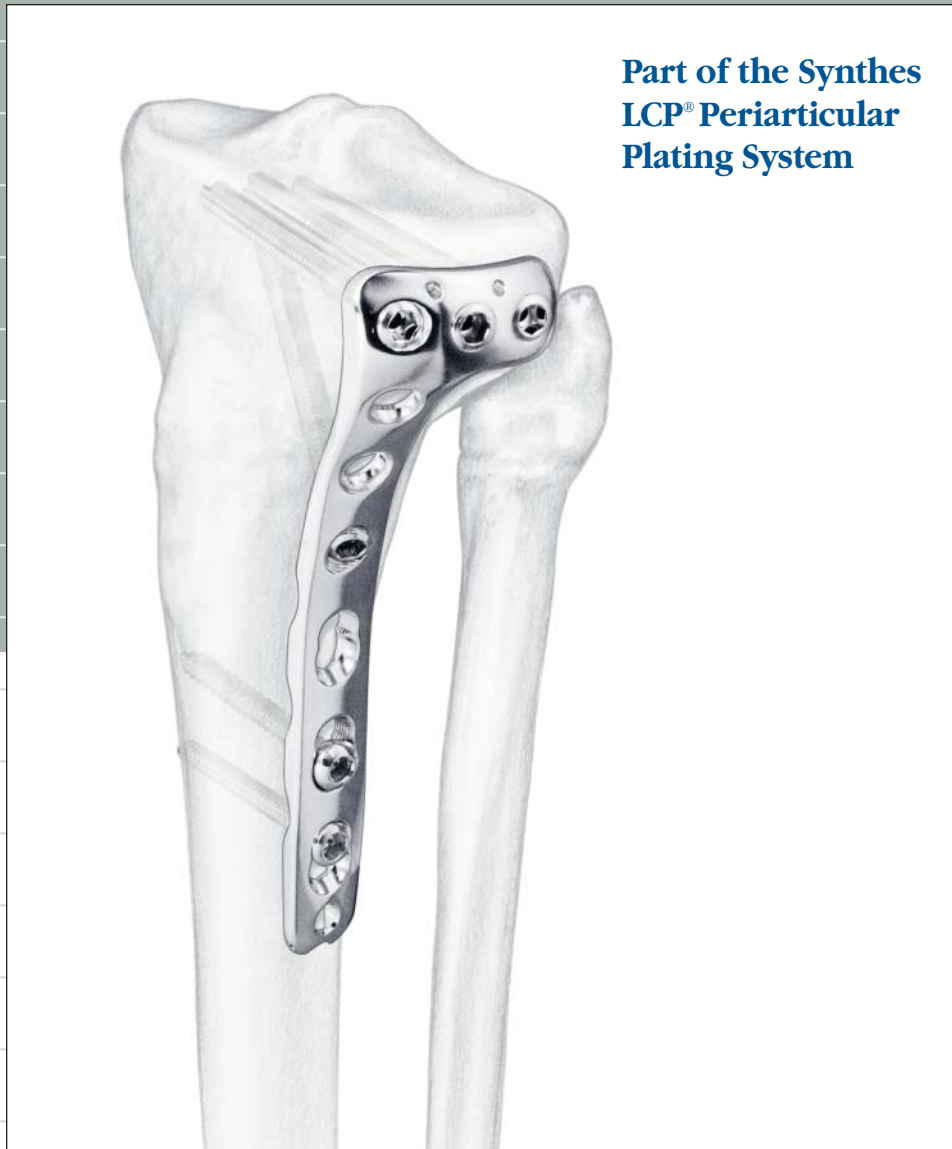


4.5 mm LCP® Proximal Tibia Plate

Stainless Steel and Titanium

TECHNIQUE GUIDE



Foreword

The Synthes 4.5 mm LCP® Proximal Tibia Plate is part of the Locking Periarticular Plating System which merges locking screw technology with conventional plating techniques. With the addition of the 4.5 mm LCP Proximal Tibia Plate, this system is capable of addressing complex fractures of the proximal tibia and the distal femur when using the 4.5 mm LCP Condylar Plate.

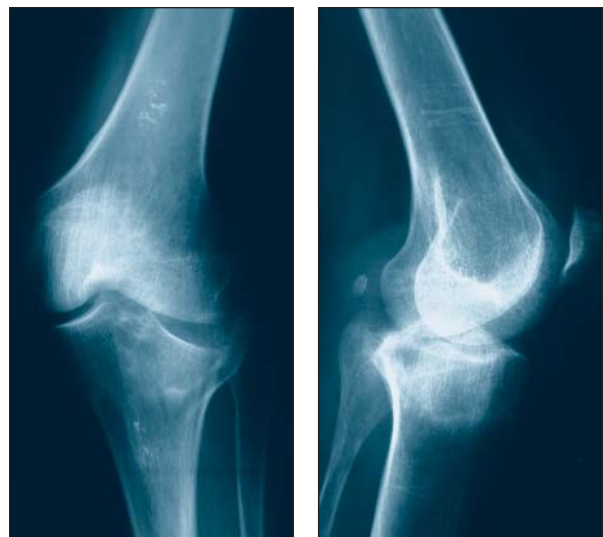
The locking compression plate (LCP) has Combi™ holes in the plate shaft that combine a dynamic compression unit (DCU) hole with a locking screw hole. The Combi hole provides the flexibility of axial compression and locking capability throughout the length of the plate shaft.

Note: For information on fixation principles using conventional and locked plating techniques, please refer to the *Synthes Large Fragment Locking Compression Plate (LCP) Technique Guide*.



