

Otology

Balloon Eustachian Tuboplasty – A new therapy concept for the treatment of chronic tube dysfunction

Obstructive tube dysfunction often involves a chronic functional defect where both the regular aeration and ventilation as well as the self-cleaning capability of the middle ear are restricted. The consequences of which include the development of chronic otitis media which, in the worst case, may lead to destruction of the middle ear structures, resulting in loss of hearing.

“The introduction of microsurgical and endoscopic techniques revolutionized medicine and are still state of the art today. The development of balloon catheters being used, for example, in the dilatation of coronary arteries, led to revolutionary treatment concepts, previously deemed unthinkable.

Transferring this technology to the dilatation of the Eustachian tube enables conservative treatment of chronic middle ear inflammation for the first time ever and paves the way for further treatment options, particularly for chronic tube malfunction and established middle ear pathologies.”

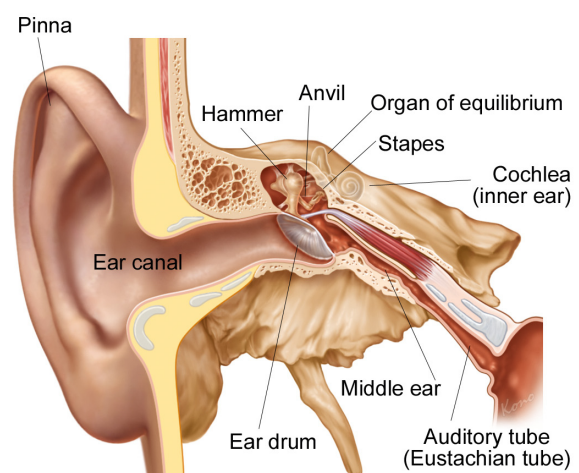


Prof. Dr. Holger Sudhoff, M.D.,
 head physician, ENT clinic, Bielefeld

A pre-operative tubomanometry (TMM) is performed on the patients for a detailed assessment of tube function and in order to decide whether dilation is necessary.

The treatment principle is similar to that of balloon dilation in vascular stenosis and it has recently been established in the treatment of chronic obstructive sinusitis. Studies on balloon sinuplasty have shown it to be a safe and reliable treatment.

During the clinical part of the study, balloon dilation was performed on subjects with obstructive tube dysfunction. The functional results were statistically analysed. A clinical prospective study concept was developed and put into practice.





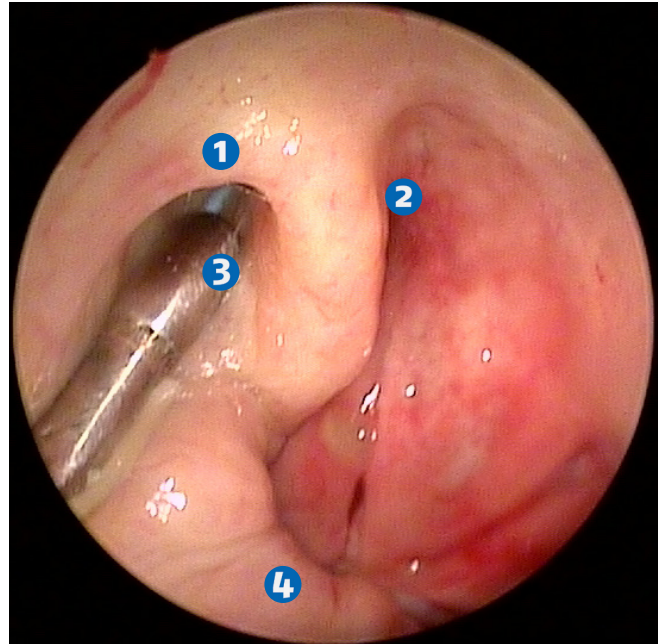
Balloon Eustachian Tuboplasty - A new therapy concept for the treatment of chronic tube dysfunction

The catheter is placed adjacent to the pharyngeal ostium of the Eustachian tube while the lateral wall of the epipharynx is endoscopically observed. The catheter is inserted via the working channel of the micro endoscope (Art. No. 80-806-30) and carefully introduced into the tube, avoiding resistance.

Using the combined insertion instrument (Art.No. 80-806-90) and a rigid endoscope (4mm/30°), is an alternative to a micro endoscope.

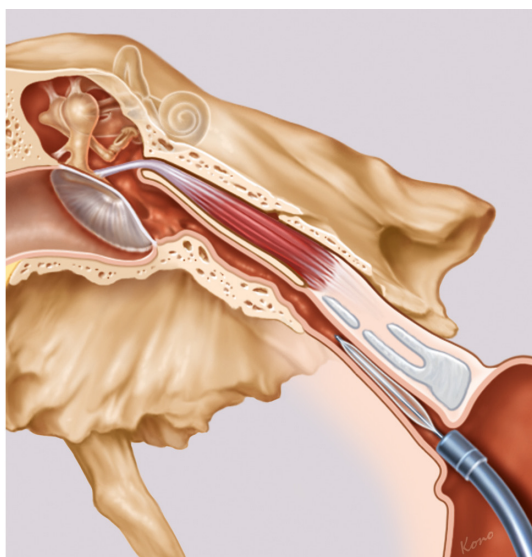
Once the balloon within the catheter is in position, a saline solution is injected at a pressure of up to 10 bar, causing the dilation. The pressure is maintained for two minutes. The saline solution is then aspirated from the balloon. The removal of the catheter and endoscope completes the procedure.

Please note that to date there is no extensive experience in the treatment of patients under the age of twenty.

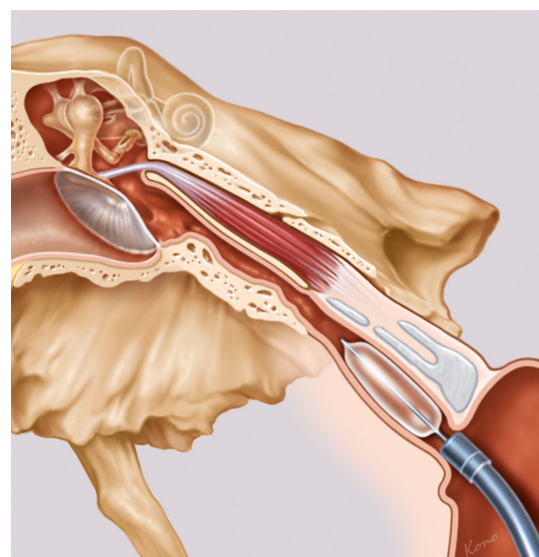


Legend:

- 1) Tube opening
- 2) Rosenmüller's fossa
- 3) Balloon catheter at the pharyngeal ostium of the Eustachian tube
- 4) Velum



