



BUTTERFLY PLATE



Introduction

Butterfly Growth Plate System consists double articulated plates and non-threaded locking screws. The stress on the screws supported by the plate thanks to the articulated design. By using non-threaded locking screws, the epiphyseal damage is minimized.

Index

- 1 Introduction
- 1 Indications
- 2 Features
- 3 Instruments
- 5 Surgical Technique
- 9 Plate Extraction
- 10 Set Detail

Indications

Butterfly Growth Plate has many pathological indications. It is used for posttraumatic, metabolic, neuromuscular, idiopathic and congenital pathologies. It is preferred for long bone deformities and corrections of unequal legs.

Warning:

This descriptive catalog is not sufficient as being unaided for proper use of the products intraoperatively. It is highly recommended that implantation and instrument sets must be used by a surgeon who is trained-experienced about the product performances and usage.

Features

Butterfly Growth Plate is available in two sizes, 13 and 16 mm depending on the distance between the screw holes. The system is produced by biocompatible Titanium alloy.

16 mm plate with 2 and 4 holes options are available.

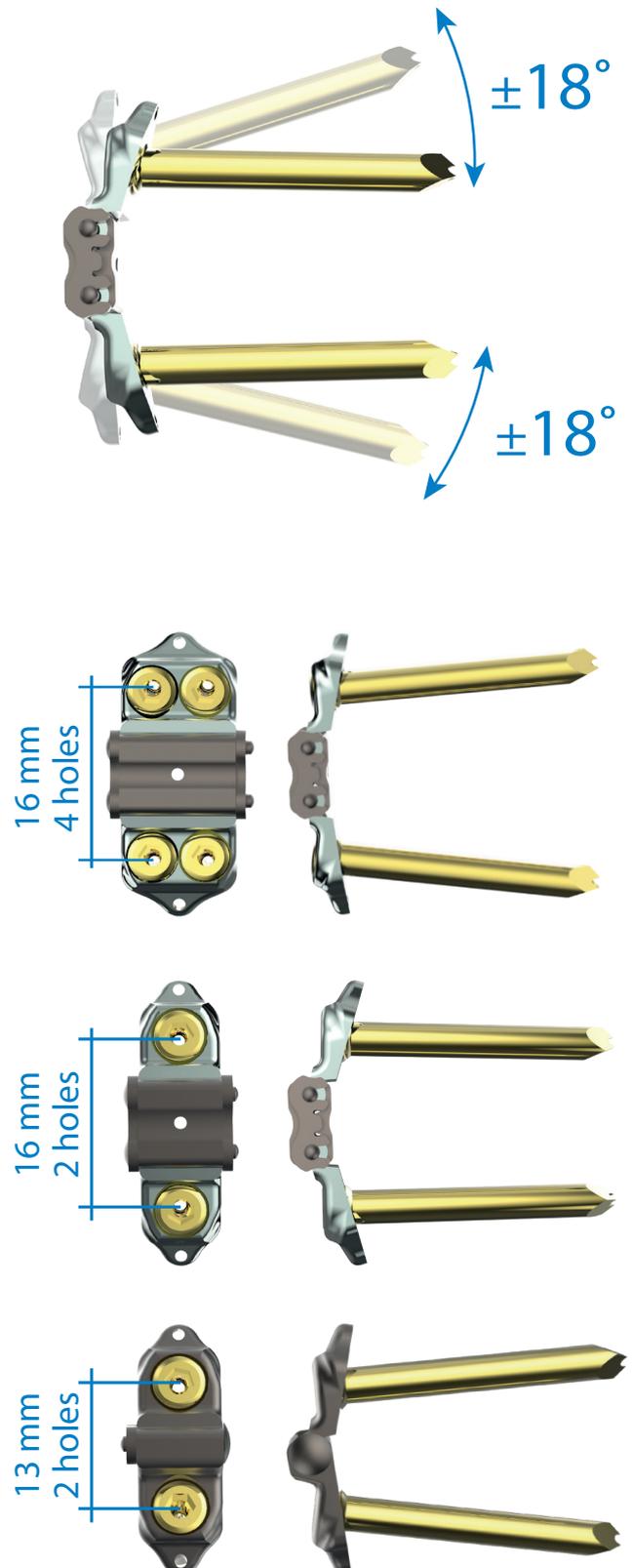
Butterfly Growth Plate has a durable structure against to the force for hemiepiphysodesis applications.

