

# **ENT PRODUCTS**

## **INDIVIDUAL REHABILITATION OPTIONS**

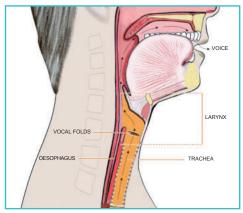


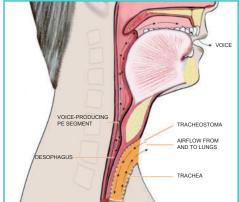
PRACTICAL SOLUTIONS FOR

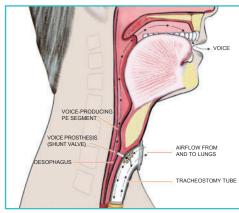
PROFESSIONAL APPLICATIONS

Restoration of the voice after laryngectomy remains at the centre of the holistic rehabilitation process for the patient. Voice rehabilitation with voice prostheses has been firmly established for many years, with the result that the proportion of patients with voice prostheses in Germany is around 80%. The advantages of voice prostheses are that the new synthetic voice can be learnt very quickly and the long phonation time due to the use of the complete volume of the lungs for phonation. The opening of the one-way valve mechanism is induced by phonation exclusively in the direction of the oesophagus and therefore prevents accidental aspiration of food or liquids.

The durability of voice prostheses is limited and depends on the individual patient. An indwelling period of 2-3 months is normal. The indications for replacement of a valve can vary greatly. The main reason for replacement is generally the presence of a leak. Leaks may occur transprosthetically, for example due to colonisation by candida in the area of the valve, or can be triggered by increased underpressure in the tracheo-oesophageal segment. Peri-prosthetic leaks can be the result of many different causes, a common one being caused by a valve of the incorrect length.







BEFORE THE LARYNGECTOMY

AFTER THE LARYNGECTOMY

AFTER LARYNGECTOMY WITH VOICE PROSTHESIS

The comprehensive range of Blom-Singer® voice prostheses comes in many different models, from which the perfect valve for the individual patient can be selected. A problem is resolved quickly and easily and patient satisfaction is significantly increased.

Two basic types of prosthesis can be defined: the indwelling prosthesis and the non-indwelling prosthesis. The non-indwelling prosthesis can be removed and replaced by the patient. The indwelling prosthesis must be removed and replaced by the physician.

#### INDWELLING PROSTHESES



### Blom-Singer® CLASSIC™ Indwelling Voice Prosthesis

The Blom-Singer® CLASSIC™ Indwelling is a voice prosthesis with integrated flap valve. The prosthesis, which is made of medical-grade silicone, is furnished with a radiopaque ring at the oesophageal flange and is available as 16 or 20 Fr. versions in sizes 4 - 20. It is also available as a sterile version in 16 or 20 Fr. in sizes 8 - 14.

ORDER INFORMATION:			
► Blom-Singer® CLASSIC™ Indwelling	16 Fr. 20 Fr.	Size 4 - 20 Size 4 - 20	REF IN16XX-NS REF IN20XX-NS
► Blom-Singer® CLASSIC™ Indwelling STERILE	16 Fr. 20 Fr.	Size 8 - 14 Size 8 - 14	REF IN16XX-SO REF IN20XX-SO



# Blom-Singer® ADVANTAGE® Indwelling Hard-Valve Assembly Voice Prosthesis

The Blom-Singer® ADVANTAGE Hard-Valve Assembly indwelling prosthesis with low-pressure valve is available as 20 Fr. version in sizes 4 - 14. In this version, silver oxide-containing silicone (7%) was used in the valve section in order to reduce early valve replacement as a result of candida. This voice prosthesis also has a titanium ring for reinforcement of the shaft. It is also available as a soft-valve version without titanium ring (16 Fr. or 20 Fr., size 4-14).

