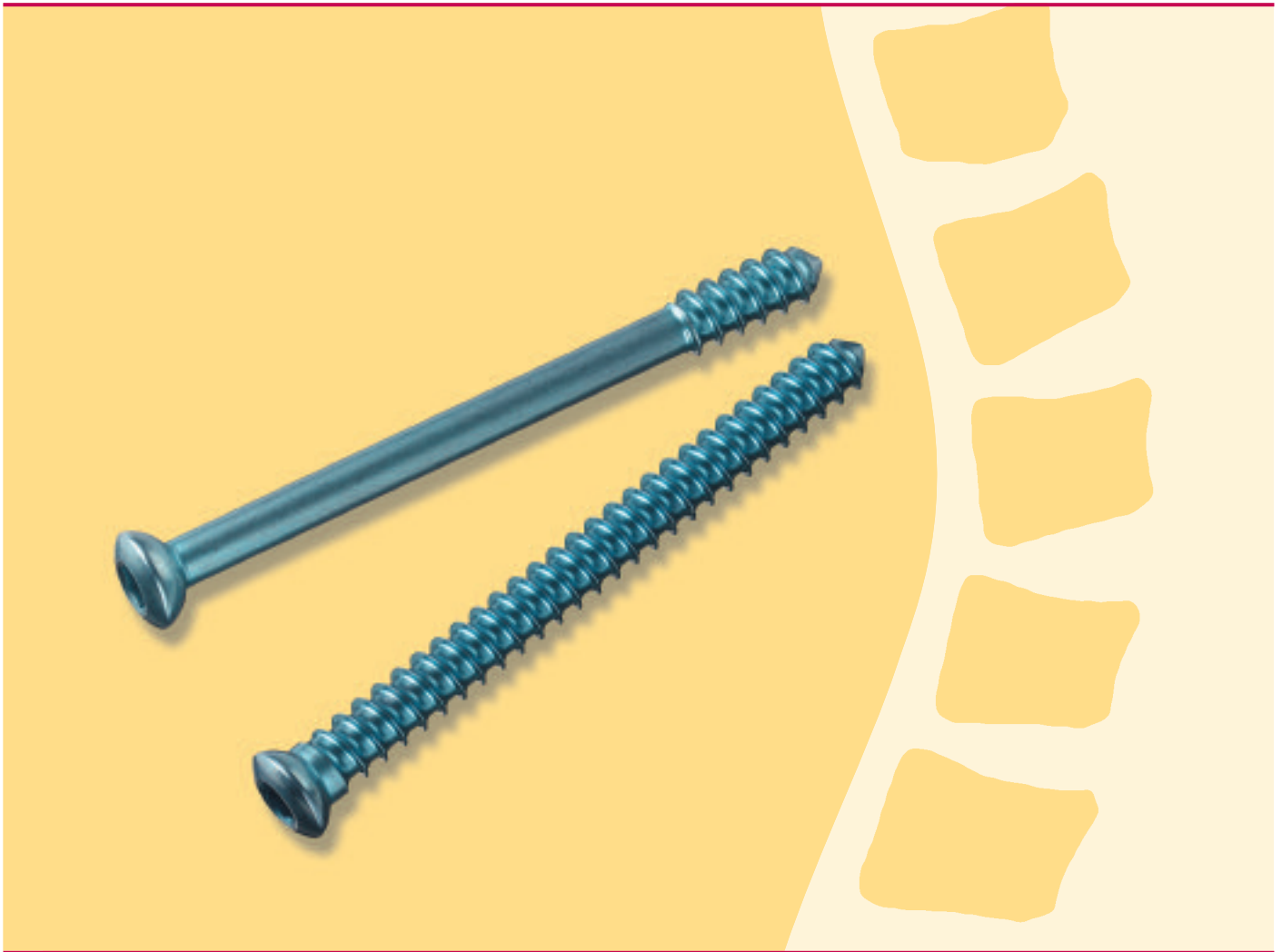


# Aesculap Spine

## Odontoid Fixation and C1/C2 Transarticular Screw Fixation

Implants and Instruments



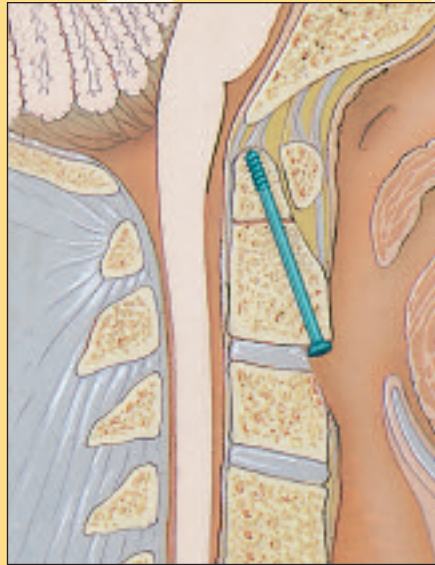
according to Apfelbaum

# Instrumentation according to Apfelbaum

## ► Anterior Odontoid Fixation

The Apfelbaum odontoid system is a real alternative to the usual external fixation technique in the treatment of Type II odontoid fractures. The advantage of the Apfelbaum technique lies in preserving the full range of motion of the segment and in the minimized approach. The partially threaded titanium implant acts as a tension screw. The