It can be applied with a precise and simple surgical technique which provides an easy adaptation to different bone morphologies.

The hinged structure of the system ensures that the plate is fully aligned with the bone surface, providing an ideal positioning on the growth plate. Butterfly 8 Plate facilitates applications by providing the desired full anatomical fit to inclined surfaces.

Double articulated plate has more angulation than single articulated plate.

The Locking Peg screws have no risk of pull out when they are compared with usual screws. They also have minimal damage to the epiphysis.



Instruments

Penset 03362020100



Length Measuring Device 03722000004



K-Wire Sleeve 03362007512



Threaded Drill Sleeve 3.2X65 mm 03362006532



Plate Holder 03362010010



Cannulated Drill 3.2X1.25X30X170 mm 23212530170



Kirschner Wire Trocar Point 1.2X150 mm 23410150112



Screw Extractor

03362010100



Cannulated Screw Driver Quick Tip 2.5X Ø 5 X130 mm

02050100425



Soft Screw Driver Quick Small

02010101001



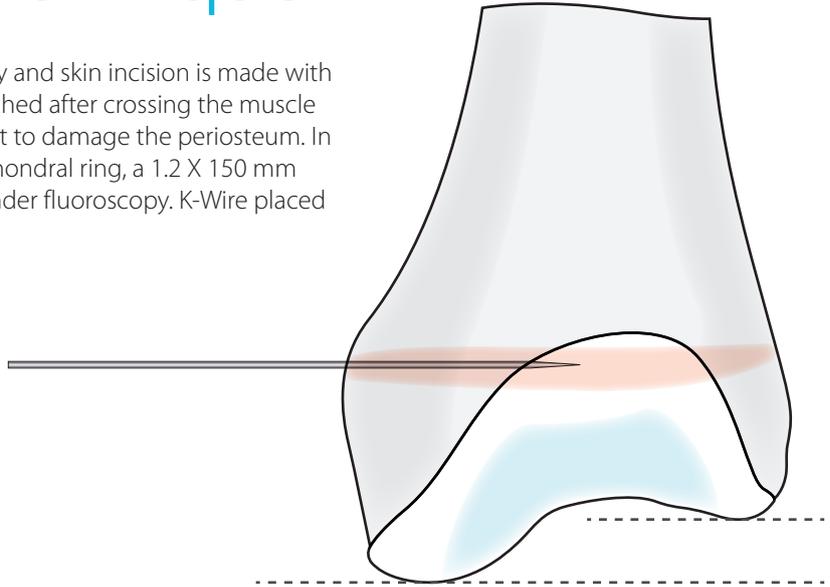
Bone Hammer Small With Slotted End

01194003009



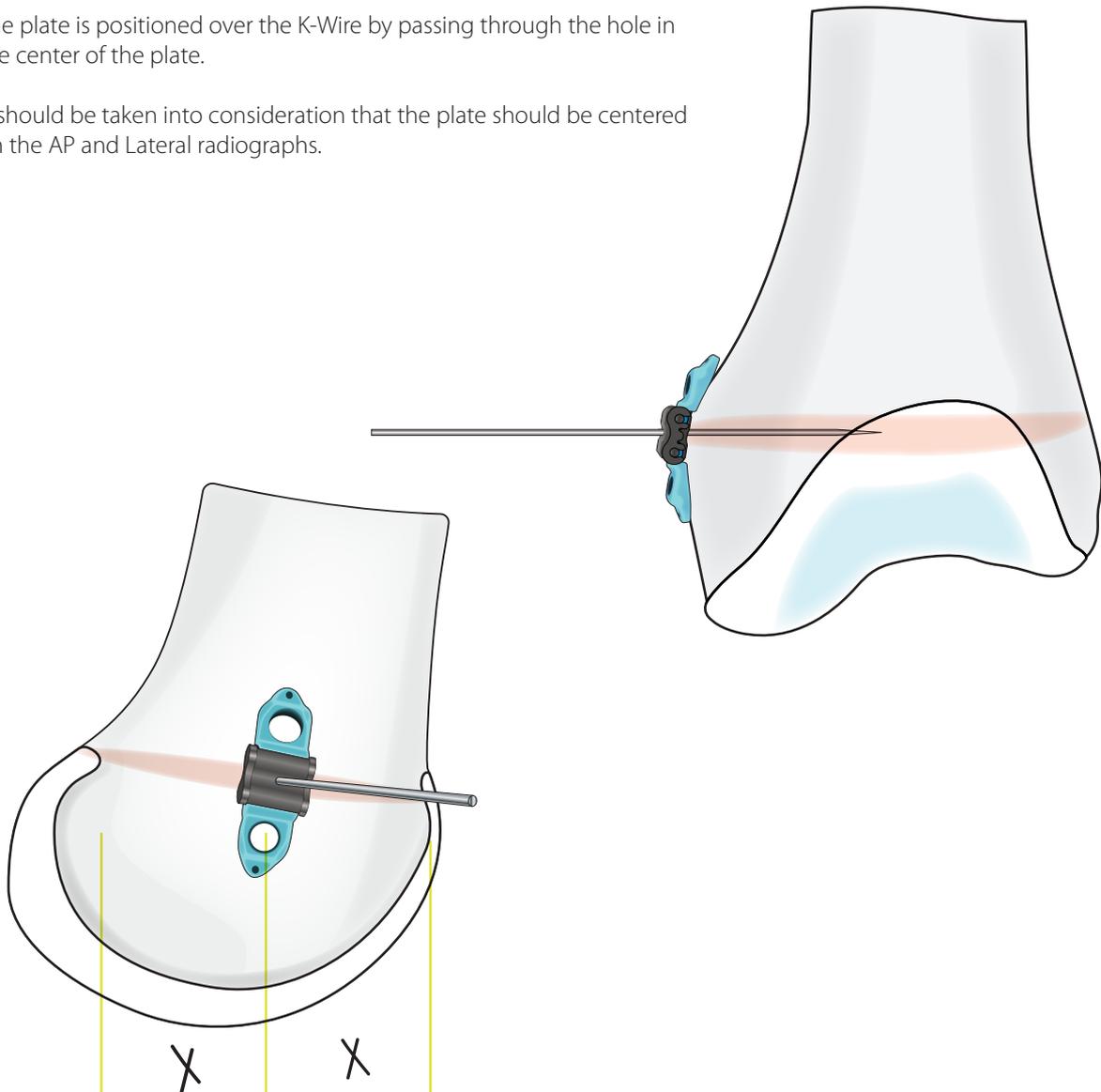
Surgical Technique

The deformity is seen under fluoroscopy and skin incision is made with a 3 cm incision. The periosteum is reached after crossing the muscle and fascia. It should be very careful not to damage the periosteum. In order to prevent damage to the perichondral ring, a 1.2 X 150 mm K-wire is used to detect localization under fluoroscopy. K-Wire placed to the pyhsis.



