018**
12	5.3	6.6	12	**LP16-012**	**LP20-012**
14	5.3	6.6	14	**BE 6011**	**BE 2022**
18	5.3	6.6	18	**BE 6012**	**BE 2026**
22	5.3	6.6	22	**BE 6013**	**BE 2030**
25	5.3	6.6	25	**BE 6014**	**BE 2033**
28	5.3	6.6	28	**BE 6015**	-

BLOM-SINGER® DUCKBILL VOICE PROSTHESIS

The BLOM-SINGER® DUCKBILL made of medical silicone is an interchangeable prosthesis which features a slit valve system that requires a low blowing pressure for comfortable speaking.

The BLOM-SINGER® DUCKBILL can be changed by the patients themselves after receiving professional instruction and training.

SIZE	SHAFT THICKNESS Ø mm 16 FR.	LENGTH mm	REF
6	5.3	6	**DB16-006**
8	5.3	8	**DB16-008**
10	5.3	10	**BE 6000**
12	5.3	12	**DB16-012**
14	5.3	14	**BE 6001**
18	5.3	18	**BE 6002**

LARYVOX® INSERTER

The LARYVOX® INSERTER consists of a placement instrument as well as an adapter and facilitates the perfect anterograde placement or replacement of a voice prosthesis. Additionally, the rounded applicator tip promotes gentle placement and makes changing the voice prosthesis as comfortable as possible.

The applicator of the LARYVOX® INSERTER is readily prepared in a few steps. The placement instrument has three different fixation options to allow easy and safe placement of various voice prostheses.

ORDER INFORMATION	PU	REF
LARYVOX® INSERTER	1	**25900**

LARYVOX® INSERTER EXPERT

The LARYVOX® INSERTER EXPERT consists of a placement instrument and an applicator and is used for the optimal anterograde placement of **a BLOM-SINGER DUAL VALVE™ VOICE PROSTHESIS**. The rounded applicator tip also promotes gentle placement and makes changing voice prostheses as comfortable as possible.

The applicator of the LARYVOX® INSERTER EXPERT is readily prepared in a few steps. The placement instrument has three different fixation options to allow easy and safe placement of various voice prostheses.

ORDER INFORMATION	PU	REF
LARYVOX® INSERTER EXPERT	1	**25910**

LARYVOX® INSERTER EXPERT SMALL

The LARYVOX® INSERTER EXPERT SMALL consists of a placement instrument as well as an adapter and facilitates the perfect anterograde placement or replacement of a voice prosthesis with a **shaft length of 4 mm**. Additionally, the rounded applicator tip promotes gentle placement and makes changing the voice prosthesis as comfortable as possible.

The applicator of the LARYVOX® INSERTER EXPERT SMALL is readily prepared in a few steps.

The placement instrument has three different fixation options to allow easy and safe placement of various voice prostheses.

ORDER INFORMATION	PU	REF
LARYVOX® INSERTER EXPERT SMALL	1	**25915**

LARYVOX® INSERTER SPECIAL

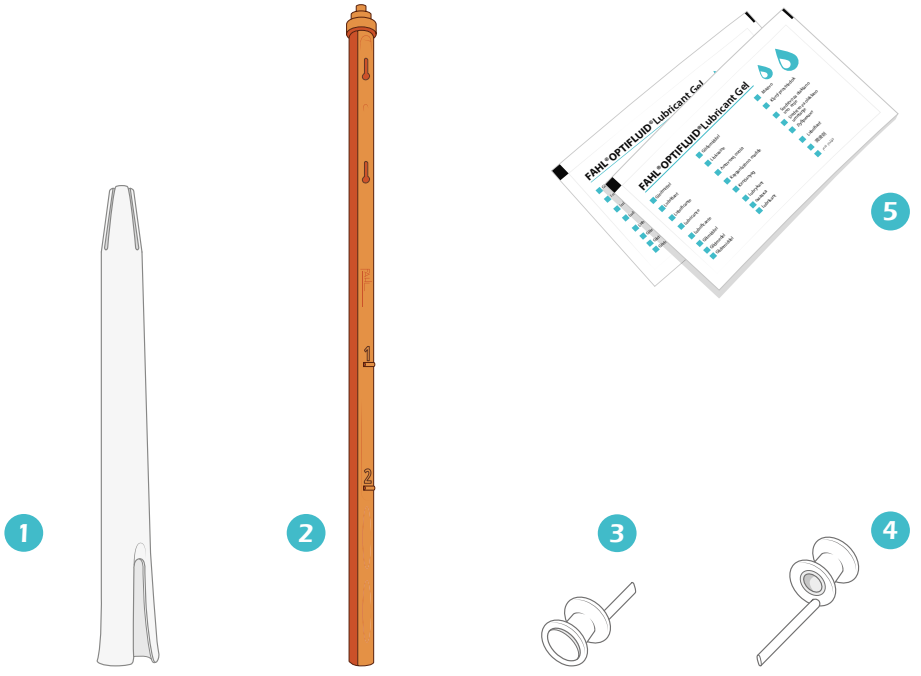
The LARYVOX® INSERTER SPECIAL is particularly suitable for a constricted shunt canal with a deep position or running diagonally or with a particularly small tracheostoma.

With this inserter, a shunt valve can be securely fixed to the placement instrument and placed anterograde in the existing shunt canal/fistula canal using **the gel capsule technique.**

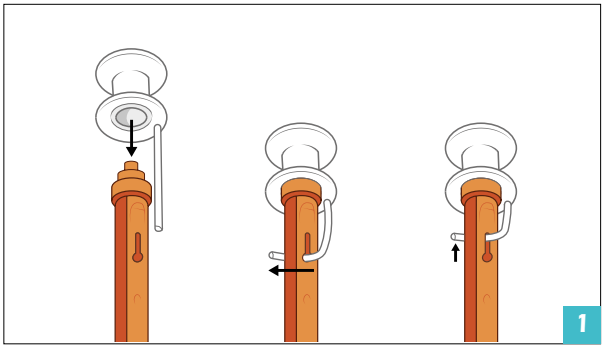
The angled shape in the front section of the LARYVOX® INSERTER SPECIAL also optimises the view during placement.

ORDER INFORMATION	PU	REF
LARYVOX® INSERTER SPECIAL	1	**25920**

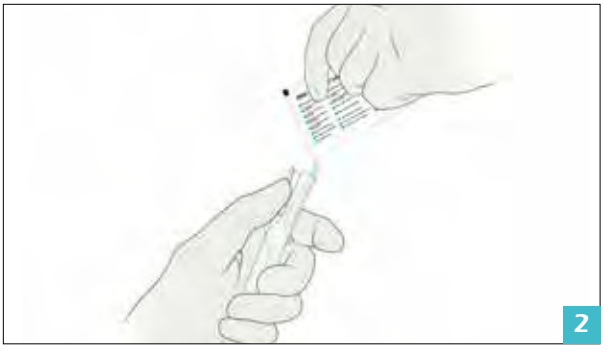
CHANGE OF VOICE PROSTHESIS WITH AN INSERTER



1. **Applicator**
2. **Placement instrument (inserter)**
3. **Oesophageal side of the voice prosthesis**
4. **Tracheal side of the voice prosthesis**
5. **Lubricant**

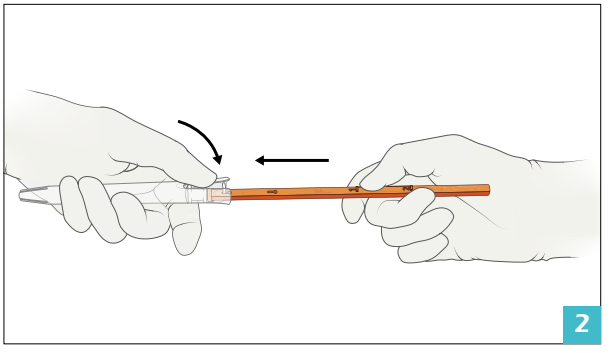


Place the tracheal flange of the voice prosthesis on the head of the placement instrument. Fixate the safety thread of the voice prosthesis.

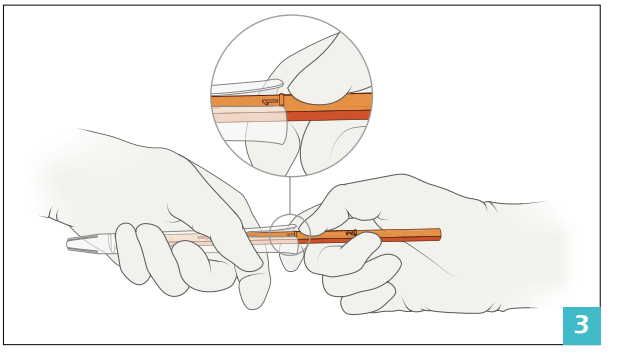


For better lubrication of the applicator to advance the voice prosthesis, you can use the FAHL® OPTIFLUID® Lubricant Gel included in the scope of delivery.

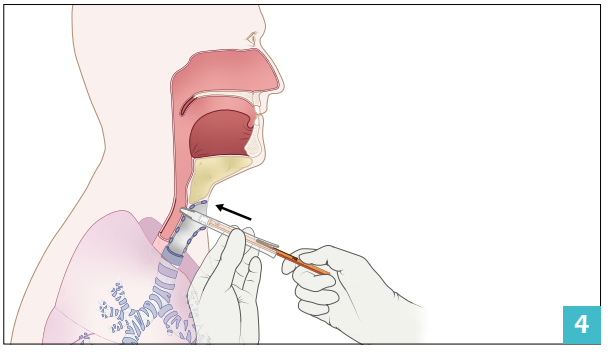
CHANGE OF VOICE PROSTHESIS WITH AN INSERTER



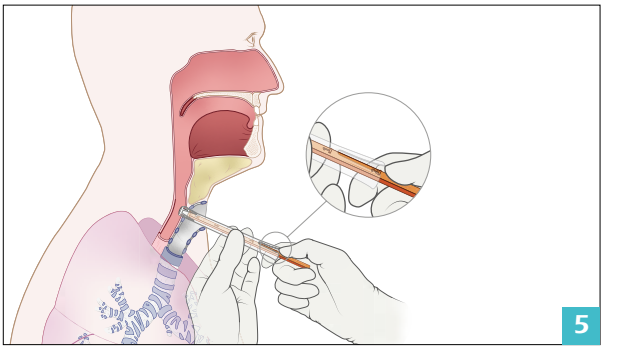
Press the oesophageal flange together so that the valve flap points forwards. Push the placement instrument forwards by approx. 1 cm into the slotted opening of the applicator.



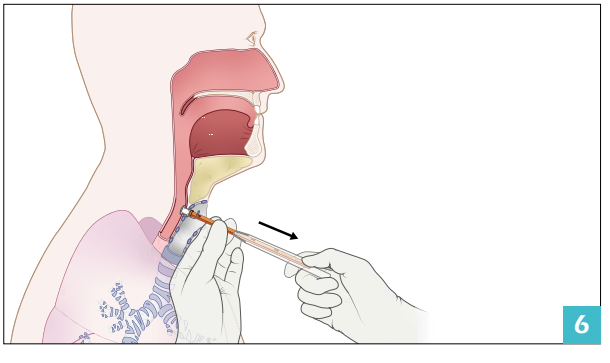
Slide the voice prosthesis slowly forwards through the applicator up to marking 1.



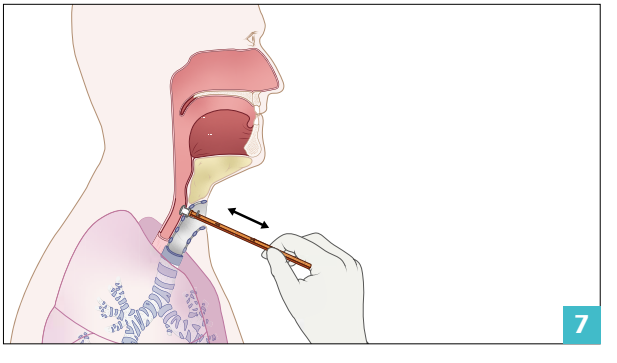
Guide the tip of the applicator carefully into the shunt channel.



Slide the voice prosthesis slowly forwards through the applicator up to marking 2. The oesophageal flange will open at the lumen of the oesophagus.

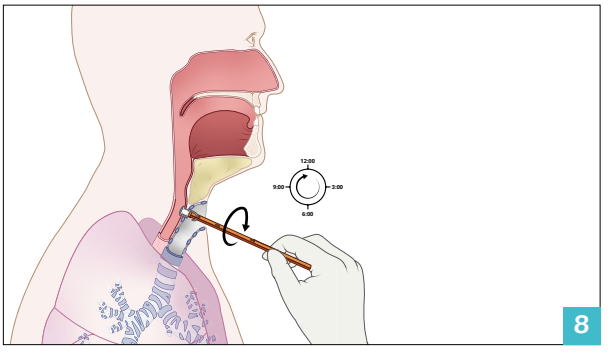


Retract the applicator carefully via the placement instrument so that the tracheal flange opens in the trachea.

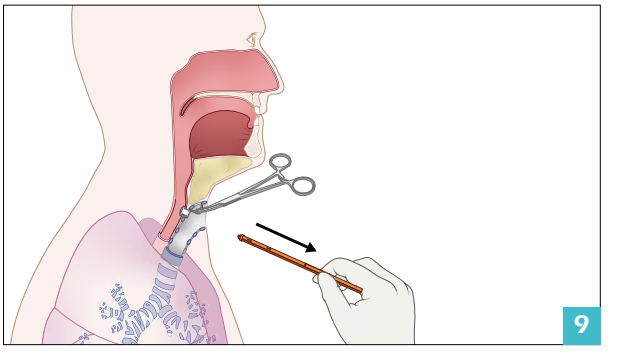


Check the correct position of the voice prosthesis by rotating and slightly pulling the placement instrument.

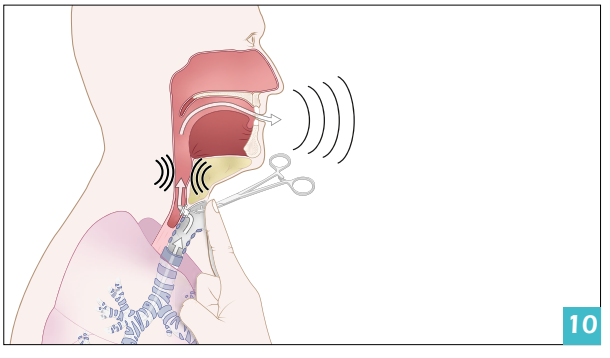
CHANGE OF VOICE PROSTHESIS WITH AN INSERTER



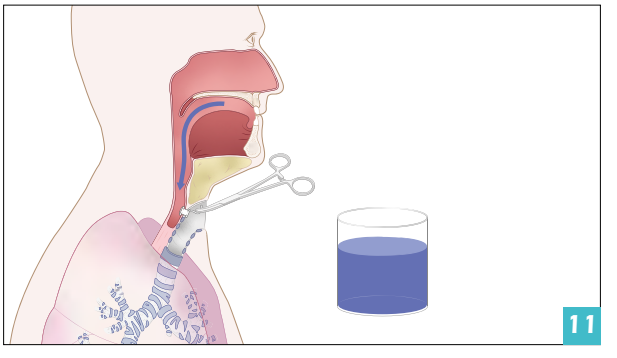
Finally, rotate the voice prosthesis into position such that the safety thread is in the 12 o'clock position.



