

Surgical Technique

Epiphyseal Plate System

about us

Auxin Medical is an integrated, research based, orthopaedic Implants & instruments manufacturing company, producing a wide range of quality, affordable generic implants, trusted by healthcare professionals and patients across geographies. It is the Company's constant endeavor to provide a wide basket of generic and our innovator products that exceed the highest expectations of customers in term of quality and safety. The company has world-class manufacturing unit established in india and serves customers in over 75 countries worldwide.

Our Achievements



Guidelines

This publication sets forth detailed recommended procedures for using Auxein Medical devices and instruments.

It offers guidance that needs to be heeded. However, with any such technical guide, each surgeon must consider the unique needs of each patient and make appropriate adjustments when and as required.

A workshop training under DAIS Academy by Auxein will provide assistance prior to first surgery. It is vital to know that all non-sterile devices must be cleaned and sterilized before use.

Moreover, multi-component instruments must be disassembled for cleaning. The surgeon must discuss all relevant risks, including the finite lifetime of the device, with the patient, when necessary.

Please NOTE that all the bone screws referenced in this document here are not approved for screw attachment or fixation in the areas not mentioned in this publication.

Warning:

This description is not sufficient for immediate application of the instrumentation. Instruction by a surgeon experienced in handling this instrumentation is highly recommended.



Product specification

Indications

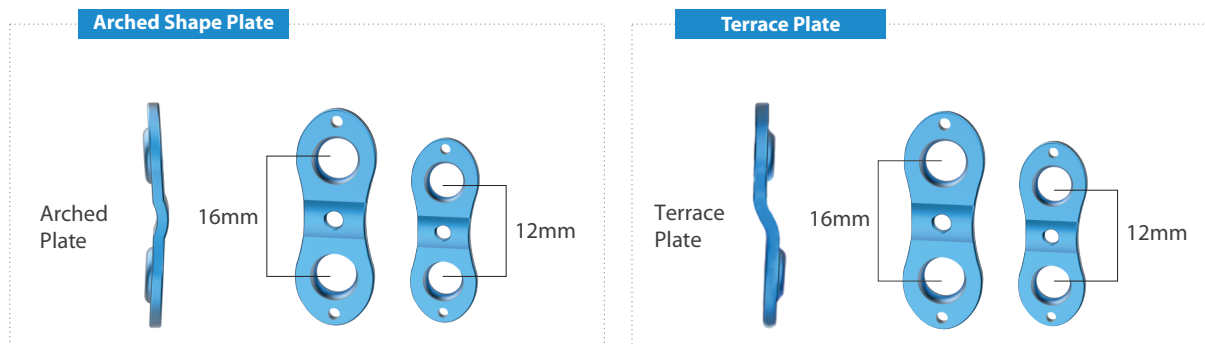
Gradual correction of pediatric deformities in upper and lower extremities:

- Ankle valgus
- Cubitus varus (post supracondylar fracture)
- Knee valgus, varus, oblique plane, flexion deformity, recurvatum



Minimally invasive technique facilitates operation and reduces post-surgical pain, allowing immediate mobilization and weight bearing.

Elevated design reduces contact with growth plate and periosteum.



Available in Terrace and Arched Shape, Length 12mm or 16mm, Accommodating Different Patient Anatomies.

MIS Approach:

Minimally invasive technique facilitates operation and reduces post-surgical pain, allowing immediate mobilization and weight bearing.

Step 1: Plate fixation on Aiming Arm

- Fix the desired aiming device on desired or calculated plate with handle for Aiming Handle and Cannulated fixation bolt.
- Place the aiming device on epiphyseal plate.
- Insert the Cannulated Fixation Bolt (**EPI-006**) through the Cannulated Aiming Handle (**EPI-005**).
- Tighten it with the hex key (**EPI-016**).

- **EPI-006**
Cannulated Fixation Bolt,
Ø1.5/ 3.0mm
- **EPI-005**
Handle for Aiming Device
- **EPI-002**
Aiming Device, Terrace Shape, Large



Step 2: Plate Insertion and Fixation.**Instrument****EPI-007** Guide Wire Ø1.5mm x Length 150mm

Following up fluoroscopic reference make an incision and insert the plate assembly over the distal physis. Insert the K wire through the cannulated fixation bolt and fix the plate temporarily. Plate assembly can be rotate angularly to match the plate contour with the distal physis. Insert the other K wires in the aiming hole and fix the plate in specific region.