#### **ORDER INFORMATION:**

► Blom-Singer® ADVANTAGE® Indwelling - Hard Valve Assembly	20 Fr.	Size 4 - 14	REF AD20XX-NS
► Blom-Singer® ADVANTAGE® Indwelling -	16 Fr.	Size 4 - 14	REF AS16XX-NS
Soft Valve Assembly	20 Fr.	Size 4 - 14	REF AS20XX-NS



#### Blom-Singer® DUAL VALVE™ Indwelling Voice Prosthesis

The Blom-Singer® DUAL VALVE™ indwelling prosthesis is equipped with two independent consecutive low-pressure valves made of silver oxide-containing silicone. 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™ is available as 20 Fr. version in sizes 6 - 14.

#### **ORDER INFORMATION:**

**Blom-Singer® DUAL VALVE™ Indwelling** 20 Fr. Size 6 - 14 **REF DV20XX-NS** 



# Blom-Singer® DUAL VALVE™ Indwelling LF (Large Flange) Voice Prosthesis

The Blom-Singer® DUAL VALVE™ LF (Large Flange) indwelling prosthesis offers extended functions compared to the Blom-Singer® DUAL VALVE™. This prosthesis is additionally equipped with two enlarged flanges (oesophageal and tracheal flanges) for treatment of periprosthetic leakages as appropriate for the indication. The Blom-Singer® DUAL VALVE™ LF (Large Flange) is available as 20 Fr. version in sizes 6 - 14.

#### **ORDER INFORMATION:**

► Blom-Singer® DUAL VALVE™ Indwelling LF 20 Fr. Size 6 - 14 REF DV20XX-LF (Large Flange)

#### **CHANGEABLE PROSTHESES**



### **Blom-Singer® DUCKBILL Voice Prosthesis**

The Blom-Singer® DUCKBILL non-indwelling prosthesis can be changed by patients themselves after receiving professional instruction and briefing. The voice prosthesis, which has a uniform shaft thickness of 16 Fr., is available in sizes 6 - 18.

#### **ORDER INFORMATION:**

► Blom-Singer® DUCKBILL Voice Prosthesis

16 Fr.	Size 6	REF DB16-006
16 Fr.	Size 8	REF DB16-008
16 Fr.	Size 10	REF BE6000
16 Fr.	Size 12	REF DB16-012
16 Fr.	Size 14	REF BE6001
16 Fr.	Size 18	REF BE6002



#### Blom-Singer® LOW PRESSURE Voice Prosthesis

The main features of the Blom-Singer® LOW-PRESSURE voice prosthesis are a special valve system and minimal required pressure, i.e., the air flows through the voice prosthesis with little hindrance. The Blom-Singer® LOW PRESSURE Voice Prosthesis is available in 16 and 20 Fr. versions in sizes 6 - 28 and 6 - 25.

### **ORDER INFORMATION:**

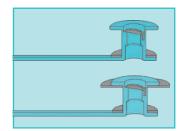
► Blom-Singer® LOW PRESSURE

Voice Prosthesis

16 Fr.	Size 6	REF BE6009
16 Fr.	Size 8	REF LP16-008
16 Fr.	Size 10	REF BE6010
16 Fr.	Size 12	REF LP16-012
16 Fr.	Size 14	REF BE6011
16 Fr.	Size 18	REF BE6012
16 Fr.	Size 22	REF BE6013
16 Fr.	Size 25	REF BE6014
16 Fr.	Size 28	REF BE6015
20 Fr.	Size 6	REF BE2014
20 Fr.	Size 8	REF LP20-008
20 Fr.	Size 10	REF BE2018
20 Fr.	Size 12	REF LP20-012
20 Fr.	Size 14	REF BE2022
20 Fr.	Size 18	REF BE2026
20 Fr.	Size 22	REF BE2030
20 Fr.	Size 25	REF BE2033

#### SPECIAL ORDER VOICE PROSTHESES

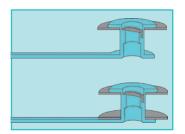
The Blom-Singer<sup>®</sup> Special Order Series offers a large assortment of special indwelling prostheses that cover specific requirements. All variants are made of medical grade silicone and are furnished with specific product features to suit the respective indications.



