ENDOVISION

# IMPLANTS FOR STAPEDIOPLASTY

## PLATINUM IMPLANTS/**PTFE**
## FOR STAPEDOTOMY AND STAPEDECTOMY

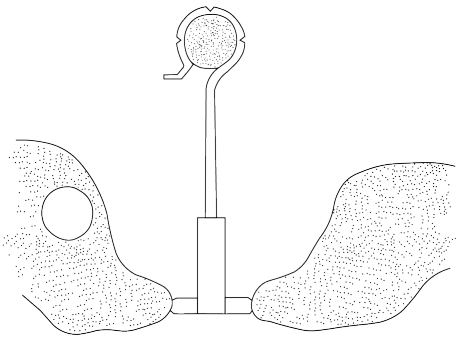
**ITEM**
**SPL 03.07/08/09/10**

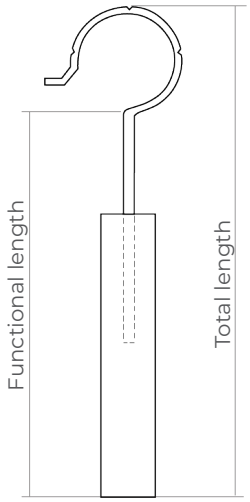
### PTFE: POLYTETRAFLUOROETHYLENE

The implant is made up of a 999‰ pure platinum hook (well tolerated and malleable material).

The stem of the implant is in PTFE, an anti-adhesive polymer to the walls of the stapedotomy.

The hook has three millings: under light pressure of the pliers, the millings allow the curvature and crimping of the hook in a controlled manner by winding the long apophysis of the incus without causing ischemia and risk of ovalized crimping.






### PLATINUM IMPLANTS/**PTFE** IMPLANTS

| Total leng (LT) | Functional length (LF) | Ø06 mm | Ø0.4 mm | Ø0.5 mm | Ø0.8 mm |
|---|---|---|---|---|---|
| **4.25 mm** | **3.25 mm** | SPL 03.07.425 | SPL 03.08.425 | SPL 03.09.425 | SPL 03.10.425 |
| **4.50 mm** | **3.50 mm** | SPL 03.07.450 | SPL 03.08.450 | SPL 03.09.450 | SPL 03.10.450 |
| **4.75 mm** | **3.75 mm** | SPL 03.07.475 | SPL 03.08.475 | SPL 03.09.475 | SPL 03.10.475 |
| **5.00 mm** | **4.00 mm** | SPL 03.07.500 | SPL 03.08.500 | SPL 03.09.500 | SPL 03.10.500 |
| **5.25 mm** | **4.25 mm** | SPL 03.07.525 | SPL 03.08.525 | SPL 03.09.525 | SPL 03.10.525 |
| **5.50 mm** | **4.50 mm** | SPL 03.07.550 | SPL 03.08.550 | SPL 03.09.550 | SPL 03.10.550 |
| **5.75 mm** | **4.75 mm** | SPL 03.07.575 | SPL 03.08.575 | SPL 03.09.575 | SPL 03.10.575 |
| **6.00 mm** | **5.00 mm** | SPL 03.07.600 | SPL 03.08.600 | SPL 03.09.600 | SPL 03.10.600 |

## SHORTENABLE PLATINUM IMPLANTS/**PTFE**
## FOR STAPEDOTOMY AND STAPEDECTOMY

**SPL 03.07 S**

Total length (L)

7.00 mm shortenable up to 4.25 mm

DIMENSIONS
**Piston diameter:** 0.6 mm

**SPL 03.08 S**

Total length (L)

7.00 mm shortenable up to 4.25 mm

DIMENSIONS
**Piston diameter:** 0.4 mm

**SPL 03.09 S**

Total length (L)

7.00 mm shortenable up to 4.25 mm

DIMENSIONS
**Piston diameter:** 0.5 mm

**SPL 03.10 S**

Total length (L)

7.00 mm shortenable up to 4.25 mm

DIMENSIONS
**Piston diameter:** 0.8 mm

## TITANIUM IMPLANTS

**ITEM**
**SPL 03.20/21/22/23**

| Total length (LT) | Functional length (LF) | COLUMELLA DIAMETER | | | |
|---|---|---|---|---|---|
| | | ø 0.6 mm | ø 0.4 mm | ø 0.5 mm | ø 0.8 mm |
| **4.25 mm** | **3.45 mm** | SPL 03.20.425 | SPL 03.21.425 | SPL 03.22.425 | SPL 03.23.425 |
| **4.50 mm** | **3.70 mm** | SPL 03.20.450 | SPL 03.21.450 | SPL 03.22.450 | SPL 03.23.450 |
| **4.75 mm** | **3.95 mm** | SPL 03.20.475 | SPL 03.21.475 | SPL 03.22.475 | SPL 03.23.475 |
| **5.00 mm** | **4.20 mm** | SPL 03.20.500 | SPL 03.21.500 | SPL 03.22.500 | SPL 03.23.500 |
| **5.25 mm** | **4.45 mm** | SPL 03.20.525 | SPL 03.21.525 | SPL 03.22.525 | SPL 03.23.525 |
| **5.50 mm** | **4.70 mm** | SPL 03.20.550 | SPL 03.21.550 | SPL 03.22.550 | SPL 03.23.550 |
| **5.75 mm** | **4.75 mm** | SPL 03.20.575 | SPL 03.21.575 | SPL 03.22.575 | SPL 03.23.575 |
| **6.00 mm** | **5.00 mm** | SPL 03.20.600 | SPL 03.21.600 | SPL 03.22.600 | SPL 03.23.600 |

The hook has three millings: under light pressure of the pliers, the millings allow the curvature and crimping of the hook in a controlled manner by winding the long apophysis of the incus without causing ischemia and risk of ovalized crimping.

## TITANIUM IMPLANTS/**PTFE**

**ITEM**
**SPL 03.27/28/29/30**

| Total length (LT) | Functional length (LF) | COLUMELLA DIAMETER | | | |
|---|---|---|---|---|---|
| | | ø 0.6 mm | ø 0.4 mm | ø 0.5 mm | ø 0.8 mm |
| **4.25 mm** | **3.45 mm** | SPL 03.29.425 | SPL 03.27.425 | SPL 03.28.425 | SPL 03.30.425 |
| **4.50 mm** | **3.70 mm** | SPL 03.29.450 | SPL 03.27.450 | SPL 03.28.450 | SPL 03.30.450 |
| **4.75 mm** | **3.95 mm** | SPL 03.29.475 | SPL 03.27.475 | SPL 03.28.475 | SPL 03.30.475 |
| **5.00 mm** | **4.20 mm** | SPL 03.29.500 | SPL 03.27.500 | SPL 03.28.500 | SPL 03.30.500 |
| **5.25 mm** | **4.45 mm** | SPL 03.29.525 | SPL 03.27.525 | SPL 03.28.525 | SPL 03.30.525 |
| **5.50 mm** | **4.70 mm** | SPL 03.29.550 | SPL 03.27.550 | SPL 03.28.550 | SPL 03.30.550 |
| **5.75 mm** | **4.75 mm** | SPL 03.29.575 | SPL 03.27.575 | SPL 03.28.575 | SPL 03.30.575 |
| **6.00 mm** | **5.00 mm** | SPL 03.29.600 | SPL 03.27.600 | SPL 03.28.600 | SPL 03.30.600 |

The hook has three millings: under light pressure of the pliers, the millings allow the curvature and crimping of the hook in a controlled manner by winding the long apophysis of the incus without causing ischemia and risk of ovalized crimping.

## SHORTENABLE PLATINUM IMPLANTS/**PTFE** FOR STAPEDOTOMY AND STAPEDECTOMY

### SPL 03.27 S

DIMENSIONS
**Columella in PTFE Ø:**
0,4 mm
**Total length (L):**
7.00 mm **shortenable up to** 4.25 mm

### SPL 03.28 S

DIMENSIONS
**Columella in PTFE Ø:**
0,5 mm
**Total length (L):**
7.00 mm **shortenable up to** 4.25 mm

### SPL 03.29 S

DIMENSIONS
**Columella in PTFE Ø:**
0,6 mm
**Total length (L):**
7.00 mm **shortenable up to** 4.25 mm

### SPL 03.30 S

DIMENSIONS
**Columella in PTFE Ø:**
0,8 mm
**Total length (L):**
7.00 mm **shortenable up to** 4.25 mm

## IMPLANTS IN SUPERELASTIC NITINOL AND **PTFE**

*Piston diameter in PTFE di 0,4 - 0,5 - 0,6 – 0,8 mm*
*Available lengths: from 7,00 mm shortenable up to 4,25 mm*

**ITEM**
**SPL 03.43/44/45/46**

Superelastic nitinol can be flexed and twisted, but it always springs back to the original position. The nitinol hook assembles to the long apophysis of the incus with an easy vertical motion that requires a push of only 4 grams of force.

### NITINOL HOOK

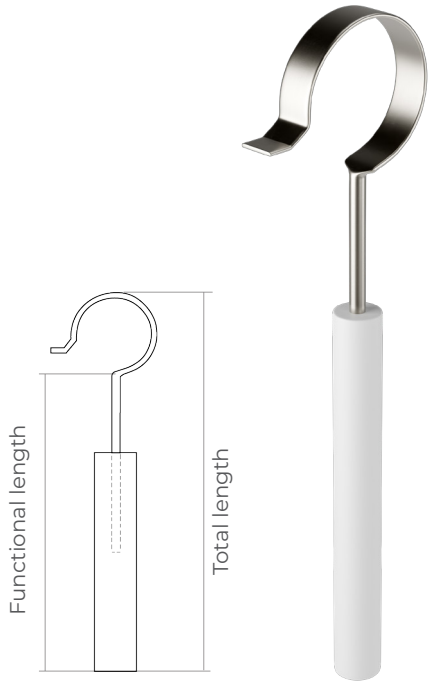
The classic Audio flat hook in combination with superelastic Nitinol is the result of a unique production process by Audio Technologies. This feature also joins with the other excellent qualities of Nitinol such as: mechanical strength, bio-inertia and lightness.

### SIMPLIFICATION OF THE SURGICAL INTERVENTION

The elasticity of the hook reduces surgical steps and difficulties which may occur during the closure phase. The hook closes gently by exerting pressure along the total periphery of the long apophysis of the incus to minimize the risk of compression necrosis.