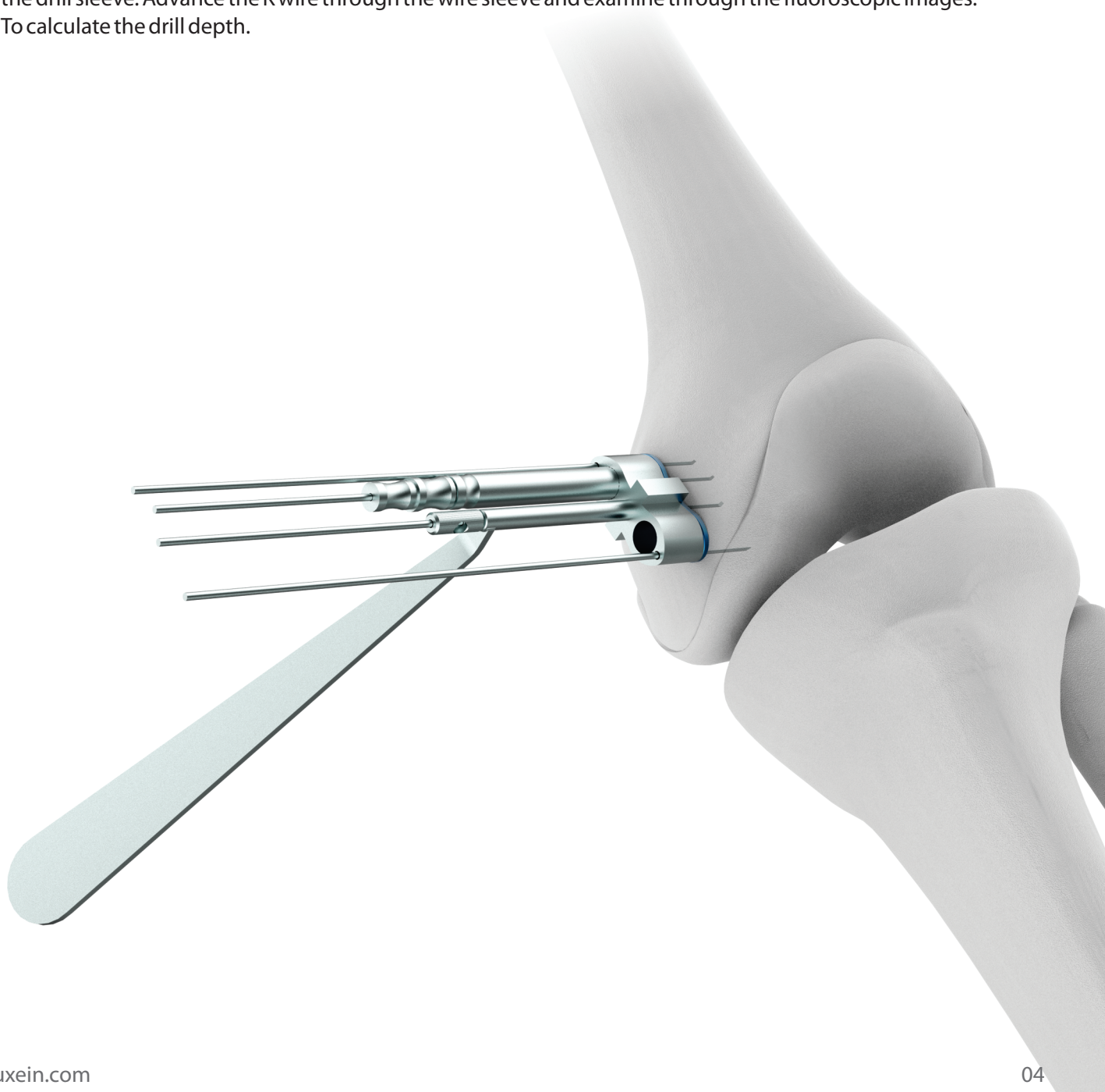


Step 3 Drill Preparation

Instrument

EPI-010	Protection Sleeve for Drill Guide Ø6.1/ 7.3mm for Epiphyseal Plate
EPI-007	Guide Wire Ø1.5mm x Length 150mm
EPI-012	Drill Sleeve for Cannulated Drill Bit Ø3.0mm
EPI-008	Wire Sleeve, Ø1.5mm