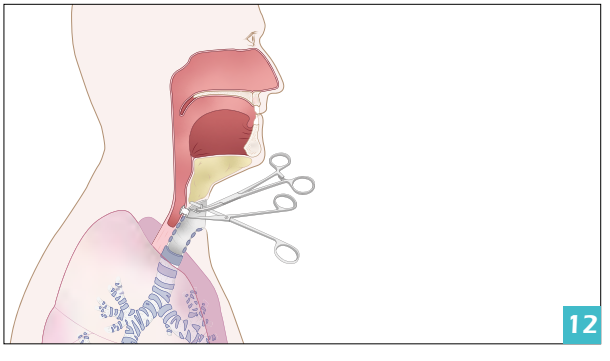
Fixate the safety thread with an atraumatic clamp and remove the placement instrument.



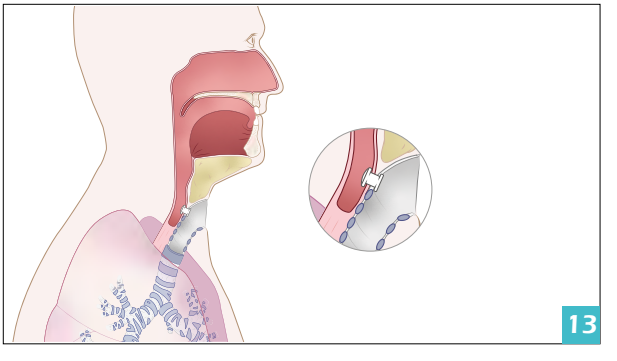
Perform a phonation test.



Check the tightness of the voice prosthesis with an attempt to swallow.

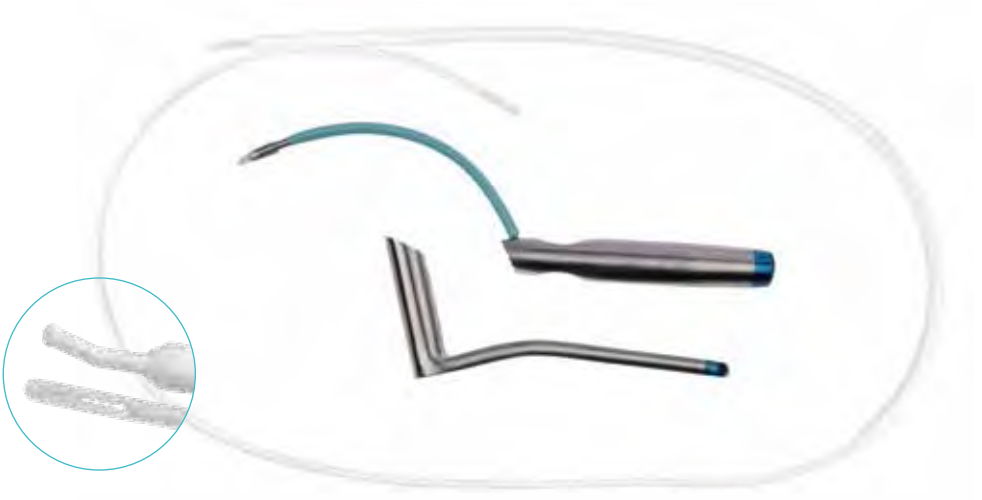


If the voice prosthesis is in the correct position, cut the safety thread flush with the tracheal flange.



Regular monitoring of the position and functionality of the voice prosthesis is an important part of professional voice prosthesis care.

LARYVOX® PUNCTURE SET STERILE



The LARYVOX® PUNCTURE SET is a complete, sterile puncture set for single use in surgery. It is used for the placement of a voice prosthesis as part of a primary or secondary puncture after laryngectomy.

The ergonomically shaped pharyngeal protector serves to protect the oesophageal mucosa during puncture. The 3-sided finely ground puncture trocar enables precise and rapid tracheo-oesophageal puncture. It is already inside a plastic sleeve for the subsequent advancement of a catheter.

The LARYVOX® GUIDEWIRE serves as a pull-through catheter for voice prosthesis placement both in a primary or secondary puncture and as part of a retrograde voice prosthesis change.

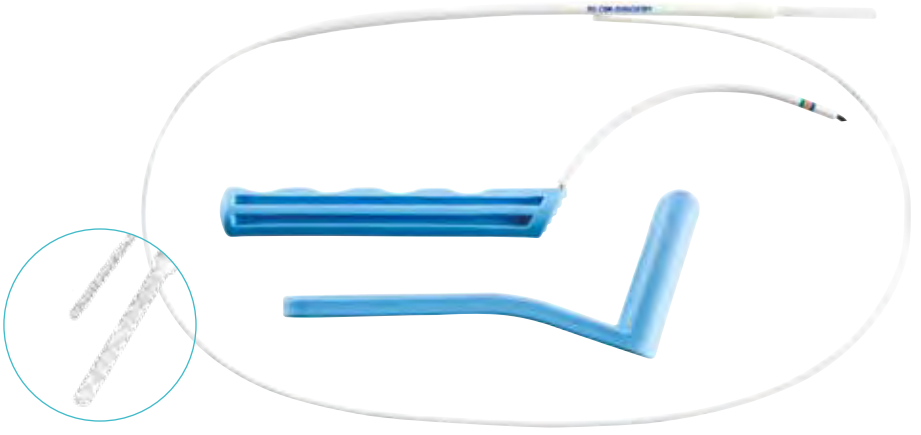
Characteristic for the guide wire are the two differently shaped ends with fixation option.

The voice prosthesis is attached to the angled fixation end within the context of a primary puncture and positioned retrogradely. The straight fixation end is used to fix and guide the voice prosthesis within the context of the secondary puncture. Special anatomical conditions may make a retrograde voice prosthesis change necessary. The curved shape of one fixation end facilitates the advancement of the guidewire in cranial direction to allow subsequent tissue-sparing retrograde prosthesis passage.

SCOPE OF DELIVERY			
1	Trocar	1	LARYVOX® Guidewire
1	Trocar sleeve	1	Pharynx protector

ORDER INFORMATION	REF
LARYVOX® PUNCTURE SET	**25200**

BLOM-SINGER® PLACEMENT SURGICAL KIT STERILE



The BLOM-SINGER® VOICE PROSTHESIS PLACEMENT SURGICAL KIT 20 Fr. is a complete surgery set for single use and serves the intraoperative primary or secondary puncture for placing a Blom-Singer® voice prosthesis.

Guide catheter, trocar and a pharyngeal protector are included in the scope of delivery (single-use instruments).

The trocar features an extremely sharp-edged tip with a 3-sided ground blade enabling easy puncture. The trocar is seated in a colour-coded sleeve. The colour code offers the unique option of measuring the length of the shunt channel already while performing the puncture and selecting a voice prosthesis that fits precisely.

SCOPE OF DELIVERY			
1	Trocar	1	Guidewire
1	Trocar sleeve	1	Pharynx protector
1	BLOM-SINGER® Classic™ Indwelling sterile 8 mm -14 mm		

ORDER INFORMATION	REF
BLOM-SINGER® VOICE PROSTHESIS PLACEMENT SURGICAL KIT, 20 Fr.	**TP1001**

BLOM-SINGER® REPLACEMENT GEL CAPS

The BLOM-SINGER® REPLACEMENT GEL CAPS serve as a replacement gel capsule for the placement of a BLOM-SINGER® voice prosthesis.

With the aid of the BLOM-SINGER® REPLACEMENT GEL CAPS, the voice prosthesis is introduced atraumatically into the shunt canal. The gel cap dissolves completely in the oesophagus after a few minutes and unfolds the oesophageal flange. The gel cap can be coated with a water-soluble local anaesthetic to speed up the procedure.

ORDER INFORMATION	PU	REF
BLOM-SINGER® REPLACEMENT GEL CAPS, 16 Fr.	90	**BE3190**
BLOM-SINGER® REPLACEMENT GEL CAPS, 18 Fr.	90	**BE3195**
BLOM-SINGER® REPLACEMENT GEL CAPS, 20 Fr.	90	**BE3290**
BLOM-SINGER® REPLACEMENT GEL CAPS, 22 Fr.	60	**BE3295**

BLOM-SINGER® DILATOR SIZER

The BLOM-SINGER® DILATOR SIZER is an important tool for every change of voice prosthesis. It combines two different functions in one innovative product. In a single step, the shunt canal can be dilated (widened) as needed during voice prosthesis placement and additionally measured via the measuring scale for size verification.

ORDER INFORMATION	PU	REF
BLOM-SINGER® DILATOR SIZER, 18 Fr. for 16 Fr. voice prostheses	1	**BE2051**
BLOM-SINGER® DILATOR SIZER, 22 Fr. for 20 Fr. voice prostheses	1	**BE2052**

LARYVOX® PLUG

The LARYVOX® PLUG sealing plug serves for the short-term use with a defective voice prosthesis to prevent transprosthetic fluid leakage (centrally through the shunt valve). It is compatible with most common voice prostheses (20-22.5 Fr.). The sealing plug is only to be used temporarily.

Use of the LARYVOX® PLUG prevents swallowing while eating and drinking. Speaking is not possible while in use.

ORDER INFORMATION	PU	REF
LARYVOX® PLUG	1	**25800**

LARYVOX® PLUG 4 MM

The LARYVOX® PLUG 4 mm sealing plug for small voice prostheses serves for the short-term use with a defective voice prosthesis to prevent transprosthetic fluid leakage (centrally through the shunt valve). It is compatible with all common 4 mm voice prostheses. The sealing plug is only to be used temporarily.

Use of the LARYVOX® PLUG prevents swallowing while eating and drinking. Speaking is not possible while in use.

ORDER INFORMATION	PU	REF
LARYVOX® PLUG 4 mm	1	**25810**

BLOM-SINGER® TRACHEOESOPHAGEAL PUNCTURE DILATOR

The BLOM-SINGER® TRACHEOESOPHAGEAL PUNCTURE DILATOR is a tracheoesophageal puncture dilator for a straightforward change of voice prosthesis. The fixed conical silicone stent is used for successive dilatation of the shunt canal in the context of a voice prosthesis change when using 16- or 20-Fr. voice prostheses.

ORDER INFORMATION	PU	REF
BLOM-SINGER® TRACHEOESOPHAGEAL PUNCTURE DILATOR, 18 FR.	1	**BE6050**
BLOM-SINGER® TRACHEOESOPHAGEAL PUNCTURE DILATOR, 22 FR.	1	**BE2050**

LARYVOX® SUCTION TUBE

The LARYVOX® METAL SUCTION TUBE was specially developed for users of a voice prosthesis. It enables targeted suction of the shunt valve while the stoma light effectively illuminates the tracheostoma. The suction tube is attached to the suction device's suction tube with a tube connector. A stoma lamp, which can be ordered separately, can be securely attached in the retaining clip of the suction tube.

ORDER INFORMATION	PU	REF
LARYVOX® SUCTION TUBE	1	**69000**

LARYVOX® DUO BRUSH

The LARYVOX® DUO BRUSH is designed for the gentle and thorough daily cleaning of voice prostheses. One side features a brush for cleaning the inner channel of the voice prosthesis in the tracheoesophageal fistula and the other side features a foam sponge for removing debris and secretions from the tracheal flange of the voice prosthesis.

We supply the LARYVOX® DUO BRUSH in a sturdy, reusable plastic box with six brushes. In addition, a retaining clip is included for attaching a stoma lamp. The combination of brush and tracheostomy lamp allows the cleaning process to be performed under good visibility with one hand while the other hand remains free. The stoma lamp is to be ordered separately. There is a mirror on the back of the box for convenient cleaning when travelling.

SIZE	VOICE PROSTHESIS SIZES	PU	REF
6.0	4 - 6	6	**29110-06**
8.0	7 - 8	6	**29110-08**
10.0	9 - 10	6	**29110-10**
12.0	11 - 13	6	**29110-12**
18.0	14 - 18	6	**29110-18**

LARYVOX® STOMALIGHT

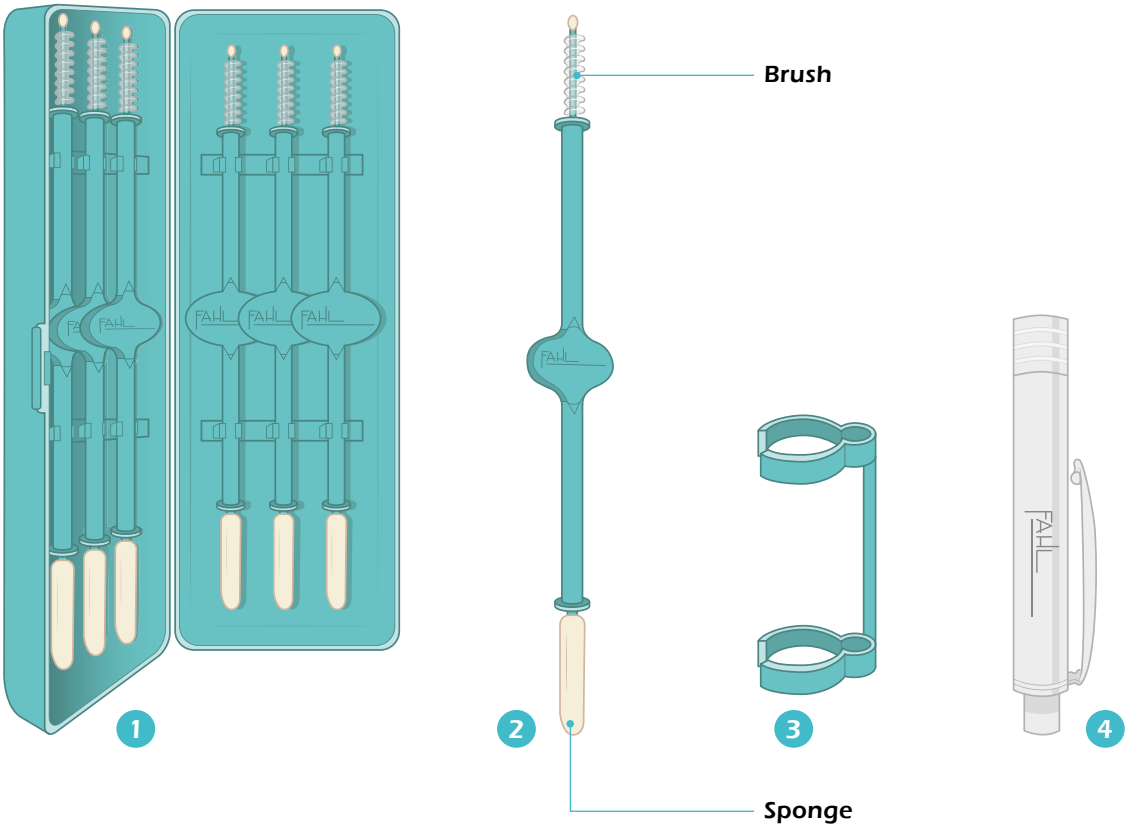
The LARYVOX® STOMALIGHT made of sturdy metal can be attached to the suction tube or a LARYVOX® DUO BRUSH (cleaning brush for voice prostheses).