### EASY ASSEMBLY

The piston fits onto the incus in one easy downward motion. The Audio Technologies SPL 03.01 micro pliers make it very easy to assemble the implant onto the incus.




## PISTONS IN **NITINOL**

| Total length (LT) | Functional length (LF) | Ø04 mm | Ø0.5 mm | Ø0.6 mm | Ø0.8 mm |
|---|---|---|---|---|---|
| **4.25 mm** | **3.25 mm** | SPL 03.43.425 | SPL 03.44.425 | SPL 03.45.425 | SPL 03.46.425 |
| **4.50 mm** | **3.50 mm** | SPL 03.43.450 | SPL 03.44.450 | SPL 03.45.450 | SPL 03.46.450 |
| **4.75 mm** | **3.75 mm** | SPL 03.43.475 | SPL 03.44.475 | SPL 03.45.475 | SPL 03.46.475 |
| **5.00 mm** | **4.00 mm** | SPL 03.43.500 | SPL 03.44.500 | SPL 03.45.500 | SPL 03.46.500 |
| **5.25 mm** | **4.25 mm** | SPL 03.43.525 | SPL 03.44.525 | SPL 03.45.525 | SPL 03.46.525 |
| **5.50 mm** | **4.50 mm** | SPL 03.43.550 | SPL 03.44.550 | SPL 03.45.550 | SPL 03.46.550 |
| **5.75 mm** | **4.75 mm** | SPL 03.43.575 | SPL 03.44.575 | SPL 03.45.575 | SPL 03.46.575 |
| **6.00 mm** | **5.00 mm** | SPL 03.43.600 | SPL 03.44.600 | SPL 03.45.600 | SPL 03.46.600 |
| **7.00 mm** | **6.00 mm** | SPL 03.43 S | SPL 03.44 S | SPL 03.45 S | SPL 03.46 S |

## IMPLANTS IN SUPERELASTIC NITINOL AND **PTFE**

**ITEM**
**SPL 03.43 S/44 S/ 45 S/46 S**

### DIMENSIONS OF NITILON SUPERELASTIC HOOKS

All superelastic nitinol piston clamp implants and stem in PTFE are available in two versions:

- The variant with a “P” which follows the item number indicates the hook with a diameter of 0.9 mm, that is to say a tenth of a millimeter smaller compared to the standard product. *For example SPL 03.43 SP.*
- The variant with a “G” which follows the item number indicates the hook with a diameter of 1.1 mm, that is to say a tenth of a millimeter smaller compared to the standard product. *For example SPL 03.43 SG.*

### SHORTENABLE VERSION

Superelastic nitinol implants with stem in PTFE are also available in the measure of 7,0 mm shortenable up to 4,25 mm.

The stem can be easily cut by the surgical scalpel.

After having used the measuring tool 02.14, it is recommended to use the plate SPL 03.06.

**SPL 03.43 S**

DIMENSIONS
**Columella in PTFE Ø:**
0,4 mm
**Total length (L):**
7.00 mm **shortenable up to** 4.25 mm

**SPL 03.44 S**

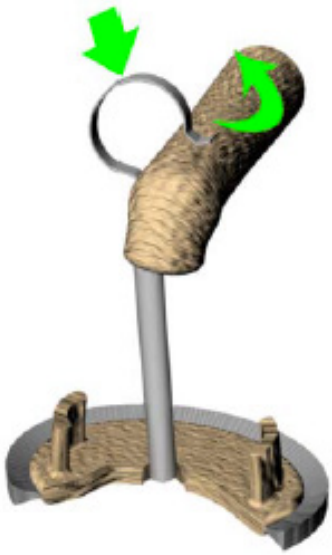
DIMENSIONS
**Columella in PTFE Ø:**
0,5 mm
**Total length (L):**
7.00 mm **shortenable up to** 4.25 mm

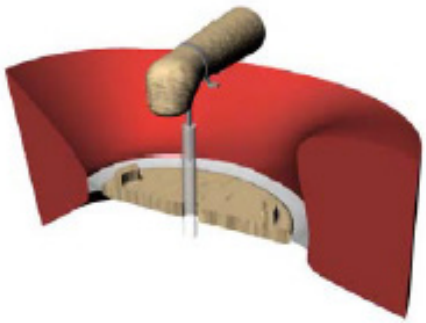
**SPL 03.45 S**

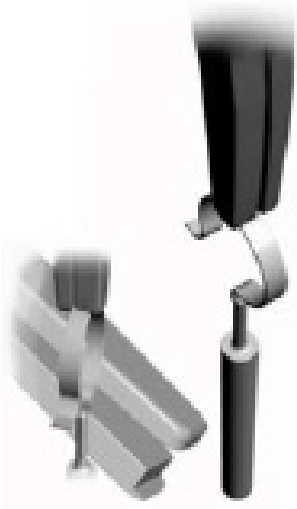
DIMENSIONS
**Columella in PTFE Ø:**
0,6 mm
**Total length (L):**
7.00 mm **shortenable up to** 4.25 mm

**SPL 03.46 S**

DIMENSIONS
**Columella in PTFE Ø:**
0,8 mm
**Total length (L):**
7.00 mm **shortenable up to** 4.25 mm







## THE “RUSSO-SANNA” PISTON IMPLANTS IN TITANIUM AND **PTFE**

*TI: Titanium ASTM F67 Gr. 2;  PTFE*

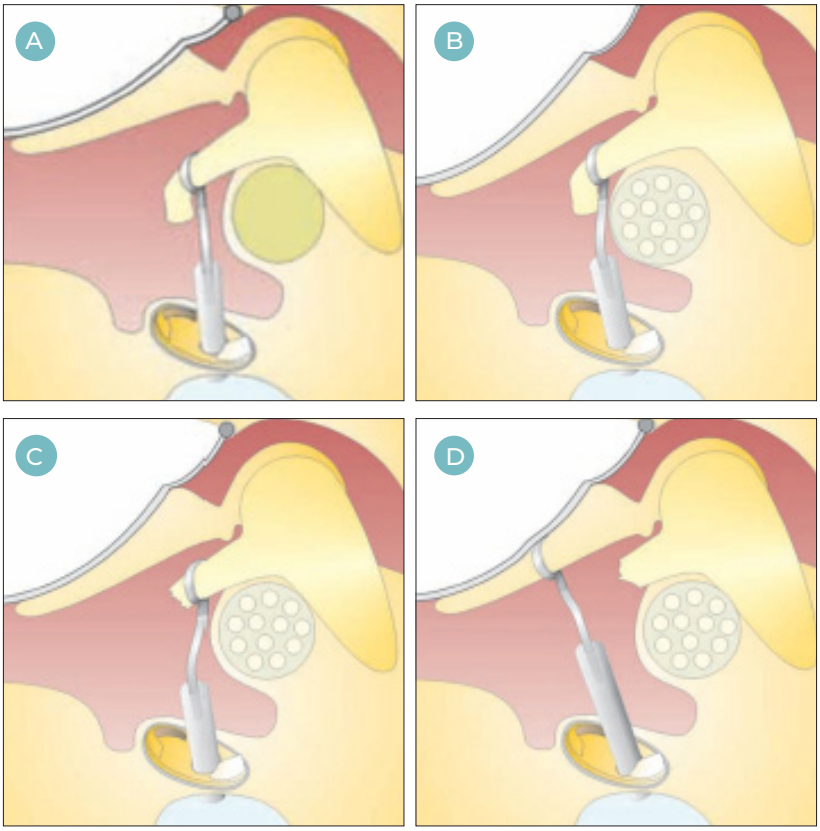
**ITEM**
**SPL 03.53S**

The “Russo-Sanna” piston implant in Titanium and PTFE has a total length of 7mm, a functional length of 6mm and a columella diameter of 0.5 mm. The implant is suitable in otosclerosis interventions with normal mobility of the incus and malleus. The platinotomy usually has a diameter of 0.6mm and the optimal space for the piston implant is 0.1 mm (Picture A).

The shape and ductility of titanium allow to bend the stem of the implant adapting the piston even to complex anatomies such as in case of facial nerve protrusion. Giving the correct angle to the stem of the implant, a good mobility of the ossicular chain can be ensured. (Picture B).

In case of partial erosion of the incus, the implant can be assembled onto the long apophysis. The stem of the implant can be duly bent and the piston fixed even if the incus is short (Picture C).

If following a revision surgery, a necrosis occurs, the implant can be hooked to the manubrium of the malleus (Picture D).




**PRODUCT CODE**

**SPL 03.52S** - Columella diameter: 0.4 mm
**SPL 03.53S** - Columella diameter: 0.5 mm
**SPL 03.54S** - Columella diameter: 0.6 mm
**SPL 03.55S** - Columella diameter: 0.8 mm

## PISTON IMPLANT IN **PTFE** FOR STAPEDECTOMY AND STAPEDOTOMY

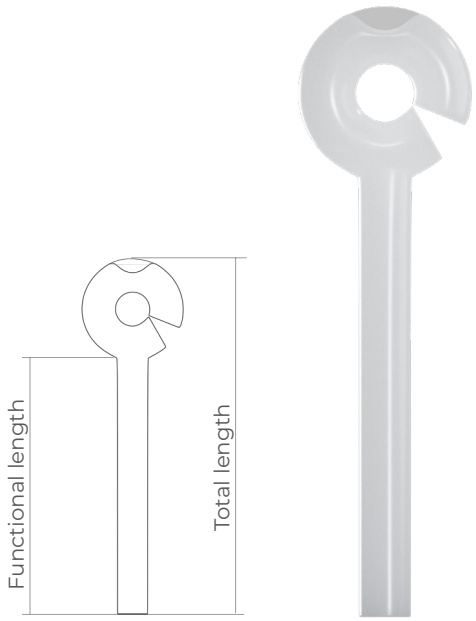
**ITEM**
**SPL 03.16/17/18/19**

### IMPLANT IN **PTFE** WITH EVOLVED HOOK

The implant has a notch to facilitate the opening of the hook.

Slightly open the implant hook which will do a little resistance thanks to the notch carved on it.

Thanks to this feature, opening and assembling with the long apophysis of the incus are easier and elastic memory of the hook is not affected.