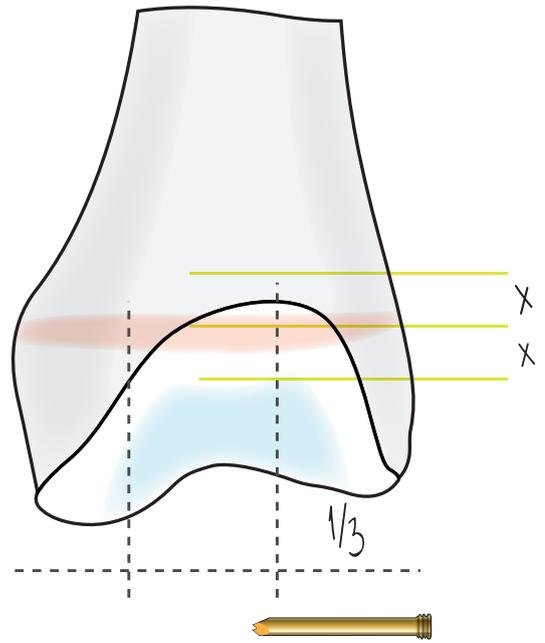
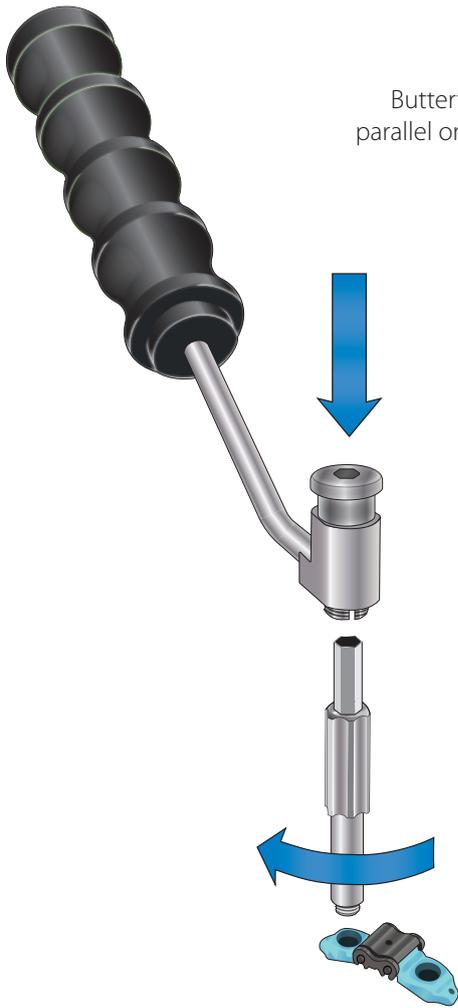
The plate is positioned over the K-Wire by passing through the hole in the center of the plate.

It should be taken into consideration that the plate should be centered on the AP and Lateral radiographs.



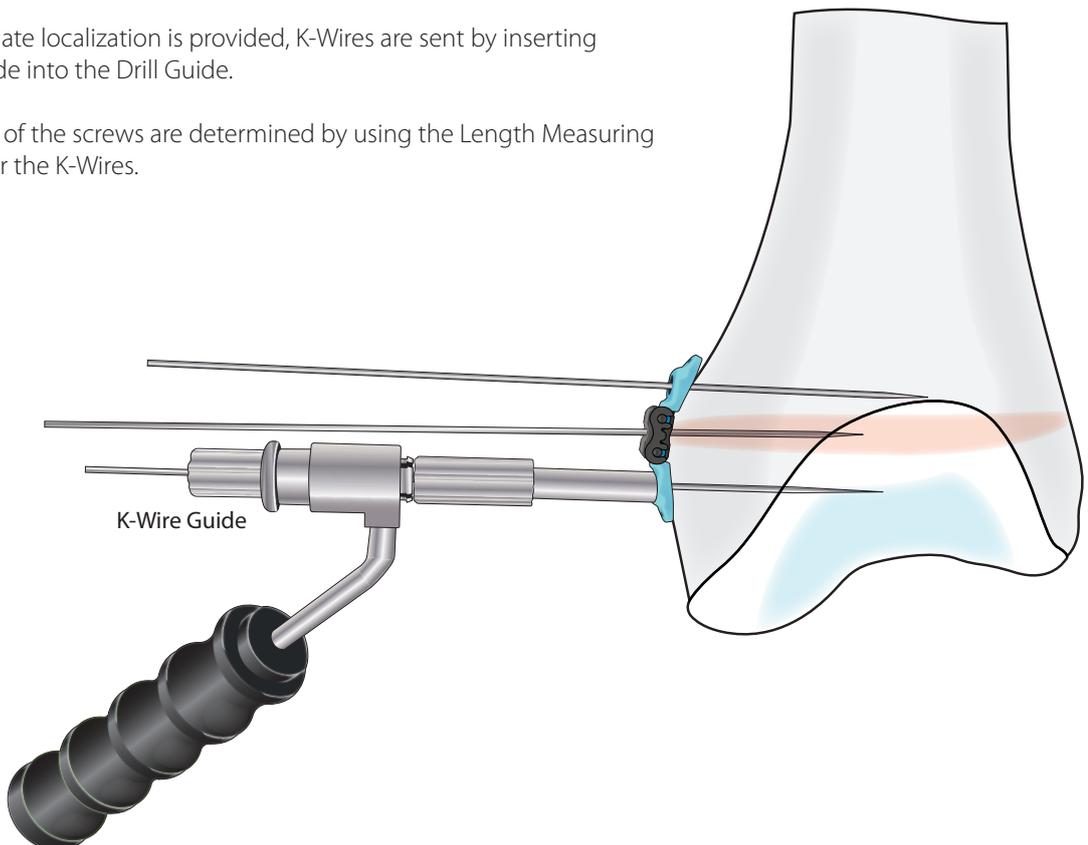
Butterfly Growth Plate is positioned centrally to growth plate and screws sent parallel or angled. The Peg Screws should be longer than $\frac{1}{3}$ of the growth plate.