special retractor system reduces the approach to a minimal working canal through which both instruments and implants can be safely inserted and directed to the target area via guide tubes. These special guide tubes are fixed onto the surface of the C3 vertebra by means of so-called "spikes", making it easier for the surgeon to work and also firmly establishing the later implant position.

The individual stages of the operation are described in detail in the separate operation manual, which can be ordered under Article Number O23402.

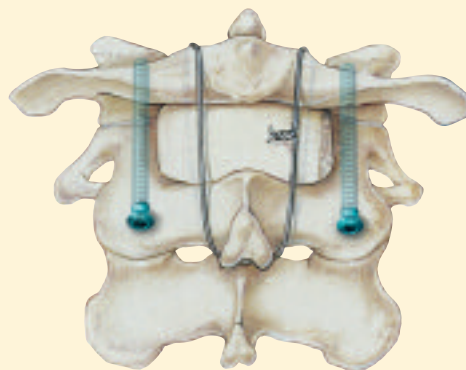
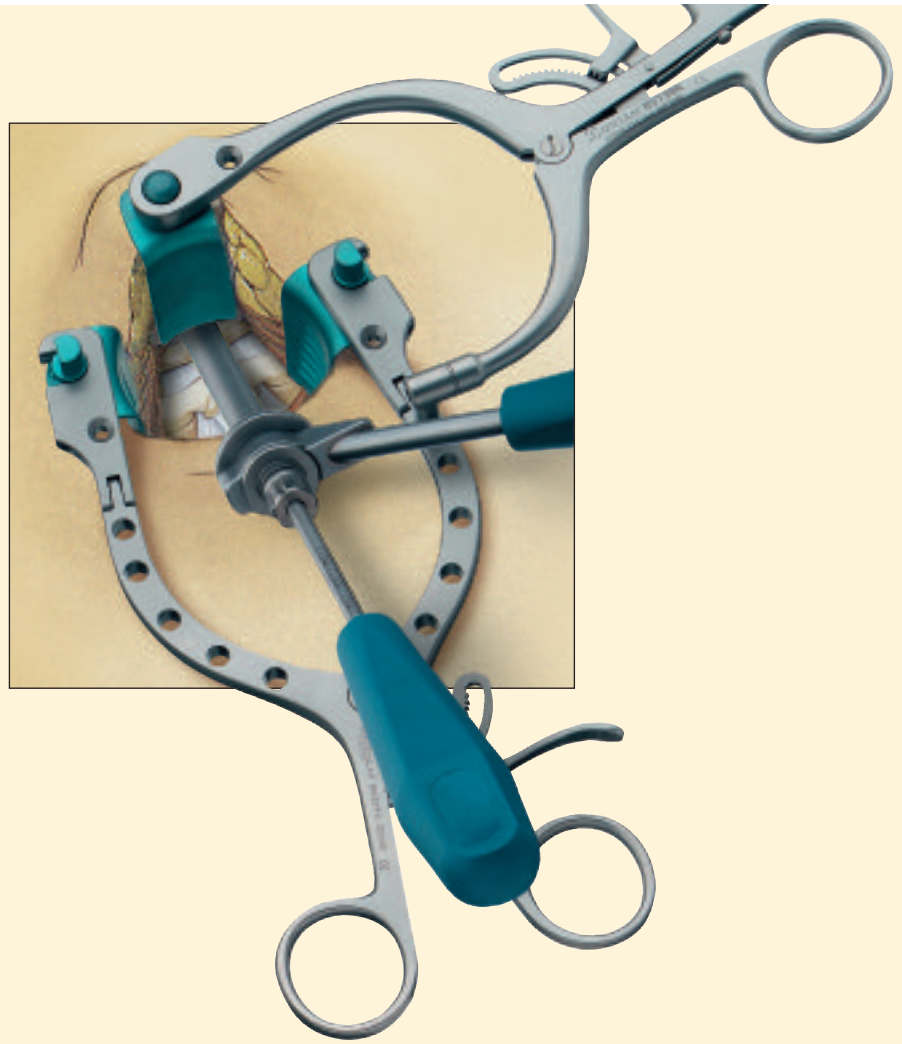