### PISTONS IN **PTFE** / HOOK WITH NOTCH

| Total length (LT) | Functional length (LF) | COLUMELLA DIAMETER | | | |
|---|---|---|---|---|---|
| | | ø 0.5 mm | ø 0.6 mm | ø 0.4 mm | ø 0.8 mm |
| **4.50 mm** | **3.50 mm** | SPL 03.16.450 | SPL 03.17.450 | SPL 03.18.450 | SPL 03.19.450 |
| **5.00 mm** | **4.00 mm** | SPL 03.16.500 | SPL 03.17.500 | SPL 03.18.500 | SPL 03.19.500 |
| **5.50 mm** | **4.50 mm** | SPL 03.16.550 | SPL 03.17.550 | SPL 03.18.550 | SPL 03.19.550 |
| **6.00 mm** | **5.00 mm** | SPL 03.16.600 | SPL 03.17.600 | SPL 03.18.600 | SPL 03.19.600 |
| **6.50 mm** | **5.50 mm** | SPL 03.16.650 | SPL 03.17.650 | SPL 03.18.650 | SPL 03.19.650 |
| **7.00 mm** | **6.00 mm** | SPL 03.16.700 | SPL 03.17.700 | SPL 03.18.700 | SPL 03.19.700 |

### PISTONS IN **PTFE** / HOOK WITHOUT NOTCH

| Total length (LT) | Functional length (LF) | COLUMELLA DIAMETER | | | |
|---|---|---|---|---|---|
| | | ø 0.5 mm | ø 0.6 mm | ø 0.4 mm | ø 0.8 mm |
| **4.50 mm** | **3.50 mm** | SPL 03.16.450 X | SPL 03.17.450 X | SPL 03.18.450 X | SPL 03.19.450 X |
| **5.00 mm** | **4.00 mm** | SPL 03.16.500 X | SPL 03.17.500 X | SPL 03.18.500 X | SPL 03.19.500 X |
| **5.50 mm** | **4.50 mm** | SPL 03.16.550 X | SPL 03.17.550 X | SPL 03.18.550 X | SPL 03.19.550 X |
| **6.00 mm** | **5.00 mm** | SPL 03.16.600 X | SPL 03.17.600 X | SPL 03.18.600 X | SPL 03.19.600 X |
| **6.50 mm** | **5.50 mm** | SPL 03.16.650 X | SPL 03.17.650 X | SPL 03.18.650 X | SPL 03.19.650 X |
| **7.00 mm** | **6.00 mm** | SPL 03.16.700 X | SPL 03.17.700 X | SPL 03.18.700 X | SPL 03.19.700 X |

# OTHER VERSIONS FOR STAPEDIOPLASTY

## PLATINUM IMPLANT FOR STAPEDECTOMY

*Material: Platinum (PT)*

**ITEM**
**SPL 03.00**

Entirely in 999‰ pure platinum (malleable and well tolerated material).

The hook has three millings: under slight clamp pressure the millings allow the curvature and closure of the hook in a controlled manner by winding the long apophysisof the incus without causing ischemia and risk of abnormal crimping.

The end part of the implant is folded back to form an elbow to allow anchoring to the new oval window membrane. The weight of the implant (about 3 mg) is very close to the natural weight of the stirrup bone.

**SPL 03.00**

| Total length (L) | Product code |
|---|---|
| **3.00 mm** | SPL 03.00.300 |
| **3.50 mm** | SPL 03.00.350 |
| **4.00 mm** | SPL 03.00.400 |
| **4.25 mm** | SPL 03.00.425 |
| **4.50 mm** | SPL 03.00.450 |
| **4.75 mm** | SPL 03.00.475 |
| **5.00 mm** | SPL 03.00.500 |
| **5.50 mm** | SPL 03.00.550 |
| **6.00 mm** | SPL 03.00.600 |

## PLATINUM IMPLANT AND **PE** FOR STAPEDECTOMY

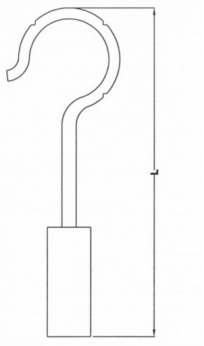
*Material: Platinum (PT) and Porous Polyethylene (PE)*

**ITEM**
**SPL 03.04**

Entirely in 999‰ pure platinum (malleable and well tolerated material).

The hook has three millings: under slight clamp pressure the millings allow the curvature and closure of the hook in a controlled manner by winding the long apophysis of the incus without causing ischemia and risk of abnormal crimping.

Thanks to its microporous structure, the end part in Audio-PE (porous polyethylene) ensures an excellent anchoring to the new oval window membrane allowing the connective tissue and blood vessels to penetrate it.



**SPL 03.04**

| Total length (L) | Product code |
|---|---|
| **3.50 mm** | SPL 03.04.350 |
| **4.00 mm** | SPL 03.04.400 |
| **4.25 mm** | SPL 03.04.425 |
| **4.50 mm** | SPL 03.04.450 |
| **4.75 mm** | SPL 03.04.475 |
| **5.00 mm** | SPL 03.04.500 |
| **5.50 mm** | SPL 03.04.550 |
| **6.00 mm** | SPL 03.04.600 |

DIMENSIONS:
**Columella ø:** 0.6 mm

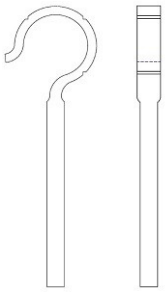
## PLATINUM IMPLANT FOR STAPEDECTOMY

*Material: Platinum (PT)*

**ITEM**
**SPL 03.05**

Entirely in 999‰ pure platinum (malleable and well tolerated material).

The hook has three millings: under slight clamp pressure the millings allow the curvature and closure of the hook in a controlled manner by winding the long apophysis of the incus without causing ischemia and risk of abnormal crimping.



**SPL 03.05**

| Total length (L) | Product code |
|---|---|
| **6.00 mm** | SPL 03.05.600 |

DIMENSIONS:
**Columella ø:** 0.3 mm

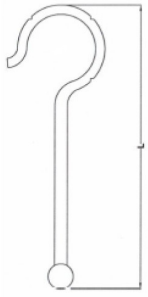
## PLATINUM IMPLANT FOR STAPEDECTOMY

*Material: Platinum (PT)*

**ITEM**
**SPL 03.13**

Entirely in 999‰ pure platinum (malleable and well tolerated material).

The spherical end part allows for a gentle contact and support between the implant and the new membrane of the oval window.



**SPL 03.13**

| Total length (L) | Product code |
|---|---|
| **4.00 mm** | SPL 03.13.400 |
| **4.50 mm** | SPL 03.13.450 |
| **5.00 mm** | SPL 03.13.500 |

DIMENSIONS:
**Sphere diameter:** 0.4 mm

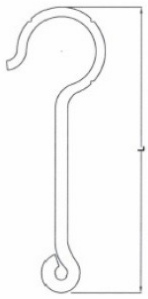
## PLATINUM IMPLANT FOR STAPEDECTOMY

*Material: Platinum (PT)*

**ITEM**
**SPL 03.15**

Entirely in 999‰ pure platinum (malleable and well tolerated material).

The end part of the implant is folded back to form an elbow to allow anchoring to the new oval window membrane.



**SPL 03.15**

| Total length (L) | Product code |
|---|---|
| **4.00 mm** | SPL 03.15.400 |
| **4.50 mm** | SPL 03.15.450 |
| **5.00 mm** | SPL 03.15.500 |

DIMENSIONS:
**End part diameter:** 0.4 mm

# TYMPANOPLASTY

## IMPLANTS

## ***NINJA*** COMPLETE IMPLANT IN TITANIUM, ADJUSTABLE LENGTH

*Material: pure Titanium Gr. 2 (Ti)*

**ITEM**
**TAP 07.63 SH**

### OPEN FLANGE
It allows to maintain the vision on the surgical field under the head of the implant.

### STRUCTURE IN TITANIUM
Titanium is a widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

### ADJUSTABLE LENGTH
The extendable stem allows to extend or compress the length of the implant.

### SOUND CONDUCTIVITY
Laser-Doppler oscillometer tests show that the sound conductivity wave is not absorbed by the shape of the stem remaining unchanged regardless of the chosen length.

### PLATINUM CONNECTOR
The micropins allow adhesion to the platinum which gives stability and optimal vibration. The tips are 0.10 mm high, while the thickness of the platinum is at least 0.20 mm. The tips slowly penetrate the platinum for compressive osteolysis.

**TAP 07.63 SH**

| Total length (L) | Product code |
|---|---|
| **from 3.00 mm to 9.00 mm** | TAP 07.63 SH |

DIMENSIONS:
**Base dimensions:** 0.7x1.1 mm

## ***NINJA*** COMPLETE IMPLANT IN TITANIUM AND **HAP**, ADJUSTABLE LENGTH

*Material: pure Titanium Gr. 2 (Ti) and flange in porous hydroxyapatite (HAP)*

**ITEM**
**TAP 07.67 SH**

### FLANGE IN HAP
As proven by clinical studies and long follow-ups, the head in HAP can keep in contact directly with the eardrum without being extruded.

### STRUCTURE IN TITANIUM
Titanium is a widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

### ADJUSTABLE LENGTH
The extendable stem allows to extend or compress the length of the implant.

### SOUND CONDUCTIVITY
Laser-Doppler oscillometer tests show that the sound conductivity wave is not absorbed by the shape of the stem remaining unchanged regardless of the chosen length.

### PLATINUM CONNECTOR
The micropins allow adhesion to the platinum which gives stability and optimal vibration. The tips are 0.10 mm high, while the thickness of the platinum is at least 0.20 mm. The tips slowly penetrate the platinum for compressive osteolysis.

**TAP 07.67 SH**

| Total length (L) | Product code |
|---|---|
| **from 3.00 mm to 9.00 mm** | TAP 07.67 SH |

DIMENSIONS:
**Base dimensions:** 0.7x1.1 mm

*PLATINUM CONNECTOR*
*The micropins at the base of the implant allow adhesion to the platinum which gives stability and optimal vibration. The tips are 0.09 mm high, while the thickness of the platinum is at least 0.20 mm.*

## COMPLETE FIXED-LENGHT IMPLANT IN TITANIUM, ***NINJA*** MODEL

**ITEM**
**TAP 07.61 SH**

*Material: pure Titanium Gr. 2 (Ti)*

Complete implant in titanium with fixed lengths, ninja model: from 3.00 mm up to 8.00 mm

### OPEN FLANGE
The widely windowed flange allows to maintain an unobstructed view of the field.

### STRUCTURE IN TITANIUM
This implant in entirely made in pure titanium, a widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

### PLATINUM CONNECTOR
The micropins allow adhesion to the platinum which gives stability and optimal vibration.
The pins are 0.09 mm high, while the thickness of the platinum is at least 0.20 mm.