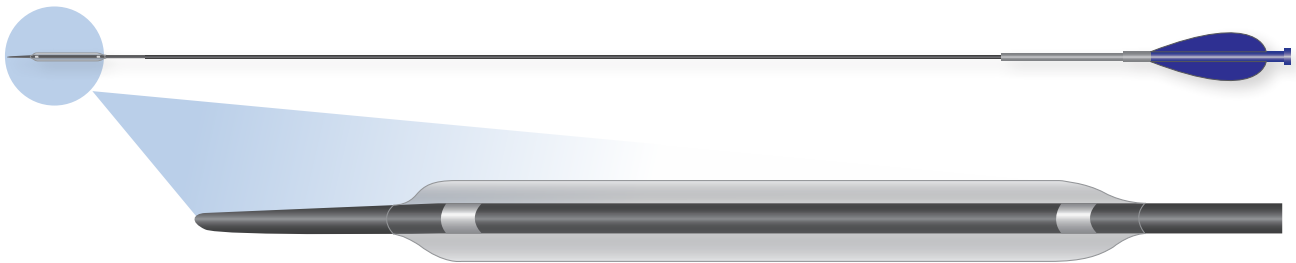
Inserting the catheter



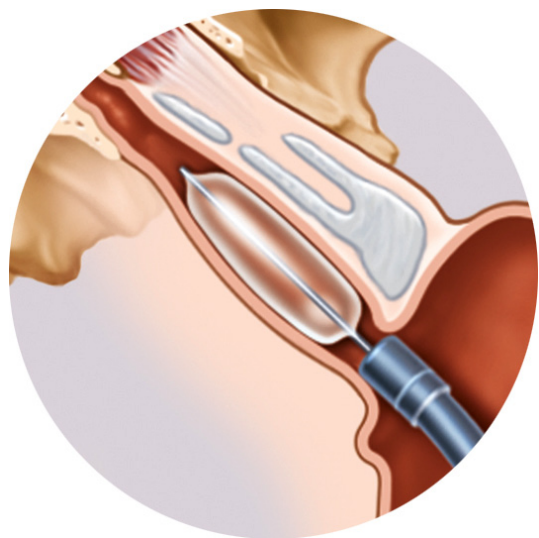
Dilating the auditory tube

Otology

Balloon Eustachian Tuboplasty Art. No. 2080-1300320



- Balloon dilatation catheter with an inflatable balloon near the distal tip
- Single use only
- Two X-ray contrast markers to indicate the cylindrical part of the balloon during radiography
- Luer-Lock adapter for inflation and deflation
- Material:
 Catheter: Polyamide (PA)/Pebax®; Stainless steel/PTFE
 Balloon: Polyamide (PA)
 Luer connection: Polycarbonate (PC)
 X-ray contrast marker: Platinum / Iridium (90% / 10%)



The catheter has an overall length of 400 mm with a working length of 355 mm from the Luer-Lock connection to the distal tip. This size of the balloon is 3 x 20 mm.

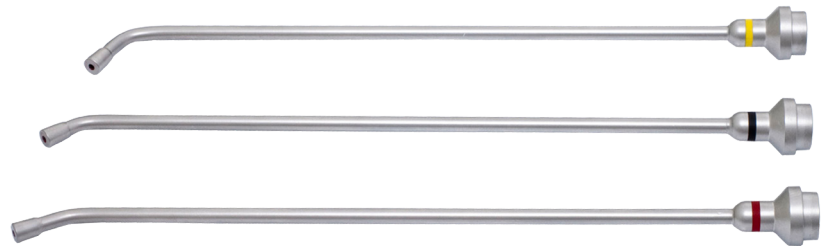
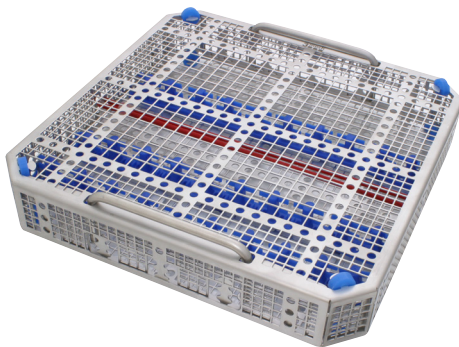
The flexible distal part of the catheter has a coaxial structure. The outer lumen is used for inflating the balloon. The proximal part of the catheter is a single lumen hypotube made of stainless steel. It is therefore less flexible in this section, ensuring easy insertion. The balloon offers controlled compliance, i.e. with a preset pressure application it expands to its defined dimensions (6 bar = 3.00 mm, 10 bar = 3.28 mm balloon diameter).

Tube dilatation by means of a Balloon Catheter offers a new option for causal treatment of Eustachian tube dysfunction: **Minimally invasive – safe – reliable – fast**



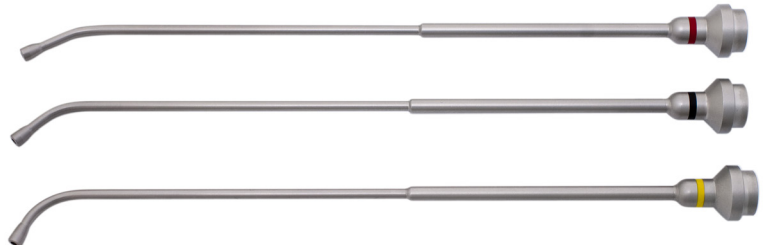
Combined Insertion Instrument Art. No. 80-806-90

- For the insertion of catheters into the Eustachian tube
- Includes three colour-coded distal tilted attachments (30°, 45°, 70°)
- Advance indicator with brake to prevent the catheter from entering the tympanum (Defined advance = 35 mm)
- Sterilization Basket, 24.4 cm x 24.4 cm, stainless steel, lid, band and segmentation, special rinsing module for cleaning of inner lumina



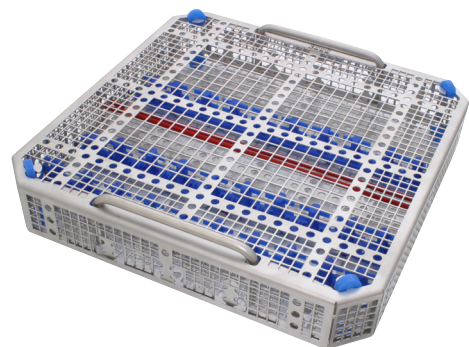
Alternatively we offer colour-coded tapered shaft attachments for the combined insertion instrument.

- Art. No. 80-806-83 = red ring tapered shaft attachment with 30°-angle
- Art. No. 80-806-84 = black ring tapered shaft attachment with 45°-angle
- Art. No. 80-806-85 = yellow ring tapered shaft attachment with 70°-angle



Sterilization Basket Art. No. 80-850-10

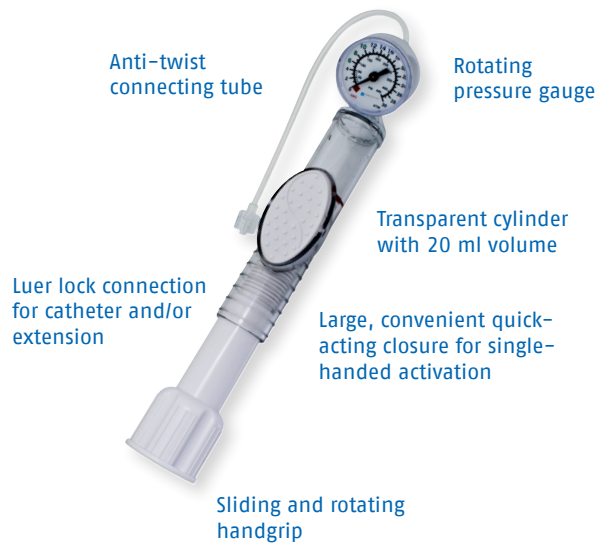
- Special rinsing module for cleaning of inner lumina
- Lid, band and segmentation
- Dimensions: 24.4 cm x 24.4 cm
- Material: Stainless steel



