

Epiphyseal Plate



990220017

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Warning

This publication describes the recommended procedures for using Double Engine devices and instruments. It offers guidance that you should pay attention to. But as with any such technical guide, the guide alone does not provide sufficient background for direct use of the instrument set, each surgeon should also consider the particular needs of each patient and make appropriate adjustments when required. Instruction by experienced surgeon is still highly recommended.

All non-sterile devices must be cleaned and sterilized before use. Multi-component instruments must be disassembled for cleaning. Please follow the instructions provided in our Reprocessing, Care and Maintenance Guide (RCMG-2012).

Please refer to Package Insert for a complete list of potential adverse effects, contraindications, warnings and precautions. The surgeon must discuss all relevant risks, including the finite lifetime of the device, with the patient, when necessary.

Caution

The implants are designed for temporary fixation of fractured bone fragments until the bone heals. Therefore, if bone does not heal or bone consolidation is delayed or not sufficient, the system may break. Post-operative care under the guidance of the surgeon is also very important and it must be done to ensure the promotion of bone consolidation.

Surgical Technique

Indications

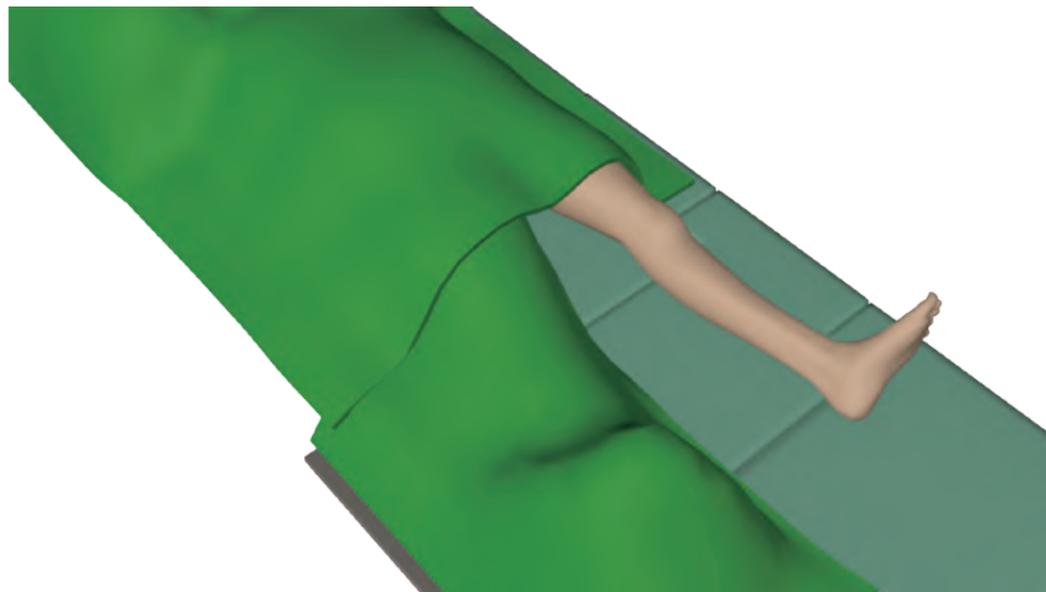
The Epiphyseal Plate is indicated for any growing child or adolescent (age range 18 months to 17 years) with any angular deformity, regardless of etiology.

Contraindications

- Closed Physis
- Physiologic Deformities
- Skeletal Maturity

Patient Position

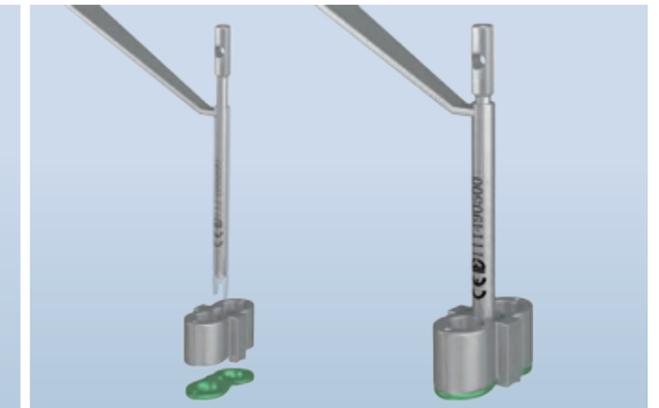
Position patient in the supine position. An appropriate sized operation table is recommended. Abduct the leg for easier fluoroscopic unit access and place a surgical drape as required.



