SPIGGLE & THEIS
Medizintechnik

Middle Ear Implants

Quality you can rely on

30 Years
SPIGGLE & THEIS
1994 - 2024

Middle Ear Implants

Middle Ear Implants

In otoplasty, middle ear implants serve as replacements for damaged or redundant ossicles. They restore the defect mechanical chain of sound transmission between the tympanum and the stapes footplate.

There are two basic types of middle ear implants:

Total implants, TORP (Total Ossicular Replacement Prosthesis) – total ossicular replacement; functional stapes footplate

Partial implants, PORP (Partial Ossicular Replacement Prosthesis) – partial ossicular replacement; stapes still present; functional stapes footplate.

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Hospital Frankfurt Höchst, Germany

*» Titanium is characterized by its high **biocompatibility** and **stability** combined with high rigidity and low weight. «*

According to Wullstein (1968), tympanoplasty requires a constant assessment of the present situation, each of which requires a special solution. One of the great challenges is reconstructing a broken or fixed ossicular chain to restore optimal hearing. Since the dawn of middle ear surgery, a variety of materials have been used. An ever-advancing development in materials technology has led to the use of titanium since 1994.

Total implant

fixed length, titanium, shaft ∅ 0.3 mm, sterile

Advantages:
- Manufactured from one single piece
- Excellent stability and handling
- Large choice of lengths
- Adjustable head angle
  (exception: 3 mm length implants)

Oval-excentric head

Round-centric head

Titanium is distinguished from all other materials used so far by its high biocompatibility and stability with high rigidity and low weight. By a simple individual adjustment in length and angle partial and total prosthesis can be ideally adapted to any anatomical situation. This middle ear implant system made of pure titanium has been able to provide the young as well as experienced otologist with a tool to safely replace destroyed ossicles and to reproduce the patient's lost hearing.

Art.-No.	Length (mm)
11830	3.00
11835	3.50
11840	4.00
11842	4.25
11845	4.50
11847	4.75
11850	5.00
11855	5.50
11860	6.00
11865	6.50
11870	7.00

Art.-No.	Length (mm)
11930	3.00
11935	3.50
11940	4.00
11942	4.25
11945	4.50
11947	4.75
11950	5.00
11955	5.50
11960	6.00
11965	6.50
11970	7.00

Partial implant

fixed length, titanium, shaft ∅ 0.3 mm, sterile

Partial implant designs with slitted bells provide the option of placing the implant on the complete bow of the stapes sides when the stapes head is no longer there. This 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 an improved fitting of the malleus. A clearer view for positioning the bell end is possible due to openings found in both versions.

Advantages:

- Manufactured from one single piece
- Optimal positioning on the stapes head
- Large choice of lengths
- Different dimensions available
- Round-centric head or oval-excentric head with additional groove
- Complete bell or bell with slits
- Excellent stability and handling

Round-centric head with slitted bell

Art.-No.	Insert length (mm)
12705	0.50
12710	1.00
12712	1.25
12715	1.50
12717	1.75
12720	2.00
12722	2.25
12725	2.50
12730	3.00
12735	3.50

Oval-excentric head with slitted bell

Art.-No.	Insert length (mm)
12805	0.50
12810	1.00
12812	1.25
12815	1.50
12817	1.75
12820	2.00
12822	2.25
12825	2.50
12830	3.00
12835	3.50

Round-centric head with complete bell

Art.-No.	Insert length (mm)
12905	0.50
12910	1.00
12912	1.25
12915	1.50
12917	1.75
12920	2.00
12922	2.25
12925	2.50
12930	3.00
12935	3.50

Total-Implants

variable length, titanium, shortenable, sterile

Advantage:
• Shaft can be shortened to required length in 1 mm intervals

Total implant, shortenable, shaft ∅ 0.4 mm, sterile

- Two parts (with head and separate shoe)
- No sharp ends

Art.-No.	Material	Overall Length (mm)
11100	titanium	2.8 - 7.8
11200	titanium	2.3 - 7.3

Total implant, shortenable, shaft ∅ 0.4 mm, sterile

- Adjustable head
- Two pieces (with head and separate shoe)

Art.-No.	Material	Overall Length (mm)
11500	titanium	2.8 - 7.8
11600	titanium	2.3 - 7.3

Total implant, shortenable, shaft ∅ 0.3 mm, sterile

- Two pieces (shaft with shoe and separate head)
- Reduction in weight due to 0.3 mm shaft diameter

Art.-No.	Material	Overall Length (mm)
11300	titanium	3.5 - 7.5
11400	titanium	3.0 - 7.0