Otology

Inflation Pump Art. No. 2080-9030020

- Inflation pump with extension tube for the inflation of catheter balloons
- Single-use only
- 20 ml syringe with control switch to release the plunger, rotating handle, pressure gauge and high pressure connection with Luer-Lock rotary adapter
- PSI scale ranging from 0 to 30 atm (= bar)
- Working pressure marker for Bielefeld balloon catheter
- 100 cm extension tube



Cleaning brush Art. No. 80-844-30

- With loop
- Working length: 30 cm
- Brush: \varnothing 2.0 mm
- Length of edging: 10 mm
- For working channels up to 1.5 mm
- 10 pieces per box



Swiveled brush Art. No. 80-844-40

- Swiveled brush with rounded ends
- Ahead 90 mm without edging
- Total length: 45 cm
- Brush: \varnothing 1.0 mm
- Length of edging: 7-9 mm
- For irrigation and suction channel
- 10 pieces per box



Ear plug for impedance measurements

- For tubomanometry and tympanometry

Art. No.	Size	Diameter	Colour	Packaging
OS01	1	6 mm	Purple	10 pieces per box
OS02	2	7 mm	Yellow	10 pieces per box
OS03	3	9 mm	Green	10 pieces per box
OS04	4	10 mm	Blue	10 pieces per box
OS05	5	11 mm	White	10 pieces per box
OS06	6	13 mm	Yellow	10 pieces per box
OS07	7	15 mm	Green	10 pieces per box
OS08	8	18 mm	Blue	10 pieces per box



Tubomanometer Art. No. TMM

System for examining the pressure equalization function of the Eustachian tube

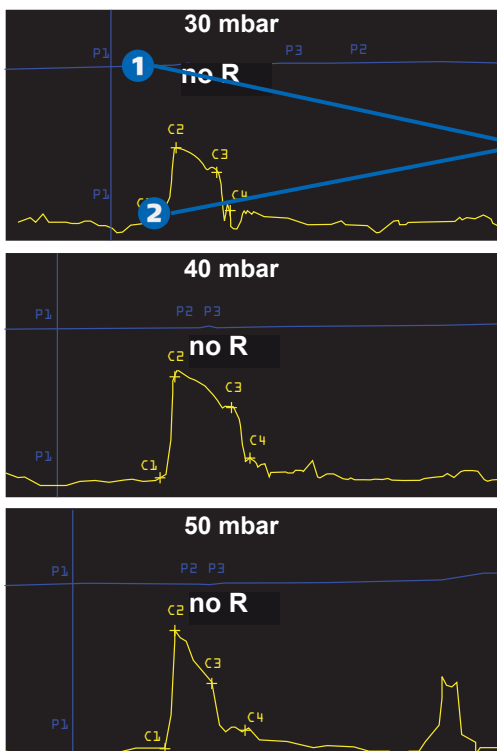
With the application of excess pressure into the nose and rhinopharynx during swallowing, the tubomanometer can record the opening parameters of the Eustachian tube and the pressure equalization function of the middle ear.

The principle aim is to build up sufficient pressure in the nose and rhinopharynx to enable the tubomanometer to assess latency = the delay between the application of pressure and the opening of the Eustachian tube. Deviations from standard values will be shown. The decisive value is the "Opening Latency Index" = R

$$R = (P1 - C1) : (C2 - C1)$$

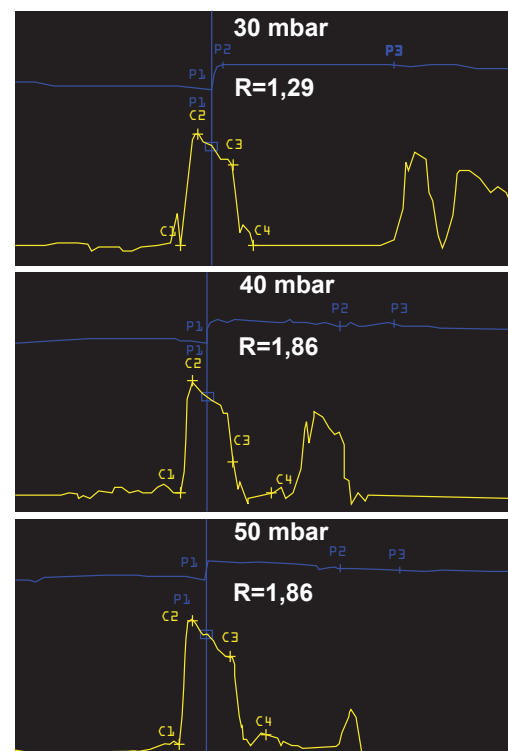


Pre-operative tubomanometry
No pressure increase in the ear
R = 0 (obstructive tube dysfunction)
Measurements at 30, 40, 50 millibar



- 1) Ear measurement curve
- 2) Nasopharynx measurement curve

Post-operative tubomanometry
R > 1, normal increase in pressure with a slight delay, 2 months after tube dilation
Measurements at 30, 40, 50 millibar



The display shows the different phases of increased pressure in the nasal cavity during velum closure. Indication of insufficient or incomplete velum closure.

Ventilation of the middle ear: Indication of tube reaction and tympanic movement by recording the pressure variations in the outer ear. The recordings indicate the opening pressure and opening latency of the Eustachian tube.

The Tubomanometer – non-invasive and non-traumatic assessment of dysfunctional tube ventilation

Otology

Equipment Trolley Art. No. 80-806-43

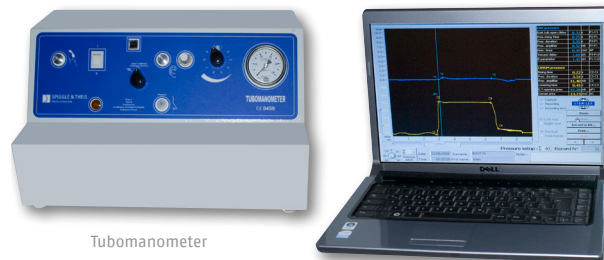
- Equipment trolley for tubomanometer and accessories
- Width 430 mm, height 1070 mm
- 1 drawer
- 2 shelves
- Power distribution
- Central switch



State of delivery

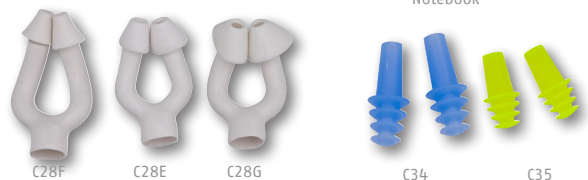
Examination Kit Art. No. 80-805-00

- Tubomanometer (Art. No. TMM) standard version
- Notebook with Intel i5 Dual Core processor (2.26 GHz), 4 GB DDR3-RAM, 320 GB hard drive, operating system and preinstalled software for the tubomanometer
- Printer
- Equipment trolley for tubomanometer and accessories
- Nasal adapter for TMM, small (Art. No. C28F)
- Nasal adapter for TMM, medium (Art. No. C28E)
- Nasal adapter for TMM, large (Art. No. C28G)
- Ear plugs for TMM, large, blue, one pair (Art. No. C34)
- Ear plugs for TMM, small, yellow, one pair (Art. No. C35)
- Ear plug for impedance measurements
- Desinfection tray with cartridge and lid, 3L