Threaded end of 3.2X65 mm Drill Sleeve is attached to plate, the other end to Plate holder.



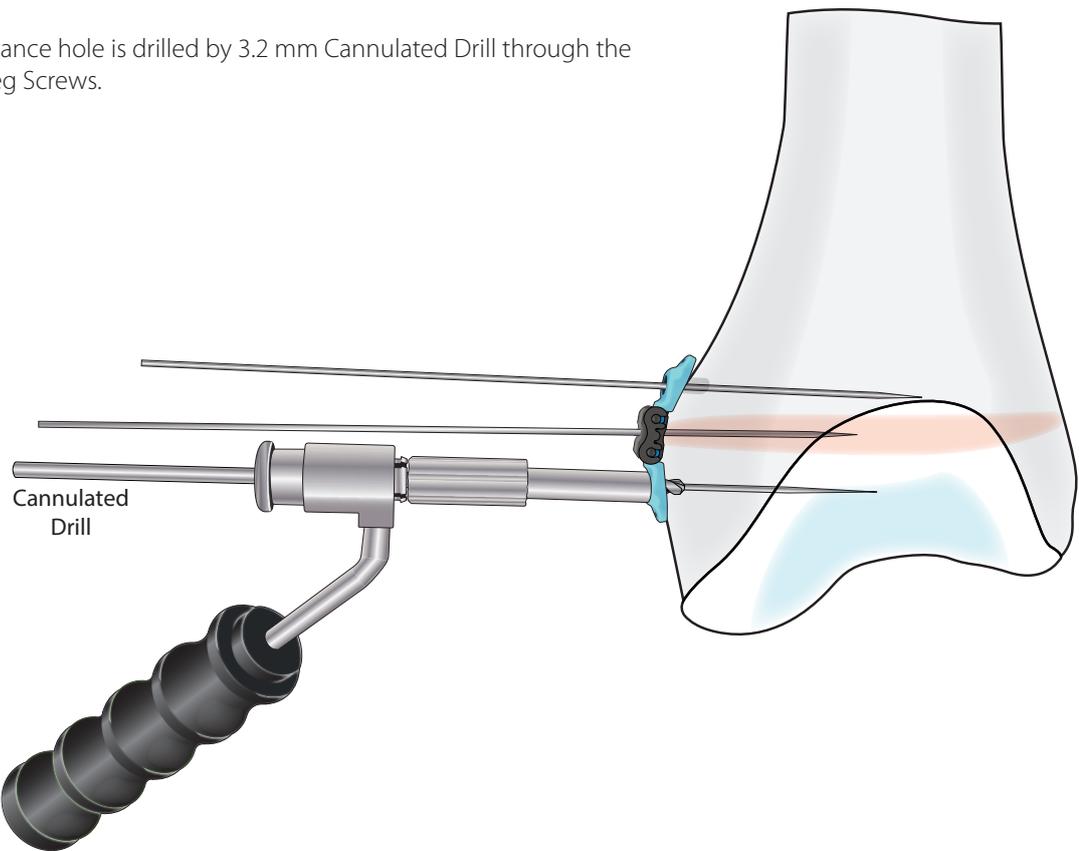
After the plate localization is provided, K-Wires are sent by inserting K-Wire Guide into the Drill Guide.

The length of the screws are determined by using the Length Measuring Device over the K-Wires.