Blom-Singer® CLASSIC™ Indwelling SL (Special Length) Voice Prosthesis The "Special Length" variant can be fitted more accurately and is available in special lengths (5-7-9 mm). It offers an additional assortment of lengths compared to the standard voice prostheses. This variant is optionally also available with an extra large oesophageal flange (LESL) (size 5.7). Both voice prostheses are available as 16 and 20 Fr. variants in sizes 5, 7 and 9.

#### ORDER INFORMATION:

► Blom-Singer® CLASSIC™ Indwelling SL	16 Fr.	Size 5,7,9	REF IN16XX-SL
(Special Length)	20 Fr.	Size 5,7,9	REF IN20XX-SL
► Blom-Singer® CLASSIC™ Indwelling LESL (Large Esophageal Flange/Special Length)	16 Fr.	Size 5,7	REF IN16XX-LESL
	20 Fr.	Size 5,7	REF IN20XX-LESL

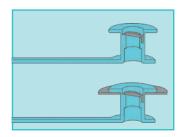


# Blom-Singer® CLASSIC™ Indwelling LEF/LF (Large Esophageal Flange / Large Flange) Voice Prosthesis

The Blom-Singer® LEF (Large Esophageal Flange) is furnished with an enlarged oesophageal flange (19 mm diameter) for treatment of periprosthetic leakages as appropriate for the indication. A "Large Flange" variant is also available. Both the oesophageal and tracheal flanges are enlarged (LF). Both voice prostheses are available as 16 and 20 Fr. variants in sizes 4-14.

#### **ORDER INFORMATION:**

► Blom-Singer® CLASSIC™ Indwelling LEF	16 Fr.	Size 4 - 14	REF IN16XX-LEF
(Large Esophageal Flange)	20 Fr.	Size 4 - 14	REF IN20XX-LEF
► Blom-Singer® CLASSIC™ Indwelling LF	16 Fr.	Size 4 - 14	REF IN16XX-LF
(Large Esophageal + Tracheal Flange)	20 Fr.	Size 4 - 14	REF IN20XX-LF



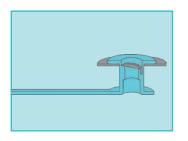
# Blom-Singer® CLASSIC™ Indwelling IR (Increased Resistance) Voice Prosthesis

The IR (Increased Resistance) version is furnished with 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. A variant with an enlarged oesophageal flange is also available (LEIR). Both voice prostheses are available as 16 and 20 Fr. variants in sizes 6 - 12 and 4 - 8.

#### **ORDER INFORMATION:**

▶ Blom-Singer® CLASSIC™ Indwelling IR (Increased Resistance)	16 Fr. 20 Fr.	Size 6 - 12 Size 6 - 12	REF IN16XX-IR REF IN20XX-IR
► Blom-Singer® CLASSIC™ Indwelling LEIR	16 Fr.	Size 4 - 8	REF IN16XX-LEIR
(Large Esophageal Flange/Increased Resistance)	20 Fr.	Size 4 - 8	REF IN20XX-LEIR

#### **TEP OCCLUDER**



# Blom-Singer® CLASSIC™ Indwelling LETO (Large Esophageal Flange / TEP Occluder) - without phonation option

The Blom-Singer® Large Esophageal Flange/TEP Occluder (LETO) is intended for non-invasive closure of the shunt channel without additional phonation option. A large oesophageal flange achieves good sealing with shunt dilation. The Blom-Singer® Large Esophageal Flange/TEP Occluder (LETO) is available as 16 and 20 Fr. version.

#### **ORDER INFORMATION:**

► Blom-Singer® CLASSIC Indwelling LETO	16 Fr.	Size 4 - 14	REF IN16XX-LETO
(Large Esophageal Flange/TEP Occluder)	20 Fr.	Size 4 - 14	REF IN20XX-LETO

#### **ACCESSORIES**



#### LARYVOX® DUO BRUSH with clip

The LARYVOX® DUO BRUSH is designed for gentle and thorough daily cleaning of voice prostheses. It comes with a brush for cleaning the internal channel of the voice prosthesis in the tracheo-oesophagel fistula and sponge for removing deposits and secretions from the tracheal flange of the voice prosthesis. With LARYVOX® Clip for attaching a stoma light (LARYVOX® Stoma light, available separately).