## ► Posterior C1/C2 Transarticular Screw Fixation

This system component is based on the classical Magerl technique for transarticular screw fixation. However, the Apfelbaum instrumentation has been so designed as to reduce the approach to a minimum, keeping approach-related surgical trauma as insignificant as possible. The guide tube system, which is partly placed subcutaneously, not only makes the positioning of the implant more accurate and easier, but also protects the tissue while the instruments are guided safely into use.

The implants (4.0 mm "fully threaded" screws) are made from titanium.

The Apfelbaum implantation technique is described in detail in a separate operation manual, which can be ordered under Article Number O23502.



# Odontoid System according to Apfelbaum

## Retractor System

### FJ959P

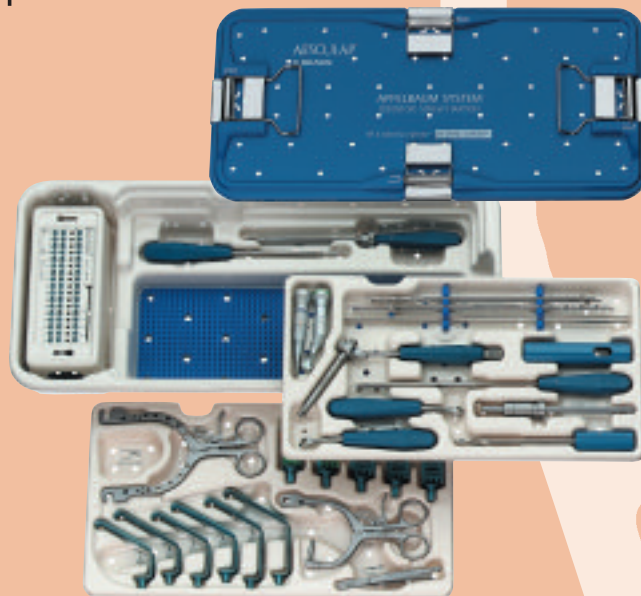
Lid for Tray FJ961P

### FJ961P

Tray for Odontoid instruments,  
retractors and implants

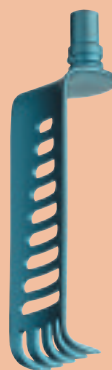
### JK/JN400

Suitable sterile container  
(without illustration)



"CCR" Caspar cervical retractor blades,  
Titanium, semi-radiolucent to X-ray,  
with "side load" mechanism  
to be used with BW079R

<b>BW153T</b>	24 x 40 mm
<b>BW154T</b>	24 x 45 mm
<b>BW155T</b>	24 x 50 mm
<b>BW156T</b>	24 x 55 mm
<b>BW157T</b>	24 x 60 mm



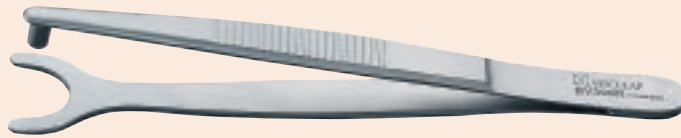
Odontoid retractor blades  
Titanium, semi-radiolucent to X-ray  
with ball snap closure  
to be used with BV379R