Tubomanometer

Notebook



C28F

C28E

C28G

C34

C35



Equipment trolley
State of delivery



Printer



Desinfection tray





Total Titanium Implant, Fixed Length, Shaft \varnothing 0.3 mm

- Single implant
- Manufactured from a single piece of titanium
- Excellent stability and handling
- Large choice of lengths
- Adjustable head angle (exception: 3mm length)

Central Head

Art.No.	Length	Packaging
11930	3.0 mm	1 piece, sterile
11935	3.5 mm	1 piece, sterile
11940	4.0 mm	1 piece, sterile
11942	4.25 mm	1 piece, sterile
11945	4.5 mm	1 piece, sterile
11947	4.75 mm	1 piece, sterile
11950	5.0 mm	1 piece, sterile
11955	5.5 mm	1 piece, sterile
11960	6.0 mm	1 piece, sterile
11965	6.5 mm	1 piece, sterile
11970	7.0 mm	1 piece, sterile



Offset Head

Art.No.	Length	Packaging
11830	3.0 mm	1 piece, sterile
11835	3.5 mm	1 piece, sterile
11840	4.0 mm	1 piece, sterile
11842	4.25 mm	1 piece, sterile
11845	4.5 mm	1 piece, sterile
11847	4.75 mm	1 piece, sterile
11850	5.0 mm	1 piece, sterile
11855	5.5 mm	1 piece, sterile
11860	6.0 mm	1 piece, sterile
11865	6.5 mm	1 piece, sterile
11870	7.0 mm	1 piece, sterile



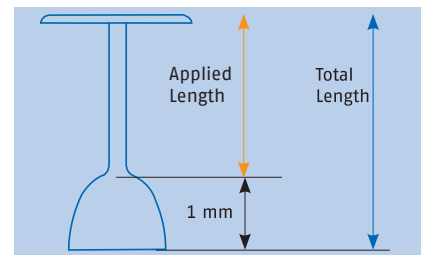
Otology

Partial Titanium Implant, Fixed Length, Shaft \varnothing 0.3 mm

- Single implant
- Manufactured from a single piece of titanium
- Optimal positioning on the stapes head
- Large choice of lengths
- Central and offset heads
- Excellent stability and handling

Central Head with Complete Bell

Art.No.	Insertion Length	Packaging
12905	0.5 mm	1 piece, sterile
12910	1.0 mm	1 piece, sterile
12912	1.25 mm	1 piece, sterile
12915	1.5 mm	1 piece, sterile
12917	1.75 mm	1 piece, sterile
12920	2.0 mm	1 piece, sterile
12922	2.25 mm	1 piece, sterile
12925	2.5 mm	1 piece, sterile
12930	3.0 mm	1 piece, sterile
12935	3.5 mm	1 piece, sterile



Insertion Length / Total Length

Central Head with Slits in Bell

Art.No.	Insertion Length	Packaging
12705	0.5 mm	1 piece, sterile
12710	1.0 mm	1 piece, sterile
12712	1.25 mm	1 piece, sterile
12715	1.5 mm	1 piece, sterile
12717	1.75 mm	1 piece, sterile
12720	2.0 mm	1 piece, sterile
12722	2.25 mm	1 piece, sterile
12725	2.5 mm	1 piece, sterile
12730	3.0 mm	1 piece, sterile
12735	3.5 mm	1 piece, sterile



Partial implant designs with slit bells provide the option of placing the implant on the complete bow of the stapes sides when the stapes head is no longer there. Secure placement reduces the risk of implant dislocation.

The implant head can be either centrally (round head) or eccentrically (oval head) attached to the implant shaft. The oval headed version has an additional groove for improved fitting onto the malleus.

A clearer view for positioning the bell end is possible due to openings found in both versions. All the designs grant the highest level of user-friendliness resulting in easier handling.

The implants are manufactured from high medical grade titanium – ensuring optimal biocompatibility and inertia.

Offset Head with Slits in Bell

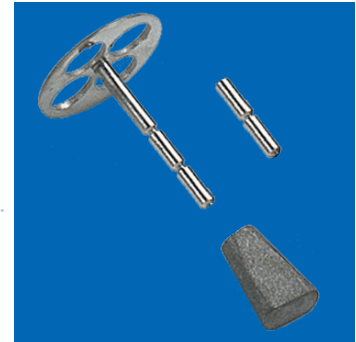
Art.No.	Insertion Length	Packaging
12805	0.5 mm	1 piece, sterile
12810	1.0 mm	1 piece, sterile
12812	1.25 mm	1 piece, sterile
12815	1.5 mm	1 piece, sterile
12817	1.75 mm	1 piece, sterile
12820	2.0 mm	1 piece, sterile
12822	2.25 mm	1 piece, sterile
12825	2.5 mm	1 piece, sterile
12830	3.0 mm	1 piece, sterile
12835	3.5 mm	1 piece, sterile





Total Titanium Middle Ear Implant for Shortening, with Separate Shoe, Shaft \varnothing 0.4 mm

- Two parts, consisting of shaft with separate shoe
- Shaft can be shortened to required length
- No sharp ends
- Excellent stability and handling



Art.No.	Description	Length	Packaging
11100	Total titanium implant, shortenable from 7.8 mm to 2.8 mm in 1 mm intervals	7.8 mm	1 piece, sterile
11200	Total titanium implant, shortenable from 7.3 mm to 2.3 mm in 1 mm intervals	7.3 mm	1 piece, sterile

Total Titanium Middle Ear Implant for Shortening, Adjustable, with Separate Shoe, Shaft \varnothing 0.4 mm

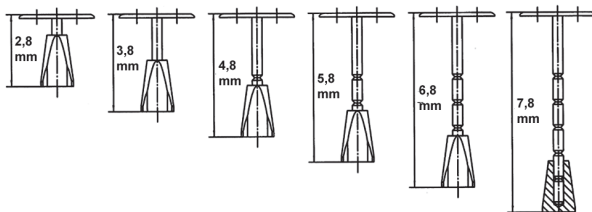
- Two parts, consisting of shaft with separate shoe
- Angle of implant head can be optimally adjusted to fit patient's anatomy
- Shaft can be shortened to required length
- No sharp ends
- Excellent stability and handling



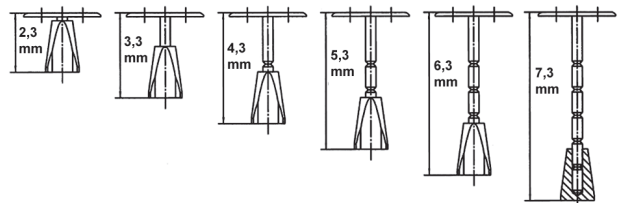
Art.No.	Description	Length	Packaging
11500	Total titanium implant, shortenable from 7.8 mm to 2.8 mm in 1 mm intervals	7.8 mm	1 piece, sterile
11600	Total titanium implant, shortenable from 7.3 mm to 2.3 mm in 1 mm intervals	7.3 mm	1 piece, sterile