#### **ORDER INFORMATION:**

► LARYVOX® DUO BRUSH with clip

Size 6 - 18

**REF 29110** 

LARYVOX® Stoma Light

**REF 69101** 



#### LARYVOX® PLUG

The LARYVOX® PLUG is used for temporary sealing of a voice prosthesis to prevent fluid leakage through the voice prosthesis until it has been properly inspected and replaced if necessary. Talking is not possible while the plug is inserted. The LARYVOX® PLUG is supplied non-sterile and with an insertion rod.

#### **ORDER INFORMATION:**

► LARYVOX® PLUG REF 25800



#### Blom-Singer® Dilator-Sizer

The Blom-Singer® Dilator-Sizer combines two different functions in one innovative product. The shunt channel can be dilated and measured in one step during placement of a voice prosthesis. The 18 Fr. (for 16 Fr. voice prostheses) and 22 Fr. (for 20 Fr. voice prostheses) versions are available.

#### **ORDER INFORMATION:**

Blom-Singer® Dilator-Sizer

18 Fr. (for 16 Fr. voice prostheses) REF BE2051 22 Fr. (for 20 Fr. voice prostheses) REF BE2052



#### Blom-Singer® Tracheoesophageal Puncture Dilator

The Blom-Singer® Puncture Dilator is a tracheoesophageal puncture dilator with a fixed, tapered silicone stent. It is used for successive dilation of the shunt channel or fistula channel during replacement of the prosthesis and prevents leakage and closure of the shunt channel or fistula channel when the voice prosthesis is removed. The dilator is available with shaft thicknesses of 18 Fr. and 22 Fr. and is used for precise dilation for 16 and 20 Fr. voice prostheses.

#### **ORDER INFORMATION:**

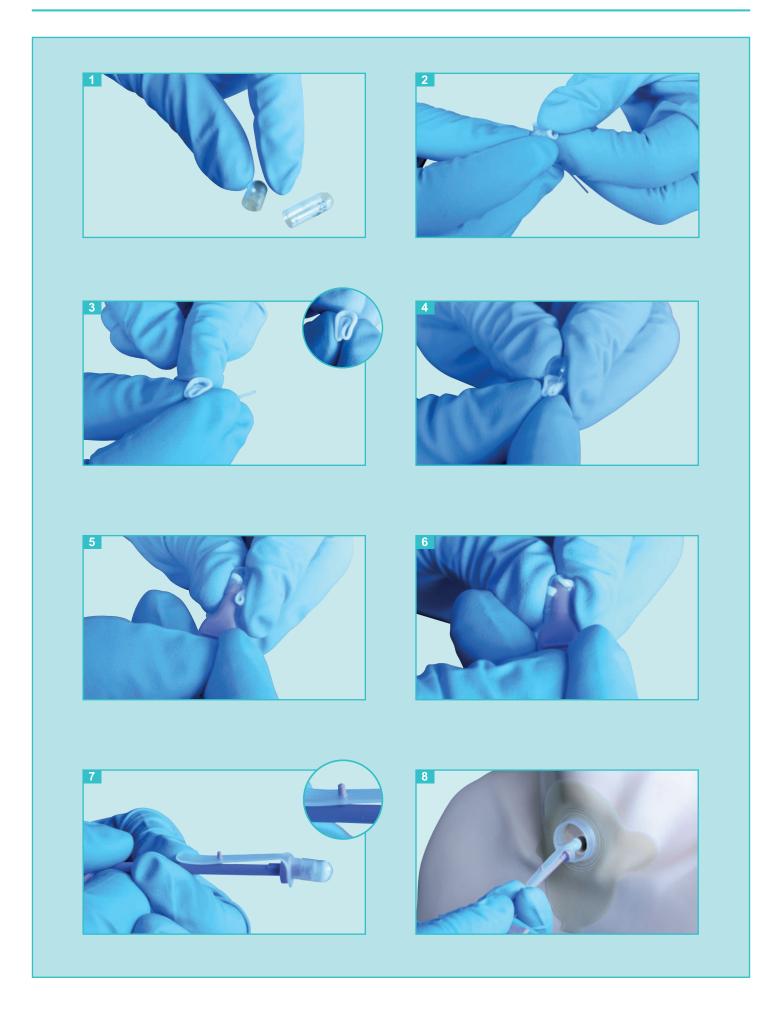
Blom-Singer® Tracheoesophageal Puncture Dilator 18 Fr. (for 16 Fr. voice prostheses) 22 Fr. (for 20 Fr. voice prostheses) **REF BE6050 REF BE2050** 