	(Width x L1 x L2)
<b>BV741T</b>	24 x 67 x 38,5 mm
<b>BV742T</b>	24 x 77 x 38,5 mm
<b>BV743T</b>	24 x 67 x 30,0 mm
<b>BV744T</b>	24 x 77 x 30,0 mm
<b>BV745T</b>	24 x 67 x 56,5 mm
<b>BV746T</b>	24 x 77 x 56,5 mm

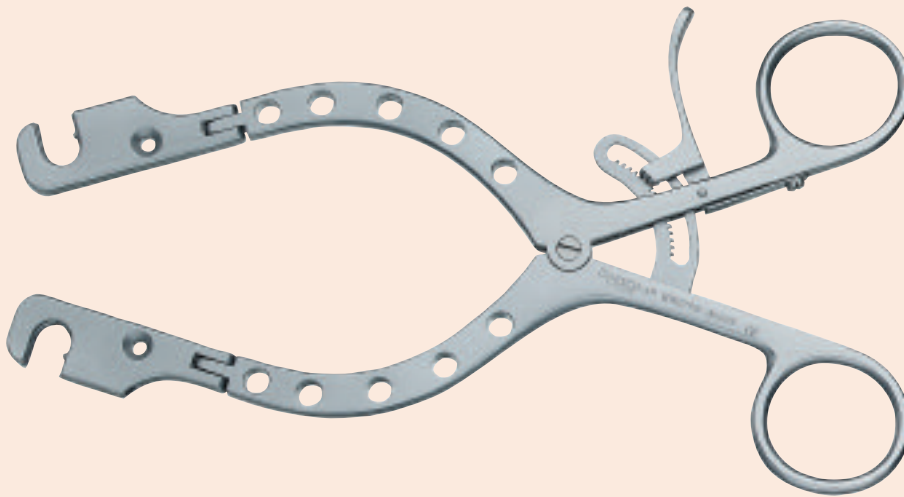




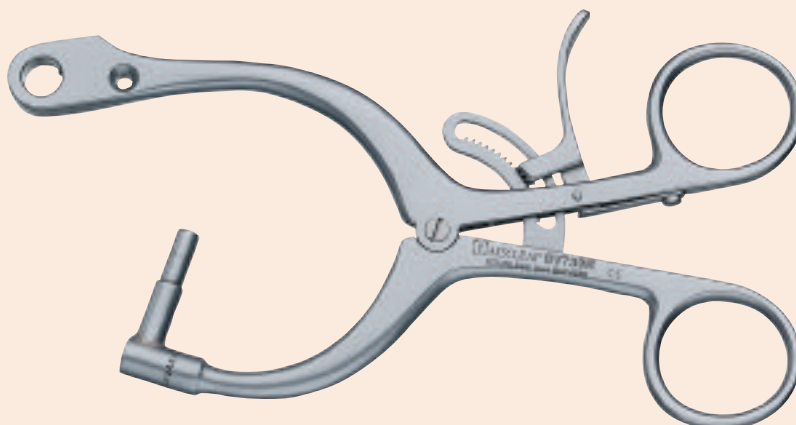
**BW010R**  
Handles for Caspar retractor blades with side load attachment



**BV399R**  
Forceps for changing retractor blades with ball snap closure



**BW079R**  
Soft tissue retractor according to Apfelbaum with side load mechanism



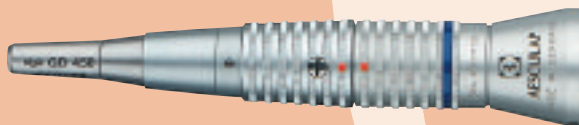
**BV739R**  
Counter retractor according to Apfelbaum with ball snap mechanism to be used in conjunction with BW019R

# Odontoid System according to Apfelbaum

## Instrumentation for Odontid Fixation

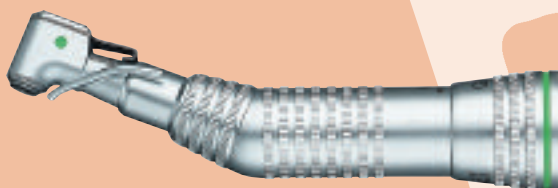
### GD450R

Straight micro hand piece (1:1)  
for drill bits with round shaft (2,35 mm)  
(INTRA coupling)



