

### 3.5mm LCP Anterolateral Distal Tibia Plate:

The LCP Anterolateral Distal Tibia Plate 3.5 is part of the Small Fragment LCP System that merges locking screw technology with conventional plating techniques. The combi-holes in the LCP limited-contact plate shaft combine a dynamic hole with a locking screw hole. Combi-holes provide the flexibility of axial compression and locking capability throughout the length of the plate shaft. Locking screws provide the ability to create a fixed-angle construct while using standard techniques. Locking capability is important for fixed-angle constructs in osteopenic bone or multifragment fractures where screw purchase is compromised. These screws do not rely on plate-to-bone compression to resist patient load, but function similarly to multiple, small, angled blade plates.



#### Design:

- Tapered tip for sub muscular insertion
- > Distal locking screws provide support for the articular surface
- The head of the plate is designed to provide a low profile construct when using locking screws or cortex screws
- Twist in shaft is contoured for the distal tibia anatomy so that less plate contouring is required.
- Anatomically shaped
- > Two different plate designs to fit right or left tibia
- Screw heads are recessed in the plate to minimize screw prominence
- The head of the plate features four locking holes that accept 3.5mm locking screws & shaft contain 3.5mm cortex screw or else 4.0mm cancellous screws.
- Anatomic plate profile and four parallel screws near the joint assist reduction of metaphysis to diaphysis to restore alignment and functional anatomy.
- The combination of conventional and locking screws offers optimum fixation regardless of bone density.
- Limited-contact plate design reduces plate-to-bone contact and helps to preserve the periosteal blood supply
- Early mobilization
- > The low profile anatomic fixation system with optimal plate placement and angular stability.

#### Indications

The LCP Anterolateral Distal Tibia Plate 3.5 is indicated for:

- Extra-articular and simple intra-articular distal tibia fractures
- > Distal tibia fracture, percutaneous or reducible by limited arthrotomes
- > Distal tibia fracture extending into the diaphysis area



### Surgical Steps:

#### Patient Position:

Position the patient supine on a radiolucent operating table. Visualization of the distal tibia under fluoroscopy in both the lateral and AP views is recommended. Elevate the leg on a padded rest with the knee moderately flexed to placement in a neutral position. Place the opposite leg level on table top.



#### Approach:

A longitudinal and straight incision should be centred at the ankle joint, parallel to the fourth metatarsal distally, and between the tibia and fibula proximally. Proximal extension of the incision should end seven or eight centimetres above the joint. Distally the incision can be extended to the level of the talonavicular joint, allowing exposure of the neck. The joint can be exposed using an arthrotomes

#### Position plate and insertion of plate

Guide wires can be placed through the distal end of the plate to assist with temporary maintenance of the reduction and for plate placement.

Instrument: 5700-INS-0027 Ø1.5mm guide wire 700-INS-0004 3.5mm LCP drill sleeve for 2.8mm drill



These also prevent plate rotation while inserting the first locking screw. To adjust the plate into final position, insert a guide wire or partially insert LCP Drill Sleeve. After plate insertion, check alignment on the bone using fluoroscopy. Ensure proper reduction before inserting the first locking screw. Once locking screws are inserted, further reduction is not possible without loosening the locking screws.

#### Locking screw insertion

Determine the combination of screws to be used for fixation. If a combination of locking and cortex screws is used, cortex screws should be inserted first to pull the plate to the bone. If a locking screw is used as the first screw, be sure the fracture is reduced and the plate is held securely to the bone.



Use 3.5mm LCP Drill Sleeve for inserting locking screw. After finding the screw position, 3.5mm LCP Drill Sleeve attached in locking threaded hole of the plate. Ø2.8mm Drill bit is passed through this LCP drill sleeve. Depth of drill is measured by using depth gauge or also it may direct measure by the size marking on drill. Screw is placed in appropriate locking hole of plate with required size by using self-holding or simple screw driver. Torque limiting screw driver is also used to tighten the LCP Screws.





Instrument:	
5700-INS-0034	Ø 3.5mm screw driver with holding sleeve x 9"
5700-INS-0012	Ø 3.5mm screw driver
5700-INS-0030	Ø 3.5mm torque limiting screw driver x 9"
5700-INS-0001	Ø 2.5mm drill bit quick coupling 5"
5700-INS-0004	Ø 3.5mm LCP drill sleeve for 2.8mm drill

#### **Placement of Cortex Screws:**



Use 3.5mm Universal drill Guide for inserting 3.5mm cortex screw in shaft of the plat. Cortex screw is placed in combi hole for achieve dynamic compression. First, 3.5mm Universal drill guide is located in the dynamic portion of the shaft hole. 2.8mm Drill bit is used to drill the cortices passing through drill guide. With the use of depth gauge, require size of 3.5mm cortex screw is measured. 3.5mm Tap is prefer for reaming the drill and then cortex Screw is inserted with the help of screw driver.