#### Blom-Singer® Replacement Gel Caps

The voice prosthesis is introduced atraumatically into the shunt channel with the aid of the gel capsule. A drop of water-soluble local anaesthetic can be applied directly prior to placement in order to accelerate the dissolution of the gel capsule in the oesophagus. One box contains 90 or 60 replacement gel capsules. The 16, 20 and 22 Fr. versions are available.

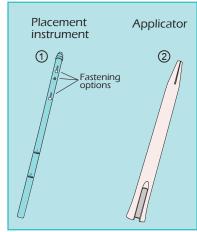
ORDER INFORMATION:			
► Blom-Singer® Replacement Gel Caps	16 Fr.	Pack of 90	REF BE3190
	18 Fr.	Pack of 90	REF BE3195
	20 Fr.	Pack of 90	REF BE3290
	22 Fr.	Pack of 60	REF BE3295



The LARYVOX® INSERTER is used for optimal anterograde placement when replacing a voice prosthesis. A voice prosthesis cannot remain permanently in the shunt channel/fistula but must be replaced at regular intervals depending on its functional efficiency. Leakage of fluids with the transfer of saliva or food particles from the oesophagus to the trachea is a direct indication for examination by the physician and the potential required replacement of the shunt.

The LARYVOX® INSERTER can be used to attach a voice prosthesis firmly to the placement instrument ① and introduce it into the existing shunt channel/fistula with the corresponding applicator ② (included in the package, except for the SPECIAL). The LARYVOX® INSERTER applicator makes it easy to insert a voice prosthesis. The rounded applicator tip ensures that placement is gentle.

The LARYVOX® INSERTER is available in four different versions: LARYVOX® INSERTER, LARYVOX® INSERTER EXPERT, LARYVOX® INSERTER SPECIAL. The LARYVOX® INSERTER allows the user of voice prostheses to use the same placement technique with different types of voice prostheses.





#### LARYVOX® INSERTER

The placement instrument can be used for different types of voice prostheses. The LARYVOX® INSERTER has three different options for fixation for simple and safe placement of different types of voice prostheses.

#### **ORDER INFORMATION:**

LARYVOX® INSERTER

for different voice prostheses

**REF 25900** 



#### LARYVOX® INSERTER EXPERT

The LARYVOX® INSERTER EXPERT is used for optimal anterograde placement or replacement of 16 Fr. voice prostheses and/or DUAL VALVE™ voice prostheses (20 Fr.).

#### ORDER INFORMATION:

► LARYVOX® INSERTER EXPERT

for 16 Fr. / DUAL VALVE™ (20 Fr.) voice prostheses

**REF 25910** 



#### LARYVOX® INSERTER EXPERT SMALL

The LARYVOX® INSERTER EXPERT SMALL is suitable for anterograde replacement or placement of a voice prosthesis with a shaft 4 mm long.