The stoma light is switched on and off using the button at one end. It is powered by 2 standard 1.5 Volt AAA micro batteries, which are included in the scope of delivery.

The powerful light source provides good illumination during tracheostoma care, e.g. when cleaning the voice prosthesis or during suctioning.

ORDER INFORMATION	PU	REF
LARYVOX® STOMALIGHT	1	**69101**

CLEANING OF VOICE PROSTHESES

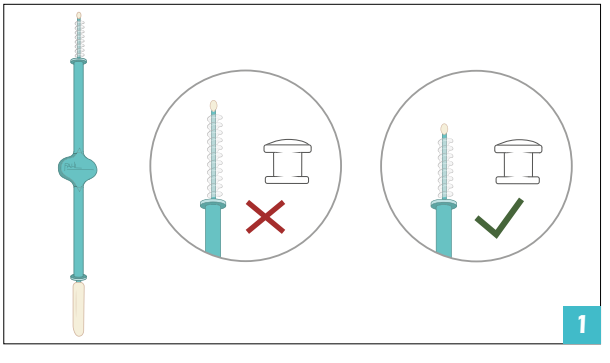


1 **LARYVOX® DUO-BRUSH case**

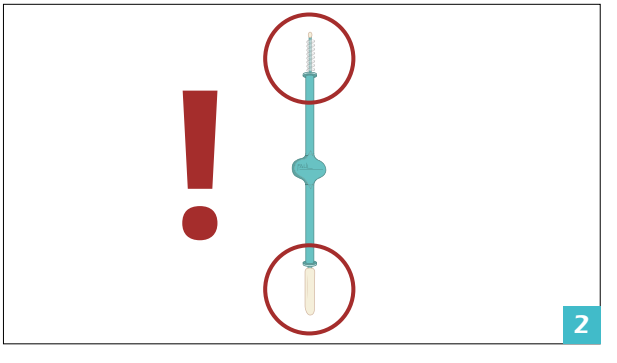
2 **LARYVOX® DUO BRUSH**

3 **LARYVOX® CLIP**

4 **LARYVOX® STOMALIGHT**

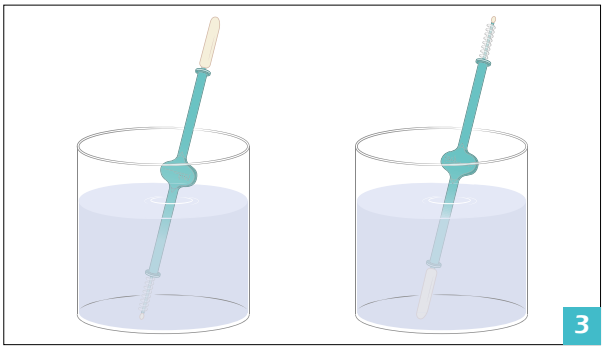


Select the size of the LARYVOX® DUO BRUSH according to the size of the voice prosthesis.

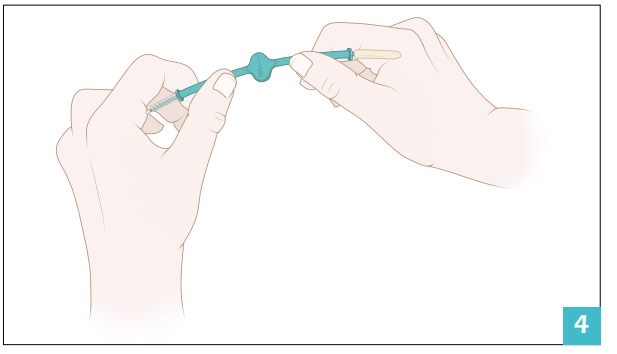


Check the LARYVOX® DUO BRUSH for possible damage before use.

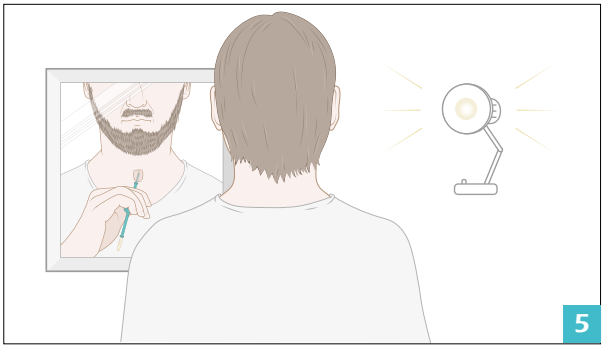
CLEANING OF VOICE PROSTHESES



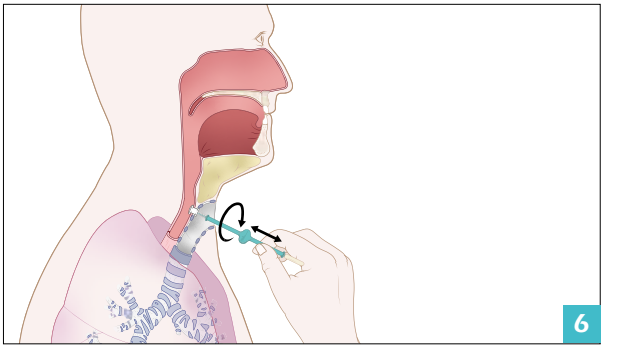
Moisten the brush and the sponge with potable water before use.



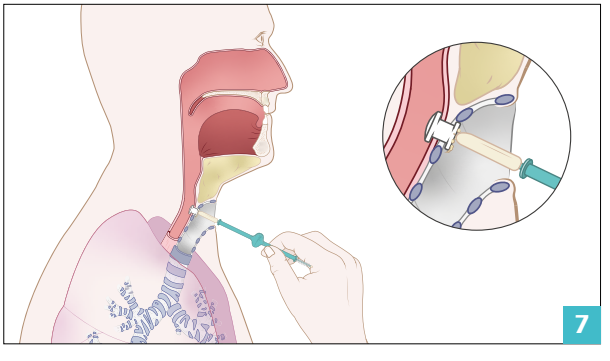
If necessary, you can bend the cleaning brush individually to the required shape.



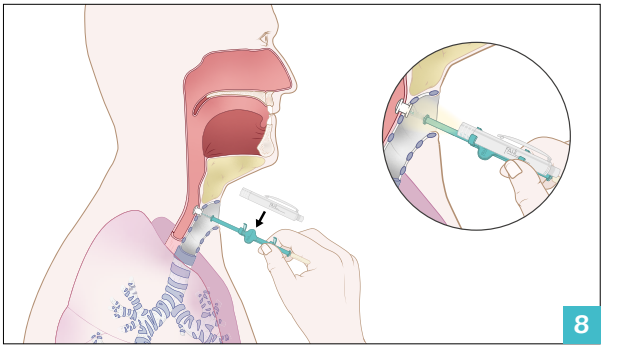
To achieve good cleaning results, improve your vision with optimal lighting.



Guide the cleaning brush into the voice prosthesis with the brush side. Move the brush back and forth, rotating it between your fingers.



Carefully remove external secretions with the sponge.



For a better view and more thorough cleaning results, you can attach the LARYVOX® STOMALIGHT to the cleaning brush with the LARYVOX® CLIP.

McLittle Stock/Shutterstock.com

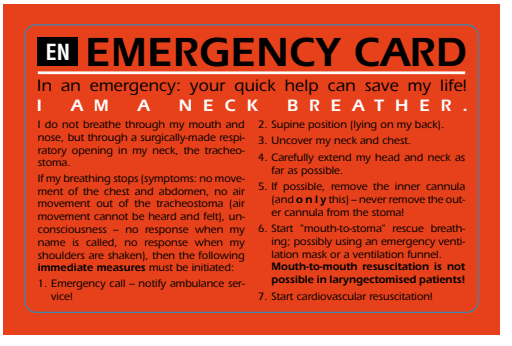
EMERGENCY EVENT

Basically, every patient is at high risk of spontaneously getting into an emergency situation after a tracheostomy. Even an unintentionally inhaled, larger foreign body can cause respiratory distress and cannot be coughed up productively due to reduced or non-existent subglottic pressure. There is a risk of suffocation without immediate endotracheal suction.

Therefore, all persons involved in the care of the patient must be prepared for an emergency and its professional management. Here too, laryngectomised patients represent a special case. Since inhalation and exhalation take place exclusively via the tracheostoma, no alternative airway (mouth/nose) can compensate for the problem.

HOW CAN I TAKE PRECAUTIONS?

Keep the emergency telephone number clearly visible on the telephone at home. Special emergency aids should be close at hand. A signal emergency device is also helpful. Emergency cards and stickers inform potential first responders about the special handicap. Affix the emergency stickers in a clearly visible place in your home environment and/or on the car window and always carry the card with you.


EN EMERGENCY CARD

In an emergency: your quick help can save my life!

I A M A N E C K B R E A T H E R .

I do not breathe through my mouth and nose, but through a surgically-made respiratory opening in my neck, the tracheostoma.

If my breathing stops (symptoms: no movement of the chest and abdomen, no air movement out of the tracheostoma (air movement cannot be heard and felt), unconsciousness – no response when my name is called, no response when my shoulders are shaken), then the following **immediate measures** must be initiated:

1. Emergency call – notify ambulance service!
2. Supine position (lying on my back).
3. Uncover my neck and chest.
4. Carefully extend my head and neck as far as possible.
5. If possible, remove the inner cannula (and **o n l y** this) – never remove the outer cannula from the stoma!
6. Start "mouth-to-stoma" rescue breathing; possibly using an emergency ventilation mask or a ventilation funnel. **Mouth-to-mouth resuscitation is not possible in laryngectomised patients!**
7. Start cardiovascular resuscitation!

HOW DOES ONE RECOGNISE AN IMPENDING EMERGENCY?

Symptoms such as palpitations, sudden nausea, dizziness and feeling faint or blurred vision can be signs of an impending emergency.

By activating the LARYVOX® ALARM signal call device, which produces a shrill alarm tone, the affected person can attract the attention of people in his/her vicinity.

Immediate measures to strengthen circulation are advisable in any case: lay the affected person flat on the floor, make an emergency call, raise the legs slightly, clear the airway opening (tracheostoma), stretch the head backwards, remove an internal cannula if necessary.

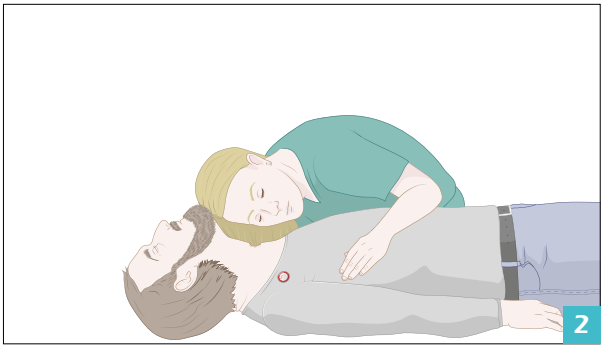
IMPORTANT: STAY CALM!

SYMPTOMS OF RESPIRATORY ARREST

- No air flow from the tracheostoma (neither audible nor palpable)
- No movements of the chest and abdomen
- Blue discolouration of the skin (cyanosis)
- No reaction to shaking by the shoulders
- Unconsciousness (no response on challenge)
- Dilated pupils

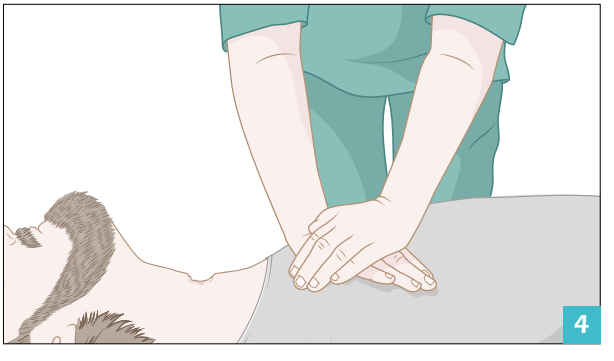
IMMEDIATE MEASURES IN CASE OF RESPIRATORY ARREST

CHECK → CALL → PRESS



CHECK - is the person conscious and responsive? For example, does the person respond to shaking of the shoulders?

Can breathing behaviour still be detected? Can airflow be felt or heard coming out of the tracheostoma?

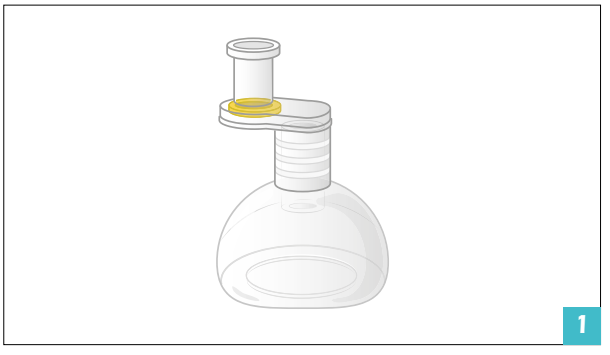


CALL - in emergency **call 112**. Explain the situation and point out the special case of a "neck breather".

PRESS - Until the emergency services arrive, apply rapid, firm chest compressions to the centre of chest (100-120 times/minute).

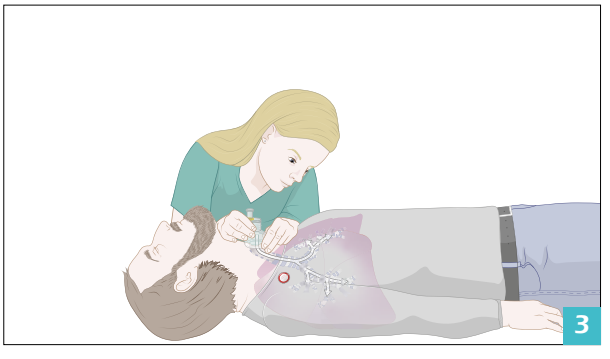
EMERGENCY MEASURE–LARYVOX® SOS SAFE-MASK

Mouth-to-nose/mouth-to-mouth resuscitation is definitely not possible in laryngectomised patients!