Advance the Protection Sleeve into the aiming jig. Advance the drill sleeve for Cannulated Drill Bit through the Protection Sleeve. The drill sleeve will rest properly without any play. Advance the wire sleeve through the drill sleeve. Advance the K wire through the wire sleeve and examine through the fluoroscopic images. To calculate the drill depth.

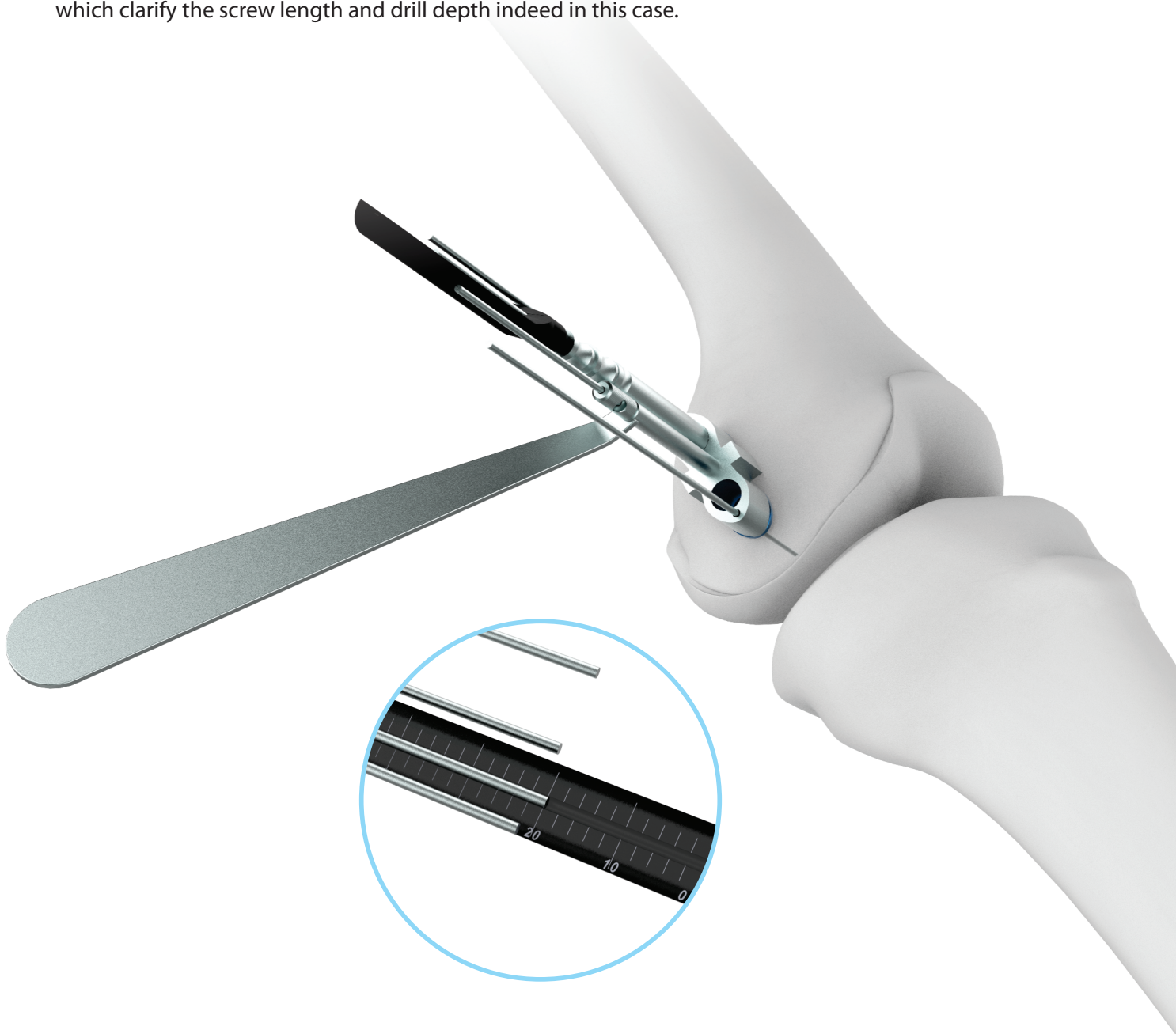


Step 3 Drill Preparation

Instrument

EPI-009 Depth Gauge measuring upto 50mm for Epiphyseal Plate

Advance the depth measuring gauge through the K wire passed from Wire Sleeve. Observe the scale value on the depth gauge coincident with the tip end of k wire. For example the end tip of K wire coincide with 20 mm scale on the depth gauge which clarify the screw length and drill depth indeed in this case.



Step 4:- Drilling.

Remove the **EPI-009** Depth Gauge measuring upto 50mm for Epiphyseal Plate, **EPI-008** Wire Sleeve, Ø1.5mm. Mount the **EPI-018** Stopper for Cannulated Drill Bit Ø3.0mm on **EPI-011** Cannulated Drill Bit Ø3.0mm x Length 200mm at desired or calculated length. Pass the **EPI-011** Cannulated Drill Bit Ø3.0mm x Length 200mm through the EPI-012 Drill Sleeve for Cannulated Drill Bit Ø3.0mm and drill the bone.