Indications

- Split-type fractures of the lateral tibial plateau
- Lateral split fractures with associated depressions
- Pure central depression fractures
- Split or depression fractures of the medial plateau
- Bicondylar fractures
- Malunions and nonunions of the proximal tibia and tibial shaft



The AO ASIF Principles of Internal Fixation

In 1958, the AO ASIF (Association for the Study of Internal Fixation) formulated four basic principles,¹ which have become the guidelines for internal fixation. Those principles as applied to the 4.5 mm LCP Proximal Tibia Plate are:

Anatomic Reduction

Facilitates restoration of the articular surface by exact screw placement utilizing wire guide.



Stable Fixation

Locking screws create a fixed-angle construct, providing angular stability and allowing the plate to be placed under tension.



Preservation of Blood Supply

Limited-contact design reduces plate-to-bone contact, and vascular trauma to the bone, preserving periosteal blood supply.



Early Mobilization

Plate features combined with AO technique create an environment for bone healing, expediting a return to optimal function.



1. M.E. Müller, M. Allgöwer, R. Schneider, and H. Willenegger. *AO Manual of Internal Fixation*, 3rd Edition. Berlin: Springer-Verlag. 1991.

4.5 mm LCP® Proximal Tibia Plates

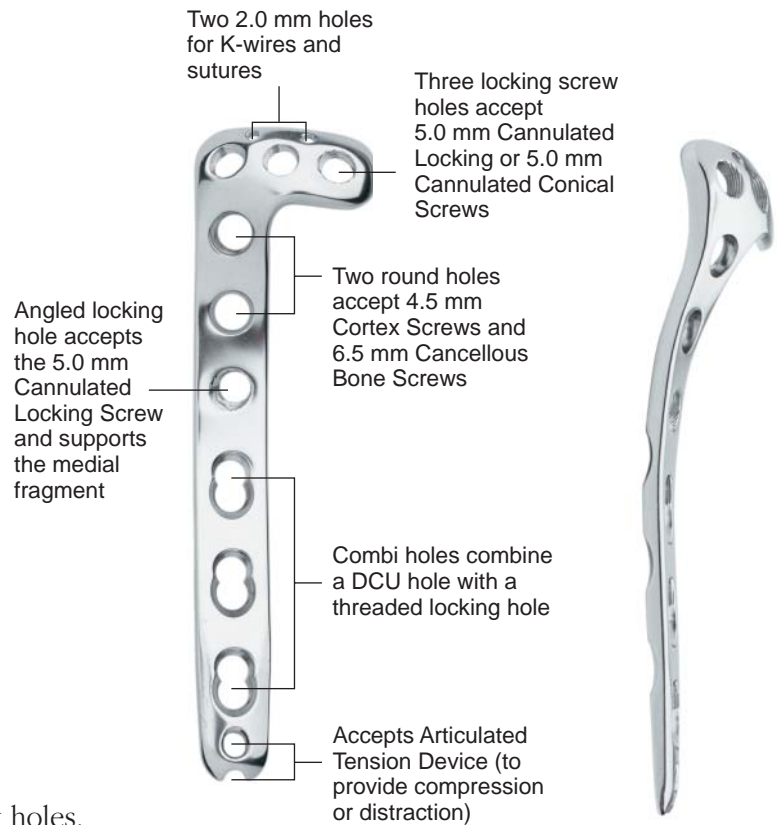
- Anatomically contoured to approximate the lateral aspect of the proximal tibia.
- Can be tensioned to create a load sharing construct.
- Available in left and right configurations, in stainless steel and titanium.

Plate head

- Three convergent threaded screw holes accept 5.0 mm Cannulated Locking or 5.0 mm Cannulated Conical Screws.
- Two 2.0 mm holes for preliminary fixation with K-wires, or meniscal repair with sutures.

Plate shaft

- Available with 4, 6, 8, 10, 12 or 14 screw holes.
- The two round holes distal to the head accept 4.5 mm Cortex Screws and 6.5 mm Cancellous Bone Screws for interfragmentary compression or to secure plate position.
- Angled, threaded hole, distal to the two round holes, accepts the 5.0 mm Cannulated Locking Screw. The hole angle allows this locking screw to converge with the central locking screw in the plate head to support a medial fragment.
- Combi holes, distal to the angled locking hole, combine a DCU hole with a threaded locking hole. The Combi holes accept 4.0 mm Locking Screws or 4.5 mm Cortex Screws.
- Limited-contact profile



Screws used with the 4.5 mm LCP® Proximal Tibia Plate (Stainless Steel and Titanium)



5.0 mm Cannulated Locking Screws

Creates a locked, fixed-angle screw/plate construct

- Threaded conical head
- Fully threaded shaft
- Self-drilling, self-tapping tip



5.0 mm Cannulated Conical Screws

Compresses the plate to the lateral tibial plateau and provides interfragmentary compression

- Smooth head
- Partially threaded shaft
- Self-drilling, self-tapping tip



4.0 mm Locking Screws

Creates a locked, fixed-angle screw/plate construct

- Threaded conical head
- Fully threaded shaft
- Self-tapping tip



4.5 mm Cortex Screws

- May be used in the Combi and round holes of the plate
- Used to compress the plate to the bone or create axial compression



Screw Nut

Offers fixation and compression options for complex fractures

- Self-cutting serrated tip and internal threads mate with the 5.0 mm Cannulated Conical Screws
- Inserted from the medial aspect of the proximal tibia
- (See the *4.5 mm LCP Condylar Plate Technique Guide* for more information on use of the Screw Nut.)

5.0 mm Cannulated Locking and Cannulated Conical Screw Design

The screw design enhances fixation and facilitates the surgical procedure.