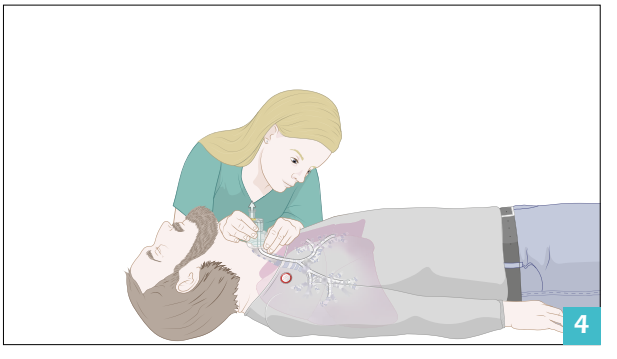


The LARYVOX® SOS safe-mask ventilation mask enables safe and efficient mouth-to-tracheostomy ventilation in emergency situations.

Press the LARYVOX® SOS safe-mask onto the tracheostoma. Fixate the mask with both hands so that the air reaches the lungs completely.



Check whether the chest rises when delivering mouth-to-tracheostomy resuscitation.



Stop resuscitation briefly. The air escapes from the lungs again. Then repeat the resuscitation process.

If you can perform first aid in pairs, mouth-to-tracheostomy ventilation should be performed at a ratio of 30 chest compressions to two ventilations. Take turns after 3 minutes at the latest. Do not stop the measures until professional help arrives.

LARYVOX® SOS MASK

This aid is intended for use in emergencies. The ventilation funnel LARYVOX® SOS MASK enables mouth-to-tracheostoma ventilation. The ventilation funnel consists of a soft silicone tracheostoma mask and a plastic adapter tube, which is attached to the mask.

The ventilation funnel is suitable for direct ventilation through the tracheostoma, as well as for indirect ventilation through a tracheostomy tube still located in the tracheostoma.

The easy to detach plug-in connection enables the ventilation funnel to be easily disassembled into individual parts, which can easily be stored in e.g., a jacket pocket. This allows the ventilation funnel carried with one easily, so that it is ready to hand in emergencies for first aid providers.

An emergency pass and an emergency sticker for neck breathers are included in the scope of delivery.

ORDER INFORMATION	PU	REF
LARYVOX® SOS MASK	1	**75010**

LARYVOX® SOS SAFE-MASK EMERGENCY VENTILATION MASK

The LARYVOX® SOS SAFE-MASK ventilation mask for neck breathers enables safe and efficient mouth-to-tracheostomy ventilation if required or in emergency situations.

The built-in disposable valve provides the user with reliable protection from possible risks of infection. The exhaled air can escape through the valve at the side of the mask and is not re-inhaled. Any escaping secretions are also diverted through this valve.

It is recommendable to carry the emergency ventilation mask at all times, in order to have it close to hand in emergencies for first aid providers. An emergency pass as well as an emergency sticker for neck breathers are included in the scope of delivery of the emrgency ventilation mask.

ORDER INFORMATION	PU	REF
LARYVOX® SOS SAFE-MASK	1	**75000**

LARYVOX® ALARM

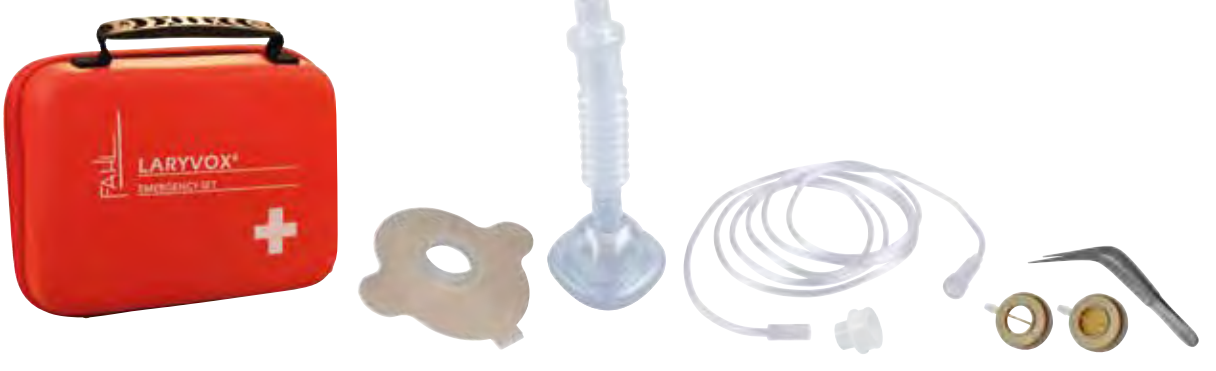
The LARYVOX® ALARM, alarm device generates a loud alarm, through an acoustic or visual signal in emergencies when calling for help is not possible. This alarm can be turned into a continuous tone by pulling out the contact pin with neck strap. This makes it possible to quickly alert other people, in emergencies. This is why it is important for every tracheostomy tube user to carry the device at all times.

The LARYVOX® ALARM signal call device is battery-operated. Batteries are included in the scope of delivery.

TECHNICAL DATA	
Dimensions	11.2 x 3.5 x 2.0 cm
Weight	approx. 100 g
Sound pressure	approx. 98 dB

ORDER INFORMATION	PU	REF
LARYVOX® ALARM	1	**76000**

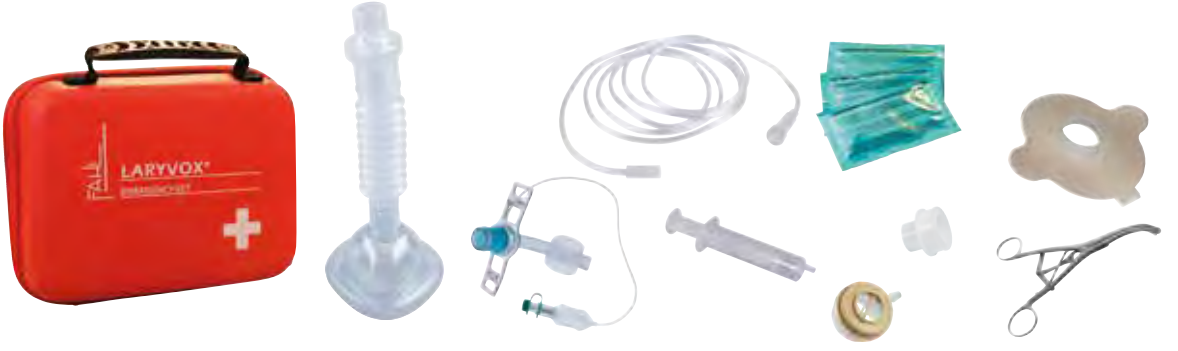
LARYVOX® EMERGENCY SET LARYNGECTOMY



SCOPE OF DELIVERY			
1	LARYVOX® SOS SAFE-MASK	5	LARYVOX® O_2 HME
1	OXYGEN CONNECTING TUBE	5	LARYVOX® TAPE Comfort XL Oval
1	LARYVOX® Connect	1	LARYVOX® TWEEZERS
5	LARYVOX® O_2 Connect		

ORDER INFORMATION	REF
LARYVOX® EMERGENCY SET LARYNGECTOMY	**48006**

LARYVOX® EMERGENCY SET LARYNGECTOMY PRO



SCOPE OF DELIVERY			
1	LARYVOX® SOS SAFE-MASK	3	OPTIFLUID® STOMA OIL TOWEL
1	TRACHEOTEC® VARIO CUFF tracheostomy tube	5	LARYVOX® TAPE Comfort XL Oval
1	LARYVOX® Tracheal dilator	1	Disposable syringe/10 ml, sterile
1	LARYVOX® Connect	1	Oxygen tube
5	LARYVOX® O_2 CONNECT		

ORDER INFORMATION	REF
LARYVOX® EMERGENCY SET LARYNGECTOMY PRO	**48007**

LARYVOX® EMERGENCY SET TRACHEOSTOMY

SCOPE OF DELIVERY			
1	LARYVOX® SOS SAFE-MASK	5	2-KAM® SLIT, sterile compress
1	LARYVOX® TRACHEALSPREIZER	5	OPTIFLUID® STOMA OIL TOWEL
1	HUMIDOTRACH® HME	5	OPTIFAHL® STOMA CLEANING WIPES
5	OPTIFLAUSCH® K tube holding strap	1	Oxygen tube
1	Disposable syringe/10 ml		

ORDER INFORMATION	REF
LARYVOX® EMERGENCY SET TRACHEOSTOMY	**48008**

FAHL® EMERGENCY NECK BREATHER BUTTON

In the context of an emergency, a quick response by those involved is a life-saving measure. To be able to initiate targeted actions immediately and to avoid possible mistakes, it is important to point out the anatomical peculiarity of the neck breather to the first responders: breathing exclusively through the throat opening - the tracheostoma.

Especially in the event of a sudden respiratory arrest, clearly visible information can save your life.

Think about your safety - the same as we do.

Request your preferred emergency identification from us free of charge. There is a choice of an emergency button (badge) with integrated safety pin for flexible attachment to different items of clothing, or alternatively an emergency patch for permanent attachment to a favoured item of clothing, for example for sporting activities. Simply iron on. Finished.

Use your next order for medical aids to request your personal item at the same time:

- EMERGENCY BUTTON REF 90290
- EMERGENCY PATCH/IRON-ON IMAGE REF 90291

Also raise the issue of an emergency situation when our sales representative visits you. You are then welcome to ask any urgent questions in person and have them answered competently.

In advance, an informative animation on the immediate measures in respiratory arrest as well as the use of the LARYVOX® SOS safe-mask for rescue breathing is also available on our YouTube channel.

ORDER INFORMATION	REF
FAHL® EMERGENCY NECK BREATHER BUTTON/PIN	**90290-EN**
FAHL® EMERGENCY NECK BREATHER PATCH/IRON-ON IMAGE	**90291-EN**

Valmedia/Shutterstock.com

LARCHEL® HYDROTHERAPY DEVICE

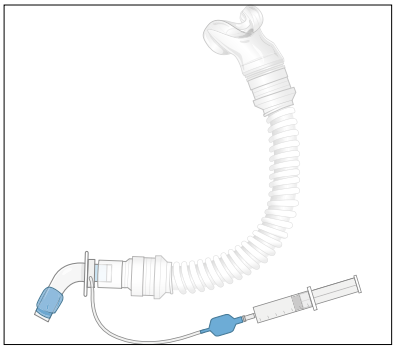
- UNDERWATER MASSAGE
- EXERCISE THERAPY
- SHOWERING
- TAKING A BATH
- SMELLING
- SWIMMING

The LARCHEL® hydrotherapy device is a proven product, which enables laryngectomised patients to take part in exercise therapy in water and therapeutic swimming.

The LARCHEL® consists of a flexible corrugated tube, which can be firmly combined with a special, blockable tracheostomy tube at one end. A mouthpiece with bite block is located at the other end. This mouthpiece is placed in the user's mouth and firmly surrounded by the lips. The air is now sucked in through the nose, channelled into the pharynx, and then moves through the oral cavity, into the corrugated tube. The air is channelled through the corrugated tube to the tracheostomy tube and flows into the tracheostoma.

A tracheostomy tube with cuff is required; by filling the cuff with air, water can be prevented from entering the tracheostoma, as the cuff seals the tracheostomy tube against the tracheal wall.

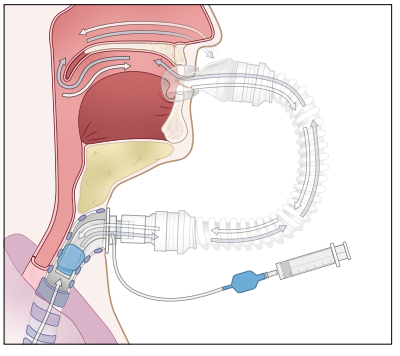
LARCHEL® HYDROTHERAPY DEVICE



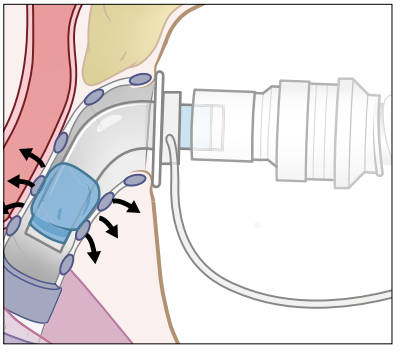
It is inflated using a 10 ml syringe, which is included in the scope of delivery of the LARCHEL®.

After insertion of the tracheostomy tube, a tube holding strap is correctly passed around the neck and securely fastened to the neck flange in the eyelets provided.

It is essential to check the correct fit of the tracheostomy tube and the tightness of the cuff before using the LARCHEL® in water.



The LARCHEL® is available in different sizes (cannula diameters). To achieve optimal adaptation of the Larchel®, consultation with the attending physician and an authorised specialist, e.g. a hydrotherapy representative of the laryngectomee association, is required as part of the instruction!



The applicability of the LARCHEL® requires a detailed medical examination of the user to ensure that there are no health problems that could contraindicate the use of this aid. A physician must provide a prescription for the LARCHEL® aid for the user.

The LARCHEL® is only provided to authorised specialists, who have been specially trained and have proof of special training in the handling of the LARCHEL®, e.g., swimming representatives of laryngectomee associations.

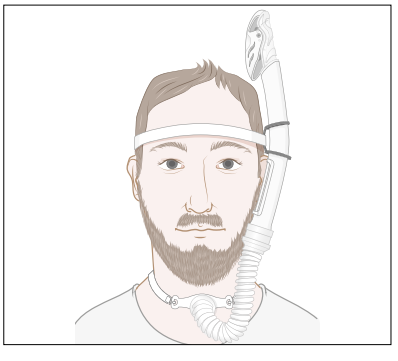
Upon request, we would be pleased to arrange official contact details for a hydrotherapy officer in your region.

SCOPE OF DELIVERY			
1	LARCHEL®	1	Towel
1	Tube holder	1	Transport case
1	Blocker syringe 10 ml	1	Cleaning brush
1	Separating wedge	1	Form Confirmation of instruction

SIZE	O.D. MM FLANGE	O.D. MM TIP	I.D. MM O CANNULA	M.B. MM LENGTH	REF SET
5.0	7.3	7.3	5.0	57.0	**79160-05**
6.0	8.7	8.7	6.0	63.0	**79160-06**
7.0	10.0	10.0	7.0	71.0	**79160-07**
8.0	11.0	11.0	8.0	75.0	**79160-08**
9.0	12.3	12.3	9.0	80.0	**79160-09**

SNORKEL FOR LARCHEL®

The snorkel consists of a stable plastic tube (breathing tube). It is adapted to the connection point on the corrugated tube and thus connected to the tracheostomy tube.