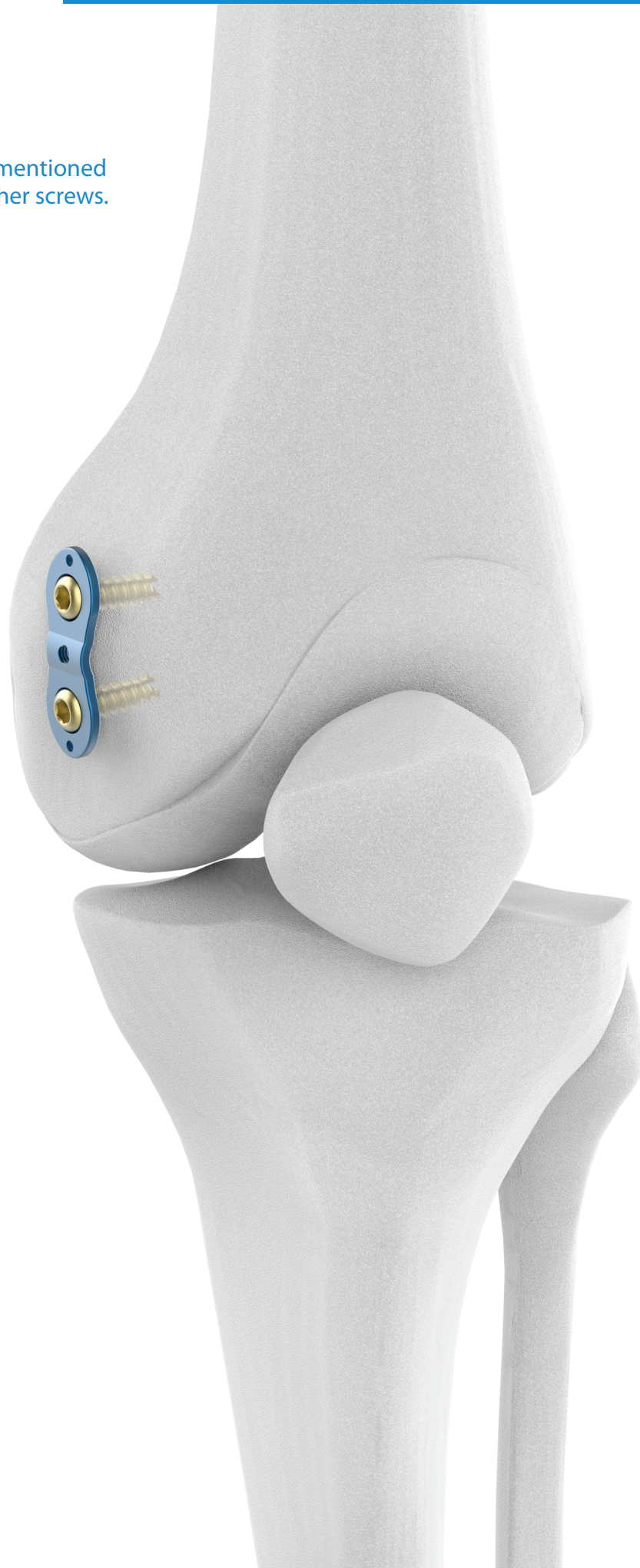


Step 5:- Screw insertation:

Unload and measure the screw length with **7-040-01** (Implant Box for Epiphyseal Plate System). Hold the desired length screw with the **EPI-014** Screw Forcep for Epiphyseal Plate and load it on **EPI-015** Cannulated Screwdriver, Hex 3.0mm, for Epiphyseal Plate. Pass the loaded screw driver through the **EPI-007** Guide Wire and fix the plate.



Repeat all the above mentioned steps for fixing the other screws.



Epiphyseal Plate



Item Code	Item Name	Length (mm)
EP-001	Epiphyseal Plate, Terrace Shape	12
EP-002	Epiphyseal Plate, Terrace Shape	16
EP-003	Epiphyseal Plate, Arc-Bridge Shape	12
EP-004	Epiphyseal Plate, Arc-Bridge Shape	16

4.5mm Cortex Screw, Self-Tapping, Cannulated (3.0mm Hex), Titanium



Item Code	Length (mm)
EPS-001	16
13-003-018TI	18
EPS-002	20
13-003-022TI	22
EPS-003	24
13-003-026TI	26
EPS-004	28
13-003-030TI	30
EPS-005	32
13-003-034TI	34
EPS-006	36
EPS-007	40
13-003-045TI	45
13-003-050TI	50



Epiphyseal Plate



STERILE

Item Code	Item Name	Length (mm)
EP-001-S	Epiphyseal Plate, Terrace Shape	12
EP-002-S	Epiphyseal Plate, Terrace Shape	16
EP-003-S	Epiphyseal Plate, Arc-Bridge Shape	12
EP-004-S	Epiphyseal Plate, Arc-Bridge Shape	16

4.5mm Cortex Screw, Self-Tapping, Cannulated (3.0mm Hex), Titanium