- **5700-INS-0006** Ø 2.5 / 3.5 mm drill & tap sleeve combined
- 5700-INS-0030 Ø 3.5 mm torque limiting screw driver x 9"
- **5700-INS-0003** Ø 2.8 mm drill bit quick coupling 8"
- **5700-INS-0008** Ø 3.5mm bone tap quick coupling for cortical screw
- 5700-INS-0014
- Ø 3.5mm depth gauge



#### **Check Position of Screw tip:**

Check the screw lengths under image intensifier control in the full range of gleno-humeral-motion and ensure that they do not penetrate the articular surface. It is important to check the screw lengths in all planes as their angulation and direction may be difficult to visualize.



#### **Implant Removal:**

Unlock all screws from the plate, and then remove the screws completely from the bone. This prevents simultaneous rotation of the plate when unlocking the last lock screw. If a screw cannot be removed with the screwdriver, use the T-Handle with Quick Coupling to insert the Extraction Screw into the screw head, and unscrew the screw in a counter clock direction.

5700-INS-0038	Ø3.5mm hollow mill for screw removal
5700-INS-0036	Ø3.5mm broken screw removal forceps
5700-INS-0035	Ø3.5mm screw driver quick coupling x 5"

#### Instruments:

5700-INS-0025 bending template







Surgical Technique



5700-INS-0032 Periosteal elevator curved 9 mm

5700-INS-0033 Periosteal elevator curved 12 mm

5700-INS-0019 Self centering bone holding forceps 190 mm (pair)

5700-INS-0023 Reduction forceps, pointed 140 mm

5700-INS-0036 Ø3.5mm broken screw removal forceps

5700-INS-0022 Reduction forceps, serrated 140 mm

**5700-INS-0011** Counter sink for Ø 3.5/4.0 mm screws

5700-INS-0026 Screw holding forceps 3.5mm











Surgical Technique





5700-INS-0001	Ø2.5mm drill bit quick coupling 5"	
5700-INS-0009	Ø4.0mm bone tap quick coupling for Cancellous screw	
5700-INS-0007	Ø2.0 /4.0 mm drill & tap sleeve combined	
5700-INS-0006	Ø2.5/3.5 mm drill & tap sleeve combined	
5700-INS-0024	Ø2.5/3.5 mm neutral and loaded drill guide (Small)	
5700-INS-0038	Ø3.5mm hollow mill for screw removal	Common Hold DW Hill
5700-INS-0035	Ø3.5 mm screw driver quick coupling x 5"	
5700-INS-0027	Ø1.5mm guide wire	
5700-INS-0028	Ø2.0mm guide wire	
5700-INS-0010	Quick coupling T-handle	

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Surgical Technique

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Implant Size:

#### Anterolateral Distal Tibia Plate Left:

SS	ТІТ	Size	Length
1345-SS-3505	1345-TT-3505	5H	81
1345-SS-3507	1345-TT-3507	7H	107
1345-SS-3509	1345-TT-3509	9H	133
1345-SS-3511	1345-TT-3511	11H	159
1345-SS-3513	1345-TT-3513	13H	185
1315-SS-3515	1345-TT-3515	15H	211
1345-SS-3517	1345-TT-3517	17H	237
1345-SS-3519	1345-TT-3519	19H	263
1345-SS-3521	1345-TT-3521	21H	289



### Anterolateral Distal Tibia Plate Right:

SS	TIT	Size	Length
1346-SS-3505	1346-TT-3505	5H	81
1346-SS-3507	1346-TT-3507	7H	107
1346-SS-3509	1346-TT-3509	9H	133
1346-SS-3511	1346-TT-3511	11H	159
1346-SS-3513	1346-TT-3513	13H	185
1316-SS-3515	1346-TT-3515	15H	211
1346-SS-3517	1346-TT-3517	17H	237
1346-SS-3519	1346-TT-3519	19H	263
1346-SS-3521	1346-TT-3521	21H	289

### 3.5mm LCP Screws Self Tapping:

1414-SS-3510/90	SS	10mm to 90 mm
1414-TT-3510/90	ΤT	10mm to 90mm

#### 3.5mm Cortex Screws Self Tapping:

 1111-SS-3510/80SS
 10mm to 80 mm

 1111-TT-3510/80TT
 10mm to 80 mm

#### Address:

**Corporate Office** 310, Sanket Avenue, Opp. AmbeVidhyalaya, Sama-savli road Vadodara-390024

### Plant Office:

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