A special attachment with a safety closing mechanism or water stop is located at the upper end of the snorkel which prevents the unintentional ingression of water into the snorkel. The moveable flap in the housing of the attachment closes automatically when the water level is too high and blocks the opening to the snorkel. As a result, no water can enter the tracheostoma via the snorkel.

The riser of the snorkel is fitted with an elastic strap to stabilise the snorkel on the head and hold it in a vertical position.

ORDER INFORMATION	REF
SNORKEL LARCHEL® SET	**79161**

AIDS FOR CHILDREN

Tracheotomy (creation of a respiratory opening in the throat) in children has actually been a part of routine clinical practice since the late 19th century. Since then, however, the indications for this medical procedure have changed significantly. Today, in addition to acute respiratory problems, various chronic diseases are the main reasons for the necessity of a tracheotomy in early childhood.

The purpose of a tracheostomy is to create a surgically altered airway bypassing the upper respiratory tract. This procedure is performed on children and newborns when their ability to breathe freely in a normal manner is impaired or even impossible due to respiratory disease or injury. The tracheotomy therefore does not cure the actual underlying disease, but merely creates a new airway through which the child can breathe freely.

Now, as a parent and relative, you are faced with the big question: "Will everything change for my child?" Many things will change, but not "everything". It requires a special approach to handling the necessary aids when caring for one's own child, as the care requires the highest medical standard. The important objective for every person affected is not to fall into a state of resignation, but to adjust to the changed situation with substantial support from experienced physicians, trained nursing staff and your competent contact person in the provision of medical aids.

We, as a certified company, manufacturer and developer as well as contractual partner of the statutory health insurance funds and many private health insurers, can offer the appropriate service and professional, state-of-the-art tracheostoma care that ensures "all-round care" for your child.

Sunny Studio/Shutterstock.com

If you wish, we can also help you find physicians, clinics, therapists, nursing services, and facilities if necessary, with the appropriately trained specialist staff to ensure the proper care and support for your own child in the face of daily challenges.

Our partners would be pleased to provide you with assistance, particularly in the areas of "What should I pay attention to when eating and drinking with a tracheostomy tube?", "How can I bathe my child safely despite a tracheostomy?" or "Can my child create a voice and learn to speak with a tracheostomy tube?". All the changes that a tracheotomy generally entails naturally require optimal and adequate equipment with the necessary aids for the tracheostoma. Terms such as "suction", " tracheostomy tube", "inhalation", "artificial nose" etc. will be a part of everyday life in the future. However, which products and which appropriate tracheostoma care, especially the selection of the right tracheostomy tube, are crucial for both the child and you as a parent to be able to live a "normal" daily routine together? Here we provide support to provide optimal advice and instruction of the aids on site and to give a secure feeling of being able to assess all situations in advance and to act accordingly. The aim is to provide professional support to the child and its parents within the context of the situation.

The following pages offer an insight into a comprehensive segment of the provision of medical aids, in which we have been successfully active for almost three decades. As a manufacturer of medical devices and a specialist in tracheostoma care, we are a reliable partner for patients (adults as well as children), clinics, care facilities and the specialist trade.

INITIAL CARE SET

FOR CHILDREN

EXAMPLE FOR SCOPE OF DELIVERY	
SENSOTRACH® UNO PED Slit	TRACHEOTEX® BIB 3L
OPTIBRUSH® CLEAN	HUMIDOSTOM® JUNIOR
OPTIBRUSH® CONT	SECUTRACH® SHOWER GUARD
OPTIBRUSH®, Cannula cleaning brush	NEBUJUNIOR® BEAR/PENGUIN
OPTIFLUID® STOMA OIL TOWEL	Protective bag
OPTIFLAUSCH® K JUNIOR PED	TRACHEOPORT® JUNIOR
OPTIFAHL® Stoma cleaning wipe	STOMA CATHETER METRIC
TRACHEOTEX® SCARF PED	

INITIAL CARE SET

FOR CHILDREN

The most important aids for the care of tracheotomised children have been compiled in a special set.

Different set variants are offered to be able to respond as individually as possible to the respective needs, the medical prescription and the entitlement to benefits with regard to the respective cost bearer.

As a rule, instruction regarding the initial care set takes place before the patient is discharged from hospital. This gives the child and its parents the opportunity to familiarise themselves with the aids while still in hospital. Instructions on the use of the aids is provided by competent, specially trained medical device consultants from our company. In addition, the nursing staff at the hospital will also be helpful. This ensures that the correct handling and the necessary safety in using the aids is already learned during the stay in the hospital.

Tracheostomy tubes are not part of the initial care set, as these must be selected individually by the physician. As a rule, the physician will issue the necessary prescription for the required tracheostomy tube early enough so that the tracheostomy tube can be delivered with the initial care set at the latest.

ORDER INFORMATION	REF
INITIAL CARE SET FOR CHILDREN	**10070**

TRACHEOPORT® JUNIOR SUCTION DEVICE

TECHNICAL DATA	
Suction power	24 l/min ± 2 l/min
Max. vacuum	–76 kPa* (–760 mbar; –570 mmHg)
Secretion container	600 ml
Suction tube	Length: 1.80 m; diameter: 6 mm
Power supply (battery charger)	100–240 V AC (± 10 %)
Voltage frequency	50/60 Hz
Dimensions (H x W x D)	370 x 290 x 150 mm
Weight	approx. 2.4 kg

TRACHEOPORT® JUNIOR

SUCTION DEVICE

The TRACHEOPORT® JUNIOR suction device, specifically developed for paediatric care, is suitable for suction in the home or clinical setting for patients with normal fluid secretion. The appealing look reduces children's dislikes/fears associated with suction.

The TRACHEOPORT® JUNIOR suction unit features a practical carrying handle.

During operation, the pump generates a vacuum in the tube system and secretion container, which enables fluids or secretions to be removed quickly and reliably by suction.

The fluid is collected in the secretion container, with a capacity of approx. 600 ml. The supplied bacterial filter prevents microorganisms and secretions from penetrating into the device.

The TRACHEOPORT JUNIOR® is supplied with the complete range of accessories (consisting of power supply unit, secretion container, bacterial filter, air filter, suction tube incl. clip, fingertip and car adapter) and a suitable storage bag (rucksack). The integrated rechargeable battery is fully charged in approx. 4 hours and lasts approx. 60 minutes in continuous operation. Even when the battery is flat, the TRACHEOPORT JUNIOR® can generate full suction power by connecting and operating it with either the charger or the car charger cable. The battery is also recharged at the same time.

SCOPE OF DELIVERY			
1	TRACHEOPORT® Junior incl. secretion container with lid	1	Fingertip
2	Bacterial filter	1	Battery charger/2-pin (100–240 V, 50–60 Hz)
1	Connecting tube for bacterial filter	1	Mains connection cable, 2-pin, 230 V
5	Air filter	1	12V car adapter
1	Rinsing tank; 0.5 l	1	Carrying bag
1	Suction tube, approx. 1.80 m long, (incl. clip)		

ORDER INFORMATION	REF
TRACHEOPORT® JUNIOR	**63800**

NEBUJUNIOR® PENGUIN INHALATION DEVICE

TECHNICAL DATA	
Input voltage	230 V AC, 50 Hz
Output current	0.8 A
Maximum filling capacity for medication:	13 ml
Aerosol droplet size	0.5 to 10 µm
Droplet size according to MMAD	less than 4 µm
Housing dimensions	175 x 120 x 180 mm (6.9″ x 4.7″ x 7.1″)
Weight	1.6 kg (3.5 Lbs)

NEBUJUNIOR® PENGUIN INHALATION DEVICE

The NEBUJUNIOR® inhaler is a modern inhaler device for compressed-air operated humidification of respiratory air. The fine aerosol mist enables noticeable humidification of the respiratory tract.

The optical appearance, which appeals to children, reduces dislikes/fears associated with inhalation. The easy-to-clean, handy design of the device assures comfortable operation, as well as simple cleaning of the NEBUJUNIOR®.

The powerful unit of the NEBUJUNIOR® enables efficient inhalation. The robust quality of the NEBUJUNIOR® makes it a reliable standard inhalation device for daily use. A lit ON/OFF switch reliably indicates operation.

An inhalation mask, mouthpiece, replacement filter and bag are included in the scope of delivery.

SCOPE OF DELIVERY			
1	NEBUJUNIOR® Penguin	1	Nosepiece
1	Power cable	1	Inhalation mask
1	Nebulizer	5	Filter
1	Air tube	1	Carrying bag
1	Mouthpiece		

ORDER INFORMATION	REF
NEBUJUNIOR® PENGUIN	**50400**

NEBUJUNIOR® BEAR INHALATION DEVICE

TECHNICAL DATA	
Input voltage	230 V AC, 50 Hz
Output current	0.8 A
Maximum filling capacity for medication:	13 ml
Aerosol droplet size	0.5 to 10 µm
Droplet size according to MMAD	less than 4 µm
Housing dimensions	175 x 120 x 180 mm (6.9″ x 4.7″ x 7.1″)
Weight	1.6 kg (3.5 Lbs)

NEBUJUNIOR® BEAR

INHALATION DEVICE

The NEBUJUNIOR® inhaler is a modern inhaler device for compressed-air operated humidification of respiratory air. The fine aerosol mist enables noticeable humidification of the respiratory tract.

The optical appearance, which appeals to children, reduces dislikes/fears associated with inhalation. The easy-to-clean, handy design of the device assures comfortable operation, as well as simple cleaning of the NEBUJUNIOR®.

The powerful unit of the NEBUJUNIOR® enables efficient inhalation. The robust quality of the NEBUJUNIOR® makes it a reliable standard inhalation device for daily use. A lit ON/OFF switch reliably indicates operation

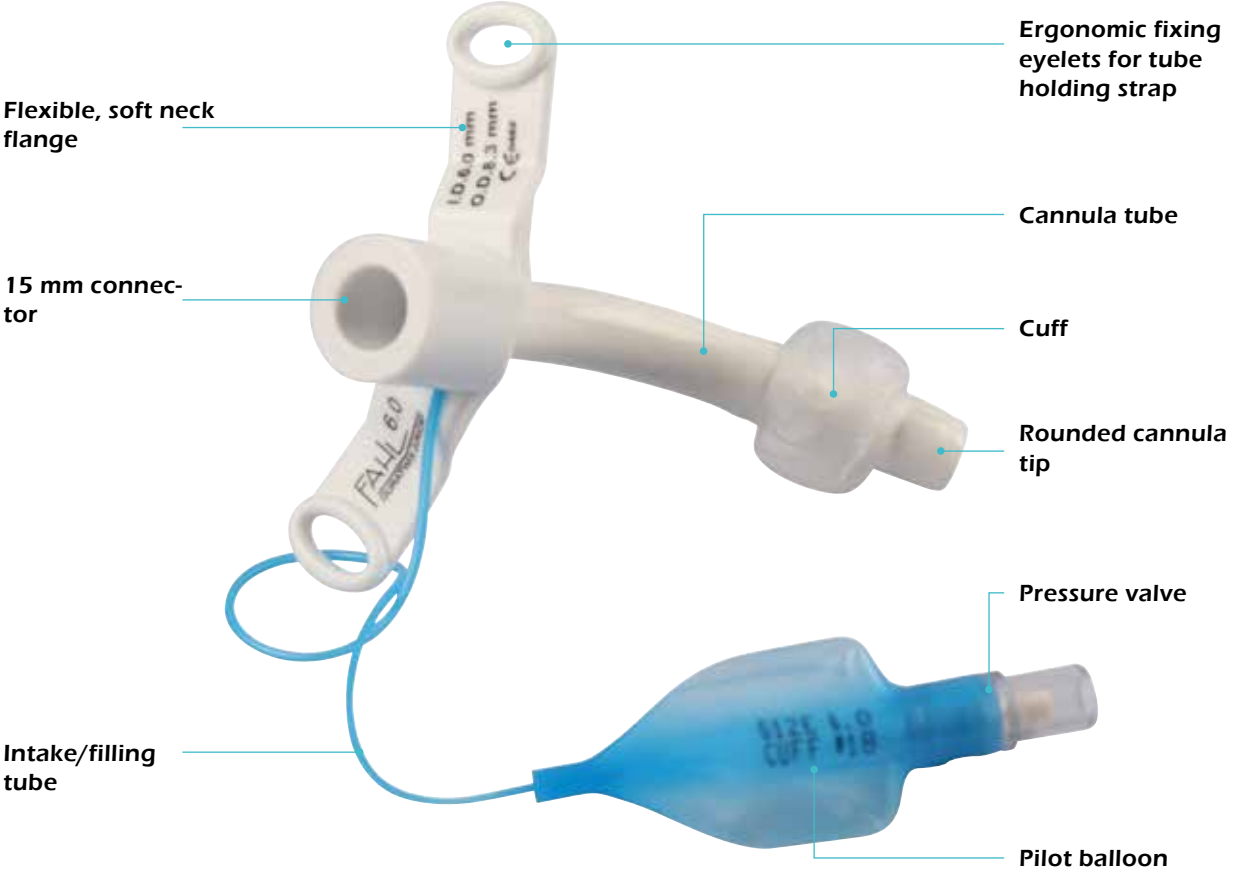
An inhalation mask, mouthpiece, replacement filter and bag are included in the scope of delivery.

SCOPE OF DELIVERY			
1	NEBUJUNIOR® Bear	1	Nosepiece
1	Power cable	1	Inhalation mask
1	Nebulizer	5	Filter
1	Air tube	1	Carrying bag
1	Mouthpiece		

ORDER INFORMATION	REF
NEBUJUNIOR® BEAR	**50300**

DURATWIX® JUNIOR

DURATWIX® JUNIOR tracheostomy tubes were developed specifically for use in newborns and children. The soft, anatomically shaped neck flange perfectly fits the neck and reliably prevents unwanted pressure fromthe cannula being transmitted to the skin. The thermo-sensitive material (plastic) provides for pleasant wearing comfort and the thin-walled design of the cannula tube for a large respiratory volume. The cannula can be securely fixed over the ergonomically placed eyelets for the tube holding strap so that a secure hold of the tube is assured. An X-ray contrast strip, running laterally in the cannula tube, enables radiological visualisation to check the position in the tracheostoma.



DURATWIX® JUNIOR NCF

STERILE

15 mm
UNI

CUFF
CUFF

The DURATWIX® JUNIOR NCF cannulas are special tracheostomy tubes for newborns and small children. The cannulas feature a cuff, which is blocked via a lateral intake tube. The cuff is used to seal the cannula tube against the tracheal wall to prevent secretion fluids from passing sideways into the trachea.