Partial implant

Sterile, titanium

Advantage:
• Shaft can be shortened to required length in 1 mm intervals

Partial implant, shaft ∅ 0.3 mm, sterile

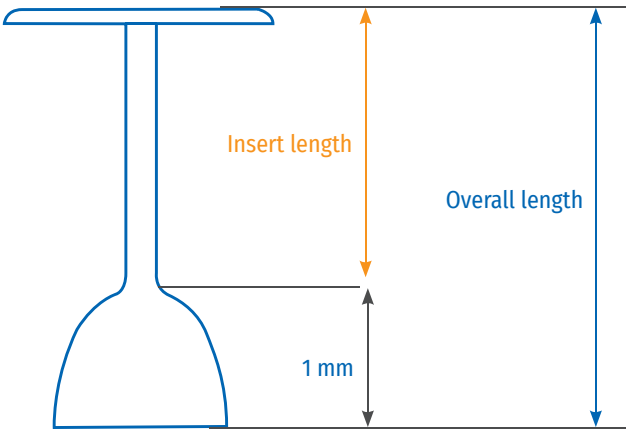
- Two pieces (shaft with bell and separate head)
- Reduction in weight due to 0.3 mm shaft diameter

Art.-No.	Material	Overall Length (mm)
12100	titanium	2.5 - 5.5
12200	titanium	2.0 - 5.0

Insert length / Overall length

Variable length

ATTENTION:
Insert length = Overall length - 1 mm



Shortening instruments

For titanium middle ear implants

Basic block

for shortening scales (total and partial implants)

PF001-10

Shortening scale for use with the basic block

for total implants 11100, 11200, 11500, 11600

PF001-11

Shortening scale for use with the basic block

for partial implants 12100, 12200

PF001-12

Shortening scale for use with the basic block

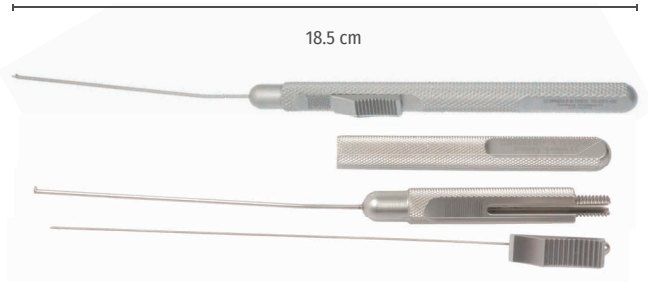
for total implants 11300, 11400

PF001-13

Shortening forceps with extra strong jaw

1.4 x 4.0 mm, 8 cm

10-715-00



Reference Instrument for middle ear prostheses

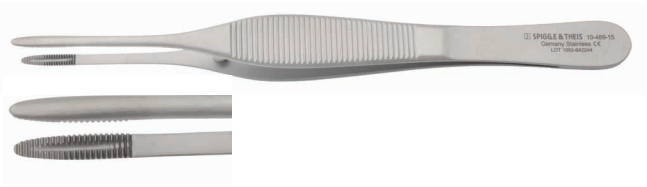
slide button control from 0-8 mm, 18.5 cm

Art.-No.	Description
10-651-00	Non-Dismountable
10-652-00	Dismountable

Hartmann ear forceps

- Serrated and fine
- Self-closing
- straight
- 0.8 x 4.0 mm
- 8 cm

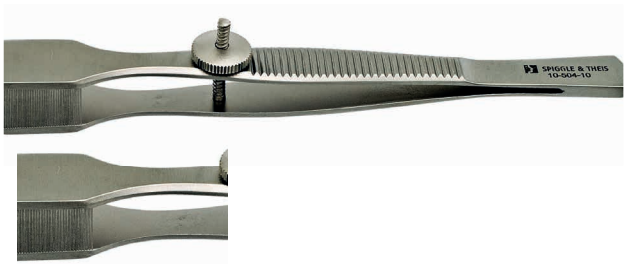
10-701-00



Helms, dressing forceps

- Straight, anatomical
- 2.8 mm
- 15 cm

10-489-15



Hildmann, cartilage forceps

- Straight
- 11 cm

10-504-10

Please see our otological instrument catalog for the complete range of our otological instruments.