Shortening Diagrams

11100 / 11500



11200 / 11600



Otology

Total Titanium Middle Ear Implant for Shortening, with Separate Head, Shaft \varnothing 0.3 mm

- Two parts consisting of shaft with shoe and separate implant head
- Shaft can be shortened to required length
- No sharp ends
- Reduction in weight due to 0.3 mm shaft
- Excellent stability and handling



Art.No.	Description	Length	Packaging
11300	Total titanium implant, shortenable from 7.5 mm to 3.5 mm in 1 mm intervals	7.5 mm	1 piece, sterile
11400	Total titanium implant, shortenable from 7.0 mm to 3.0 mm in 1 mm intervals	7.0 mm	1 piece, sterile

Shortening Diagrams



Partial Titanium Middle Ear Implant for Shortening, with Separate Head, Shaft \varnothing 0.3 mm

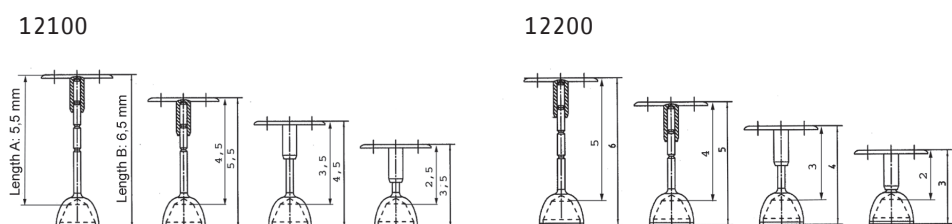
- Two parts consisting of shaft with bell and separate implant head
- Shaft can be shortened to required length
- No sharp ends
- Reduction in weight due to 0.3 mm shaft
- Excellent stability and handling



Art.No.	Description	Length	Packaging
12100	Partial titanium implant, shortenable from 5.5 mm to 2.5 mm in 1 mm intervals	5.5 mm	1 piece, sterile
12200	Partial titanium implant, shortenable from 5.0 mm to 2.0 mm in 1 mm intervals	5.0 mm	1 piece, sterile

Shortening Diagrams

ATTENTION:
Length A: applied length
 (= total length - 1 mm)
Length B: total length





Dummy Sizers for Titanium Middle Ear Implants

- Measure required implant length easily
- Stable
- Can be used with both our one- and two-part implants
- Similar in form to original implants in order to eliminate false measurements due to poorly comprehensible length scales
- Length lasered onto implant head
- Partial length is applied not the total length
- Available individually or in sets
- Special container for sterilizing is available
- Non-sterile, but easy to sterilize



Attention: The dummies are comparatively wide and do not have a sufficiently smooth surface to be used as implants.
Such use is strictly prohibited!

Dummy Sizers for Total Implants

Art.No.	Length
11000-D20	2.0 mm
11000-D25	2.5 mm
11000-D30	3.0 mm
11000-D35	3.5 mm
11000-D40	4.0 mm
11000-D45	4.5 mm
11000-D50	5.0 mm
11000-D55	5.5 mm
11000-D60	6.0 mm
11000-D65	6.5 mm
11000-D70	7.0 mm
11000-D75	7.5 mm

Dummy Sizers for Partial Implants

Art.No.	Applied Length
12000-D05	0.5 mm
12000-D10	1.0 mm
12000-D15	1.5 mm
12000-D17	1.75 mm
12000-D20	2.0 mm
12000-D25	2.5 mm
12000-D30	3.0 mm
12000-D35	3.5 mm
12000-D40	4.0 mm
12000-D45	4.5 mm
12000-D50	5.0 mm
12000-D55	5.5 mm

Sterilization Container

Art.No.	Description	Box
Dummy Box	Sterilization Container for Dummy Sizers	1 piece, non-sterile
Dummy Set	Sterilization Container with 12 Total and 12 Partial Dummy Sizers	25 pieces, non-sterile

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Shortening Instruments for Titanium Middle Ear Implants

Basic Shortening Block

- Basic block for total and partial implant shortening scales

Art. No.	Packaging
PF001-10	1 piece



Shortening Scale

- Shortening scale for use with the basic block for total implants 11100, 11200, 11500 & 11600

Art. No.	Packaging
PF001-11	1 piece



Shortening Scale

- Shortening scale for use with the basic block for partial implants 12100 & 12200

Art. No.	Packaging
PF001-12	1 piece



Shortening Scale

- Shortening scale for use with the basic block for total implants 11300 & 11400

Art. No.	Packaging
PF001-13	1 piece



Shortening Forceps

- With extra strong jaw 1.4 x 4.0 mm, length 80 mm

Art. No.	Packaging
10-715-00	1 piece





Instruments for Insertion of Middle Ear Implants

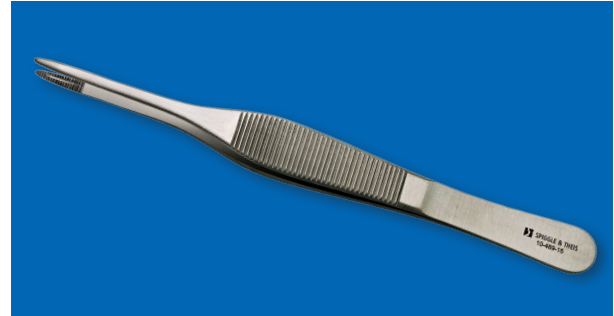
Hartmann Ear Forceps

Art. No.	Description	Packaging
10-701-00	Serrated, fine, self-closing , straight, 0.8 x 4.0 mm, 8 cm	1 piece



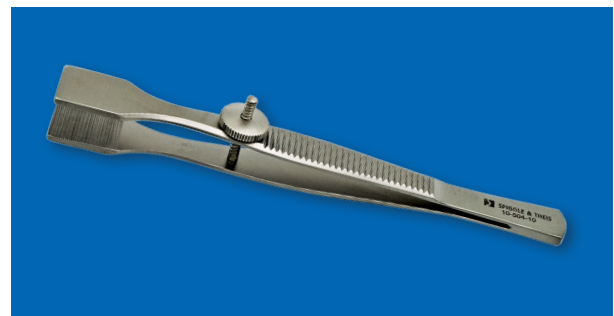
Helms Dressing Forceps

Art. No.	Description	Packaging
10-489-15	Serrated, straight, 1.8 mm, 15 cm	1 piece



Hildmann Cartilage Forceps

Art. No.	Description	Packaging
10-504-10	Straight, 10 cm	1 piece



Otology

Wollenberg Titanium Ear Instrument Set

- Non-magnetic
- Suitable for Vibrant Soundbridge, cochlear implants and titanium middle ear implants
- Extremely light
- No bending
- Very neat and precise workmanship