Conical screw head

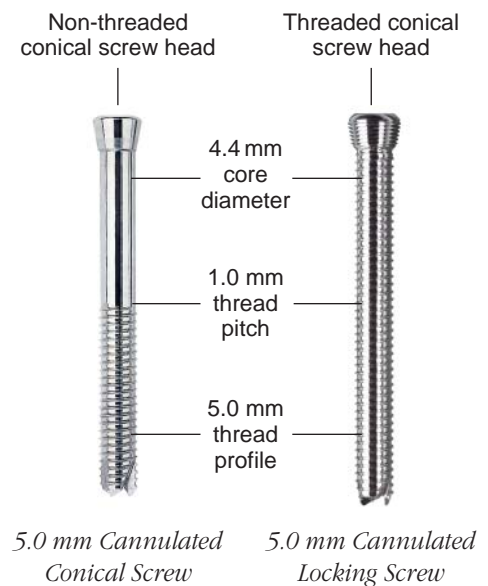
The conical head simplifies alignment in the plate hole. This is of particular importance when using locking screws. The threaded screw head must align with the plate hole threads to provide a secure screw/plate construct. To ensure proper alignment and prevent cross-threading, the appropriate threaded wire guide or drill guide must always be used.

Large diameter screw core

The large diameter screw core improves bending and shear strength, and distributes the load over a larger area in the bone.

Thread profile

The shallow thread profile of the locking screws is necessary to provide a larger core. This is appropriate since locking screws do not rely on compression between the plate and the bone to maintain stability. When required, interfragmentary compression can be achieved with the partially threaded cannulated conical screws, especially when near the articular surface.



Screw Selection

Screw selection and configuration for the plate head

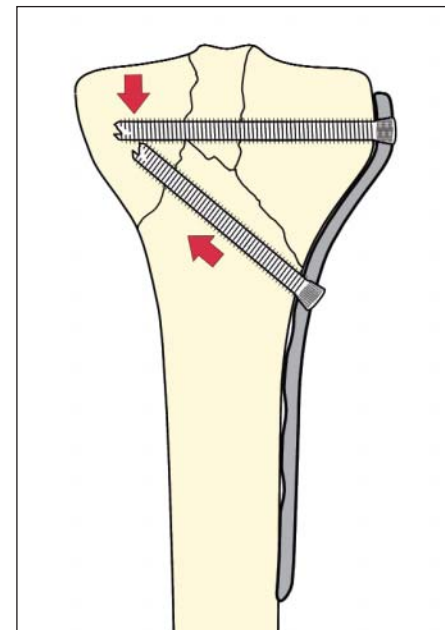
The 5.0 mm Cannulated Locking Screws provide a fixed-angle construct in the metaphysis, while the 5.0 mm Cannulated Conical Screws can be used to gain interfragmentary compression through the plate.

This plate can serve as a buttress for a medial wedge. This is accomplished by the convergence of the locking screws in the metaphyseal region and the oblique screw from below.

Screw selection and configuration for the plate shaft

The combination of a DCU screw hole with a locking screw hole provides the ability to apply compression and the benefits of a locked-screw construct along the entire length of the plate shaft. The 4.0 mm Locking Screws in the shaft function the same as the 5.0 mm locking screws in the plate head by creating a fixed-angle construct that locks the bone segments in their relative positions regardless of the degree of reduction.

Important: Compression must be achieved prior to inserting any locking screws.



Wire and Drill Guides Used with the 4.5 mm LCP® Proximal Tibia Plate

The wire and drill guides screw into the plate to provide proper alignment of guide wires and drill bits and ensure proper locking of the screw to the plate.

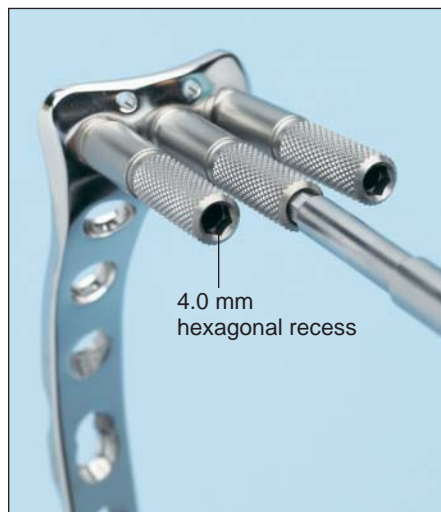
The convergent locking screw holes in the plate head and the angled hole in the shaft accept the 2.5 mm Wire Guide, for 5.0 mm screws [324.174]. The locking portion of Combi holes in the shaft accept the 3.2 mm Drill Guide, for 4.0 mm screws [324.176].



2.5 mm Wire Guide, for 5.0 mm screws [324.174]



3.2 mm Drill Guide, for 4.0 mm screws [324.176]



The Solid Hexagonal Screwdriver [313.93] and the Cannulated Hexagonal Screwdriver [314.05] can be used to facilitate insertion and removal of wire and drill guides.

Surgical Technique

1 Preparation

Complete the preoperative radiographic assessment and prepare the preoperative plan. Determine plate length and instruments to be used. **Determine proximal screw placement and screw lengths to ensure proper screw placement in the metaphysis.**

Position the patient supine on a radiolucent operating table. Visualization of the proximal tibia under fluoroscopy in both the lateral and AP views is necessary.

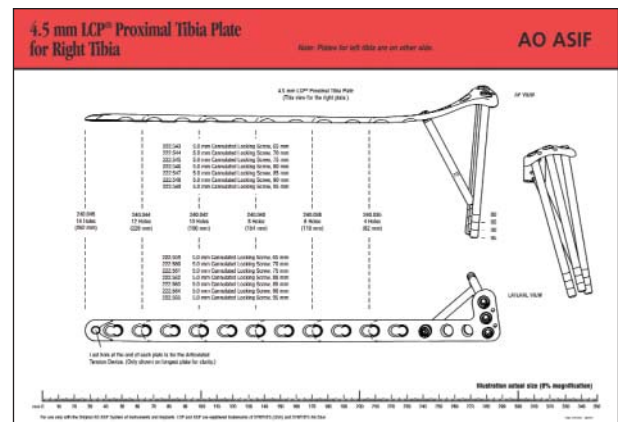
Required sets:

The Large Fragment LCP Instrument and Implant Set, with 4.0 mm and 5.0 mm Locking Screws [115.400] or [146.400], and Periarticular LCP Plating System Instrument and Screw Set [105.210] or [01.223.604] are required when implanting the 4.5 mm LCP Proximal Tibia Plate.