*optional

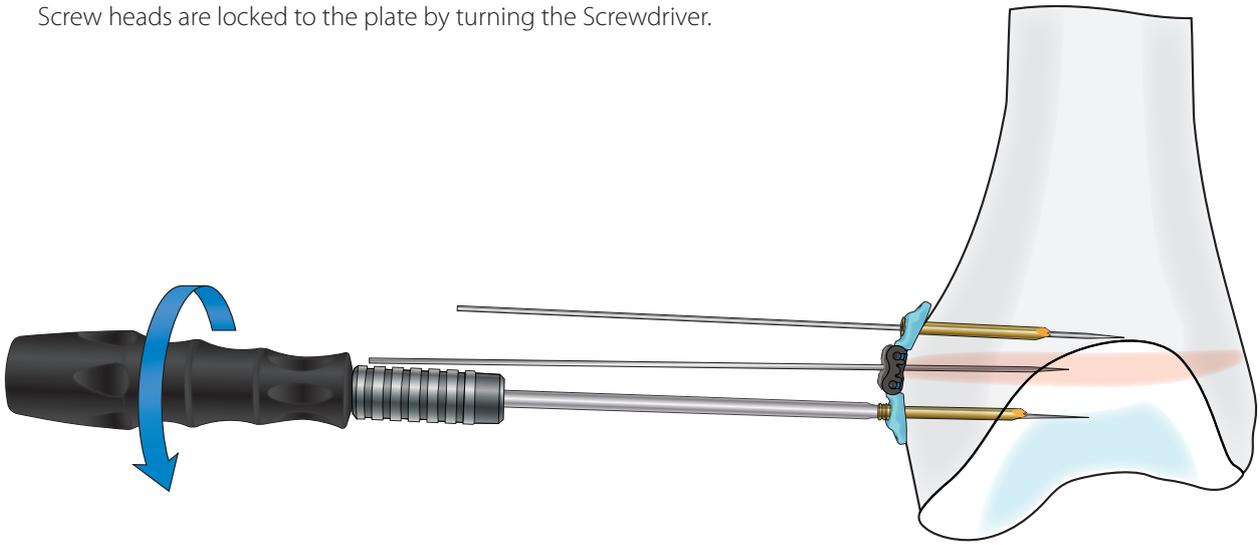
A guide entrance hole is drilled by 3.2 mm Cannulated Drill through the K-Wire for Peg Screws.



The Peg Screw is inserted to the Cannulated Screwdriver and sent by the help of the Hammer.

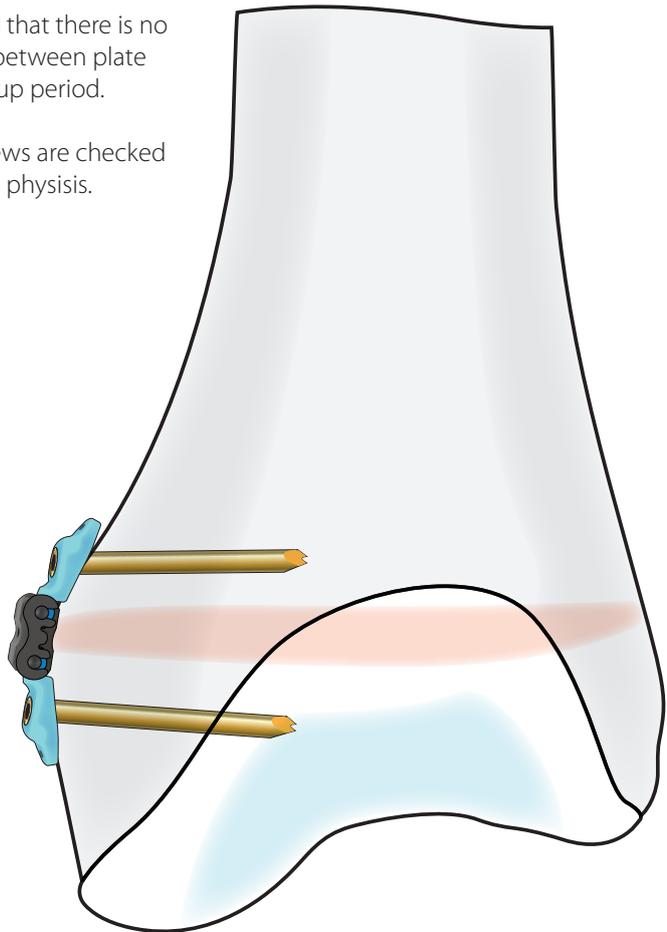


Screw heads are locked to the plate by turning the Screwdriver.



After the K-Wires are pulled out, it must be checked that there is no space between the plate and the bone. The space between plate and bone may cause screw breakage in the follow-up period.