Micro Forceps, Titanium

- Anatomical
- Serrated
- 1 mm
- 15 cm

Art. No. Packaging
 10-605-10 1 piece



Micro Hook, Titanium

- 90°
- 1 mm
- Sharp
- 16 cm

Art. No. Packaging
 10-603-10 1 piece



Micro Needle, Titanium

- Slightly curved
- 16 cm

Art. No. Packaging
 10-600-00 1 piece



Hartmann Ear Forceps, Titanium

- Serrated
- Straight
- Fine
- Self-closing
- 0.8 x 4.0 mm
- 8 cm

Art. No. Packaging
 10-701-10 1 piece





Stapes Protheses

Platinum-PTFE, ø 0.4 mm

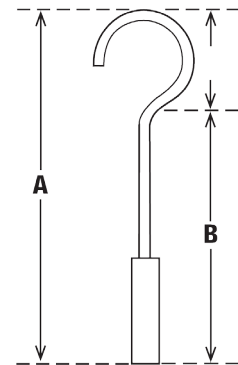
Art. No.	(Total) Length A	(Applied) Length B	Features	Packaging
10540425	5.25 mm	4.25 mm		1 piece / steril
10540450	5.50 mm	4.50 mm		1 piece / steril
10540475	5.75 mm	4.75 mm		1 piece / steril
10540600	7.00 mm	6.00 mm	shortenable	1 piece / steril
10540900	10.00 mm	9.00 mm	shortenable	1 piece / steril



Platinum-PTFE

Platinum-PTFE, ø 0.6 mm

Art. No.	(Total) Length A	(Applied) Length B	Features	Packaging
10560425	5.25 mm	4.25 mm		1 piece / steril
10560450	5.50 mm	4.50 mm		1 piece / steril
10560475	5.75 mm	4.75 mm		1 piece / steril
10560600	7.00 mm	6.00 mm	shortenable	1 piece / steril
10560900	10.00 mm	9.00 mm	shortenable	1 piece / steril



Total length (A) vs. applied length (B)

Titanium, ø 0.4 mm

Art. No.	(Total) Length A	(Applied) Length B	Features	Packaging
10640425	5.25 mm	4.25 mm		1 piece / steril
10640450	5.50 mm	4.50 mm		1 piece / steril
10640475	5.75 mm	4.75 mm		1 piece / steril
10640700	8.00 mm	7.00 mm	shortenable	1 piece / steril



Titanium

Titanium, ø 0.6 mm

Art. No.	(Total) Length A	(Applied) Length B	Features	Packaging
10660425	5.25 mm	4.25 mm		1 piece / steril
10660450	5.50 mm	4.50 mm		1 piece / steril
10660475	5.75 mm	4.75 mm		1 piece / steril
10660700	8.00 mm	7.00 mm	shortenable	1 piece / steril

Otology

Self-Cutting Titanium Ventilation Tube

- Time-saving, separate myringotomy blade is no longer needed
- Myringotomy blade is always sharp
- Easy positioning
- Excellent drainage and ventilation results
- Familiar collar button design
- Sits firmly
- To be used in combination with our 1.2 mm suction tube (Art.No. 302012)

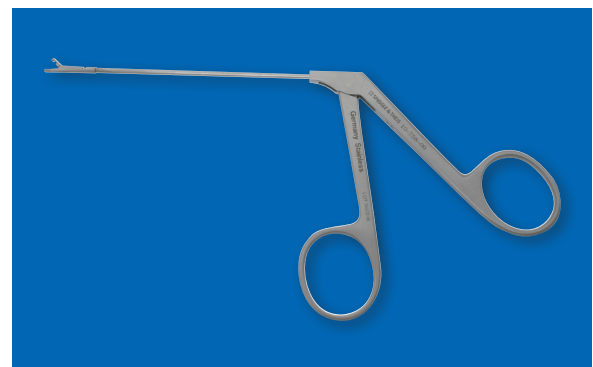
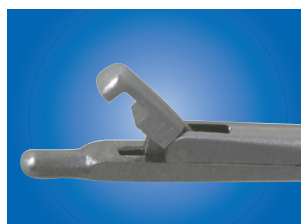
Art. No.	Inner Diameter	Packaging
10125SC	1.25 mm	10 pieces / sterile



Universal Insertion Forceps

- Universal insertion forceps for collar button ventilation tubes

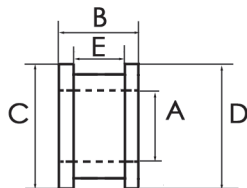
Art. No.	Packaging
10-758-00	1 piece





Titanium Ventilation Tube Collar Button

- Classic design
- Four different inner diameters
- Produced according to the highest quality standards
- Excellent biocompatibility and biostability
- Light
- Typical medium-term ventilation tube



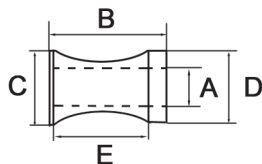
A = Inner diameter
B = Length
C = Inner flange diameter
D = Outer flange diameter
E = Inter flange distance



Art. No.	Feature	(B) Length	(A) Inner ϕ	(C) Inner Flange ϕ	(D) Outer Flange ϕ	(E) Inter Flange dist.	Packaging
10076		1.49 mm	0.76 mm	1.57 mm	1.97 mm	1.01 mm	10 pieces / box, sterile
10100		1.55 mm	1.00 mm	2.25 mm	2.25 mm	1.15 mm	10 pieces / box, sterile
10100F	with wire	1.55 mm	1.00 mm	2.25 mm	2.25 mm	1.15 mm	10 pieces / box, sterile
10125		1.55 mm	1.25 mm	2.50 mm	2.50 mm	1.15 mm	10 pieces / box, sterile
10125F	with wire	1.55 mm	1.25 mm	2.50 mm	2.50 mm	1.15 mm	10 pieces / box, sterile
10150		1.55 mm	1.50 mm	2.75 mm	2.75 mm	1.15 mm	10 pieces / box, sterile
10150F	with wire	1.55 mm	1.50 mm	2.75 mm	2.75 mm	1.15 mm	10 pieces / box, sterile

Titanium Ventilation Tube Shepard

- Classic design
- Two different inner diameters
- Produced according to the highest quality standards
- Excellent biocompatibility and biostability
- Light
- Typical short-term ventilation tube



A = Inner diameter
B = Length
C = Inner flange diameter
D = Outer flange diameter
E = Inter flange distance

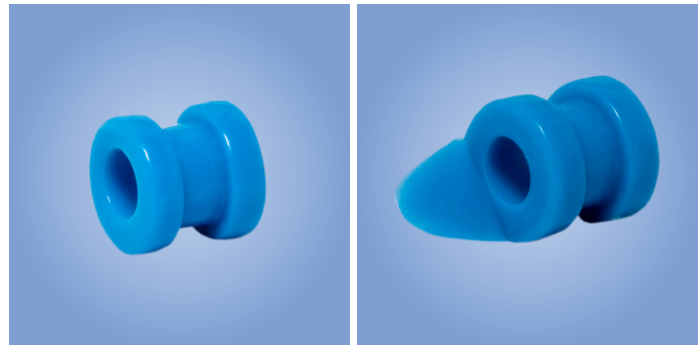
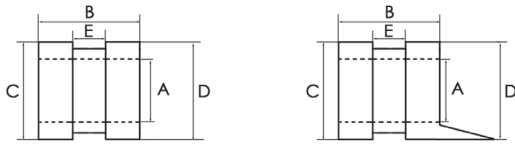


Art. No.	Feature	(B) Length	(A) Inner ϕ	(C) Inner Flange ϕ	(D) Outer Flange ϕ	(E) Inter Flange dist.	Packaging
101100		2.20 mm	1.00 mm	2.50 mm	2.50 mm	1.30 mm	10 pieces / box, sterile
101100F	with wire	2.20 mm	1.00 mm	2.50 mm	2.50 mm	1.30 mm	10 pieces / box, sterile
101125		2.20 mm	1.25 mm	2.50 mm	2.50 mm	1.30 mm	10 pieces / box, sterile
101125F	with wire	2.20 mm	1.25 mm	2.50 mm	2.50 mm	1.30 mm	10 pieces / box, sterile