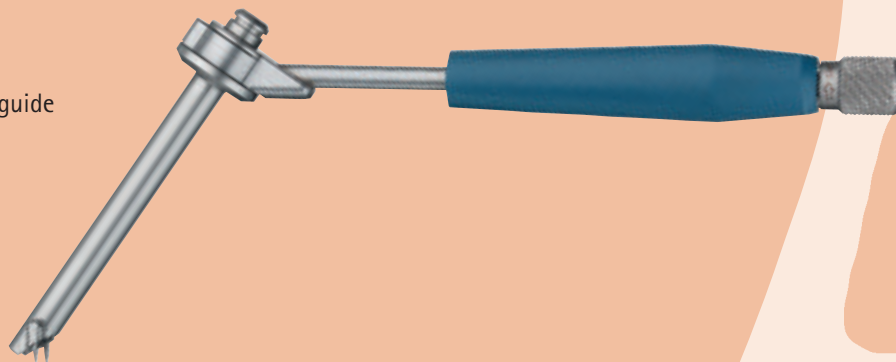
### GB111 + GB119

Angular micro hand piece  
for drill bits with dental shaft  
(INTRA coupling)  
(GB111 angular micro hand piece (4:1)  
and GB119 angular head (2:1)  
have to be ordered separately)



### FJ962R

Outer sleeve guide



### FJ964P

Impactor for FJ962R





◀ **FJ965R**  
Cannulated drill



◀ **FJ963R**  
Inner drill guide  
to be used in FJ962R



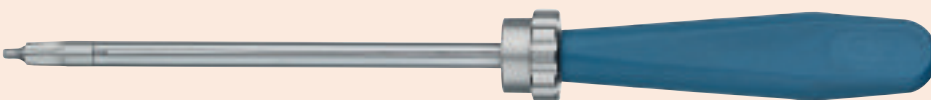
◀ **FJ976R**  
Drill bit, 3.0 mm, dental shaft  
to be used in drill guide FJ963R  
respectively with angular micro  
hand piece GB111/GB119



◀ **FJ966R**  
Drill bit, 3.0 mm,  
round shaft (2.35 mm)  
to be used in drill uide FJ963R  
respectively with straight micro  
hand piece GD450R



◀ **FJ967R**  
Tap  
to be used in outer  
sleeve guide FJ962R



◀ **FJ969R**  
Screw driver  
with screw holding mechanism  
to be used in outer sleeve guide  
FJ962R