STERILE

Item Code	Length (mm)
EPS-001-S	16
13-003-018TI-S	18
EPS-002-S	20
13-003-022TI-S	22
EPS-003-S	24
13-003-026TI-S	26
EPS-004-S	28
13-003-030TI-S	30
EPS-005-S	32
13-003-034TI-S	34
EPS-006-S	36
EPS-007-S	40
13-003-045TI-S	45
13-003-050TI-S	50



13-028 Epiphyseal Plate Implant Set

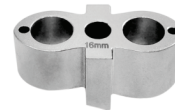


Item Code	Item Name	Units
EP-001	Epiphyseal Plate, Terrace Shape, Length 12mm, Titanium	1
EP-002	Epiphyseal Plate, Terrace Shape, Length 16mm, Titanium	1
EP-003	Epiphyseal Plate, Arc-Bridge Shape, Length 12mm, Titanium	1
EP-004	Epiphyseal Plate, Arc-Bridge Shape, Length 16mm, Titanium	1
EPS-001	4.5mm Cortex Screw, Self-Tapping, Cannulated, Length 16mm(3.0mm Hex),Titanium	6
EPS-002	4.5mm Cortex Screw, Self-Tapping, Cannulated, Length 20mm(3.0mm Hex),Titanium	6
EPS-003	4.5mm Cortex Screw, Self-Tapping, Cannulated, Length 24mm(3.0mm Hex),Titanium	6
EPS-004	4.5mm Cortex Screw, Self-Tapping, Cannulated, Length 28mm(3.0mm Hex),Titanium	6
EPS-005	4.5mm Cortex Screw, Self-Tapping, Cannulated, Length 32mm(3.0mm Hex),Titanium	6
EPS-006	4.5mm Cortex Screw, Self-Tapping, Cannulated, Length 36mm(3.0mm Hex),Titanium	6
EPS-007	4.5mm Cortex Screw, Self-Tapping, Cannulated, Length 40mm(3.0mm Hex),Titanium	6
7-040-01	Implant Box for Epiphyseal Plate System	1