**TAP 07.61**

| Total length (L) | Product code |
|---|---|
| **3.00 mm** | TAP 07.61.300 |
| **3.25 mm** | TAP 07.61.325 |
| **3.50 mm** | TAP 07.61.350 |
| **3.75 mm** | TAP 07.61.375 |
| **4.00 mm** | TAP 07.61.400 |
| **4.25 mm** | TAP 07.61.425 |
| **4.50 mm** | TAP 07.61.450 |
| **4.75 mm** | TAP 07.61.475 |
| **5.00 mm** | TAP 07.61.500 |
| **5.25 mm** | TAP 07.61.525 |
| **5.50 mm** | TAP 07.61.550 |
| **6.00 mm** | TAP 07.61.600 |
| **6.50 mm** | TAP 07.61.650 |
| **7.00 mm** | TAP 07.61.700 |
| **7.50 mm** | TAP 07.61.750 |
| **8.00 mm** | TAP 07.61.800 |

DIMENSIONS:
**Wire ø:** 0.20 mm
**Columella ø:** 0.60 mm
**Base dimensions:** 0.7x1.1 mm

## COMPLETE FIXED-LENGTH IMPLANT IN TITANIUM WITH FLANGE IN **HAP**, ***NINJA*** MODEL

**ITEM**
**TAP 07.65 SH**

*Materials: pure Titanium Gr. 2 (Ti) and flange in porous hydroxypatite (HAP)*

### FLANGE IN HAP
The flange in hydroxyapatite, as proven by clinical studies and follow-ups, can keep in contact directly with the tympanic membrane without being extruded.

### IMPLANT STABILITY
The porosity of the flange allows a stable fixing to the eardrum thanks to a slight adhesion that occurs through penetration of fibroblasts in the pores of the HAP.

### STRUCTURE IN TITANIUM
Titanium is a widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

### PLATINUM CONNECTOR
The micropins allow adhesion to the platinum which gives stability and optimal vibration. The pins are 0.09 mm high, while the thickness of the platinum is at least 0.20 mm.

**TAP 07.65 SH**

| Total length (L) | Product code |
|---|---|
| **3.00 mm** | TAP 07.65.300 SH |
| **3.25 mm** | TAP 07.65.325 SH |
| **3.50 mm** | TAP 07.65.350 SH |
| **3.75 mm** | TAP 07.65.375 SH |
| **4.00 mm** | TAP 07.65.400 SH |
| **4.25 mm** | TAP 07.65.425 SH |
| **4.50 mm** | TAP 07.65.450 SH |
| **4.75 mm** | TAP 07.65.475 SH |
| **5.00 mm** | TAP 07.65.500 SH |
| **5.25 mm** | TAP 07.65.525 SH |
| **5.50 mm** | TAP 07.65.550 SH |
| **6.00 mm** | TAP 07.65.600 SH |
| **6.50 mm** | TAP 07.65.650 SH |
| **7.00 mm** | TAP 07.65.700 SH |
| **7.50 mm** | TAP 07.65.750 SH |
| **8.00 mm** | TAP 07.65.800 SH |

DIMENSIONS:
**Base dimensions:** 0.7x1.1 mm

*A small groove is made for the manubrium of malleus which if missing, the flange of the implant can be put directly in contact with the tympanic membrane: the rounded edges of the groove do not cause decubitus.*

## COMPLETE IMPLANT IN TITANIUM, ADJUSTABLE LENGTH

*Material: pure Titanium Gr. 2 (Ti)*

**ITEM**
**TAP 07.63**

### WINDOWED FLANGE
It allows the view of the underneath surgical field.

### TITANIUM STRUCTURE
Titanium is a bioinert and widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

### EXTENDABLE STEM
Extendable by traction and shortenable by compression.

### GOOD SOUND CONDUCTIVITY
The oscillometric test with Laser/Doppler demonstrates the unchanged conductivity of the sound wave in all stem configurations.

DIMENSIONS:
**Wire ø:** 0.20 mm
**Columella ø:** 0.60 mm

**TAP 07.63**

| Total length (L) | Product code |
|---|---|
| **from 3.00 mm to 8.00 mm** | TAP 07.63 |

*For implants with flange in titanium, the interposition of a layer of autologous cartilage between implants and neotympanum is necessary.*

## TITANIUM ADJUSTABLE PARTIAL

*Material: pure Titanium Gr. 2 (Ti)*

**ITEM**
**PAP 07.64**

### WINDOWED FLANGE
It allows the view of the underneath surgical field.

### TITANIUM STRUCTURE
Titanium is a bioinert and widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

### EXTENDABLE STEM
Extendable by traction and shortenable by compression.

### GOOD SOUND CONDUCTIVITY
The oscillometric test with Laser/Doppler demonstrates the unchanged conductivity of the sound wave in all stem configurations.

DIMENSIONS:
**Wire ø:** 0.20 mm
**Inner diameter of the cup:** 1.10 mm
**Outer diameter of the cup:** 1.20 mm

**PAP 07.64**

| Total length (L) | Product code |
|---|---|
| **from 2.25 mm to 5.50 mm** | PAP 07.64 |

*It is recommended the interposition of a layer of autologous cartilage between implants and neotympanum.*

## COMPLETE IMPLANT WITH FLANGE IN **HAP**, ADJUSTABLE LENGTH

*Materials: pure Titanium Gr. 2 (Ti) and porous hydroxypatite (HAP)*

**ITEM**
**TAP 07.67**

### FLANGE IN HAP
The flange in porous hydroxypatite, as proven by clinical studies and follow-ups, can keep in contact directly with the tympanic membrane without being extruded.

### FIXATION TO EARDRUM
The fixation of the implant to eardrum, inducted by porosity, takes place thanks to a double mechanism: a physical and chemical bond by input of fibroblasts in the pores and the bioactivity of hydroxylapatite.

### TITANIUM STRUCTURE
Titanium is a bioinert and widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

### EXTENDABLE STEM
Extendable by traction and shortenable by compression.

### GOOD SOUND CONDUCTIVITY
The oscillometric test with Laser/Doppler demonstrates the unchanged conductivity of the sound wave in all stem configurations.

**TAP 07.67**

| Total length (L) | Product code |
|---|---|
| **from 4.00 mm to 8.00 mm** | TAP 07.67 |

DIMENSIONS:
**Wire ø:** 0.20 mm
**Columella ø:** 0.60 mm

*A small groove is made for the manubrium of malleus which if missing, the flange of the implant can be put directly in contact with the tympanic membrane: the rounded edges of the groove do not cause decubitus.*

## PARTIAL IMPLANT WITH FLANGE IN **HAP**, ADJUSTABLE LENGTH

*Material: pure Titanium Gr. 2 (Ti) and porous hydroxyapatite (HAP)*

**ITEM**
**PAP 07.68**

### FLANGE IN HAP
The flange in porous hydroxypatite, as proven by clinical studies and follow-ups, can keep in contact directly with the tympanic membrane without being extruded.

### FIXATION TO EARDRUM
The fixation of the implant to eardrum, inducted by porosity, takes place thanks to a double mechanism: a physical and chemical bond by input of fibroblasts in the pores and the bioactivity of hydroxylapatite.

### TITANIUM STRUCTURE
Titanium is a bioinert and widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

### EXTENDABLE STEM
Extendable by traction and shortenable by compression.

### GOOD SOUND CONDUCTIVITY
demonstrates the unchanged conductivity of the sound wave in all stem configurations.

**PAP 07.68**

| Total length (L) | Product code |
|---|---|
| **from 2.50 mm to 5.00 mm** | PAP 07.68 |

DIMENSIONS:
**Wire ø:** 0.20 mm
**Inner diameter of the cup:** 1.10 mm
**Outer diameter of the cup:** 1.20 mm

*A small groove is made for the manubrium of malleus which if missing, the flange of the implant can be put directly in contact with the tympanic membrane: the rounded edges of the groove do not cause decubitus.*

## COMPLETE IMPLANT IN TITANIUM/**HAP**, ADJUSTABLE LENGTH

*Materials: pure Titanium Gr. 2 (Ti) and porous hydroxyapatite (HAP)*

**ITEM**
**TAP 07.58**

### FLANGE IN HAP
The flange in porous hydroxypatite, as proven by clinical studies and follow-ups, can keep in contact directly with the tympanic membrane without being extruded.

### FIXATION TO EARDRUM
The fixation of the implant to eardrum, inducted by porosity, takes place thanks to a double mechanism: a physical and chemical bond by input of fibroblasts in the pores and the bioactivity of hydroxylapatite.

### TITANIUM STRUCTURE
Titanium is a bioinert and widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

### EXTENDABLE STEM
Extendable by traction and shortenable by compression.

### GOOD SOUND CONDUCTIVITY
The oscillometric test with Laser/Doppler demonstrates the unchanged conductivity of the sound wave in all stem configurations.

**TAP 07.58**

| Total length (L) | Product code |
|---|---|
| **from 4.00 mm to 8.50 mm** | TAP 07.58 |

DIMENSIONS:
**Extendable stem**
**Flange:** 3,50 x 2,50 mm
**Columella ø:** 0,60

*The flange has a bent apophysis to host the manubrium of the malleus.*

## PARTIAL IMPLANT IN TITANIUM/**HAP**, ADJUSTABLE LENGTH

*Materials: pure Titanium Gr. 2 (Ti) and porous hydroxyapatite (HAP)*

**ITEM**
**PAP 07.72**

### FLANGE IN HAP
The flange in porous hydroxypatite, as proven by clinical studies and follow-ups, can keep in contact directly with the tympanic membrane without being extruded.

### FIXATION TO EARDRUM
The fixation of the implant to eardrum, inducted by porosity, takes place thanks to a double mechanism: a physical and chemical bond by input of fibroblasts in the pores and the bioactivity of hydroxylapatite.

