SPIGGLE & THEIS
Medizintechnik

Stapes Prostheses

Nitinol - Platinum - Titanium



Quality you can rely on



Stapes Prostheses

Stapes Prostheses

Typically, stapes prostheses are used as a replacement for the stapedius, i.e. the stirrup bone, with the footplate fixed in place.

Common materials used to make the prostheses are **platinum, a combination of platinum and PTFE** and, increasingly, **titanium.**

In 2008, we began using a special combination of **super-elastic nitinol with PTFE**.

The shape of a stapes prosthesis resembles a question mark. The curved part is placed around the long incus and fixed in different ways, depending on the model. The cylindrical shaft is passed through a hole in the footplate. This restores the mechanical sound conduction chain. Sound can now be conducted from the eardrum via the residual ossicular chain and the implant through the stapedial footplate.



Stapes Prostheses

Nitinol/PTFE-Prostheses



Prof. Dr. med. Serena Preyer
Chief physician of the ENT Clinic
Diakonissenkrankenhauses,
Karlsruhe, Germany

» Using the new superelastic stapes nitinol piston prostheses removes the critical surgical step of crimping the piston loop to the long process of incus during stapes surgery. «

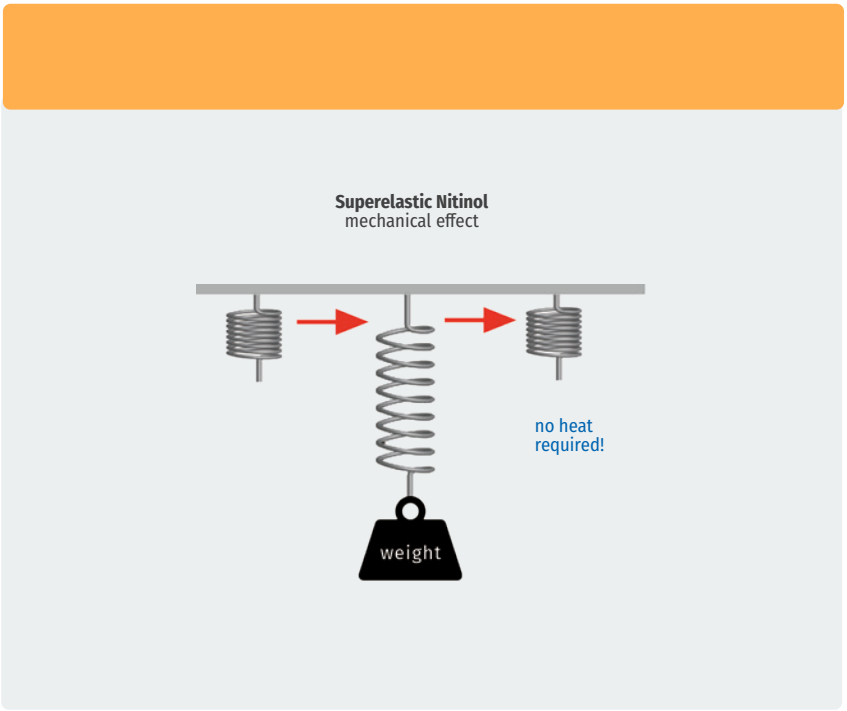
The average diameter of the incus is 0.7 mm, but the exact diameter can vary from patient to patient. For this reason an incus fork with 0.7 mm diameter was developed in collaboration with **Prof. Serena Preyer**, to ascertain the proper size of stapes prostheses. The size of the hook is determined by simply placing the incus fork over the incus.



Preyer incus fork **10-670-00**

Nitinol features a unique material behavior. Small changes to the composition and the manufacturing process allow you to change the effect of the mechanical shape memory (super-elasticity) or the thermal shape memory (shape memory effect).

The alloy is light-weight with excellent biocompatibility. The super-elasticity causes the material to return to its original shape through its intrinsic tension when not under load. Unlike the shape memory effect, **no temperature changes are necessary** and the potential risk of heat-induced necrosis is virtually eliminated. Furthermore, the surgical procedure is abbreviated because no heating of the prosthesis is required.

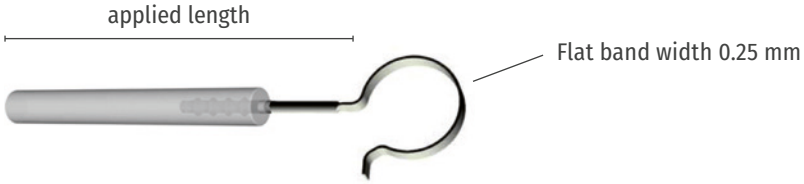


Nitinol/PTFE, superelastic, sterile



Size range of hook:

M (medium):	inner diameter = 0.7 mm
S (small):	inner diameter < 0.7 mm
L (large):	inner diameter > 0.7 mm



PTFE shaft ∅: 0.4 mm

Incus diameter medium: 0.7 mm

Art.-No.	Applied length (mm)
10740425M	4.25
10740450M	4.50
10740475M	4.75
shortenable:	
10740600M	6.00

Incus diameter small < 0.7 mm

Art.-No.	Applied length (mm)
10740425S	4.25
10740450S	4.50
10740475S	4.75
shortenable:	
10740600S	6.00

Incus diameter large > 0.7 mm

Art.-No.	Applied length (mm)
10740425L	4.25
10740450L	4.50
10740475L	4.75
shortenable:	
10740600L	6.00