The metaphysis and epiphysis detection of the Screws are checked for the last time. One plate may be applied for each physis.



After the fixation process is completed, bleeding control is provided with tourniquet application. Skin and fascia plans are carefully closed and the subcutaneous and skin are closed.

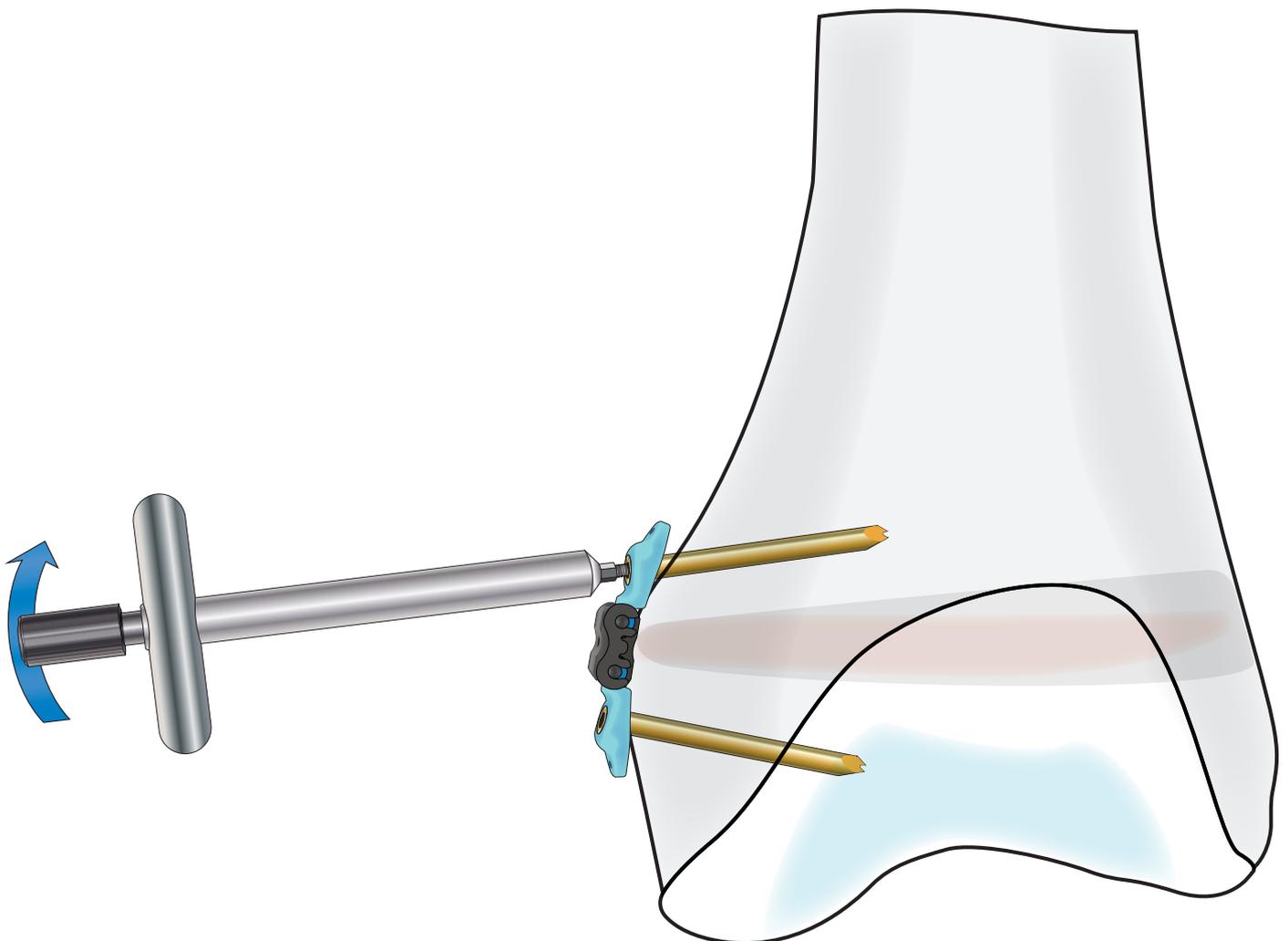
Immobilization on next day is not recommended for patients. Weight bearing, knee flexion, extension movements are recommended according to the pain tolerance.