### TITANIUM STRUCTURE
Titanium is a bioinert and widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

### EXTENDABLE STEM
Extendable by traction and shortenable by compression.

### GOOD SOUND CONDUCTIVITY
The oscillometric test with Laser/Doppler demonstrates the unchanged conductivity of the sound wave in all stem configurations.

**PAP 07.72**

| Total length (L) | Product code |
|---|---|
| **from 2.25 mm to 5.00 mm** | PAP 07.72 |

DIMENSIONS:
**Extendable stem**
**Flange:** 3,50 x 2,50 mm

*The flange has a bent apophysis to host the manubrium of the malleus.*

## UNIVERSAL CONNECTOR, ***NINJA*** MODEL

**ITEM**
**TPL 07.73/76**

The connectors are available in different diameters: 0.4, 0.5, 0.6, 0.7 mm.
The stem of the implant must be inserted in the cylinder which is then tightened by means of sturdy pliers.

The six micropins of the “shoe” penetrate the platinum surface part until the flat surface of the implant base stabilizes.

The penetration slowly occurs by compressive osteolysis and stops at a maximum penetration of 0.10 mm with no risk to damage the platinum.

The base integrates the complete implant with the platen, allowing sound wave transmission by oscillatory motions.

**TPL 07.73**

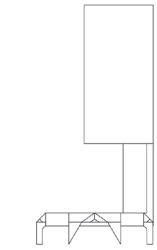
**TPL 07.74**

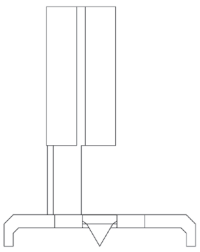
**TPL 07.75**

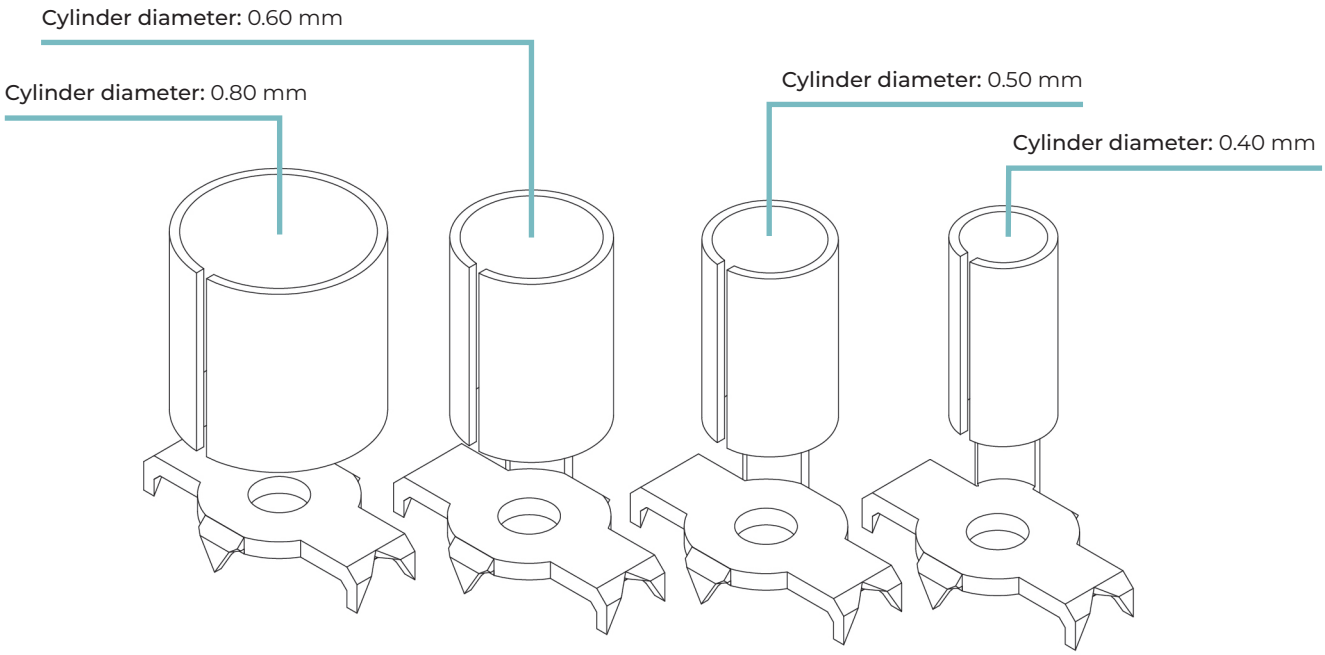
**TPL 07.76**

| Diameter (mm) | Product code |
|---|---|
| **0.40 mm** | TPL 07.73 |
| **0.50 mm** | TPL 07.74 |
| **0.60 mm** | TPL 07.75 |
| **0.80 mm** | TPL 07.76 |

DIMENSIONS:
**Base:** 0.7x1.1 mm
**Micropumps:** 0.09 mm







## COMPLETE IMPLANT IN TITANIUM WITH FIXED-LENGHTS

*Material: pure Titaniam Gr. 2 (Ti)*

**ITEM**
**TAP 07.61**

Fixed-length implant: from 3.00 up to 8.00 mm.

OPEN FLANGE
It allows to maintain the view of the field under the head of the implant.

TITANIUM STRUCTURE
Titanium is a widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

DIMENSIONS:
**Wire ø:** 0.20 mm
**Columella ø:** 0.60 mm

**TAP 07.61**

| Total length (L) | Product code |
|---|---|
| **3.00 mm** | TAP 07.61.300 |
| **3.25 mm** | TAP 07.61.325 |
| **3.50 mm** | TAP 07.61.350 |
| **3.75 mm** | TAP 07.61.375 |
| **4.00 mm** | TAP 07.61.400 |
| **4.25 mm** | TAP 07.61.425 |
| **4.50 mm** | TAP 07.61.450 |
| **4.75 mm** | TAP 07.61.475 |
| **5.00 mm** | TAP 07.61.500 |
| **5.25 mm** | TAP 07.61.525 |
| **5.50 mm** | TAP 07.61.550 |
| **6.00 mm** | TAP 07.61.600 |
| **6.50 mm** | TAP 07.61.650 |
| **7.00 mm** | TAP 07.61.700 |
| **7.50 mm** | TAP 07.61.750 |
| **8.00 mm** | TAP 07.61.800 |

## PARTIAL IMPLANT IN TITANIUM WITH FIXED-LENGTH

*Material: pure Titanium Gr. 2 (Ti)*

**ITEM**
**PAP 07.62**

Implant with fixed-lenght: from 1.75 mm up to 5.00 mm.

OPEN FLANGE
It allows to maintain the view of the field under the head of the implant.

TITANIUM STRUCTURE
Titanium is a bioinert and widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

DIMENSIONS:
**Wire ø:** 0.20 mm
**Inner diameter of the cup:** 1.10 mm
**Outer diameter of the cup:** 1.20 mm

**PAP 07.62**

| Total length (L) | Product code |
|---|---|
| **1.75 mm** | PAP 07.62.175 |
| **2.00 mm** | PAP 07.62.200 |
| **2.25 mm** | PAP 07.62.225 |
| **2.50 mm** | PAP 07.62.250 |
| **2.75 mm** | PAP 07.62.275 |
| **3.00 mm** | PAP 07.62.300 |
| **3.25 mm** | PAP 07.62.325 |
| **3.50 mm** | PAP 07.62.350 |
| **4.00 mm** | PAP 07.62.400 |
| **4.50 mm** | PAP 07.62.450 |
| **5.00 mm** | PAP 07.62.500 |

## COMPLETE IMPLANT IN TITANIUM AND FLANGE IN **HAP**

*Materials: pure Titanium Gr. 2 (Ti) and porous hydroxyapatite (HAP)*

**ITEM**
**TAP 07.65**

Implant with fixed-length: from 3.00 mm up to 8.00 mm.

### FLANGE IN HAP
The flange in porous hydroxypatite (HAP), as proven by clinical studies and long follow-ups, can keep in contact directly with the tympanic membrane without being extruded.

### STABILIZATION OF THE IMPLANT
The fixation of the implant to eardrum, inducted by porosity, takes place thanks to a double mechanism: a physical and chemical bond by input of fibroblasts in the pores and the bioactivity of hydroxylapatite.

### TITANIUM STRUCTURE
Titanium is a bioinert and widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

DIMENSIONS:
**Wire ø:** 0.20 mm
**Columella ø:** 0.60 mm

**TAP 07.65**

| Total length (L) | Product code |
|---|---|
| **3.00 mm** | TAP 07.65.300 |
| **3.25 mm** | TAP 07.65.325 |
| **3.50 mm** | TAP 07.65.350 |
| **3.75 mm** | TAP 07.65.375 |
| **4.00 mm** | TAP 07.65.400 |
| **4.25 mm** | TAP 07.65.425 |
| **4.50 mm** | TAP 07.65.450 |
| **4.75 mm** | TAP 07.65.475 |
| **5.00 mm** | TAP 07.65.500 |
| **5.25 mm** | TAP 07.65.525 |
| **5.50 mm** | TAP 07.65.550 |
| **6.00 mm** | TAP 07.65.600 |
| **6.50 mm** | TAP 07.65.650 |
| **7.00 mm** | TAP 07.65.700 |
| **7.50 mm** | TAP 07.65.750 |
| **8.00 mm** | TAP 07.65.800 |

*A small groove is made for the manubrium of malleus which if missing, the flange of the implant can be put directly in contact with the tympanic membrane. The rounded edges of the groove do not cause decubitus.*

## COMPLETE IMPLANT IN TITANIUM AND FLANGE IN **HAP**

*Materials: Titanium pure Gr. 2 (Ti) and porous hydroxyapatite (HAP)*

**ITEM**
**PAP 07.66**

Implant with fixed-lenght: from 1.75 up to 5.00 mm.

### FLANGE IN HAP
The flange in porous hydroxypatite (HAP), as proven by clinical studies and long follow-ups, can keep in contact directly with the tympanic membrane without being extruded.

### STABILIZATION OF THE IMPLANT
The fixation of the implant to eardrum, inducted by porosity, takes place thanks to a double mechanism: a physical and chemical bond by input of fibroblasts in the pores and the bioactivity of hydroxylapatite.