◀ **FJ968R**  
Screw driver with ball head

# C1/C2 System according to Apfelbaum

## Instrumentation for C1/C2 transarticular screw fixation

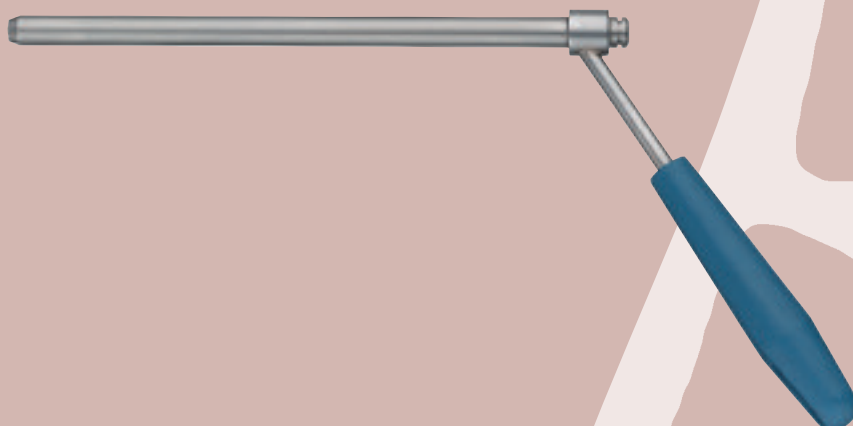
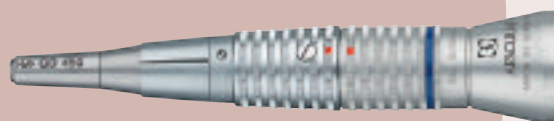
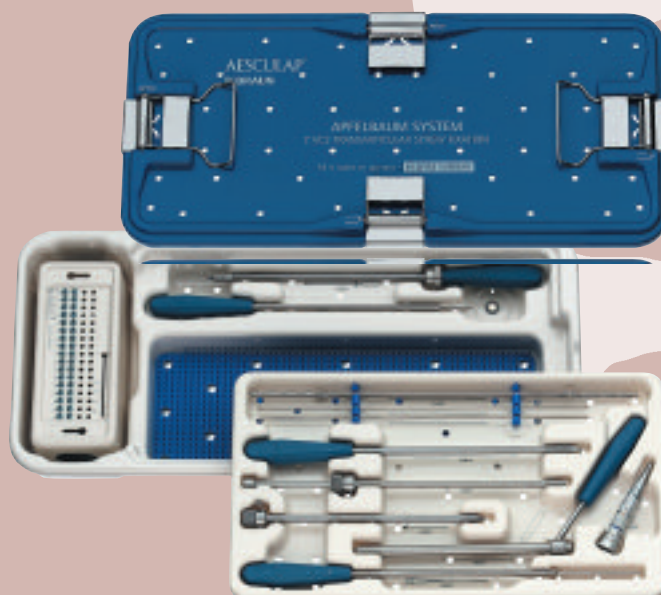
**FJ979P**  
Lid for tray FJ981P

**FJ981P**  
Tray for C1/C2 instruments  
and implants

**JK/JN400**  
Suitable sterile container  
(without illustration)

**GD450R**  
Straight micro hand piece (1:1)  
for drill bits with round shaft (2,35 mm)  
(INTRA coupling)

**FJ982R**  
Sleeve guide







◀ **FJ983R**  
Obturator for  
sleeve guide FJ982R



◀ **FJ984R**  
Trocar



◀ **FJ985R**  
Inner drill guide  
to be used in FJ982R



◀ **FJ986R**  
Drill bit, 3.0 mm,  
round shaft (2.35 mm)  
to be used with straight  
micro hand piece GD450R



◀ **FJ987R**  
Tap, to be used in FJ982R



◀ **FJ989R**  
Screw driver  
with screw holding mechanism  
to be used in FJ982R



◀ **FJ988R**  
Screw driver with ball head

# Implants according to Apfelbaum

## Odontoid Implants

▶ Odontoid screw, 4.0 mm partially threaded, Titanium

LB512T	32 mm
LB514T	34 mm
LB516T	36 mm
LB518T	38 mm
LB520T	40 mm
LB522T	42 mm
LB524T	44 mm
LB526T	46 mm
LB528T	48 mm
LB530T	50 mm
LB532T	52 mm
LB534T	54 mm
LB536T	56 mm
LB538T	58 mm
LB540T	60 mm
LB542T	62 mm
LB544T	64 mm



## C1/C2 Implants

▶ C1/C2 screw, 4.0 mm fully threaded, Titanium

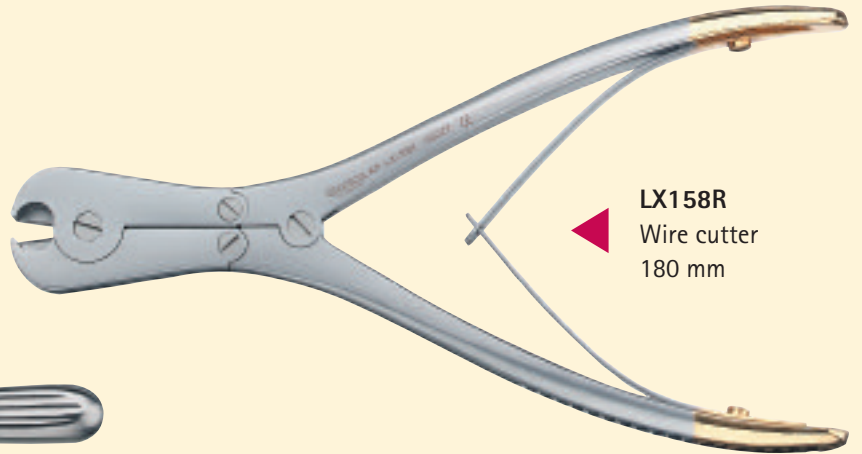
LB472T	32 mm
LB474T	34 mm
LB476T	36 mm
LB478T	38 mm
LB480T	40 mm
LB482T	42 mm
LB484T	44 mm
LB486T	46 mm
LB488T	48 mm
LB490T	50 mm
LB492T	52 mm
LB494T	54 mm
LB496T	56 mm
LB498T	58 mm
LB500T	60 mm
LB502T	62 mm
LB504T	64 mm