Recommended additional sets:

- 4.5 mm Cannulated Screw Instrument and Implant Set [105.04]
- 6.5 mm/7.3 mm Combined Cannulated Screw Instrument and Implant Set [105.190] for stainless steel, [145.190] for titanium
- Small Fragment Instrument and Implant Set—LC-DCP®, with self-tapping screws [105.445]* for stainless steel, or [145.448] for titanium
- Bone Forceps Set [105.90]
- General Instrument Set [102.91]
- Large Distractor Set [115.700]
- Pelvic Reduction Instrument Set [115.86]
- Interchangeable Gouge, Chisel and Impactor Set [102.93]
- Periarticular Reduction Forceps Set [105.909]

* **Note:** If using 3.5 mm Cortex Screws for additional fixation around the plate, longer lengths may be required than are available in the set.



Large Fragment LCP®
Instrument and Implant Set,
with 4.0 mm and 5.0 mm
Locking Screws
115.400

Surgical Technique (continued)

2 Reduce articular surface

Technique tip: Prior to reduction, application of an external fixator or Large Distractor [394.35] may facilitate visualization and reduction of the joint.

Reduce the fracture fragments and confirm reduction using image intensification. Fragments may be reduced using independent Kirschner wires; however, K-wire holes are also provided on the plate to help achieve provisional reduction, plate position, or fixation.

The locking screws do not provide interfragment or plate-to-bone compression; therefore, any desired compression must be achieved with traditional lag screws. The angular fragments must be reduced and compression must be obtained prior to applying the 4.5 mm LCP Proximal Tibia Plate with locking screws.

Technique tip: To verify that lag screws will not interfere with plate placement, hold the plate laterally to the bone.

3 Attach wire guides

Before placing the plate against the bone, thread 2.5 mm Wire Guides, for 5.0 mm screws [324.174] into the three (3) proximal holes. If desired, thread a wire guide into the angled hole of the shaft.

Note: It is easier to thread these wire guides when the plate is off the bone, and the wire guides can be used as handles to facilitate positioning of the plate on the bone.

Insert 2.5 mm Drill Tip Guide Wires [310.243] into each of the wire guides to verify that the wire guides are properly threaded into the plate. The wires in the plate head should be parallel to each other in the transverse plane. The oblique or kickstand wire should buttress the central wire in the plate head.



Apply the Large Distractor [394.35] to assist in the visualization and reduction of the joint.



Thread the three wire guides into the plate before placing the plate on the bone.

4 Determine plate position

Using anatomic landmarks and fluoroscopy, mount the plate on the intact or reconstructed plateau without attempting to reduce the distal portion of the fracture. Use the wire guides to help position the plate on the bone.

Insert a 2.5 mm Guide Wire [310.243] through the 2.5 mm Wire Guide. Readjust plate position, if necessary. Place a second guide wire to prevent rotation of the plate, and to secure provisional fixation of the plate to the tibial plateau. All three guide wires must be inserted through the 2.5 mm Wire Guides.

Note: Additional 2.0 mm K-wires [292.20] from the Basic Instrument Set may be placed in the proximal K-wire holes to hold the plate in position.

Confirm plate head placement. Use clinical examination and fluoroscopy to confirm that:

- Screw trajectories in the proximal locking holes are parallel to the joint in the transverse plane, and the plate is oriented properly on the plateau;
- Screw and plate placement are consistent with the preoperative plan; and
- Alignment of the plate to the shaft of the tibia is correct in both the AP and lateral views. Placement of the plate at this point will determine final flexion/extension reduction.



Insert 2.5 mm Guide Wires [310.243].

Surgical Technique (continued)

5 Insert proximal screws

Note: If required, lag screw reduction of a fragment must be accomplished before inserting locking screws into the fragment.

Before inserting the first screw, advance each guide wire until it reaches either the medial cortex or the desired screw tip location when placing convergent screws.

If the plate shifts during screw insertion, the guide wires must be removed and reinserted using the wire guides, for the screws to lock to the plate properly.

Screw length considerations

Central locking hole: The locking screw holes in the proximal portion of the plate create a converging screw pattern for improved pullout strength. When using locking screws longer than 60 mm in the anterior and posterior of the three head holes, a central locking screw greater than 70 mm in length may meet with these screws.

Measure for screw length using the Cannulated Screw Measuring Device [319.701]. The correct length measurement will place the screw at the tip of the guide wire.

Note: The measuring device must contact the end of the wire guide for an accurate measurement.

Technique tip: The self-drilling, self-tapping flutes of the 5.0 mm screws make predrilling and pretapping unnecessary in most cases. If necessary in dense bone, the lateral cortex can be predrilled with the 4.3 mm Cannulated Drill Bit, for 5.0 mm screws [310.634].



Secure the plate position on the lateral plateau with guide wires.



Locking screws converge to improve pullout strength.



Measure for screw length using the Cannulated Screw Measuring Device [319.701].

5 Insert proximal screws (continued)

Remove the Wire Guide and insert the appropriate length screw over the 2.5 mm Guide Wire and into the bone, using the Cannulated 4.0 mm Hexagonal Screwdriver [314.05]. Locking screws may be inserted using power equipment. However, DO NOT use power to seat these screws since this may cause screws to cross-thread in the plate holes.

Important: Securely tighten all locking screws to lock them to the plate.

Conical head screws can be inserted into the holes in the plate head to achieve interfragmentary compression and/or pull the plate to the bone. These conical screws may be replaced with locking screws after reduction is complete.