EPI-001 Aiming Device, Terrace Shape, Small



EPI-002 Aiming Device, Terrace Shape, Large



EPI-003 Aiming Device, Arc-Bridge Shape, Small



EPI-004 Aiming Device, Arc-bridge Shape, Large



EPI-005 Handle for Aiming Device



EPI-006 Cannulated Fixation Bolt, \varnothing 1.5/ 3.0mm



EPI-007 Guide Wire Ø1.5mm x Length 150mm



EPI-008 Wire Sleeve, Ø1.5mm



EPI-009 Depth Gauge measuring upto 50mm for Epiphyseal Plate



EPI-010 Protection Sleeve for Drill Guide Ø6.1/ 7.3mm for Epiphyseal Plate



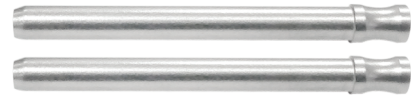
EPI-011 Cannulated Drill Bit Ø3.0mm x Length 200mm



EPI-018 Stopper for Cannulated Drill Bit Ø3.0mm



EPI-012 Drill Sleeve for Cannulated Drill Bit Ø3.0mm



EPI-014 Screw Forcep for Epiphyseal Plate



EPI-015 Cannulated Screwdriver, Hex 3.0mm, for Epiphyseal Plate



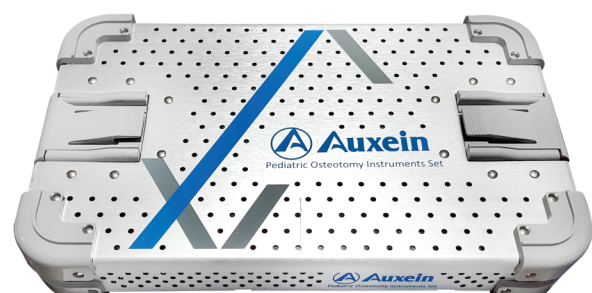
EPI-016 Allen key, Hex 2.5mm for Epiphyseal Plate



7-040-01 Implant Box for Epiphyseal Plate System



EPI-017 Container for Epiphyseal Plate Instrument Set



INS-EPS Epiphyseal Plate Instrument Set



Item Code	Item Name	Unit
EPI-001	Aiming Device, Terrace Shape, Small	1
EPI-002	Aiming Device, Terrace Shape, Large	1
EPI-003	Aiming Device, Arc-Bridge Shape, Small	1
EPI-004	Aiming Device, Arc-bridge Shape, Large	1
EPI-005	Handle for Aiming Device	2
EPI-006	Cannulated Fixation Bolt, Ø1.5/ 3.0mm	2
EPI-007	Guide Wire Ø1.5mm x Length 150mm	3
EPI-008	Wire Sleeve, Ø1.5mm	2
EPI-009	Depth Gauge measuring upto 50mm for Epiphyseal Plate	1
EPI-010	Protection Sleeve for Drill Guide Ø6.1/ 7.3mm for Epiphyseal Plate	2
EPI-011	Cannulated Drill Bit Ø3.0mm x Length 200mm	2
EPI-018	Stopper for Cannulated Drill Bit Ø3.0mm	1
EPI-012	Drill Sleeve for Cannulated Drill Bit Ø3.0mm	2
EPI-014	Screw Forcep for Epiphyseal Plate	1
EPI-015	Cannulated Screwdriver, Hex 3.0mm, for Epiphyseal Plate	1
EPI-016	Allen key, Hex 2.5mm for Epiphyseal Plate	1
7-040-01	Implant Box for Epiphyseal Plate System	1
EPI-017	Container for Epiphyseal Plate Instrument Set	1



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