The standardised 15 mm connector is used to accommodate HMEs for example.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
2.5	4.0	4.0	2.5	34.0	30.0	120°	**17434-025**
03	4.5	4.5	3.0	35.0	31.0	120°	**17434-03**
3.5	5.1	5.1	3.5	38.0	33.0	120°	**17434-035**
04	5.8	5.8	4.0	41.0	35.0	120°	**17434-04**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer curve | L2-MB = length over middle curve θ - BA = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® JUNIOR NEO

STERILE

UNI

The DURATWIX® JUNIOR NEO tracheostomy tubes for neonatology feature a 15 mm connector and an elongated neck flange with lateral eyelets for attaching a tube holding strap.

An insertion aid (obturator), a cannula passport as well as a tube holding strap are included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
2.5	4.0	4.0	2.5	34.0	30.0	120°	**17432-025**
03	4.5	4.5	3.0	35.0	31.0	120°	**17432-03**
3.5	5.1	5.1	3.5	38.0	33.0	120°	**17432-035**
04	5.8	5.8	4.0	41.0	35.0	120°	**17432-04**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer curve | L2-MB = length over middle curve θ - BA = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® JUNIOR PDC

STERILE

UNI

CUFF

The DURATWIX® JUNIOR PDC cannulas are special tracheostomy tubes for small children. The cannulas feature a cuff, which is blocked via a lateral intake tube. The DURATWIX® JUNIOR is used to seal the cannula tube against the tracheal wall to prevent secretion fluids from passing sideways into the trachea. The standardised 15 mm connector is used to accommodate HMEs for example.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	Ø CD	REF
2.5	4.0	4.0	2.5	34,0	32.0	120°	8.0	**17438-025**
03	4.5	4.5	3.0	37,0	35.0	120°	9.0	**17438-03**
3.5	5.1	5.1	3.5	42,0	39.0	120°	10.0	**17438-035**
04	5.8	5.8	4.0	46,0	43.0	120°	12.0	**17438-04**
4.5	6.5	6.5	4.5	50,0	47.0	120°	12.0	**17438-045**
05	7.1	7.1	5.0	53,0	49.0	120°	15.0	**17438-05**
5.5	7.6	7.6	5.5	58,0	54.0	120°	15.0	**17438-055**
06	8.3	8.3	6.0	64,0	60.0	120°	15.0	**17438-06**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer curve | L2-MB = length over middle curve θ - BA = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURATWIX® JUNIOR PED

STERILE

UNI

The DURATWIX® JUNIOR PED tracheostomy tubes for paediatric use feature a 15 mm connector and are especially suitable for children.

An insertion aid (obturator), a product ID card as well as a tube holding strap are included in the scope of delivery.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
2.5	4.0	4.0	2.5	34,0	32.0	120°	**17436-025**
03	4.5	4.5	3.0	37,0	35.0	120°	**17436-03**
3.5	5.1	5.1	3.5	42,0	39.0	120°	**17436-035**
04	5.8	5.8	4.0	46,0	43.0	120°	**17436-04**
4.5	6.5	6.5	4.5	50,0	47.0	120°	**17436-045**
05	7.1	7.1	5.0	53,0	49.0	120°	**17436-05**
5.5	7.6	7.6	5.5	58,0	54.0	120°	**17436-055**
06	8.3	8.3	6.0	64,0	60.0	120°	**17436-06**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer curve | L2-MB = length over middle curve θ - BA = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SILVERVENT® UNI

15 mm
UNI

SILVERVENT® UNI tracheostomy tubes in sizes 00-06 with universal attachment are made of sterling silver and are suitable for children who need to put a heat and moisture exchanger (= "artificial nose") on their tube.

The tracheostomy tube consists of an outer cannula and an inner cannula, which has an attachment with a 15 mm connector.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF
00	6.1	4.5	3.7	2.6	50.0	45.0	90°	**10500-00**
01	6.4	5.0	4.2	3.1	50.0	45.0	90°	**10500-01**
02	6.8	5.7	4.9	3.8	50.0	45.0	90°	**10500-02**
03	7.5	6.4	5.6	4.6	55.0	49.0	90°	**10500-03**
04	8.2	7.0	6.2	5.2	55.0	49.0	90°	**10500-04**
05	9.1	7.7	6.9	5.9	60.0	53.0	90°	**10500-05**
06	9.8	8.4	7.6	6.5	60.0	53.0	90°	**10500-06**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer curve | L2-MB = length over middle curve θ - BA = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SILVERVENT® LINGO PHON

LINGO

LINGO

PHON

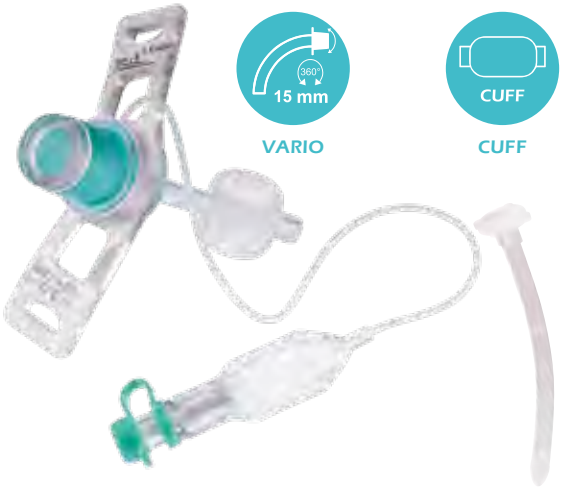
The SILVERVENT® LINGO PHON in sizes 00-06 are tracheostomy tubes made of sterling silver with a sieve in the outer tube and an oval opening in the inner tube, which are suitable for children. A round valve flap closes off the tube during expiration for speaking. On inhaling, the valve is automatically opened by the incoming airflow. If air is not ideally flowing through the larynx, loosening the speaking valve from the tracheostomy tube can prevent the formation of overpressure.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF
00	6.1	4.5	3.7	2.6	50.0	45.0	90°	**20000-00**
01	6.4	5.0	4.2	3.1	50.0	45.0	90°	**20000-01**
02	6.8	5.7	4.9	3.8	50.0	45.0	90°	**20000-02**
03	7.5	6.4	5.6	4.6	55.0	49.0	90°	**20000-03**
04	8.2	7.0	6.2	5.2	55.0	49.0	90°	**20000-04**
05	9.1	7.7	6.9	5.9	60.0	53.0	90°	**20000-05**
06	9.8	8.4	7.6	6.5	60.0	53.0	90°	**20000-06**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer curve | L2-MB = length over middle curve θ - BA = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHEOTEC® VARIO CUFF

STERILE



The TRACHEOTEC® VARIO CUFF tracheostomy tube consists of an outer cannula with cuff and is particularly suitable for children. The tracheostomy tube is made of a soft, supple plastic material and has a swivable 15 mm connector. The cuff can be filled through a one-way valve and seals the cannula to the trachea wall. The accidental "swallowing" of secretions is prevented. The cuff's pilot line is integrated into the outer cannula, achieving a rounded and smooth outer shape. This prevents additional irritation of the mucous membranes.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	Ø CD	REF
03	4.7	4.7	3.0	47.2	43.7	95°	15.0	**18920-03**
04	6.0	6.0	4.0	57.1	52.7	95°	19.0	**18920-04**
05	7.3	7.3	5.0	61.1	55.7	95°	19.0	**18920-05**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer curve | L2-MB = length over middle curve
θ - BA = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

TRACHEOTEC® VARIO

STERILE

The TRACHEOTEC® VARIO is a tracheostomy tube without cuff and is particularly suitable for children and features a swivable 15 mm connector. The TRACHEOTEC® tracheostomy tube consists of only an outer cannula. The neck flange has large openings which allow plenty of air to reach the skin. The lateral fixing eyelets can be used for fixation of the tube holding strap.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	L1 AB	L2 MB	Θ BW	REF
03	4.7	4.7	3.0	47.2	43.7	95°	**18560-03**
04	6.0	6.0	4.0	57.1	52.7	95°	**18560-04**
05	7.3	7.3	5.0	61.1	55.7	95°	**18560-05**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer curve | L2-MB = length over middle curve
θ - BA = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAVENT® UNI 1 ICU

The DURAVENT® UNI tracheostomy cannula is a two-piece cannula with a 15 mm connector on the inner cannula and features an integrated X-ray contrast strip which enables the position of the cannula to be checked radiographically.

The large inner diameter of the cannula allows a comfortable flow of air and offers safe and comfortable wearing comfort without loss of stability despite the thin-walled and flexible tube thickness. The anatomically shaped neck flange hugs the skin gently and is equipped with two lateral fastening eyelets for fixing a tube holding strap.

The Easy Lock hexagonal connection enables the attachment of the solo adapter which is matched to the DURAVENT® cannulas.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF
03	5.2	3.8	2.7	1.8	55.0	51.0	90°	**11011-03**
3.5	6.2	4.8	3.6	2.7	55.0	51.0	90°	**11011-035**
04	7.2	5.8	4.4	3.3	55.0	51.0	90°	**11011-04**
05	8.4	6.6	5.4	4.3	55.0	51.0	90°	**11011-05**
06	9.4	7.8	6.2	4.9	60.0	55.0	90°	**11011-06**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer curve | L2-MB = length over middle curve θ - BA = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

DURAVENT® 2 IC

The DURAVENT® 2 IC tracheostomy tube consists of an outer cannula and two inner cannulas. The outer tube is equipped with an integrated X-ray contrast strip, which enables optimal position control of the cannula.

The large inner diameter of the cannula allows a comfortable flow of air and offers safe and comfortable wearing comfort without loss of stability despite the thin-walled and flexible tube thickness. The anatomically shaped neck flange touches the skin gently and is equipped with two lateral fastening eyelets for fixing a tube holding strap.

The Easy Lock hexagonal connection enables the attachment of the solo adapter which is matched to the DURAVENT® cannulas.

GR Size	AD1 Flange	AD2 Tip	ID1 AK	ID2 IC	L1 AB	L2 MB	Θ BW	REF
03	5.2	3.8	2.7	1.8	55.0	51.0	90°	**11002-03**
3.5	6.2	4.8	3.6	2.7	55.0	51.0	90°	**11002-035**
04	7.2	5.8	4.4	3.3	55.0	51.0	90°	**11002-04**

AD1 = outer diameter neck flange | AD2 = outer diameter cannula tip | ID1 = inner diameter cannula tip of outer cannula | ID2 inner diameter cannula tip of inner cannula | L1-AB = length over outer curve | L2-MB = length over middle curve θ - BA = bending angle | ø - CD = CUFF diameter | IC = inner cannula | AK = outer cannula | ° = specification in degrees | all specifications in mm

SENSOTRACH® UNO PED

The SENSOTRACH® UNO PED tracheal compress is single layer, comfortably soft and highly absorbent. Its surface is lint-free and suitable for children with little secretion.

Through a special shape, the SENSOTRACH® UNO PED, with its smooth surface, perfectly adapts to the anatomy of the neck/tracheostoma, softly and securely cushions the neck flange against the skin and thereby ensures the highest comfort.

There are two variants available to choose from: the tracheal compress without a slit is intended for a renewal of the compress, with exchange of the tracheostomy tube. The compress with a slit (SLIT) is designed for comfortable compress changing without a change of tube. For normal to heavy secretion, the use of the more absorbent SENSOTRACH® DUO PED tracheal compress is recommended.

ORDER INFORMATION	PU	REF
SENSOTRACH® UNO PED, 6 x 7 cm	10	**30522**
SENSOTRACH® UNO PED SLIT, 6 x 7 cm	10	**30523**

SENSOTRACH® UNO PED ALU SLIT

SENSOTRACH® UNO PED SLIT are single-layer tracheostomy compresses for children (PED) made of high-quality material with anatomically adapted rounding for optimal wearing comfort.

The aluminium vapour coating prevents blood and secretion residues from sticking to the skin.

The SLIT variant with slit is used for a quick change of compresses while the tracheostomy tube remains in place

ORDER INFORMATION	PU	REF
SENSOTRACH® UNO PED ALU SLIT, 6 x 7 cm	10	**30524**

SENSOTRACH® UNO PED SLIT JUNIOR

SENSOTRACH® UNO PED SLIT JUNIOR are tracheostomy compresses for children (PED) with an animal pattern and made of high-quality material with anatomically adapted rounding for pleasant wearing comfort.

The UNO variants are single-layer and suitable for children with little secretion.

The SLIT variants with slit are suitable for a quick change of compresses while the tracheostomy tube remains in place.

ORDER INFORMATION	PU	REF
SENSOTRACH® UNO PED SLIT JUNIOR, 6 x 7 cm	10	**30525**

SENSOTRACH® DUO PED

The SENSOTRACH® DUO PED tracheal compress for children consists of two compress layers of equal thickness, fixed together. The front and rear side are covered with a transparent layer, which prevents the compress sticking to the skin. In addition, the compress quickly absorbs secretions from the skin between the stoma and the tube. This keeps the skin dry and warm. To aid identification, the skin-side of the compress features a green thread. With its special shape, the SENSOTRACH® DUO PED tracheal compress adapts perfectly to the neck region of children.

We also offer SENSOTRACH® DUO PED tracheal compresses in the "slit" (SLIT) version.

ORDER INFORMATION	PU	REF
SENSOTRACH® DUO PED, 6 x 7 cm	10	**30622**
SENSOTRACH® DUO PED SLIT, 6 x 7 cm	10	**30623**

SENSOFOAM® PAD

STERILE

Based on its anatomical shape, the SENSOFOAM® PAD tracheal compress softly and securely cushions the tracheostomy tube against the skin and thereby prevents sores. At the same time, this stabilises the fit of the tracheostomy tube in the tracheostoma.

The SENSOFOAM® PAD tracheal compress is constructed in multiple layers, whereby the skin-coloured, breathable top layer prevents saturation of the compress. In addition, the spongy material is especially soft and is comfortable to wear. Secretions are absorbed quickly and safely, thus avoiding adhesion/sticking to the skin and make the compress easier to remove.

ORDER INFORMATION	PU	REF
SENSOFOAM® PAD - STERILE, 7.8 x 3.8 cm	10	**30862**

LARYVOX® TRACHEAL DILATOR PED

The LARYVOX® TRACHEOSTOMA DILATOR PED enables the dilation and temporary safety of body orifices in children. Inserting the tracheostomy tube is considerably easier through the dilated body orifice, for example a tracheostoma,, as a "contraction" of the tracheostoma, especially in unstable openings, is prevented.

The LARYVOX® TRACHEAL DILATOR PED is made of stainless steel. The tips of the tracheal dilator are specially shaped and rounded, in order to minimise the risk of injury when inserting it into the tracheostoma. Due to the special construction with the three spreadable wings, the tracheostoma can be opened evenly in all directions during cannula changing.

The LARYVOX® TRACHEAL DILATOR PED is an aid for tracheostomy tube users and should always be close to hand for a fast cannula change. The LARYVOX® TRACHEAL DILATOR PED is also indispensable in emergencies, in a deformation of the tube, in order to safeguard the airway.