Implant material: Titanium Alloy according to ISO 5832-3 (Ti6Al4V)

**LX040S**

K-wire, 2.0 x 310 mm  
(package per 10)  
(without illustration)

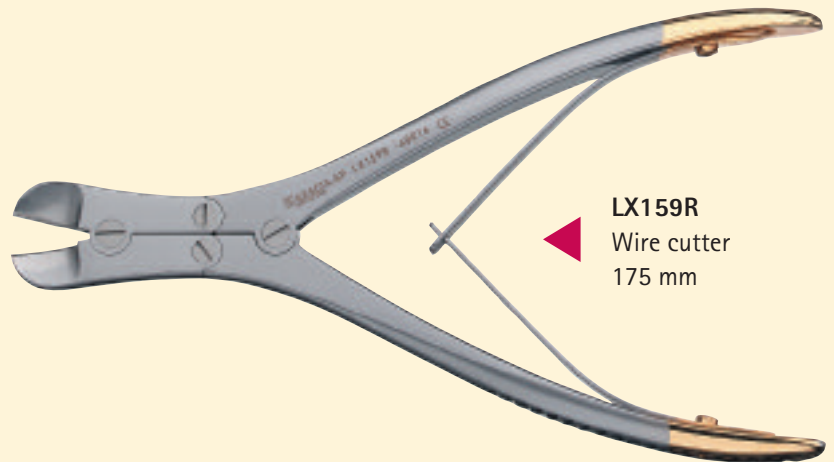


**LX158R**  
Wire cutter  
180 mm



▲ Curettes according to Apfelbaum,  
70° angulated

- FK870R** 15° to the right, 3 x 9 mm
- FK871R** 15° to the right, 4 x 11 mm
- FK872R** 15° to the left, 3 x 9 mm
- FK873R** 15° to the left, 4 x 11 mm

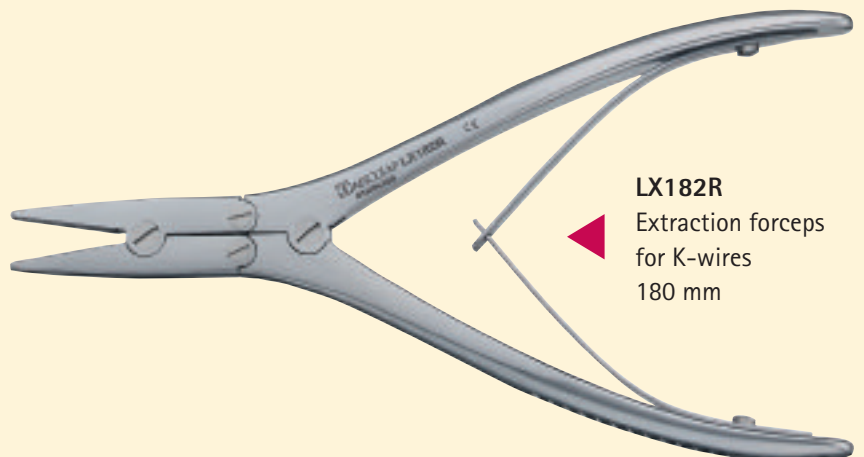


**LX159R**  
Wire cutter  
175 mm



▲ **FL036R** Mallet, 140 g  
with exchangeable  
nylon inserts

▲ **FL037** Set of spare nylon  
inserts for FL036R  
(without illustration)



**LX182R**  
Extraction forceps  
for K-wires  
180 mm



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