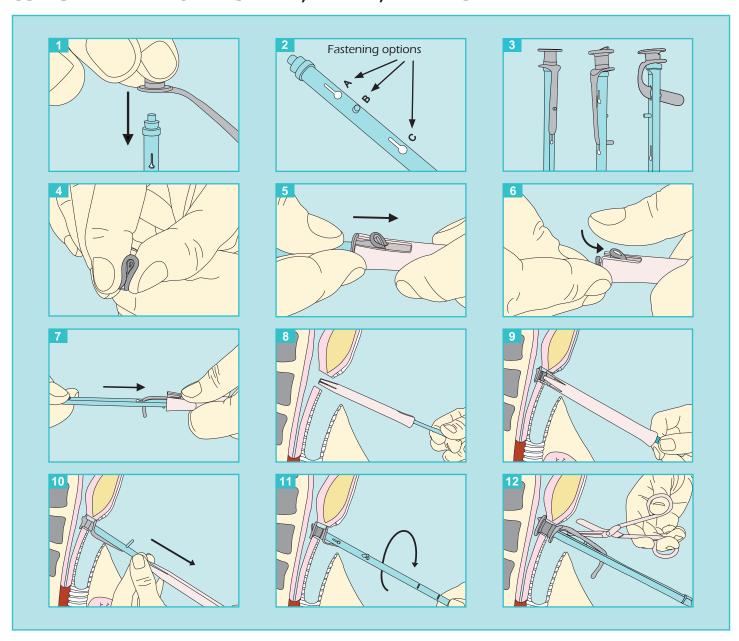
#### **ORDER INFORMATION:**

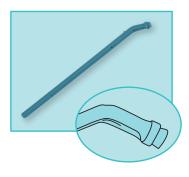
LARYVOX® INSERTER EXPERT SMALL

for 4 mm voice prostheses

**REF 25915** 

## USING THE LARYVOX® INSERTER, EXPERT, EXPERT SMALL





#### LARYVOX® INSERTER SPECIAL

The LARYVOX® INSERTER SPECIAL can be used to attach a voice prosthesis securely to the placement instrument and introduce it anterograde into the existing shunt channel/fistula using the gel capsule technique. The LARYVOX® INSERTER SPECIAL is particularly suitable for a constricted shunt canal with a deep position or running diagonally and with a particularly small tracheostoma.

The chamfered shape in the front section of the LARYVOX® INSERTER SPECIAL also optimises the view during placement. A drop of water-soluble local anaesthetic can be applied directly prior to placement in order to accelerate the dissolution of the gel capsule in the oesophagus.

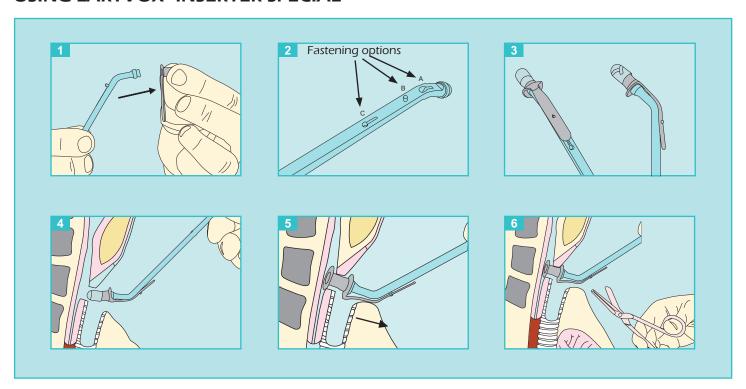
#### **ORDER INFORMATION:**

LARYVOX® INSERTER SPECIAL

for Blom-Singer® oice prostheses (with gel capsule technique)

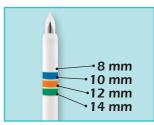
**REF 25920** 

#### **USING LARYVOX® INSERTER SPECIAL**



#### BLOM-SINGER® VOICE PROSTHESIS PLACEMENT SURGICAL KIT

The Blom-Singer® surgical kit is a complete surgical set for one-time use and is used for intraoperative primary or secondary puncturing for placement of a Blom-Singer® CLASSIC™ Indwelling voice prosthesis. The trocar included in the surgical kit has an extremely sharp-edged tip with a 3-sided ground blade. The tip enables effortless puncturing. The trocar also produces an extremely small puncture which is carefully dilated with the aid of the enclosed guide catheter



until the precise diameter of the voice prosthesis has been reached. The trocar is seated in a colour-coded sleeve. The colour code has the unique option of measuring the length of the shunt channel during the puncture procedure and enabling the selection of precisely the right size of voice prosthesis. This procedure is thus particularly atraumatic to the tissue and ensures that the voice prosthesis and puncture channel are compatible.