PTFE shaft ∅: 0.6 mm

Incus diameter medium: 0.7 mm

Art.-No.	Applied length (mm)
10760425M	4.25
10760450M	4.50
10760475M	4.75
shortenable:	
10760600M	6.00

Incus diameter small < 0.7 mm

Art.-No.	Applied length (mm)
10760425S	4.25
10760450S	4.50
10760475S	4.75
shortenable:	
10760600S	6.00

Incus diameter large > 0.7 mm

Art.-No.	Applied length (mm)
10760425L	4.25
10760450L	4.50
10760475L	4.75
shortenable:	
10760600L	6.00

Find more information and an instruction video on our website
www.spiggle-theis.com

Stapes Prostheses

Platinum/PTFE, sterile



Characteristics:
The flat band of this prosthesis has four transversal notches. Under soft pressure of forceps the flat band closes equally and grabs perfectly without any reduction of blood flow.

Shaft diameter: 0.4 mm

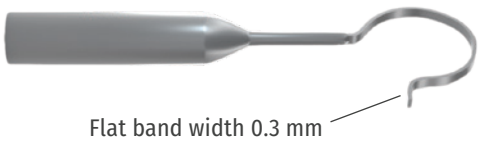
Art.-No.	Applied length (mm)
10540425	4.25
10540450	4.50
10540475	4.75
10540600	6.00

Shaft diameter: 0.6 mm

Art.-No.	Applied length (mm)
10560425	4.25
10560450	4.50
10560475	4.75
10560600	6.00

Stapes Prostheses

Titanium, sterile



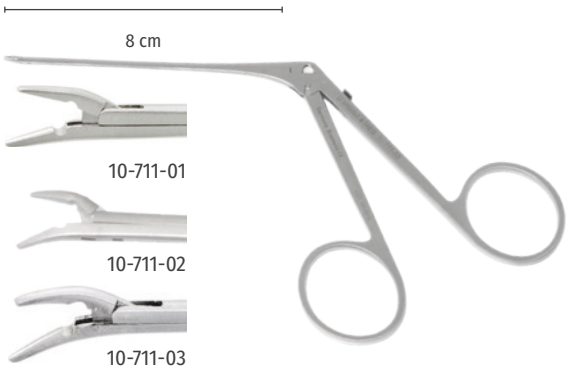
Characteristics:
Under soft pressure of forceps the flat band closes equally and grabs perfectly without any reduction of blood flow.

Shaft diameter: 0.4 mm

Art.-No.	Applied length (mm)
10640425	4.25
10640450	4.50
10640475	4.75

Shaft diameter: 0.6 mm

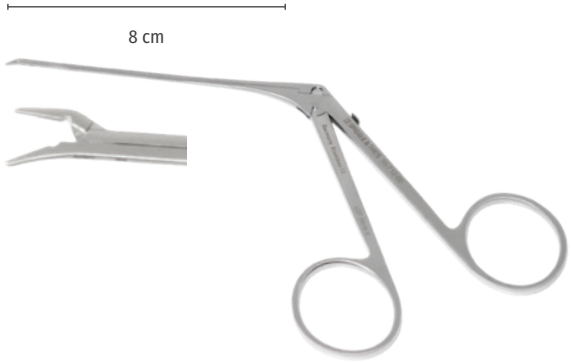
Art.-No.	Applied length (mm)
10660425	4.25
10660450	4.50
10660475	4.75



McGee wire closing forceps

- 0.8 x 3.5 mm
- 8 cm

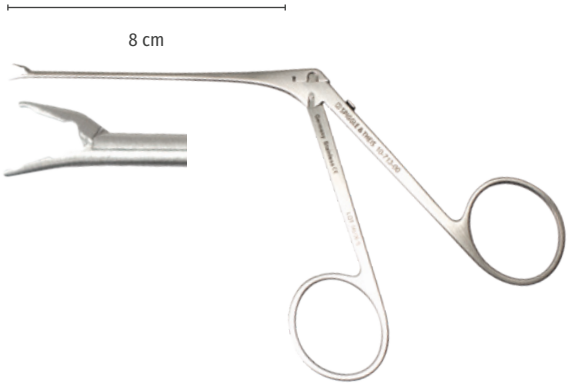
Art.-No.	Description
10-711-01	straight
10-711-02	curved right
10-711-03	curved left



Fisch-McGee wire closing forceps

- Straight
- 0.6 x 3.5 mm
- Length 8 cm

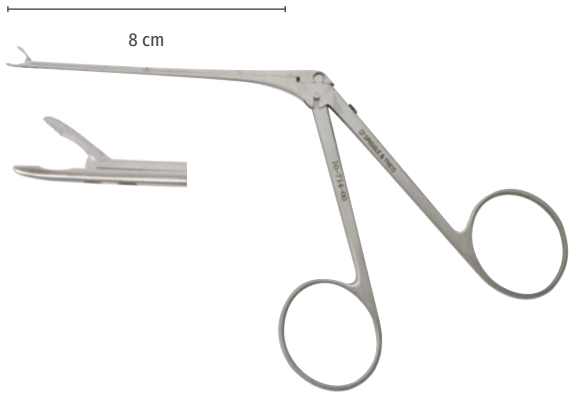
10-712-00



Müller wire closing forceps

- Straight
- 0.8 x 3.5 mm
- Rounded tip

10-713-00



Greven wire closing forceps

- Straight
- 0.8 x 5 mm
- Length 8 cm

10-714-00

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