### TITANIUM STRUCTURE
Titanium is a bioinert and widely tested material in the surgical field, endowed with high mechanical resistance and lightness.

*As for the partial version (product code PAP 07.65) the same groove is provided onto the flange in HAP.*

**PAP 07.66**

| Total length (L) | Product code |
|---|---|
| **2.00 mm** | PAP 07.66.200 |
| **2.25 mm** | PAP 07.66.225 |
| **2.50 mm** | PAP 07.66.250 |
| **2.75 mm** | PAP 07.66.275 |
| **3.00 mm** | PAP 07.66.300 |
| **3.25 mm** | PAP 07.66.325 |
| **3.50 mm** | PAP 07.66.350 |
| **4.00 mm** | PAP 07.66.400 |
| **4.50 mm** | PAP 07.66.450 |
| **5.00 mm** | PAP 07.66.500 |

DIMENSIONS:
**Wire ø:** 0.20 mm
**Inner diameter of the cup:** 1.10 mm
**Outer diameter of the cup:** 1.20 mm

## COMPLETE INCUDOSTAPEDIAL IMPLANT

*Materials: pure Titanium Gr. 2 (Ti) and Polytetraflorethylene (PTFE)*

**ITEM**
**TAP 07.52**

The implant is designed to connect the incus to the platinum of the stirrup. It is particularly indicated in case of eroded and irregular incus. The part in contact with the incus has 6 titanium clips, while the stem in PTFE can be easily shortened with a surgical scalpel.

The 6 titanium clips have a progressive length and can be adapted to all kind of incus. The end part of the clips is angled to be fixed to the incus.

The stem in PTFE can be shortened (after measurement) and put in contact with the platinum of the stirrup, in case this is movable.

DIMENSIONS:
**Total length:** 6.25 mm shortenable up to 4.50 mm
**Titanium wire thickness:** 0.23 mm
**PTFE stem diameter:** 0.60 mm

## PARTIAL INCUDOSTAPEDIAL IMPLANT

*Material: pure Titanium Gr. 2 (Ti)*

**ITEM**
**PAP 07.53**

Partial implant for incudostapedial assembly.

The implant is composed by a single block in titanium with 6 clips for the residue of the incus and a lid for assembly with the stirrup head.

The 6 titanium clips have a progressive length and can be adapted to all kind of incus.
The end part of the clips is angled to be fixed to the incus.

DIMENSIONS:
**Total length:** 1.90 mm
**Titanium wire thickness:** 0.23 mm

## PARTIAL IMPLANT IN POROUS **HAP**

*Material: (HAP) Bioactive porous ceramic hydroxyapatite*

**ITEM**
**PAP 07.50**

The porosity of the material gives lightness to the implant.

The implant is hollow to view the stirrup head.

After measurement (it is recommended the audio meter by Audio Technologies, product code 02.14), the implant can eventually be shortened to the suitable length: the HAP can be shortened by a diamond wheel under watering.

The implant doesn't need any cartilage interposition.

DIMENSIONS:
**Flange diameter:** 4.0 mm
**Outer columella diameter:** 2.1 mm
**Inner columella diameter:** 1.2 mm of cartilage
**Totally shortenable**

**PAP 07.50**

| Total length (L) | Product code |
|---|---|
| **4.00 mm** | PAP 07.50 |

## PARTIAL IMPLANT IN DENSE **HAP**

*Material: (HAP) Bioactive ceramic hydroxyapatite*

**ITEM**
**TPL 07.45**

Hollow implant to view the stirrup head. The implant can be shortened by a diamond wheel under watering.

The implant doesn't need any cartilage interposition.

DIMENSIONS:
**Total length:** 3.5 mm
**Flange diameter:** 4.0 mm
**Outer diameter:** 2.1 mm
**Inner diameter:** 1.2 mm

**TPL 07.45**

| Total length (L) | Product code |
|---|---|
| **3.50 mm** | TPL 07.45 |

## PARTIAL IMPLANT WITH TILTING FLANGE IN **HAP** AND **PTFE**

*Materials: Porous hydroxyapatite (HAP), platinum joint (Pt) and Polytetraflorethylene (PTFE)*

**ITEM**
**PAP 07.36**

The porosity of the flange allows stabilization of the implant through penetration of connective cells in the pores ed bioactive adhesion to neotympanic tissue.

An advantage of porous hydroxyapatite (patented by Audio Technologies) is represented by the possibility of avoiding interposition of cartilage.

The platinum joint allows to tilt the flange of the implant to make it perpendicular to the stirrup head.

The PTFE columella can be shortened from 6.5 mm to 3.0 mm.

For such shortening it is possible to use a surgical scalpel.

**PAP 07.36**

| Total length (L) | Product code |
|---|---|
| **shortenable from 6.50 to 3.00 mm** | PAP 07.36 |

DIMENSIONS:
**Total length:** 6.50 mm
shortenable up to 3.00 mm
**Flange diameter:** 3.50 mm
**Titanium wire thickness:** 0.25 mm
Columella in PTFE
**Outer diameter:** 2.10 mm
**Inner diameter:** 1.40 mm

## PARTIAL IMPLANT IN **HAP** AND **PE** WITH TILTING FLANGE

*Materials: Porous hydroxyapatite (HAP), platinum joint (Pt) and porous Polyethylene (PE)*

**ITEM**
**PAP 07.38**

The porosity of the flange allows stabilization of the implant through penetration of connective cells in the pores and bioactive adhesion to neotympanic tissue.

An advantage of porous hydroxyapatite (patented by Audio Technologies) is represented by the possibility of avoiding interposition of cartilage.

The platinum joint allows to tilt the flange of the implant to make it perpendicular to the stirrup head.

The PTFE columella can be shortened from 6.5 mm to 3.0 mm.

For such shortening it is possible to use a surgical scalpel.

**PAP 07.38**

| Total length (L) | Product code |
|---|---|
| **shortenable from 6.50 to 3.00 mm** | PAP 07.38 |

DIMENSIONS:
**Total length:** 6.50 mm
shortenable up to 3.00 mm
**Flange diameter:** 3.50 mm
**Titanium wire thickness:** 0.25 mm
Columella in HA
**Outer diameter:** 2.10 mm
**Inner diameter:** 1.40 mm

## SHORTENABLE COMPLETE IMPLANT IN **PE**

*Material: High molecular weight porous polyethylene (PE)*

**ITEM**
**TAP 07.09**

The TAP 07.09 is a complete implant for the replacement of the entire ossicular chain, from the tympanic membrane to the oval window.
To prevent extrusion it is necessary to interpose a layer of autologous cartilage between the neo-eardrum and implant.

The newly formed connective tissue will join the flange of the implant to the tympanic membrane and the distal end of the implant at the base of the stirrup.

After measurement (it is possible to use the microsurgery measuring device 02.14), the implant can be shortened with a surgical scalpel.

**TAP 07.09**

| Total length (L) | Product code |
|---|---|
| **6.00 mm** | TAP 07.09.600 |
| **7.00 mm** | TAP 07.09.700 |
| **8.00 mm** | TAP 07.09.800 |

DIMENSIONS:
**Total length:**
6.00 mm (shortenable up to 5.00 mm)
7.00 mm (shortenable up to 6.00 mm)
8.00 mm (shortenable up to 7.00 mm)
**Flange diameter:** 4.00 mm
**Flange thickness:** 0.60 mm
**Columella diameter:** 0.70 mm

## COMPLETE IMPLANT IN **HA**

*Material: Dense hydroxyapatite (HA)*

**ITEM**
**TAP 07.11**

The TAP 07.11 is a complete implant for replacement of the entire ossicular chain, from the malleus or tympanic membrane to the platinum of the stirrup.

As a bioactive material, the hydroxyapatite can be in contact with the neotympanum without being extruded: it does not require the interposition of cartilage.

The flange can be stabilized to the tympanic membrane by fibrin glue.

**TAP 07.11**

| Total length (L) | Product code |
|---|---|
| **5.00 mm** | TAP 07.11.500 |
| **5.50 mm** | TAP 07.11.550 |
| **6.00 mm** | TAP 07.11.600 |
| **6.50 mm** | TAP 07.11.650 |
| **7.00 mm** | TAP 07.11.700 |
| **7.50 mm** | TAP 07.11.750 |
| **8.00 mm** | TAP 07.11.800 |

DIMENSIONS:
**Total length:** 5.00, 5.50,
6.00, 6.50, 7.00, 7.50, 8.00 mm
**Flange diameter:** 2.00 mm
**Flange thickness:** 0.80 mm
**Columella diameter:** 0.65 mm

## COMPLETE IMPLANT IN POROUS HYDROXYAPATITE AND **PTFE**, SHORTENABLE AND TILTING FLANGE

**ITEM**
**TAP 07.35**

*Materials: Porous hydroxyapatite (HAP) and polytetraflorethylene (PTFE)*

The TAP 07.35 is a complete implant with a flange in porous hydroxyapatite (HAP). The porosity of the flange allows stabilization of the implant through the penetration of connective cells in the pores and bioactive adhesion to the neotympanic tissue.

An advantage of porous hydroxyapatite (patented by Audio Technologies) is represented by the possibility of avoiding the interposition of cartilage.

The HAP flange porosity allows a 50% weight saving. The columella consists of one end bottom in PTFE and a platinum joint both suitable to allow the adjustment of the angle between the neoeardrum and columella, and the displacement of the columella to get a view of the oval window.

The PTFE columella can be shortened with a surgical scalpel. The length can therefore vary from 8.0 mm to 3.25 mm.

**TAP 07.35**

| Total length (L) | Product code |
|---|---|
| **from 8.00 to 3.25 mm** | TAP 07.35 |

DIMENSIONS:
**Total length:** from 8.00 to 3.25 mm
**Flange length:** 3.50 mm
**Columella diameter:** 0.60 mm

## PARTIAL IMPLANT “INCUS”

**ITEM**
**INCUS 07.32**

*Material: dense hydroxyapatite (HA)*

The implant can be used wherever a part of the long apophysis is missing.

Its wedge shape allows for insertion between the remaining incus and the stirrup head.

Its small surface allows a better view of the stirrup head during placement.