Note: To compress the plate to the lateral tibial plateau, it is necessary to use a conical screw prior to any locking screws. Conical screws may be replaced with locking screws after reduction is complete.

6 Reduce shaft to tibial plateau

Reduce the tibial plateau to the shaft of the tibia using indirect reduction techniques whenever possible. Using atraumatic technique, temporarily secure the plate shaft to the bone with plate holding forceps.

Confirm rotation of the extremity by clinical examination.

Once reduction is satisfactory, and if it is appropriate based on the fracture morphology, the plate should be loaded in tension using the Articulated Tension Device [321.12].*

Note: With multifragment fractures, it may not always be possible or desirable to achieve anatomic reduction of the fracture. However, in simple fracture patterns, the Articulated Tension Device may facilitate anatomic reduction. This device may be used to generate either compression or distraction.



Using the Cannulated Hexagonal Screwdriver [314.05], insert the appropriate length screw over the 2.5 mm Guide Wire and into the bone.



Temporarily secure the plate shaft to the bone with plate holding forceps.

* Found in the Basic Instrument Set for LC-DCP® and DCP® [115.04]

Surgical Technique (continued)

6 Reduce shaft to tibial plateau (continued)

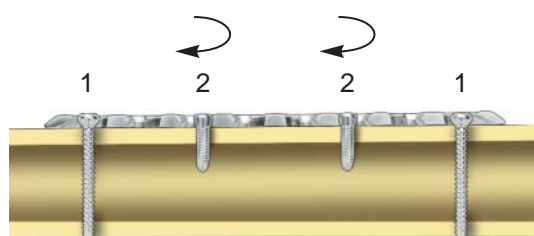
In addition to having threaded locking holes, the plate functions similarly to DCP plates which offer the ability to self-compress fracture fragments. Therefore, a combination of lag screws and locking screws may be used.



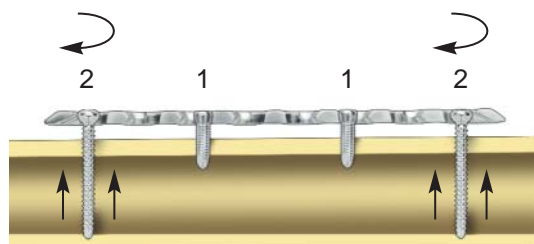
Use the Articulated Tension Device [321.12] to compress or distract the fracture.

Important: If a combination of cortex (1) and locking screws (2) is used, a cortex screw should be inserted first to pull the plate to the bone.

If locking screws (1) have been used to fix the plate to a fragment, subsequent insertion of a cortex screw (2) in the same fragment without loosening and retightening the locking screw is **NOT RECOMMENDED**.



Correct



Incorrect

7 Insert screws in shaft of plate

Insert the 4.5 mm Cortex Screws

Insert as many standard 4.5 mm Cortex Screws as necessary into the distal portion of the plate.

Important: All of the 4.5 mm Cortex Screws must be inserted prior to insertion of 4.0 mm Locking Screws.

Use the 4.5 mm Universal Drill Guide [323.46] to predrill for 4.5 mm Cortex Screws and drill through both cortices with the 3.2 mm Drill Bit [310.31].*



Predrill for 4.5 mm Cortex Screws, drilling through both cortices.

For the neutral position, press the drill guide down in the nonthreaded hole. To obtain compression, place the drill guide at the end of the nonthreaded hole away from the fracture. Do not apply downward pressure on the drill guide's spring-loaded tip.



Neutral

Compression

Note: The DCP and LC-DCP Drill Guides [322.44 and 323.45] are not compatible with the LCP plates.

Measure for screw length using the Depth Gauge [319.10]. Select and insert the appropriate length 4.5 mm Cortex Screw using the Large Hexagonal Screwdriver [314.27].



Measure for screw length.

Surgical Technique (continued)

7 Insert screws in shaft of plate (continued)

Insert the 4.0 mm Locking Screws

Attach the 3.2 mm Drill Guide, for 4.0 mm locking screws [324.176] to the locking hole in the plate shaft. Drill a hole using the 3.2 mm Drill Bit [310.31].

Note: Use of the drill guide is mandatory for screws to lock to the plate properly.

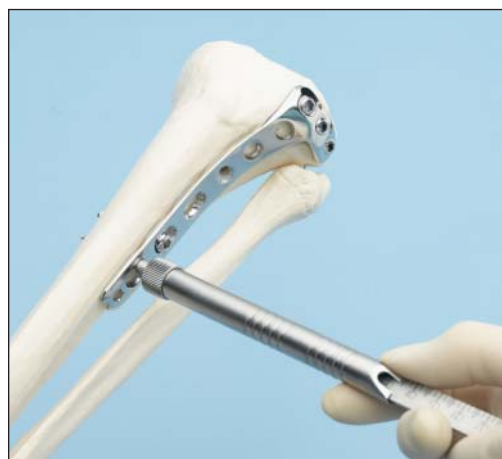
Remove the drill guide and measure screw length using the Depth Gauge [319.10]. Insert the appropriate length 4.0 mm Locking Screw with either the Solid Hexagonal Screwdriver, with 4.0 mm hex [313.93], or the T25 StarDrive Screwdriver [314.118], or T25 StarDrive Screwdriver Shaft [314.119]. Repeat as necessary to insert additional locking screws.

Examine the limb clinically and radiographically. It is important that the tibial plateau is in proper orientation to the tibial shaft.

Important: Securely tighten all locking screws again.



Using the 3.2 mm Drill Bit [310.31], drill through the 3.2 mm Drill Guide, for 4.0 mm screws [324.176].



Measure for screw length.

8 Insert the 5.0 mm Cannulated Locking Screw into the angled hole

Note: Use the oblique locking position to buttress a medial fragment.