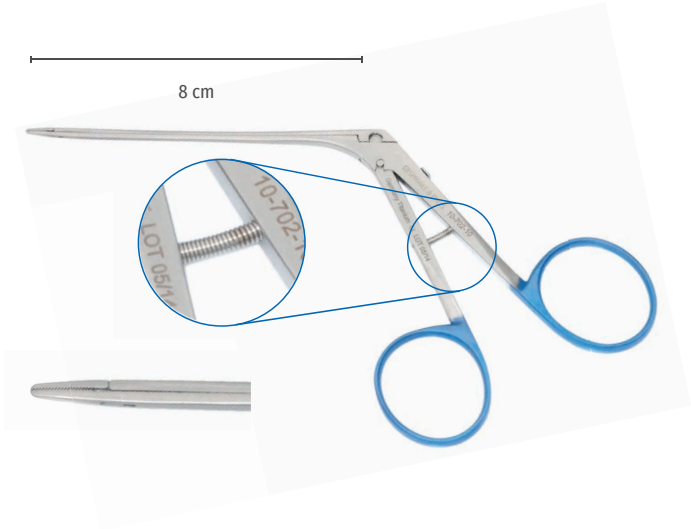
Titanium Ear Instrument Set

Prof. Wollenberg

Prof. Dr. med. B. Wollenberg
Director of the clinic and polyclinic for ear, nose and throat medicine, Chair of Otorhinolaryngology at the Technical University Munich (TUM), Germany

» Vibrant Soundbridge (VSB) implantation is well established in the surgical treatment of sensorineural as well as combined hearing loss in e.g. revision middle ear surgery or complex atresia cases. «

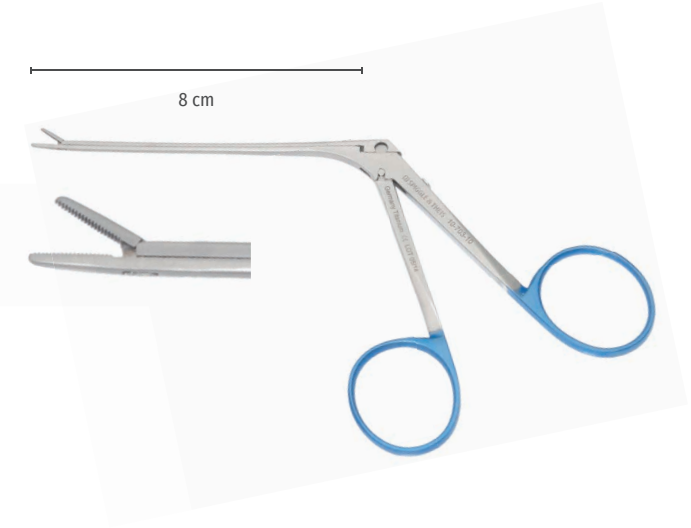
„Coupling the VSB to existing anatomical structures can be greatly facilitated using non magnetic Titanium instruments. With the help of the presented instruments frequently used during such operations, the VSB can be easily positioned and will no longer be displaced by a magnetic ghost hand."



Hartmann ear forceps, titanium

- Non-magnetic
- Fine
- Straight
- Self-closing
- 8 cm

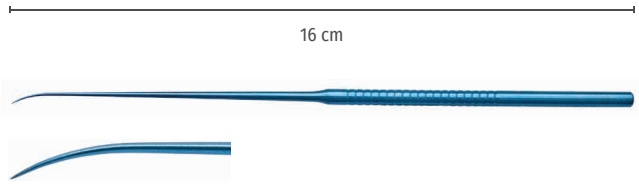
Art.-No.	Size (mm)
10-702-10	1 x 6 (serrated)
10-702-11	1 x 6 (smooth)



Hartmann ear forceps, titanium

- Non-magnetic
- Straight
- Fine
- 1 x 6 mm
- 8 cm

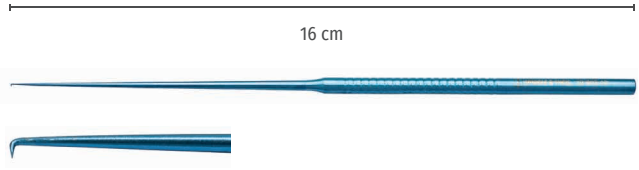
10-703-10



Micro needle, titanium

- Non-magnetic
- 16 cm

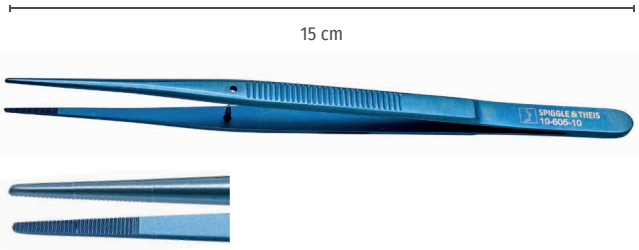
Art.-No.	Description
10-600-00	short curve, slightly curved
10-601-00	long curve, very slightly curved



Micro hook, titanium

- Non-magnetic
- Sharp
- 1 mm
- 16 cm

Art.-No.	Angle
10-603-10	90°
10-604-10	45°



Micro forceps, titanium

- Non-magnetic
- Anatomical
- 1 mm
- 15 cm

10-605-10

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