#### PREPARATION OF THE BLOM-SINGER® VOICE PROSTHESIS PLACEMENT SURGICAL KIT

The surgical kit enables quick and easy preparation, particularly when connecting the voice prosthesis to the guide catheter.



1. A transparent loading sleeve with fenestration is located at the end of the guide catheter.



2. The sterile Blom-Singer<sup>®</sup> CLASSIC<sup>™</sup> Indwelling Voice Prosthesis is introduced through the fenestration with the safety thread leading.



3. The voice prosthesis is then pulled through the guide catheter by the safety thread...



4. ...until the tracheal flange is completely visible at the end of the guide catheter.

In this process, the voice prosthesis is pulled through from the tracheal to the oesophageal side, which, from the point of view of hygiene, is to be regarded as the optimal direction.



#### Blom-Singer® Voice Prosthesis Placement Surgical Kit

The Blom-Singer® surgical kit is designed for single use. In addition to the separately packed Blom-Singer® CLASSIC™ Indwelling voice prosthesis, it contains a trocar (single-use instrument) and a pharynx protector (single-use instrument). The Blom-Singer® Voice Prosthesis Placement Surgical Kit is available in 16 and 20 Fr. versions.



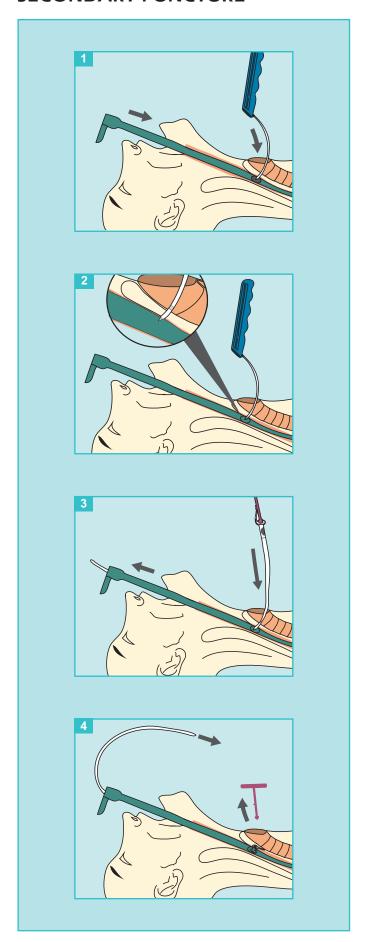
#### **ORDER INFORMATION:**

► Blom-Singer® Voice Prosthesis Placement Surgical Kit
When ordering, please indicate the required voice prosthesis size (8-14 mm)