If not already done, thread a 2.5 mm Wire Guide, for 5.0 mm screws [324.174] into the angled locking hole.

Insert a 2.5 mm Drill Tip Guide Wire [310.243] through the 2.5 mm Wire Guide. Advance the guide wire until it reaches the desired screw tip location.

Measure for screw length using the Cannulated Screw Measuring Device. The correct length measurement will place the screw at the tip of the guide wire.

Note: The measuring device must contact the end of the wire guide for an accurate measurement.



Thread a 2.5 mm Wire Guide, for 5.0 mm screws [324.174] into the angled locking hole.



Insert a 2.5 mm Drill Tip Guide Wire [310.243] through the 2.5 mm Wire Guide.



Measure for screw length.

Surgical Technique (continued)

8 Insert the 5.0 mm Cannulated Locking Screw into the angled hole (continued)

Screw length considerations

Angled locking hole: The oblique locking screw in the plate shaft converges with the central locking screw in the plate head for improved pullout strength and fixation. If the oblique locking screw exceeds 65 mm in length, it should contact the proximal locking screw.

Technique Tip: The self-drilling, self-tapping flutes of the 5.0 mm screws make predrilling and pretapping unnecessary in most cases. If necessary, in dense bone, the lateral cortex can be predrilled with the 4.3 mm Cannulated Drill Bit.

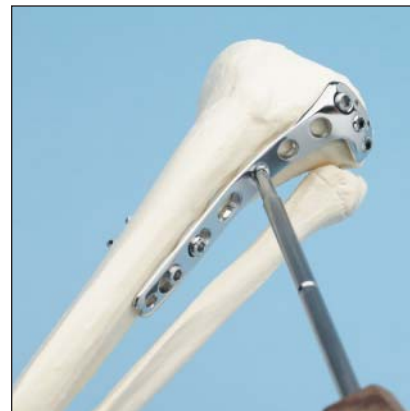
Remove the wire guide and insert the appropriate length screw over the 2.5 mm guide wire and into the bone using the Cannulated 4.0 mm Hexagonal Screwdriver [314.05]. Locking screws may be inserted using power equipment. However, DO NOT use power to seat these screws since this may cause screws to cross-thread in the plate holes.

Important: Securely tighten all locking screws to ensure they are locked to the plate.

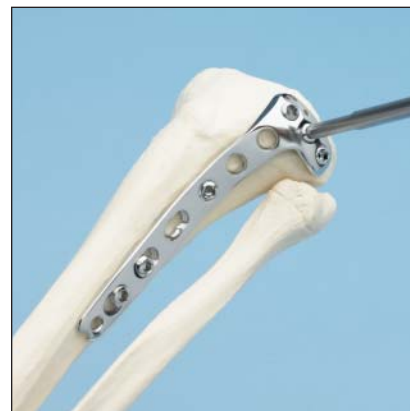
Important: Always use the Torque Limiting Attachment [511.774] when using power to insert locking screws.

Cleaning Tip

Cleaning the cannulation in each instrument is imperative for proper function. Instruments should be cleared intraoperatively using the 2.5 mm Cleaning Stylet [319.461] to prevent accumulation of debris in the cannulation and potential binding of the instruments about the guide wire. Instruments should be cleaned postoperatively using the stylet and the 2.9 mm Cleaning Brush [319.24].



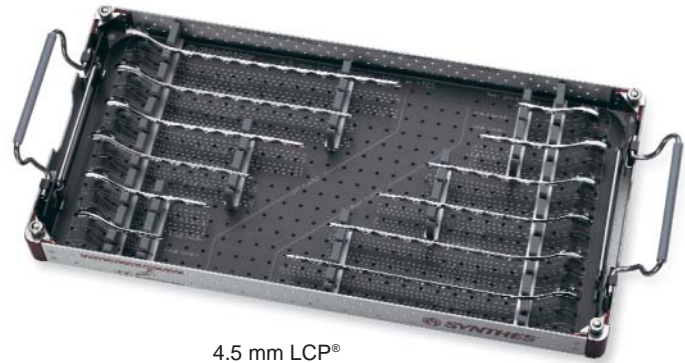
Using the Cannulated 4.0 mm Hexagonal Screwdriver [314.05], insert the appropriate length locking screw over the guide wire.



Securely tighten all locking screws to ensure they are locked to the plate.

4.5 mm LCP® Proximal Tibia Plate Implant Set Stainless Steel [105.222] or Titanium [01.123.604]

Must be used with the Synthes Periarticular LCP® Plating System Instrument and Screw Set [105.210] or [01.223.604], and Large Fragment LCP® Instrument and Implant Set, with 4.0 mm and 5.0 mm Locking Screws [115.400] or [146.400].



4.5 mm LCP®
Proximal Tibia Plate Set
Graphic Case
690.367

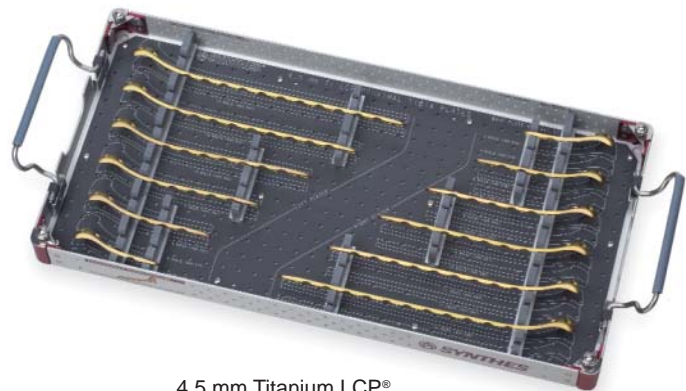
Implants

4.5 mm LCP® Proximal Tibia Plates

240.036	4 holes, right, 82 mm
240.037	4 holes, left, 82 mm
240.038	6 holes, right, 118 mm
240.039	6 holes, left, 118 mm
240.040	8 holes, right, 154 mm
240.041	8 holes, left, 154 mm
240.042	10 holes, right, 190 mm
240.043	10 holes, left, 190 mm
240.044	12 holes, right, 226 mm
240.045	12 holes, left, 226 mm
240.046	14 holes, right, 262 mm
240.047	14 holes, left, 262 mm