ORDER INFORMATION	PU	REF
LARYVOX® TRACHEAL DILATOR PED	1	**35501**

OPTIFLAUSCH® K JUNIOR PED — TWO-PART

The OPTIFLAUSCH® K JUNIOR PED are tube holding straps with an animal pattern for children (PED) made of high quality material.

The holding strap is placed around the neck and the velcro fastener enables it to be easily and quickly adjusted to the desired neck size. The ends of the OPTIFLAUSCH® tube holding strap feature thin velcro strips, which are threaded into the eyelets of the tracheostomy tube. For fastening, the Velcro strips are turned over and fixed to the fluffy side of the tube holder. If the tube holder is too long, it can be shortened to the desired length by cutting it. This ensures a secure fit of the tracheostomy tube.

The OPTIFLAUSCH® K JUNIOR PED tube holding strap is approx. 4 mm thick and approx. 2.5 cm wide.

ORDER INFORMATION	PU	REF
OPTIFLAUSCH® K JUNIOR PED, adjustable from 16 - 25 cm	1	**32556**

OPTIFLAUSCH® SLIM K JUNIOR PED — TWO-PART

In contrast to the standard version, the OPTIFLAUSCH® SLIM K JUNIOR PED tube holding strap is only 1.7 cm wide. The neck size regulator is variable and the adherent fastener enables it to be easily and quickly adjusted to the desires neck size.

The OPTIFLAUSCH® SLIM K JUNIOR PED tube holding strap with a particularly soft circumferential edge is offered with an animal pattern.

ORDER INFORMATION	PU	REF
OPTIFLAUSCH® K SLIM JUNIOR PED, adjustable from 16 - 30 cm	1	**32558**

SUPRAFIX® H PED

SINGLE-PART

The SUPRAFIX® H PED tube holding strap with hook (H) enables secure and comfortable fixation of the child's tracheostomy tube. It consists of an approx. 3 cm wide foam strap surrounded by soft, non-woven fabric. The fastening straps are elastic and equipped with an adjustable clip making the length of the tube holder variable.

ORDER INFORMATION	PU	REF
SUPRAFIX® 11H PED, adjustable from 15 - 26 cm	1	**32308**
SUPRAFIX® 13H PED, adjustable from 17 - 28 cm	1	**32310**
SUPRAFIX® 15H PED, adjustable from 19 - 30 cm	1	**32311**

SUPRAFIX® K PED

SINGLE-PART

The SUPRAFIX® K PED tube holding strap with velcro fastener (K) enables secure and comfortable fixation of the child's tracheostomy tube. It consists of an approx. 3 cm wide foam strap surrounded by soft, non-woven fabric.

The ends of the holding strap feature a velcro fastener and are attached to the retaining eyelets of the tracheostomy tube to ensure a secure hold.

ORDER INFORMATION	PU	REF
SUPRAFIX® 11K PED, adjustable from 18 - 25 cm	1	**32509**
SUPRAFIX® 13K PED, adjustable from 20 - 27 cm	1	**32510**
SUPRAFIX® 15K PED, adjustable from 22 - 29 cm	1	**32512**

OPTIFLAUSCH® K PED

TWO-PART

OPTIFLAUSCH® K PED enables the secure fixation of tracheostomy tubes. It is distinguished by its very comfortable wearing properties. OPTIFLAUSCH® K PED consists of a light foam core, which is surrounded by a skin-friendly non-woven fabric. The materials used are comfortably soft. The stretch-fabric provides a snug fit. The circumferential border is particularly soft and supports wearing comfort.

The holding strap is placed around the neck and the velcro fastener enables it to be easily and quickly adjusted to the desired neck size. The ends of the OPTIFLAUSCH® K PED tube holding strap feature thin velcro strips, which are threaded into the eyelets of the tracheostomy tube. If the tube holder is too long, it can be shortened to the desired length by cutting it.

The OPTIFLAUSCH® K PED tube holding strap is approx. 4 mm thick and approx. 2.5 cm wide.

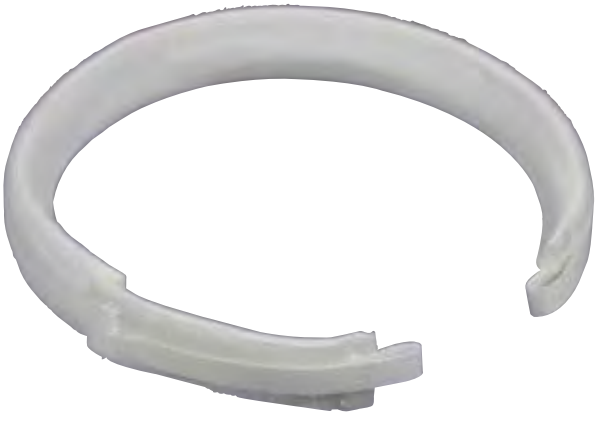
ORDER INFORMATION	PU	REF
OPTIFLAUSCH® K PED, adjustable from 16 - 25 cm	1	**32555**

OPTIFLAUSCH® SLIM K PED

TWO-PART

In contrast to the standard version, the OPTIFLAUSCH® SLIM K PED tube holding strap is only 1.7 cm wide. The neck size regulator is variable and the adherent fastener enables it to be easily and quickly adjusted to the desires neck size.

The OPTIFLAUSCH® SLIM K PED tube holding strap with a particularly soft circumferential edge is offered in white.



ORDER INFORMATION	PU	REF
OPTIFLAUSCH® SLIM K PED, adjustable from 16 - 30 cm	1	**32557**

NECKFIX® BLUE K PED

SINGLE-PART

The design of the NECKFIX® BLUE K PED tube holding strap enables the secure fixation of the tracheostomy tube for children.

The tube holder is pleasantly soft and flexible. It can be adjusted to different neck sizes. The light foam core of the tube holder is surrounded by a skin-friendly non-woven fabric.

Fastening straps made of velcro are located at the ends of the tube holder. This enables fast fixing of the tube holder to the neck flange of the tracheostomy tube.

ORDER INFORMATION	PU	REF
NECKFIX® BLUE K PED, 34 cm	1	**32612**
NECKFIX® BEIGE K PED, 34 cm	1	**32621**

FAHL® EMERGENCY SET PED

The FAHL® EMERGENCY-SET PED is a complete set for paediatric emergency care. The selected products are specifically designed for the care and needs of children. We supply the set in a practical case to ensure that it is quickly at hand in an emergency.

SCOPE OF DELIVERY			
1	LARYVOX® SOS SAFE-MASK	3	OPTIFAHL® STOMA CLEANING WIPES
1	LARYVOX® TRACHEOSPREIZER PED	1	Oxygen connection tube
1	DURATWIX® JUNIOR PED tracheostomy tube	1	FAHL® CATHETER MOUNT
5	LARYVOX® O_2 HME	5	Tracheostoma catheter, sterile
2	SENSOTRACH® DUO PED SLIT	1	Disposable syringe 10 ml
3	OPTIFLUID® Stoma oil towel	1	Emergency sticker and emergency card

ORDER INFORMATION	REF
FAHL® EMERGENCY SET PED	**48009**

HUMIDOSTOM® JUNIOR

The HUMIDOSTOM® JUNIOR "artificial nose" is a moisture and heat exchanger specifically for children. When using the HME, the inhaled air is filtered, warmed and moistened. The HUMIDOSTOM® JUNIOR "artificial nose" consists of a foam filter, which is integrated into a sturdy plastic housing. HUMIDOSTOM® JUNIOR is equipped with a standardised opening, which enables the attachment onto the 15 mm connector of the tracheostomy tube.

With a weight of only 2 g, this air humidifier is particularly light. These properties make the HUMIDOSTOM® JUNIOR comfortable to wear.

Despite its low weight and the relatively small plastic housing, the HUMIDOSTOM® JUNIOR has a good humidification capacity.

ORDER INFORMATION	PU	REF
HUMIDOSTOM® JUNIOR, "artificial nose" for children	30	**46850**

HUMIDOSTOM® MINI

HUMIDOSTOM® MINI is an "artificial nose" or HME (Heat-Moisture Exchanger). Its standardised opening allows it to be attached to any 15 mm connector. Moisture and heat of the expired air is stored in the filter medium. On inhalation, the filter returns this moisture as well as heat. HUMIDOSTOM® MINI thus filters the respiratory air and, on the one hand, prevents particles from entering the respiratory tract. On the other hand, the formation of viscous secretions in the lungs is reduced. Through its oxygen connection piece (plug-in connection 5 mm) which is attached to the side of the housing, the HUMIDOSTOM® MINI allows fitting a connecting tube, which offers the option of supplying oxygen via an external oxygen source. The low weight of only approx. 3 g rounds off the pleasant wearing features.

ORDER INFORMATION	PU	REF
HUMIDOSTOM® MINI, "artificial nose" for children	30	**46870**

TRACHEOTEX® SCARF PED

The TRACHEOTEX® SCARF PED stoma protection neckerchief is tied around the child's neck using an approx. 1 cm wide cotton strap. The centrally incorporated insert, made of multiple layers of fine mesh fabric, warms, humidifies and, at the same time, filters the air.

The stoma protection neckerchief prevents the ingress of foreign matter, such as dust or insects, and reliably captures escaping tracheal secretions.

The stoma protection neckerchief is equipped with an adjustment clip on the fixing strap, which enables the adjustment to different neck sizes. It is attached using an adherent fastener.

The stoma protection neckerchief is available in many colours and patterns. Stoma protection neckerchiefs are available in different fabric qualities, from normal to highly breathable. Please note the information on our colour sample card.

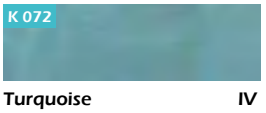
Stoma protection neckerchiefs are washable and do not lose their shape. For reasons of hygiene, they should be changed daily.

White III

Light blue IV

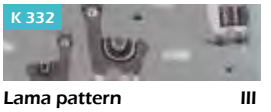
Light pink III

Dove grey IV



Turquoise IV

Teddy bear pattern white III



Lama pattern grey-white III

Car & aeroplane pattern blue III

Elephant pattern yellow-grey III

Turquoise, chequered III

Blue, with stars III

ORDER INFORMATION	PU	REF
TRACHEOTEX® SCARF PED	1	**42010**
Please additionally specify colour no. when ordering (see colour sample card)		

TRACHEOTEX® BIB PED

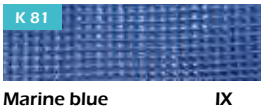
The TRACHEOTEX® BIB PED stoma protection bib for children covers and protects the tracheostoma. The multiple layers of fine polyester mesh fabric of the particularly breathable bib ensure that the inhaled air is warmed, humidified and filtered at the same time. The stoma protection bibs reliably absorb escaping tracheal secretions and provide effective protection from the ingress of foreign matter, e.g., dust and dirt.

The stoma protection bibs for children are available in two thicknesses: 3-layer and 5-layer. This enables optimal coordination with each seasonal climate.

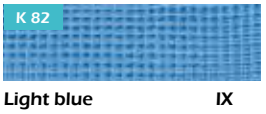
The stoma protection bib is fastened with an adherent fastener, sewn onto the fixing strap. An additional adjustment element enables the neck width to be individually set to a size between 24 cm and 33 cm. This simplifies handling and provides a comfortable fit. The fastener is located at the side of the bib and is therefore easily accessible, at any time.

Stoma protection bibs are washable and can be used numerous times.

White IX



Marine blue IX



Light blue IX

Bordeaux red IX

ORDER INFORMATION	PU	REF
TRACHEOTEX® BIB 3L PED	1	**40110**
TRACHEOTEX® BIB 5L PED	1	**40210**

Please additionally specify colour no. when ordering (see colour sample card)

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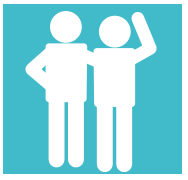
THIS IS WHAT MATTERS TO US



Your personal contact person

The affected persons will be visited by a medical device consultants at regular intervals, or as required. The needs of the individual patients are determined together and possible product changeovers discussed, to develop solution-oriented care concepts. Consultation with the responsible physicians and therapists in the interdisciplinary team is an important aspect for us here.

Professional care provides safety

Treatment with individually fitted tracheostomy tubes and a needs-balanced choice of rehabilitation aids, avoid complications and improve the success rate of rehabilitation. Together with the patient, the physicians and therapists, our FAHL representative will select and adapt the necessary aids for you in terms of a correct indication, individual need and economic feasibility.

Individual voice rehabilitation

Voice rehabilitation after tracheostomy and laryngectomy has a high priority. Since the founding of our company, we have continuously dealt with this issue. Especially with regard to shunt valve care, we can offer our patients active support through a wide range of products and special aids such as phonation cannulas, speaking valves and electronic speaking aids.

Benefit from using our network:

Good cooperation among the interdisciplinary team increases the quality of results in patient care. We therefore use congresses, exhibitions and seminars to form a network of specialists (physicians, therapists and care providers of other care fields) who act hand in hand with us professionally in terms of rehabilitation-oriented patient care.

Fast and reliable delivery provides relief

The order is processed immediately by our employees and prepared for shipping. This enables us to always provide timely, punctual and needs-oriented deliveries.

THIS IS WHAT MATTERS TO US

Our speakers pass on up-to-date specialist information:

Our specialists are invited to speak at numerous conferences and events about professional management of tracheostomy tubes. We also offer our own onsite and offsite seminars and workshops. We coordinate customised training for your location personally with you on focus areas specific to your facility (such as secretion management and phonation during mechanical ventilation). Ask us how we can help!

We pursue clear objectives:

We wish to provide professional care for tracheotomised and laryngectomised patients and strengthen the patients, relatives and caregivers in their activities in the best possible manner.

Join in! Your opinion is important to us!

When developing our products, we always make sure to listen to our customers' suggestion which enables us to offer improved or even new products.

YOUR CHOICE

If you are convinced of our supply concept, place your trust in us and choose our company as your new supplier of medical aids. Our staff would gladly support and advise you in all matters relating to your individual tracheostoma care.