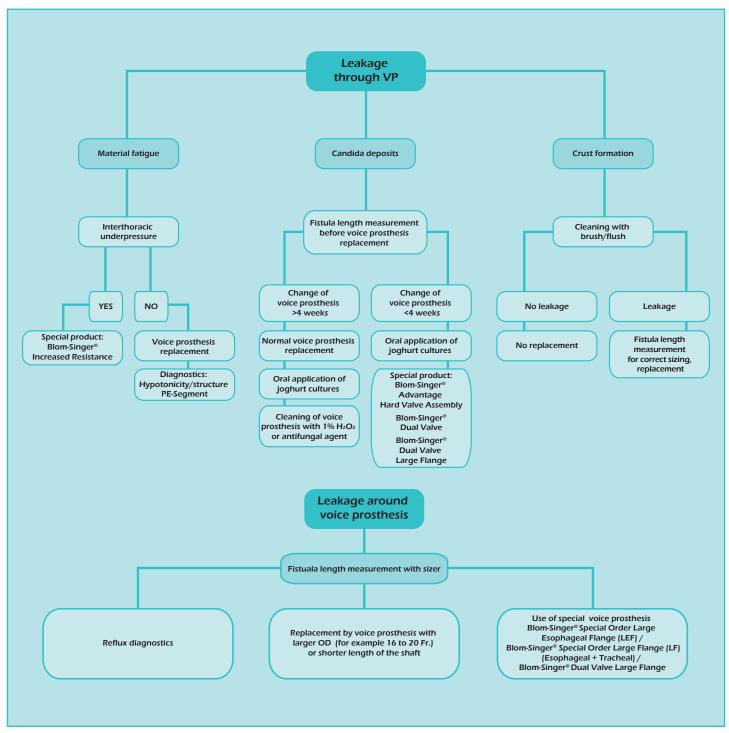
16 Fr. 20 Fr. **REF TP1000 REF TP1001** 

### **PRIMARY PUNCTURE**

### **SECONDARY PUNCTURE**



## REPLACEMENT OF VOICE PROSTHESES



With kind permission of Prof. Dr. med. Kai J. Lorenz



#### **BOOK RECOMMENDATION:**

Komplikationsmanagement nach Stimmrehabilitation mit Stimmprothese/ Complication Management after Voice Rehabilitation with Voice Prosthesis Prof. Dr. Kai Johannes Lorenz

UNI-MED Verlag AG ISBN 978-3-8374-1488-2

#### FISTULA MANAGEMENT

The individually adjustable bi-flanged fistula prosthesis was developed for management of hypopharyngeal fistulas - in particular, pharyngo-cutaneous fistulas. The Blom-Singer® Adjustable Bi-Flanged Fistula Prosthesis offers the advantage of easy transfistular or transoral placement. The fistula prosthesis can furthermore be quickly and easily removed again. Before the prosthesis is selected and inserted, the fistula channel should be examined in detail in order to be able to correctly assess its length, diameter and course.

When using the SMALL and MEDIUM versions, note that the flange diameter must overlap the entire outer edge of the fistula by at least 8-10 mm. For the LARGE version, this overlap must measure at least 12.5 mm. The flexible and translucent flange can additionally be individually adjusted for other diameters at the doctor's discretion. The fistula prosthesis is indicated for fistula lengths of 1.5 mm to maximum 25 mm and a fistula diameter of 6 to 25 mm.



### Blom-Singer® Adjustable Bi-Flanged Fistula Prosthesis

Individually adjustable bi-flanged fistula prosthesis suitable for management of hypopharyngeal fistulas. A catheter for placement and removal is optionally available for the Blom-Singer® Adjustable Bi-Flanged Fistula Prosthesis SMALL (25 mm flange diameter) and MEDIUM (38 mm flange diameter). It is included but can also be ordered separately. A catheter is not used for the Blom-Singer® Adjustable Bi-Flanged Fistula Prosthesis LARGE (50 mm flange diameter).



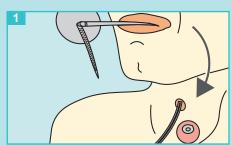
#### **ORDER INFORMATION:**

- Blom-Singer® Adjustable Bi-Flanged Fistula Prosthesis 25 mm SMALL
- Blom-Singer® Adjustable Bi-Flanged Fistula Prosthesis 38 mm MEDIUM
- Blom-Singer® Adjustable Bi-Flanged Fistula Prosthesis 50 mm LARGE
- Blom-Singer® Fistula Prosthesis Insertion and Removal Catheter

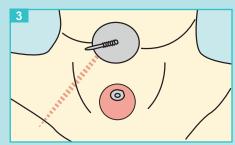
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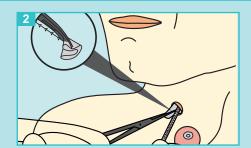
**REF FM1010** 



Transoral, retrograde placement



Bi-flanged fistula prosthesis in place



Transfistular anterograde placement



Removal with removal catheter



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voice restoration systems

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