4.5 mm Titanium LCP® Proximal Tibia Plates

440.036	4 holes, right, 82 mm
440.037	4 holes, left, 82 mm
440.038	6 holes, right, 118 mm
440.039	6 holes, left, 118 mm
440.040	8 holes, right, 154 mm
440.041	8 holes, left, 154 mm
440.042	10 holes, right, 190 mm
440.043	10 holes, left, 190 mm
440.044	12 holes, right, 226 mm
440.045	12 holes, left, 226 mm
440.046	14 holes, right, 262 mm
440.047	14 holes, left, 262 mm

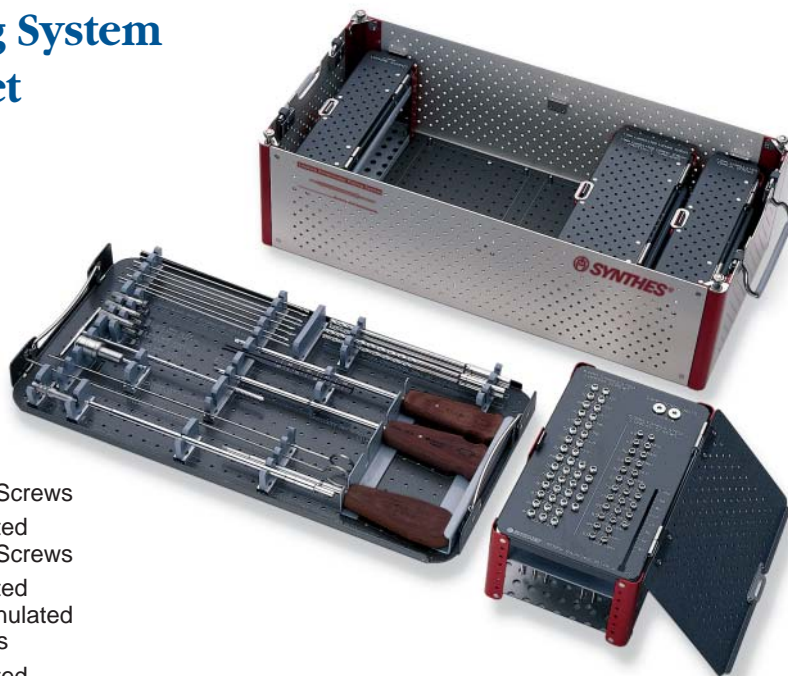


4.5 mm Titanium LCP®
Proximal Tibia Plate Set
Graphic Case
690.467

Recommended Additional Sets

105.04	4.5 mm Cannulated Screw Instrument and Implant Set
105.190	6.5 mm/7.3 mm Combined Cannulated Screw Instrument and Implant Set
145.190	6.5 mm/7.3 mm Combined Titanium Cannulated Screw Instrument and Implant Set
105.445	Small Fragment Instrument and Implant Set—LC-DCP®, with self-tapping screws
145.448	Small Fragment Instrument and Titanium Implant Set—LC-DCP®, with self-tapping screws
105.90	Bone Forceps Set
102.91	General Instrument Set
115.700	Large Distractor Set
115.86	Pelvic Reduction Instrument Set
102.93	Interchangeable Gouge, Chisel and Impactor Set
105.909	Periarticular Reduction Forceps Set

Periarticular LCP® Plating System Instrument and Screw Set [105.210]



Graphic Case and Screw Racks

- 690.301 Locking Periarticular Plating System Graphic Case
- 690.301.30 Screw Rack, for 4.0 mm Locking Screws
- 690.301.40 Screw Rack, for 5.0 mm Cannulated Locking and Cannulated Conical Screws
- 690.301.60 Screw Rack, for 7.3 mm Cannulated Locking Screws and 7.3 mm Cannulated Conical Partially Threaded Screws
- 690.301.70 Screw Rack, for 7.3 mm Cannulated Conical Screws

Instruments

- 310.243 2.5 mm Drill Tip Guide Wire, 200 mm, 8 ea.
- 310.632 5.0 mm Cannulated Drill Bit, quick coupling, 200 mm, 2 ea.
- 310.634 4.3 mm Cannulated Drill Bit, quick coupling, 200 mm, 2 ea.
- 311.682 Cannulated Tap, for 7.3 mm Cannulated Conical and 7.3 mm Cannulated Locking Screws
- 313.93 Solid Hexagonal Screwdriver
- 314.05 Cannulated Hexagonal Screwdriver, 2 ea.
- 314.23 Cannulated Hexagonal Screwdriver Shaft
- 319.24 2.9 mm Cleaning Brush
- 319.461 2.5 mm Cleaning Stylet
- 319.701 Cannulated Screw Measuring Device
- 324.174 2.5 mm Wire Guide, for 5.0 mm screws, 4 ea.
- 324.175 2.5 mm Wire Guide, for 7.3 mm screws, 2 ea.
- 324.176 3.2 mm Drill Guide, for 4.0 mm screws, 2 ea.
- 338.49 Large Quick Coupling