ABBREVIATIONS/INDEX

NAME	EXPLANATION
®	Registered trademark
A	Ampere
AAA	Type of battery
AB	Outer bend
AC	Alternating current
AD	External diameter
AK	Outer cannula
approx.	approximately
CH	Charriere
cm	Centimetre
Col. No.	Colour number
CPC	Cuff Pressure Control
db	Decibles
DC	Direct current
e. V.	Registered association
e.g.	for example
EEC	European Economic Community
Fr.	French
G	Gramme
GR.	Size
h	Hour
HME	Heat–Moisture-Exchanger
HR.	Hour
Hz	Hertz
i.e.	in other words/for example
IC	Inner cannula
ID	Inner diameter
KG	Kilogramme
KPA	Kilopascal
L	Litre
L1	Length over the outer curve of the cannula tube
L2	Length over the central arch of the cannula tube
L3	Length across the shaft
m	Metre
m2	Square metre
m3	Cubic metre
mA	Milliampere
max.	Maximum
MB	Central arch
MHz	Megahertz
min	Minute
ml	Millilitre

ABBREVIATIONS/INDEX

NAME	EXPLANATION
mm	Millimetre
MMAD	Mass Median Aerosol Diameter
PED	Products especially designed for children
PE-Segment	Pharyngoesophageal segment
PU	Packaging unit
PVC	Polyvinylchloride
so-c.	So-called
V	Volt
V AC	Volt (alternating current)
V DC	Volt (direct current)
VA	Volt Ampere
W	Watt
µm	Micrometre

ABBREVIATIONS FOR TRACHEOSTOMY TUBES

NAME	EXPLANATION
LINGO	sieved
CUT	slitted
CUFF	with cuff
SUCTION	with suction line
MULTI	Multifunctional cannula
XL	Length XL
M	Medium length
SHORT	Short length
PHON	with speaking valve
UNI	with 15 mm connector
VARIO	with 15 mm swivel connector
KOMBI	with 22-mm combi-adapter
MRI	MRI suitable
FIX	Button with fastening eyelets
SV	Speaking valve
HP	HUMIDOPHONE®
CP	COMBIPHON®
IC	Inner cannula
ICF	Inner cannula fenestrated
ICS	Inner cannula sieved
ICSU	IC with 15 mm connector, sieved
ICU	IC with 15 mm connector
ICFU	IC with 15 mm connector, fenestrated
ICV	IC with 15 mm swivel connector
ICFV	IC with 15 mm swivel connector, fenestrated
ICK	IC with 22-mm combi-adapter
ICFK	IC with 22-mm combi-adapter, fenestrated
ICX	Inner cannula flexible, with flat profile
ICFX	Inner cannula flexible, fenestrated
O_2	IC with O_2-connector (oxygen connection)

GLOSSARY

ALPHABETICAL

NAME	EXPLANATION
Aerosol	micro-fine mist
Airway resistance	Resistance which the air flow has to overcome during inhalation and exhalation
Alveoli	Small air sacs in which the exchange of gas between the air we inhale and the blood takes place
Anaesthesia	Anaesthesia, narcosis
Anatomy	The science of bodily structure
Anomaly	Developmental disorders of organs, regardless of whether they are congenital or occur later on
Antibiotics	Medicines for the treatment and prevention of bacterial infections
Aspiration	Penetration of solid or liquid substances into the respiratory tract, e.g. through ingestion
Bayonet lock	Quick twist lock
Bedside method	Examination or a minor procedure that can be performed directly at the patient's bedside
Blocked tracheostomy tube	Tracheostomy tube with unfolded inflated cuff
Blood gas analysis	Determination of the oxygen content in the blood
Bronchial toilette	Measures to prevent the development of infections or even pneumonia in patients with insufficient self-cleaning mechanisms of the lung apparatus, especially in tracheotomised, ventilated, unconscious and generally weakened patients
Button	A special cannula to keep the tracheostoma open
Cannula-cleaning brushes	Special brushes for cleaning tracheostomy tubes
Carcinoma	malignant cancer
Carina	The carina tracheae refers to the small spur formed at the lowest tracheal cartilage
Central arch	Designates the length of the cannula tube (tube centre) between the neck flange and cannula tip (I2)
Chemotherapy	The use of low-molecular substances for the specific inhibition of infectious organisms and tumour cells
Computer tomography	Medical imaging method for the sectional representation of body structures
Connector	Possibility of connecting aids, e.g. to tracheostomy tubes
cpm	Abbreviation for: cuff pressure monitor
cranial	anatomical direction and means "oriented towards the head" or "upwards"
Cuff	Inflatable balloon (balloon cuff) at the lower end of an endotracheal tube or tracheostomy tube to seal the space between the tube and the tracheal wall
Cuff hernia	Sac-shaped protrusion of the cuff as a result of excessive filling or damage to the material with potential leakage at this point and the risk of local overpressure on the mucosa of the trachea

GLOSSARY

ALPHABETICAL

NAME	EXPLANATION
Dead space	Part of the airways not involved in gaseous exchange
Decannulation	Procedure of weaning and subsequent permanent removal of a tracheostomy tube from the trachea
Dilatation	generally means an expansion
Dilatation tracheostoma	A tracheostoma after dilatation with a dilator
Dilators	Medical instruments used for dilatation of tissue/body orifices
Dysphagia	Difficulty in swallowing; occurs when one of the structures involved in the act of swallowing is impaired in its function or its interaction
Electrocardiogram	Records activity of the heart
Endotracheal tube	Tube-shaped medical device used for ventilation, which is inserted into the trachea during oral or nasal intubation; a cuff is located at the lower tracheal end
Epithelialisation	A process in which a skin defect is covered or closed by newly developing epithelial tissue (tissue cells)
Epithesis	Compensation "prostheses" for body defects, e.g. in the tracheostoma area, with different fixation solutions
Expiration:	Process of exhaling
Extubation	Removal of the endotracheal tube
Feeding tube	Plastic tube which extends through the nose directly into the stomach to administer food and fluids
Fenestration	Fenestration - in distinction to sieving - of a tracheostomy tube; refers to the creation of an - usually oval - opening; one also speaks of a fenestrated tracheostomy tube
Fingertip	Adapter with opening (permanently attached to the suction catheter or individually), which continues the suction process (production of suction) or stops it by closing/releasing with the finger
Fistula	Tubular duct which originates from a hollow organ or a (possibly pathological) cavity and exits from the surface of the body or only passes inside the body
Funnel tracheostoma	deep, funnel-shaped stoma, which may make it difficult to provide medical aids
Granuloma	Nodular tissue neoplasms - differing causes
Hagen-Poiseuille Law	The flow resistance of a defined fluid depends on its viscosity, the length and the radius of a pipe. This is given by an equation.
High pressure cuff	Spherical cuff which fits tightly against the tracheostomy tube. The smaller contact area results in higher pressure at the same pressure as with a low-pressure cuff
High pressure/ Low pressure cuff	Short name for high pressure/low pressure cuff
HME	Abbreviation for: Heat and Moisture Exchanger/"artificial nose"; this is an aid for heat and moisture exchange

GLOSSARY

ALPHABETICAL

NAME	EXPLANATION
Hydrotherapy device	Medical aid which enables laryngectomised and tracheotomised persons to perform movement therapies in water and also therapeutic swimming (e.g. Larchel®)
Hydrotherapy Officer	Specially trained person, usually a tracheotomist/laryngectomist or therapist, who conducts the active instruction for a hydotherapy device(e.g. Larchel®) and instructs inexperienced patients in water within the context of special courses
Hypopharynx	the lower throat area
Inhaling	Inhalation of gaseous substances for therapeutic purposes
Initial-care-package	Compilation of the most important aids for the initial care of laryngectomised and tracheotomised patients; the initial care set is generally provided before discharge from hospital
Inspiration	Process of inhaling
Intervention	Procedure, which can be therapeutically or medically justified
Intubation	Insertion of a tube (hollow probe, tube, etc.) into a trachea to ventilate the patient
laryngectomy	Removal of the larynx
Larynx	Larynx
Low pressure cuff	Cuffs with cylindrical contact surface are mainly used for long-term ventilation
Luer system	standardised connection system for the combined use of, for example, syringes and cannulas
Lumen	Diameter of a cavity or tubular body
Macerations	Softening or swelling of tissue due to prolonged contact with liquids, such as saliva
Magnetic resonance imaging (MRI)	Diagnostic imaging method for visualising soft tissue using magnetic resonance measurements
Medical aids	are medical devices which are used to compensate for an illness or disability
Medical device consultant	informs customers professionally and instructs them in the proper handling of the medical devices
Medical Devices Act (MPG)	The purpose is to regulate the placing on the market of medical devices and thereby ensuring the safety, suitability and performance of medical devices as well as the health and necessary protection of patients, users and third parties
Metastasis	Subsequent tumour of a malignant tumour
Name	Explanation
nasal	through the nose
Neck dissection	surgical evacuation of the neck's lateral soft tissues
Neck mask	Plastic mask which is held onto the tracheostoma and thus enables a targeted and concentrated supply of respiratory air, e.g. as part of emergency ventilation

GLOSSARY

ALPHABETICAL

NAME	EXPLANATION
Obturator	Insertion aid for a tracheostomy tube
Oedemas	Accumulation of aqueous fluid in body tissues, resulting in swelling of the affected tissues - this may be limited to certain parts of the body or spread over the entire body
Oesophageal voice	Substitute voice with which patients relearn speaking after removal of the larynx (laryngectomy)
Oesophagus	Oesophagus
oral	through the mouth
Outer bend	Outer bend of the cannula tube of a tracheostomy tube
Paresis of the vocal cord	Unilateral or bilateral paralysis of the vocal cords
Percutaneous Dilatation Tracheotomy (PDT)	special type of tracheostoma, which is often applied in intensive care units
persisting	continuing or permanent
Pharynx	Mouth/throat cavity; joint respiratory and feeding pathway
Phonation	Formation of the primary tone in the larynx (through respiratory air and phonation movement of the vocal cords)
Phonation ructus voice	See oesophageal voice
Pneumothorax	Accumulation of air in the interpulmonary space with cancellation of the negative pressure that normally prevails there - this leads to partial or complete collapse of the affected lung and the associated loss of function
Probing	Insertion of a probe, e.g. a feeding tube, or administration of food, fluids and medication via the feeding tube.
Prophylaxis	Prevention
Reflux	Return flow of fluids, e.g. when swallowing
Rehabilitation	the best possible restoration of general well-being after surgery and the best possible restoration of lost or disturbed physical functions and mental calmness
Reintubation	Re-intubation of a patient after intentional or unintentional removal of an endotracheal tube
Retention of secretion	Retention of certain substances or liquids in the airways
Scintigraphy	Imaging procedure in nuclear medicine using radioactive substances which are as short-lived as possible and are administered to the body, e.g. orally or through the vein
Sedation	Calming effect induced by special medication
Shaft	e.g. outer tube of a tracheostomy tube
Shunt	Surgically created connection between the trachea and oesophagus (see also fistula), to accommodate/insert a shunt valve (voice prosthesis)
Shunt valve/voice prosthesis	Voice prosthesis; valve made of silicone for voice rehabilitation
Sieving	Holes located on the outer curve of the tracheostomy tube, which guide the air upwards towards the larynx during exhalation sieved tracheostomy tube

GLOSSARY

ALPHABETICAL

NAME	EXPLANATION
Silver cannula	Tracheostomy tube made of sterling silver
Sono-Abdomen	Ultrasound examination of the abdomen
Sonography	Ultrasound examination
Speculum	Funnel-, tube-, channel- or spatula-shaped instrument for dilating natural body orifices
Speech therapy	Therapeutic specialty for rehabilitation of voice, speech, speaking and swallowing functions
Spontaneous breathing	Patient's breathing without the support of a ventilator
Stenosis	Any form of constriction of a tubular part of the body in medicine
Stoma	Artificially created hollow organ outlet, orifice to the body surface (Greek: mouth, pharynx)
subglottic	The opening between the vocal folds (glottis)
Subglottic stenosis	Constriction is located below the vocal cords and can have various causes
Suction device	Electrical apparatus/medical pump used to aspirate secretions/ body fluids
Therapy	Treatment
Thorax	Chest
Trachea	Trachea
Tracheal compress	Absorbs secretion and serves as a cushion between the skin and the cannula
Tracheal dilator	Instrument used to dilate a tracheostoma to facilitate the insertion of a cannula or to temporarily secure the airways
Tracheal stenosis	Narrowing of the trachea - the cause can be acquired or congenital
Tracheitis	Inflammation of the trachea - this affects the mucous membrane of the trachea
Tracheomalacia	Disease, which can be congenital or acquired, in which there is a softening of tracheal cartilage rings, for example. This is characterised by a slackening of the trachea
Tracheostoma	surgically created opening of the trachea to the outside
Tracheotomy	Incision of the trachea
transnasal	through the nose or via the nose
Ultrasonic nebulizer	Converts water into microfine mist (aerosol) by high-frequency vibrations, which reach and humidify the deepest areas of the lungs
Unblocked cannula	Tracheostomy tube with unfilled cuff
Voice rehabilitation	Improving voice formation and quality
Weaning	Tracheotomised person is gradually weaned off a ventilator

INDEX

Symbole

A

B

C

INDEX

D

INDEX

E

F

G

H

I

INDEX

K

L

INDEX

M

N

O

P

Q

R

INDEX

S

T

V

W

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Layout and design:	Andreas Fahl Medizintechnik-Vertrieb GmbH, Cologne
Publisher/author:	Andreas Fahl Medizintechnik-Vertrieb GmbH, Cologne
Print:	Meister Print & Media GmbH
Editing:	mt-g medical translation GmbH & Co. KG

Sources/trademarks and image rights of third parties: Andreas Fahl Medizintechnik-Vertrieb GmbH, Cologne

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For better readability, the masculine form is used for personal names and personal nouns in this catalogue and guide. Corresponding terms apply in principle to all genders in the sense of equal treatment. Abbreviations are for editorial reasons only and do not imply a value judgement.

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NOTES

THE TRACHEOSTOMY MANAGEMENT

"THE TRACHEOSTOMY MANAGEMENT" - with this guide and catalogue of medical aids, we would like the reader to join us on an informative journey through the various issues one faces after a tracheostomy or laryngectomy. Starting with a description of the anatomical changes after surgical intervention through to rehabilitation, the guide offers extremely detailed explanations and pays particular attention to individual situations, which are also illustrated. The contents of this brochure reflect the broad expertise and experience of the family-run business and provider of medical aids ANDREAS FAHL MEDIZINTECHNIK-VERTRIEB GMBH, a company that has been established in the medical technology industry for more than almost 30 years as a specialist provider of medical aids for tracheostomised and laryngectomised patients.

The medical aids presented in this catalogue have been developed in cooperation with, or at the suggestion of users and professionals, such as patients, physicians, speech therapists and nurses among others. We are very proud of this cooperation and also grateful for the many impulses that have resulted in further improvements to our extensive product range. This has culminated in high-quality medical products - which form the basis for providing optimal and superior medical aids and at the same time represent a major element in the overall package of products and services with which we wish to inspire our customers and users.

Divided into the different categories of aids, the individual products in this catalogue are described in a comprehensible manner with regard to their application, function, benefits and specifications. This medical aids catalogue is not only intended to be an important reference work for those affected, a guide for orientation in all questions of tracheostomy management, but is also intended to serve as a useful guide for professionals in their everyday work.

FAHL

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REF 90210-EN - TD_242_PROMAC_FAHL_Katalog_01_EN