Plate Extraction

The patients are checked 3 months period. The angles of the mechanical axes and joints are measured by the X-ray. After the measured values are neutral, the plate is removed and the growth is continued normal.

The threaded head of the Peg screws is recovered by rotating the screw head with the normal screwdriver. There is an extractor designed for removing the Butterfly Growth Plate and Peg Screws.

The threaded section of the Extractor is attached to the threaded section of the Peg Screws. The Extractor is retracted and the screw is removed. During removal, the Hammer With Slotted End can be used with slight hits.





Set Detail

	code	ubb	description	qty
1	33620000122	8680858426768	BUTTERFLY PLATE 2 HOLES (TI) 13 MM	4
2	33620000162	8680858426775	BUTTERFLY PLATE 2 HOLES (TI) 16 MM	4
3	33620000164	8680858426805	BUTTERFLY PLATE 4 HOLES (TI) 16 MM	4
	20127002035	8680858427772	LOCK. CANN. PEG SCREW (TI) Ø3.5X20 MM	2
	20127002235	8680858427789	LOCK. CANN. PEG SCREW (TI) Ø3.5X22 MM	2
	20127002435	8680858427796	LOCK. CANN. PEG SCREW (TI) Ø3.5X24 MM	2
	20127002635	8680858427802	LOCK. CANN. PEG SCREW (TI) Ø3.5X26 MM	2
	20127002835	8680858427819	LOCK. CANN. PEG SCREW (TI) Ø3.5X28 MM	2
	20127003035	8680858427826	LOCK. CANN. PEG SCREW (TI) Ø3.5X30 MM	2
	20127003535	8680858427833	LOCK. CANN. PEG SCREW (TI) Ø3.5X35 MM	2
	20127004035	8680858427840	LOCK. CANN. PEG SCREW (TI) Ø3.5X40 MM	2
	20427002040	8680858413737	LOCK.CANNULATED SCREW TI 4X20 MM	2
	20427002240	8680858413744	LOCK.CANNULATED SCREW TI 4X22 MM	2
	20427002440	8680858413751	LOCK.CANNULATED SCREW TI 4X24 MM	2
	20427002640	8680858413768	LOCK.CANNULATED SCREW TI 4X26 MM	2
	20427002840	8680858413775	LOCK.CANNULATED SCREW TI 4X28 MM	2
	20427003040	8680858413782	LOCK.CANNULATED SCREW TI 4X30 MM	2
	20427003540	8680858413799	LOCK.CANNULATED SCREW TI 4X35 MM	2
	20427004040	8680858413805	LOCK.CANNULATED SCREW TI 4X40 MM	2
	03362020100	8680858437757	PENSET FOR BUTTERFLY PLATE	1
4	00000304010	8680858437764	PEDI-ART. PLATE&SCREW BOX	1
5	3362010010	8680858437733	BUTTERFLY AND EIGHT GROWTH PLATES HOLDER	1
6	03362010100	8680858437740	SCREW EXTRACTOR FOR BUTTERFLY. PLT	1
7	03362006532	8680858437719	THREADED DRILL SLEEVE 3.2X65 MM	2
8	03362007512	8680858437726	K-WIRE SLEEVE 1.2X100 MM	2
9	01194003009	8699931028157	BONE HAMMER SMALL WITH SLOTTED END	1
10	3356200100	8680858442256	LENGTH MEASURING DEVICE FOR K-WIRE 1.2X150 MM	1
11	02010101001	8698673441187	SCREWDRIVER HANDLE SMALL	1
12	04551208190	8699931029550	K-WIRE TUBE Ø12XØ8X190 MM	1
	23410150112	8698673458840	KIRSCHNER WIRE TROCAR POINT 1.2X150 MM	4
	23212530170	8680858426355	CANNULATED DRILL 3.2X1.25X30X170 MM	2
13	02050100425	8699931005417	CANNULATED SCREW DRIVER QUICK TIP 2.5XØ5X130MM	2
	00000304100	8680858437771	DESIGN TRAY 250X250 MM	1
	00270270080	8699931009019	CONTAINER 270X270X80 MM	1

Set Detail