Implants

- 222.535– 5.0 mm Cannulated Locking Screws, 222.542 25 mm–60 mm*, 2 ea.
- 222.543– 5.0 mm Cannulated Locking Screws, 222.547 65 mm–85 mm*, 4 ea.
- 222.548– 5.0 mm Cannulated Locking Screws, 222.549 90 mm–95 mm*, 3 ea.
- 222.554– 5.0 mm Cannulated Conical Screws, 222.558 40 mm–60 mm*, 2 ea.
- 222.559– 5.0 mm Cannulated Conical Screws, 222.563 65 mm–85 mm*, 3 ea.
- 222.564– 5.0 mm Cannulated Conical Screws, 222.565 90 mm–95 mm*, 2 ea.
- 222.567– 7.3 mm Cannulated Locking Screws, 222.576 50 mm–95 mm*, 2 ea.
- 222.578 5.0 mm Screw Nut, 2 ea.
- 222.580– 4.0 mm Locking Screws, 222.582 14 mm–18 mm**, 2 ea.
- 222.583– 4.0 mm Locking Screws, 222.591 22 mm–54 mm***, 3 ea.
- 222.592– 4.0 mm Locking Screws, 222.593 58 mm–62 mm***, 2 ea.
- 222.601– 7.3 mm Cannulated Conical Screws, 222.610 50 mm–95 mm*, 2 ea.
- 222.640– 7.3 mm Cannulated Conical Screws, 222.649 partially threaded, 50 mm–95 mm*, 2 ea.

Sterilization Parameters for Sets [105.210], [105.222], [01.123.604] and [01.223.604]

These Synthes sets with all additionally available items, as marked in the cases, can be sterilized by the following parameters. For more information, please see graphic case package inserts.

Method	Cycle	Temperature	Exposure Time
Steam	Gravity Displacement (Wrapped)	132°–135°C (270°–275°F)	22 Minutes
Steam	Prevacuum (Wrapped)	132°–135°C (270°–275°F)	8 Minutes

Also Available

- 338.002 2.5 mm Drill Tip Guide Wire, with 12 mm thread, 300 mm

* 5 mm increments
** 2 mm increments
*** 4 mm increments

Periarticular LCP® Plating System

Instrument and Titanium Screw Set [01.223.604]

Graphic Case and Screw Racks

- 690.401 Graphic Case, for Titanium LCP® Periarticular Plating System
- 690.402 Screw Rack, for 4.0 mm Titanium StarDrive Locking Screws
- 690.403 Screw Rack, for 5.0 mm Titanium Cannulated Conical and Locking Screws
- 690.404 Screw Rack, for 5.0 mm Titanium StarDrive Locking Screws
- 690.407 Screw Rack, for 4.5 mm Titanium and Stainless Steel Cortex Screws

Instruments

- 310.243 2.5 mm Drill Tip Guide Wire, 200 mm, 8 ea.
- 310.431 4.3 mm Drill Bit, quick coupling, 180 mm, for 5.0 mm Locking Screws, 2 ea.
- 310.632 5.0 mm Cannulated Drill Bit, quick coupling, 200 mm, 2 ea.
- 310.634 4.3 mm Cannulated Drill Bit, quick coupling, 200 mm, 2 ea.
- 313.93 Solid Hexagonal Screwdriver
- 314.05 Cannulated Hexagonal Screwdriver, 2 ea.
- 314.23 Cannulated Hexagonal Screwdriver Shaft
- 319.24 2.9 mm Cleaning Brush
- 319.461 2.5 mm Cleaning Stylet
- 319.701 Cannulated Screw Measuring Device
- 324.174 2.5 mm Wire Guide, for 5.0 mm screws, 4 ea.
- 324.176 3.2 mm Drill Guide, for 4.0 mm screws, 2 ea.
- 338.49 Large Quick Coupling
- 511.774 Torque Limiting Attachment, 4 Nm, for AO Reaming Coupler

Titanium Implants

- 412.201– 5.0 mm Titanium Locking Screws, self-tapping, with T25 StarDrive recess, 14 mm–18 mm**, 2 ea.
- 412.203
- 412.205– 5.0 mm Titanium Locking Screws, self-tapping, with T25 StarDrive recess, 22 mm–50 mm***, 3 ea.
- 412.219
- 412.220 5.0 mm Titanium Locking Screw, self-tapping, with T25 StarDrive recess, 55 mm, 3 ea.
- 412.221– 5.0 mm Titanium Locking Screws, self-tapping, with T25 StarDrive recess, 60 mm–65 mm*, 2 ea.
- 412.222
- 422.535– 5.0 mm Titanium Cannulated Locking Screws, 25 mm–60 mm*, 2 ea.
- 422.542
- 422.543– 5.0 mm Titanium Cannulated Locking Screws, 65 mm–85 mm*, 4 ea.
- 422.547
- 422.548– 5.0 mm Titanium Cannulated Locking Screws, 90 mm–95 mm*, 3 ea.
- 422.549
- 422.554– 5.0 mm Titanium Cannulated Conical Screws, 40 mm–60 mm*, 2 ea.
- 422.558
- 422.559– 5.0 mm Titanium Cannulated Conical Screws, 65 mm–85 mm*, 3 ea.
- 422.563
- 422.564– 5.0 mm Titanium Cannulated Conical Screws, 90 mm–95 mm*, 2 ea.
- 422.565
- 422.578 5.0 mm Titanium Screw Nut, 2 ea.
- 422.670– 4.0 mm Titanium Locking Screws, self-tapping, with T25 StarDrive recess, 14 mm–18 mm**, 2 ea.
- 422.672
- 422.673– 4.0 mm Titanium Locking Screws, self-tapping, with T25 StarDrive recess, 22 mm–54 mm***, 3 ea.
- 422.681
- 422.682– 4.0 mm Titanium Locking Screws, self-tapping, with T25 StarDrive recess, 58 mm–62 mm***, 2 ea.
- 422.683

Also Available

- 338.002 2.5 mm Drill Tip Guide Wire, with 12 mm thread, 300 mm
- 412.223– 5.0 mm Titanium Locking Screws,
- 412.227 70 mm–90 mm*

* 5 mm increments
 ** 2 mm increments
 *** 4 mm increments

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