**INCUS 07.32**

| Total length (L) | Product code |
|---|---|
| **2.50 mm** | INCUS 07.32 |

DIMENSIONS:
**Total length:** 2.50 mm
**Total height:** 1.60 mm

## PARTIAL PROSTHESIS "OFFSET" IN SHORTENABLE **PE**

*Material: High molecular weight porous polyethylene (PE)*

**ITEM**
**TPL 07.02**

Implant for replacement of the incus and malleus, from the tympanic membrane to the stirrup head.

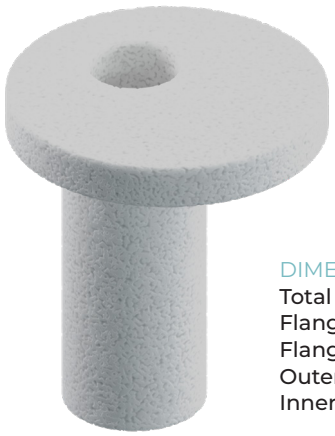
To prevent extrusion, it is recommended to interpose a layer of autologous cartilage between the neoeardrum and implant.

The fully perforated columella allows the surgeon to check the stirrup head during placement.

After the measurement (measuring device for microsurgery 02.14), the implant can be cut to measure by a scalpel.

**TPL 07.02**

| Total length (L) | Product code |
|---|---|
| **5.00 mm** | TPL 07.02 |



DIMENSIONS:
**Total length:** 5.00 mm
**Flange diameter:** 4.00 mm
**Flange thickness:** 0.60 mm
**Outer columella diameter:** 1.80 mm
**Inner columella diameter:** 1.20 mm

## COMPLETE IMPLANT IN **HA**, TILTING FLANGE

*Material: Dense hydroxyapatite (HA)*

**ITEM**
**TPL 07.07**

Implant for replacement of the whole ossicular chain, from malleus or tympanic membrane to the platinum of the stirrup.

It is not necessary the cartilage interposition between the flange of the implant and the tympanic membrane.

The columella is assembled to the flange by means of a platinum joint (malleable and widely tolerated material).

This joint allows the angle adjustment of the implant and the placement of columella in order to obtain the best view of the oval window during the insertion of the implant itself.

**TPL 07.07**

| Total length (L) | Product code |
|---|---|
| **5.50 mm** | TPL 07.07.550 |
| **6.00 mm** | TPL 07.07.600 |
| **6.50 mm** | TPL 07.07.650 |
| **7.00 mm** | TPL 07.07.700 |
| **7.50 mm** | TPL 07.07.750 |
| **8.00 mm** | TPL 07.07.800 |

DIMENSIONS:
**Total length: (mm):** 5.50, 6.00, 6.50, 7.00, 7.50, 8.00
**Flange length:** 3.60 mm
**Flange thickness:** 0.80 mm
**Lower diameter of columella:** 0.65 mm

## SHORTENABLE PARTIAL IMPLANT IN **HA**, TILTING FLANGE

*Material: Dense hydroxyapatite*

**ITEM**
**TPL 07.08**

The implant replaces the incus or incudo-malleolar joint. Interposition of cartilage is not required between the flange and the tympanic membrane.

The columella is joined to the flange by a platinum joint. Platinum is known to be a malleable and well tolerated material.

The malleable platinum joint gives the possibility to angle the flange of the implant to the tympanic membrane.

The possibility to adjust the position of the columella through the joint allows to center the stirrup in the oval window.

The flange can be fixed to the tympanic membrane with fibrin glue.

**TPL 07.08**

| Total length (L) | Product code |
|---|---|
| **3.50 mm** | TPL 07.08.600 |
| **4.00 mm** | TPL 07.08.700 |
| **4.50 mm** | TPL 07.08.800 |
| **5.00 mm** | TPL 07.08.450 |
| **5.50 mm** | TPL 07.08.500 |
| **6.00 mm** | TPL 07.08.600 |

DIMENSIONS:
**Total length: (mm):** 3.50, 4.00, 4.50, 5.00, 5.50, 6.00 mm
**Flange length:** 3.60 mm
**Flange thickness:** 1.00 mm
**Outer columella diameter:** 2.00 mm
**Inner columella diameter:** 1.20 mm

## SHORTENABLE PARTIAL IMPLANT IN **PE**

*Materials: High molecular weight porous polyethylene (PE)*

**ITEM**
**PAP 07.10**

The PAP 07.10 is an implant to replace the incus and malleus. It replaces the ossicular chain from the tympanic membrane to the stirrup head.

To avoid extrusion, an autologous cartilage graft must be placed between the flange of the implant and the tympanic membrane.

The newly formed connective tissue will join the implant flange to the tympanic membrane and the implant base to the stirrup head.

The hollow shape of the columella allows the surgeon to check the stirrup head during insertion.

After the measurement (for example by microsurgical measuring device 02.14), the length can be reduced using a surgical scalpel.

**PAP 07.10**

| Total length (L) | Product code |
|---|---|
| **5.00 mm** | PAP 07.10 |

DIMENSIONS:
**Total length:** 5.00 mm
**Flange length:** 4.00 mm
**Flange thickness:** 0.60 mm
**Outer columella diameter:** 2.10 mm
**Inner columella diameter:** 1.20 mm

## ADJUSTABLE COMPLETE IMPLANT IN **HAP** AND **PE**

*Materials: Porous hydroxyapatite (HAP) and polyethylene (PE)*

**ITEM**
**TAP 07.37**

### FLANGE IN HAP
As proven by clinical studies and long follow-ups, the head in HAP can stay directly in contact with the eardrum without being extruded.

### LIGHTNESS
The porosity of the material makes the implant lighter.

### ADJUSTABLE COLUMELLA
The columella is composed by a platinum joint which allows to angle and adjust the inclination of the flange and by a part in PE which can be shortened using a surgical scalpel.

**TAP 07.37**

| Total length (L) | Product code |
|---|---|
| **from 8.00 to 3.25 mm** | TAP 07.37 |

DIMENSIONS:
**Total length:** 8.00 mm
shortenable up to 3.25 mm
**Flange diameter:** 3.50 mm
**Platinum wire diameter:** 0.20 mm
**Columella diameter in PE:** 0.60 mm

## ADJUSTABLE COMPLETE IMPLANT IN **HA** AND **PE**

*Materials: Hydroxyapatite (HA) and polyethylene (PE)*

The columella is composed by a platinum joint which allows to angle and adjust the inclination of the flange and by a part in PE which can be shortened using a surgical scalpel.

**ITEM**
**TAP 07.40**

**TAP 07.40**

| Total length (L) | Product code |
|---|---|
| **from 8.00 mm to 3.25 mm** | TAP 07.40 |

DIMENSIONS:
**Total length:** 8.00 mm
shortenable up to 3.25 mm
**Flange diameter:** 3.50 mm
**Platinum wire diameter:** 0.20 mm
**Columella diameter in PE:** 0.75 mm

## ADJUSTABLE PARTIAL IMPLANT IN **HA** AND **PE**, TILTING FLANGE

*Materials: Hydroxyapatite (HA) and polyethyelene (PE)*

The platinum joint allows to angle the implant flange and make it perpendicular to the stirrup head.

The columella in PE can be shortened from 6.5 mm to 3.0 mm.

For such shortening, it is possible to use a surgical scalpel.

**ITEM**
**PAP 07.41**

**PAP 07.41**

| Total length (L) | Product code |
|---|---|
| **6.50 mm** | TAP 07.41 |

DIMENSIONS:
**Total length:** 6.50 mm
**Flange diameter:** 3.50 mm
**Platinum wire diameter:** 0.25 mm
**Audio-PE columella**
**Outer diameter:** 2.20 mm
**Inner diameter:** 1.40 mm

# OTHER MODELS OF TIMPANOPLASTY

## PARTIAL IMPLANT IN **HA**

*Material: Hydroxyapatite (HA)*

**ITEM**
**PAP 07.12**

The PAP 07.12 implant replaces the incus or incudo-malleolar block.

The carved niche at the base of the columella is assembled to the stirrup head.

The flange of the implant can be fixed to the tympanic membrane with fibrin glue.

The bioactive material hydroxylapatite can stay in contact with the neotympanum without being extruded: it does not require a cartilage interposition.

**PAP 07.12**

| Total length (L) | Product code |
|---|---|
| **3.00 mm** | PAP 07.12.300 |
| **3.50 mm** | PAP 07.12.350 |
| **4.00 mm** | PAP 07.12.400 |
| **4.50 mm** | PAP 07.12.450 |
| **5.00 mm** | PAP 07.12.500 |

DIMENSIONS:
**Total length:** 3.00, 3.50, 4.00, 4.50, 5.00 mm
**Flange diameter:** 4.00 mm
**Flange thickness:** 0.80 mm
**Outer columella diameter:** 2.00 mm
**Niche diameter:** 1.20 mm
**Niche depth:** 1.50 mm

## PARTIAL IMPLANT IN **HA** WITH 90° TILTING OVAL FLANGE

*Material: dense hydroxyapatite (HA)*

**ITEM**
**PAP 07.15**

The PAP 07.15 implant replaces the incus or incudo-malleolar block.

The flange is in the “off-set” position.

No cartilage interposition is required between the flange and the tympanic membrane.

The flange of the implant can be fixed to the tympanic membrane with fibrin glue.

**PAP 07.15**

| Total length (L) | Product code |
|---|---|
| **3.00 mm** | PAP 07.15.300 |
| **3.50 mm** | PAP 07.15.350 |
| **4.00 mm** | PAP 07.15.400 |
| **4.50 mm** | PAP 07.15.450 |
| **5.00 mm** | PAP 07.15.500 |

DIMENSIONS:
**Total length:** 3.00, 3.50, 4.00, 4.50, 5.00 mm
**Flange length:** 4.00 mm
**Flange length:** 2.50 mm
**Flange thickness:** 0.80 mm
**Outer columella diameter:** 2.00 mm
**Inner columella diameter:** 1.20 mm

## PARTIAL IMPLANT IN **HA** WITH 75° TILTING OVAL HEAD

*Material: Dense Hydroxyapatite (HA)*

**ITEM**
**PAP 07.16**

The PAP 07.16 implant replaces the incus or incudo-malleolar block.

The flange is in the “off-set” position.

No cartilage interposition is required between the flange and the tympanic membrane.