Otology

Silicone Ventilation Tube Donaldson

- Short-term ventilation tube
- Flange design prevents migration and extrusion
- Also available with tab for easier insertion and removal
- Single, sterile packaging

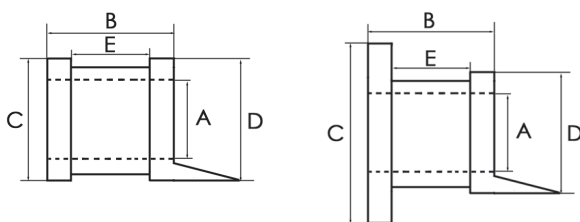


A = Inner diameter
 B = Length
 C = Inner flange diameter
 D = Outer flange diameter
 E = Inter flange distance

Art. No.	Feature	(B) Length	(A) Inner ϕ	(C) Inner Flange ϕ	(D) Outer Flange ϕ	(E) Inter Flange dist.	Packaging
103000		2.21 mm	1.10 mm	2.16 mm	2.11 mm	0.74 mm	10 pieces / box, sterile
103010	with tab	2.21 mm	1.10 mm	2.16 mm	2.11 mm	0.74 mm	10 pieces / box, sterile

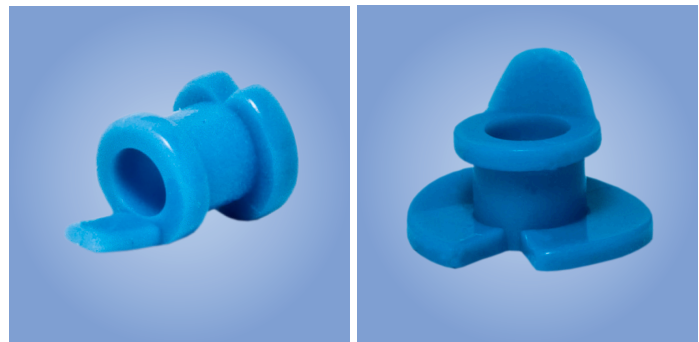
Silicone Ventilation Tube Paparella I+II

- Short-term ventilation tube
- Notched inner flange is designed for easier insertion in a smaller incision
- Two different sizes available
- Single, sterile packaging
- With tab



Paparella Type I

Paparella Type II



Paparella Type I

Paparella Type II

A = Inner diameter
 B = Length
 C = Inner flange diameter
 D = Outer flange diameter
 E = Inter flange distance

Art. No.	Description	(B) Length	(A) Inner ϕ	(C) Inner Flange ϕ	(D) Outer Flange ϕ	(E) Inter Flange dist.	Packaging
103300	Type I	2.21 mm	1,10 mm	2.16 mm	2.11 mm	1.19 mm	10 pieces / box, sterile
103310	Type II	1.98 mm	1,50 mm	4.45 mm	3.00 mm	1.09 mm	10 pieces / box, sterile

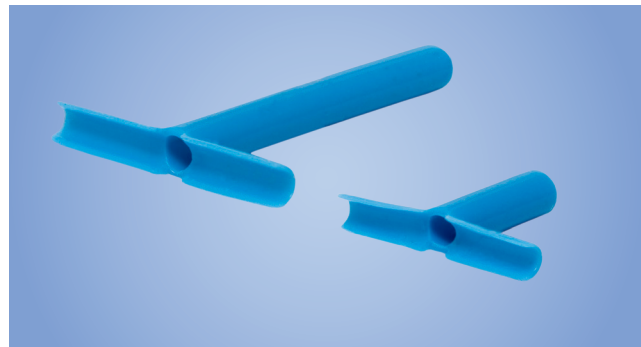
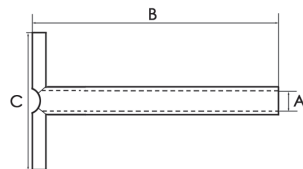




Silicone Ventilation Tube T-Tube

- Long-term ventilation tube
- Shafts and flanges can be partly shortened
- Proven and popular design
- Soft flanges open out after insertion into ear drum
- Opened flanges prevent premature loss
- Single, sterile packaging

A = Inner diameter
B = Length
C = Inner flange length

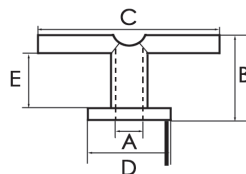


Art. No.	(B) Length	(A) Inner \varnothing	(C) Inner Flange	Packaging
103100	12.0 mm	1.14 mm	9.5 mm	10 pieces / box, sterile
103150	5.5 mm	1.14 mm	7.5 mm	10 pieces / box, sterile

Silicone Ventilation Tube Grommet T-Tube

- Long-term ventilation tube
- With integral tab for ease of insertion and removal
- Soft flanges open out after insertion into ear drum
- Opened flanges prevent premature loss
- Single sterile packaging

A = Inner diameter
B = Length
C = Inner flange length
D = Outer flange length
E = Inter flange distance

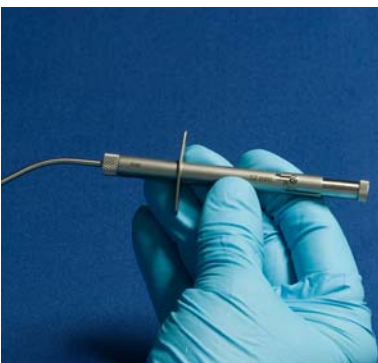
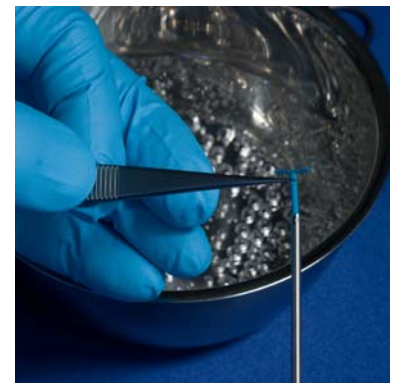
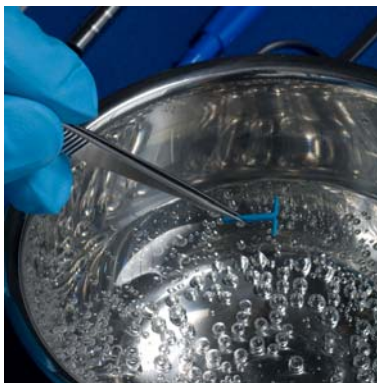
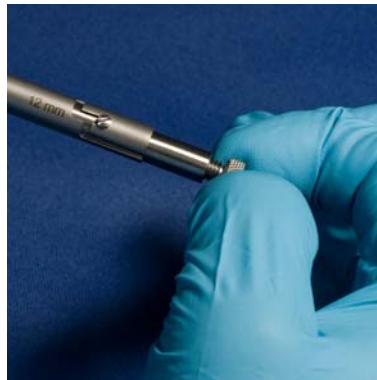