STEP 1

LOCALIZE PHYSIS

Fluoroscopically verify physis position to determine the epiphyseal plate to be used. Mark a 2-3 cm incision on the skin. Carefully separate skin and fascia. Do not interfere with the periosteum.

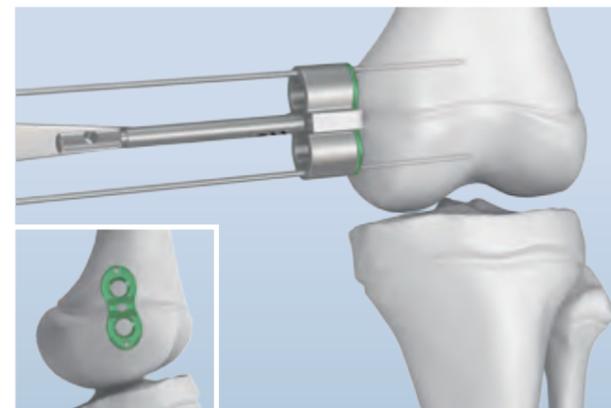


STEP 2

APPLY AIMING DEVICE ASSEMBLY

- | | |
|-----------|-------------------------------------|
| 111490100 | Aiming Device, Terrace Shape, Small |
| 111490500 | Handle for Aiming Device |
| 111490600 | Fixation Bolt |

Select the appropriate sized plate to best match the patient's anatomy (we provide both arched and stepped plates which are available in 12 mm/16 mm). Attach the selected plate to the corresponding aiming device. Insert the handle and lock with the fixation bolt.

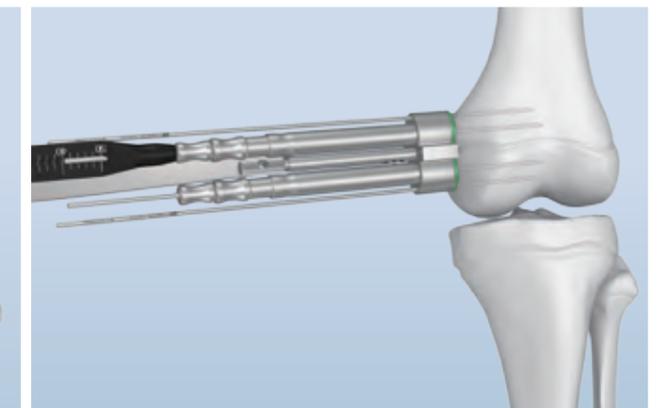


STEP 3

FIX PLATE TEMPORARILY

- | | |
|-----------|--------------------------------------|
| 110040100 | Guide Wire, ϕ 1.5, length 150mm |
|-----------|--------------------------------------|

Place the aiming device assembly over the physeal line. The central axis of the plate is on the physeal line as shown. Insert two 1.5 mm guide wires over the guide wire holes. Identify the position of the plate and guide wires with fluoroscope in multiple views. If they are not in the correct placement, remove the guide wires and reposition the plate until it's correctly placed.