The flange of the implant can be fixed to the tympanic membrane with fibrin glue.

DIMENSIONS:
**Total length:** 3.00, 3.50, 4.00, 4.50, 5.00 mm
**Flange length:** 4.00 mm
**Flange length:** 2.50 mm
**Flange thickness:** 0.80 mm
**Outer columella diameter:** 2.00 mm
**Inner columella diameter:** 1.20 mm

**PAP 07.16**

| Total length (L) | Product code |
|---|---|
| **3.00 mm** | PAP 07.16.300 |
| **3.50 mm** | PAP 07.16.350 |
| **4.00 mm** | PAP 07.16.400 |
| **4.50 mm** | PAP 07.16.450 |
| **5.00 mm** | PAP 07.16.500 |

## INCUS MODEL IMPLANT IN **HA**

*HA: Bioactive dense hydroxyapatite*

**ITEM**
**INCUS 07.17**

The INCUS 07.17 implant is inserted between incus and stirrup.

The compact design allows an easy placement inside the ossicular chain.

DIMENSIONS:
**Total length:** 3.25, 3.75 mm
**Outer columella diameter:** 2.00 mm
**Inner columella diameter:** 1.20 mm

**INCUS 07.17**

| Total length (L) | Product code |
|---|---|
| **3.25 mm** | INCUS 07.17.325 |
| **3.75 mm** | INCUS 07.17.375 |

## MALLEOLUS-STAPEDIAL ADJUSTABLE IMPLANT IN **HA** AND **PE**

**ITEM**
**TAP 07.42**

*Materials: hydroxyapatite (HA) and porous polyethylene (PE)*

DIMENSIONS:
**Total length:** 8.00 mm
**Flange diameter:** 3.50 mm
**Platinum wire diameter:** 0.25 mm
**PE diameter:** 0.75 mm

The columella can be adjusted with a surgical scalpel.

**TAP 07.42**

| Total length (L) | Product code |
|---|---|
| **from 8.00 mm to 3.25 mm** | TAP 07.42 |

## MALLEOLUS-PLATINUM ADJUSTABLE IMPLANT IN **HA** AND **PE**

**ITEM**
**PAP 07.43**

*Materials: hydroxyapatite (HA) and porous polyethylene (PE)*

DIMENSIONS:
**Total length:** 6.50 mm
**Flange diameter:** 3.50 mm
**Platinum wire diameter:** 0.25 mm

**Columella in PE**
**Outer columella diameter:** 2.20 mm
**Inner columella diameter:** 1.40 mm

The columella can be adjusted with a surgical scalpel.

**PAP 07.43**

| Total length (L) | Product code |
|---|---|
| **from 6.50 mm to 3.00 mm** | PAP 07.43 |

## SHORTENABLE "OFF-SET" COMPLETE IMPLANT IN **PE**

**ITEM**
**TPL 07.04**

*Materials: High molecular weight porous polyethylene (PE)*

Implant to replace the entire ossicular chain, from the tympanic membrane to the oval window.

To avoid extrusion, it is necessary to interpose a layer of cartilage.

The columella in the offset position remains perpendicular to the oval window.

After the measurement (it is recommended to use the measuring device 02.14 by Audio Technologies), the implant can be shortened and taken to the suitable length.

**TPL 07.04**

| Total length (L) | Product code |
|---|---|
| **6.00 mm** | TPL 07.04.600 |
| **7.00 mm** | TPL 07.04.700 |
| **8.00 mm** | TPL 07.04.800 |

DIMENSIONS:
**Total length:**
6.00 mm (shortenable up to 5.00 mm)
7.00 mm (shortenable up to 6.00 mm)
8.00 mm (shortenable up to 7.00 mm)
**Flange diameter:** 3.60 mm
**Flange thickness:** 0.50 mm
**Columella diameter:** 0.65 mm

## COMPLETE OFF-SET IMPLANT IN **HA**

*Material: dense hydroxyapatite*

Implant to replace the entire ossicular chain, from the tympanic membrane to the oval window.

The interposition of cartilage is not necessary between the implant flange and the tympanic membrane.

The columella in the off-set position remains perpendicular to the oval window.

It is possible to fix the flange to the tympanic membrane with fibrin glue.

**ITEM**
**TPL 07.05**

**TPL 07.05**

| Total length (L) | Product code |
|---|---|
| **5.00 mm** | TPL 07.05.500 |
| **5.50 mm** | TPL 07.05.550 |
| **6.00 mm** | TPL 07.05.600 |
| **6.50 mm** | TPL 07.05.650 |
| **7.00 mm** | TPL 07.05.700 |
| **7.50 mm** | TPL 07.05.750 |
| **8.00 mm** | TPL 07.05.800 |

DIMENSIONS:
**Total length (mm):** 5.00, 5.50, 6.00, 6.50, 7.00, 7.50, 8.00
**Flange length:** 2.00 mm
**Flange thickness:** 0.80 mm
**Columella diameter:** 0.65 mm

## PARTIAL OFF-SET IMPLANT IN **HA**

*Material: dense hydroxyapatite*

Implant for partial replacement of the ossicular chain.

The columella in off-set position is assembled to the stirrup head in vertical way.

It is not necessary the interposition of cartilage between the flange of the implant and tympanic membrane.

**ITEM**
**TPL 07.06**

**TPL 07.06**

| Total length (L) | Product code |
|---|---|
| **3.00 mm** | TPL 07.06.600 |
| **3.50 mm** | TPL 07.06.700 |
| **4.00 mm** | TPL 07.06.800 |
| **4.50 mm** | TPL 07.06.450 |
| **5.00 mm** | TPL 07.06.500 |
| **5.50 mm** | TPL 07.06.500 |

DIMENSIONS:
**Total length (mm):** 3.00, 3.50, 4.00, 4.50, 5.00, 5.50
**Flange diameter:** 4.00 mm
**Flange thickness:** 0.80 mm
**Outer columella diameter:** 2.00 mm
**Niche diameter:** 1.20 mm
**Niche depth:** 1.50 mm

## COMPLETE IMPLANT IN **HA** WITH 90° OVAL FLANGE

*Material: Hydroxyapatite (HA)*

**ITEM**
**TAP 07.13**

The TAP 07.13 implant replaces the entire ossicular chain, from the malleus or tympanic membrane up to the platinum of the stirrup.

No cartilage interposition is required between the flange and the tympanic membrane.

The offset columella and the shape of the flange allow to see the oval window during placement of the implant.

The thickness of the flange allows to create a groove for the manubrium of malleus (use a diamond cutter).

The flange can be stabilized to the tympanic membrane with fibrin glue.

**TAP 07.13**

| Total length (L) | Product code |
|---|---|
| **5.00 mm** | TAP 07.13.500 |
| **5.50 mm** | TAP 07.13.550 |
| **6.00 mm** | TAP 07.13.600 |
| **6.50 mm** | TAP 07.13.650 |
| **7.00 mm** | TAP 07.13.700 |
| **7.50 mm** | TAP 07.13.750 |
| **8.00 mm** | TAP 07.13.800 |

DIMENSIONS:
**Total length (mm):** 5.00, 5.50, 6.00, 6.50, 7.00, 7.50, 8.00
**Flange length:** 3.50 mm
**Flange width:** 2.50 mm
**Spessore flangia:** 1.00 mm
**Lower diameter of columella::** 0.75 mm

## 75° TILTED OVAL HEAD COMPLETE IMPLANT IN **HA**

*Material: Hydroxyapatite (HA)*

**ITEM**
**TAP 07.14**

The TAP 07.14 implant replaces the entire ossicular chain, from the malleus or tympanic membrane to the platinum of the stirrup.

No cartilage interposition is required between the flange and the tympanic membrane.

The offset columella and the shape of the flange allow to see the oval window during placement of the implant.

The thickness of the flange allows to create a groove for the manubrium of malleus (use a diamond cutter).

The flange can be stabilized to the tympanic membrane with fibrin glue.

**TAP 07.14**

| Total length (L) | Product code |
|---|---|
| **5.00 mm** | TAP 07.14.500 |
| **5.50 mm** | TAP 07.14.550 |
| **6.00 mm** | TAP 07.14.600 |
| **6.50 mm** | TAP 07.14.650 |
| **7.00 mm** | TAP 07.14.700 |
| **7.50 mm** | TAP 07.14.750 |
| **8.00 mm** | TAP 07.14.800 |

DIMENSIONS:
**Total length (mm):** 5.00, 5.50, 6.00, 6.50, 7.00, 7.50, 8.00
**Flange length:** 3.50 mm
**Flange width:** 2.50 mm
**Flange thickness:** 1.00 mm
**Lower diameter of columella:** 0.75 mm

## SHORTENABLE IMPLANT IN **HA** "MARPLA"

*Material: Dense hydroxyapatite (HA)*

**ITEM**
**TAP 07.54**

Implant in dense HA to connect the malleus to the platinum of the stirrup. The base of the implant is rectangular for a good contact with the platinum of the stirrup.

The columella can be shortened by a diamond cutter under watering.

**TAP 07.54**

| Total length (L) | Product code |
|---|---|
| **8.00 mm** | TAP 07.54 |

DIMENSIONS:
**Total length:** 8.00 mm
**Flange length:** 4.00 mm
**Rectangular-section columella:** 1.00 mm x 0.80 mm

## CUP PLATINUM CONNECTOR

*Material: dense hydroxyapatite (HA)*

**ITEM**
**TPL 07.44**

The implant is designed to power the sound wave transmission on the platinum of the stirrup. The implant can be placed among the possible residues of the crura.

The cavity of the cup hosts the columella of the complete implant with diameters between 0.4 mm and 0.8 mm.

*The transmission of the sound wave is not impaired by inclinations below 20.*

TPL 07.44

| Product code | Dimension mm | Height mm | Cup diameter mm |
|---|---|---|---|
| **TPL 07.44** | 1.2 x 1.0 | 0.6 | 0.85 |

DIMENSIONS:
**Platen dimension:** 1.2 x 1.0 mm
**Cup diameter:** 0.85 mm

ENDOVISION
NKO - ORL - ENT

Dorp 28, 3221 NIEUWRODE
Tel. **016 40 70 10** Fax **016 40 70 66**
E-mail **info@endovision.be**

CAT 400 - Rev. 00, Jan 2023