Art. No.	Feature	(B) Length	(A) Inner \varnothing	(C) Inner Flange	(D) Outer Flange	(E) Inter Flange dist.	Packaging
103200	with tab	3.81 mm	1.27 mm	3.81 mm	2.49 mm	8.13 mm	10 pieces / box, sterile



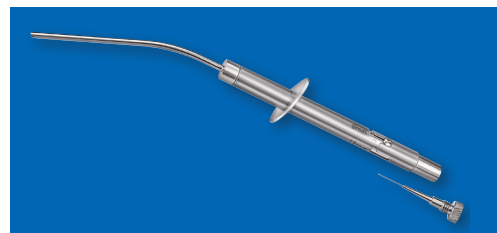
Otology

Instruction Sheet for Ventilation Tube Inserter



T-Tube Inserter

- Ventilation Tube Inserter for T-Tubes, 5.5 to 12 mm



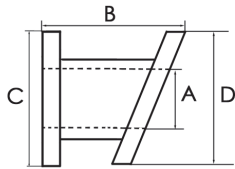
Art.-No.	Feature	Packaging
10-760-00	dismountable	1 piece
1316012	non-dismountable	1 piece





Silicone Ventilation Tube Armstrong

- Medium-term ventilation tube
- Bevelled inner flange corresponds to the angle of the tympanic membrane
- Easy insertion
- Single, sterile packaging



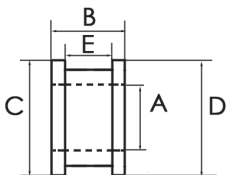
A = Inner diameter
B = Length
C = Inner flange diameter
D = Outer flange diameter



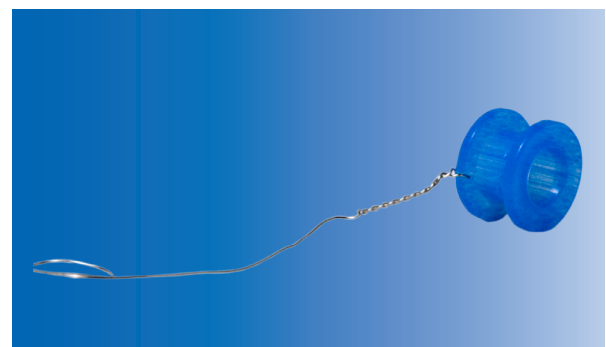
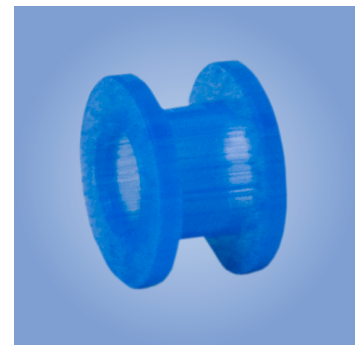
Art. No.	(B) Length	(A) Inner ϕ	(C) Inner Flange ϕ	(D) Outer Flange ϕ	Packaging
103400	3.86 mm	1.10 mm	3.61 mm	3.61 mm	10 pieces / box, sterile

Fluoroplastic Ventilation Tube Collar Button

- Medium-term ventilation tube
- Proven and popular design
- Three different inner diameters
- Also available with wire
- Single, sterile packaging



A = Inner diameter
B = Length
C = Inner flange diameter
D = Outer flange diameter
E = Inter flange distance



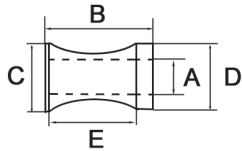
Art. No.	Feature	(B) Length	(A) Inner ϕ	(C) Inner Flange ϕ	(D) Outer Flange ϕ	(E) Inter Flange dist.	Packaging
104100		2.10 mm	1.00 mm	2.70 mm	2.70 mm	1.30 mm	10 pieces / box, sterile
104100-F	with wire	2.10 mm	1.00 mm	2.70 mm	2.70 mm	1.30 mm	10 pieces / box, sterile
104125		2.10 mm	1.25 mm	2.95 mm	2.95 mm	1.30 mm	10 pieces / box, sterile
104125-F	with wire	2.10 mm	1.25 mm	2.95 mm	2.95 mm	1.30 mm	10 pieces / box, sterile
104150		2.10 mm	1.50 mm	3.20 mm	3.20 mm	1.30 mm	10 pieces / box, sterile
104150-F	with wire	2.10 mm	1.50 mm	3.20 mm	3.20 mm	1.30 mm	10 pieces / box, sterile



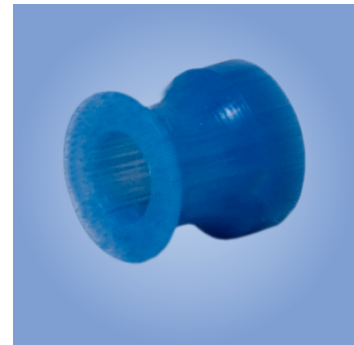
Otology

Fluoroplastic Ventilation Tube Shepard

- Short-term ventilation tube
- Proven and popular design
- Also available with wire
- Single, sterile packaging



A = Inner diameter
 B = Length
 C = Inner flange diameter
 D = Outer flange diameter
 E = Inter flange distance



Art. No.	Feature	(B) Length	(A) Inner ϕ	(C) Inner Flange ϕ	(D) Outer Flange ϕ	(E) Inter Flange dist.	Packaging
104115		2.40	1.15	2.40	2.40	1.50	10 pieces / box, sterile
104115-F	with wire	2.40	1.15	2.40	2.40	1.50	10 pieces / box, sterile

Fluoroplastic Ventilation Tube Shah

- Medium-term ventilation tube
- Wedge shaped inner flange for easier insertion
- Also available with tab

Art. No.	Inner ϕ	Feature	Packaging
104200	1.14 mm	with tab	10 pieces / box
104210	1.14 mm		10 pieces / box





PVA Tampons

- Expanding ear tampon for post-tympanoplastic tamponing of the external acoustic canal
- With or without central lumen



Dry state



Dry state

Art.-No.	Dimensions	Feature	Packaging
66400	9 x 15 mm	with inner lumen	50 pieces / box
66410	12 x 24 mm	with inner lumen	20 pieces / box
66420	9 x 15 mm		50 pieces / box



Wet state



Wet state

Important:

In order to prevent the tampon adhering to tissue after tympanoplasty, it is absolutely vital that strips of silicone sheeting (e.g. Art.No. 1710000 or 1710001) are applied to the eardrum and the walls of the external acoustic canal. **Must be kept constantly moist for the entire duration of use. Not suitable for implantation!**

Absorbable Gelatin Sponge

Ear tampons made of purified porcine gelatin are commonly utilised in otoplasty. They function dry or moist, and have a wide range of applications. They can be used for local haemostasis, keeping fascia or perichondrium in place, or even as a carrier for the local application of antibiotics. The advantages of this material are the porous structure and light weight combined with good compatibility and complete absorption.

- 100% purified porcine gelatin
- Comparatively high density resulting in longer tamponing
- Insoluble in water and fully absorbable
- Total absorption time varies according to application (between 4 and 6 weeks)
- Practical size
- Single sterile blister packaging, i.e. can be used sparingly



Art. No.	Dimensions	Packaging
GS-325	10 x 10 x 10 mm	50 pieces / box
GS-015	80 x 50 x 10 mm	10 pieces / box