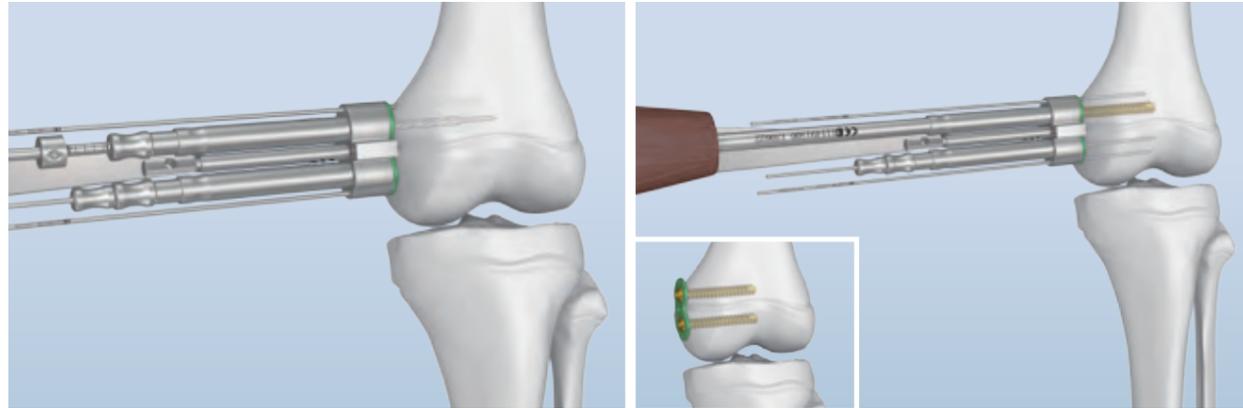
STEP 4

MEASURE DEPTH

- | | |
|-----------|------------------------------------------|
| 110040100 | Guide Wire, ϕ 1.5, length 150mm |
| 111490900 | Depth Gauge for Guide Wires |
| 111491200 | Drill Sleeve for Screw Holes |
| 111491800 | Drill Sleeve for Guide Wires, ϕ 3.0 |
| 111491900 | Drill Sleeve for Drill Bits, ϕ 3.0 |

Insert the drill sleeve assembly (111491200, 111491800, 111491900) into the aiming holes. Place the 1.5 mm guide wires. Slide the depth gauge over the 1.5 mm guide wires to measure the depth. The direct read indicates the required screw length.

Remove the drill sleeve for guide wires, ϕ 3.0.



STEP 5

DRILL

- 111492000 Cannulated Drill Bit, ϕ 3.0, length 200mm
- 111492100 Fixation Sleeve for Cannulated Drill Bits
- 111491600 Wrench for Fixation Sleeve

Limit the drill bit depth as per the read of depth gauge using fixation sleeve and fix with the wrench for fixation sleeve. Drill the drill bit to the limited depth over the guide wires.

Remove the cannulated drill bit and drill sleeve for drill bits.

STEP 6

INSERT SCREWS

- 111491400 Screw Forceps
- 111492200 Screwdriver, hexagonal, cannulated, ϕ 3.0

Select 4.5 mm cannulated cortex screw of proper length using screw forceps and manually insert the screw over the guide wires with the screwdriver. Ensure proper screw placement and screw length under multiple fluoroscopically views.

Remove the aiming device assembly (111490100, 111490500, 111490600) and 1.5 mm guide wires.

Instruments 111810000

111490100 Aiming Device, Terrace Shape, Small



111490200 Aiming Device, Terrace Shape, Large



111490300 Aiming Device, Arc-bridge Shape, Small



111490400 Aiming Device, Arc-bridge Shape, Large



111490500 Handle for Aiming Device



111490600 Fixation Bolt



110040100 Guide Wire, ϕ 1.5, length 150mm



111491800 Drill Sleeve for Guide Wires, ϕ 3.0



111490900 Depth Gauge for Guide Wires



111491900 Drill Sleeve for Drill Bits, ϕ 3.0



111492000 Cannulated Drill Bit, ϕ 3.0, length 200mm



111491200 Drill Sleeve for Screw Holes



111492100 Fixation Sleeve for Cannulated Drill Bits



111491400 Screw Forceps



111492200 Screwdriver, hexagonal, cannulated, ϕ 3.0



111491600 Wrench for Fixation Sleeve



111810100 Instrument Case

