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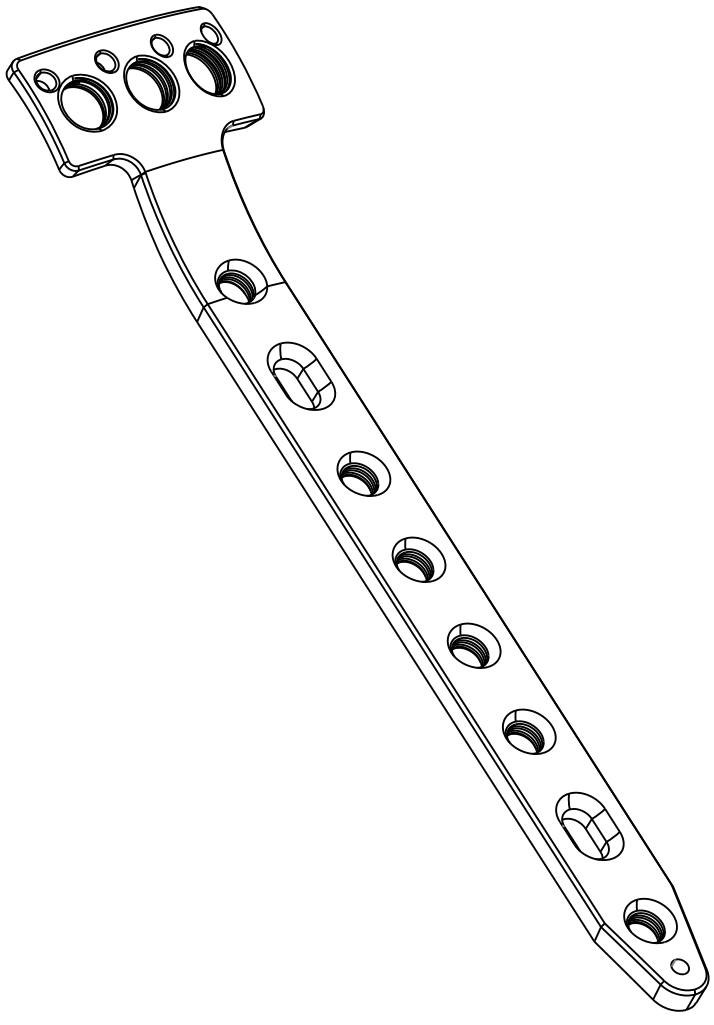
# PROXIMAL MEDIAL TIBIAL T PLATE

## Surgical Technique



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# PROXIMAL MEDIAL TIBIAL T PLATE

## 1. Introduction



## 2. Surgical Technique



## 3. Disinfection



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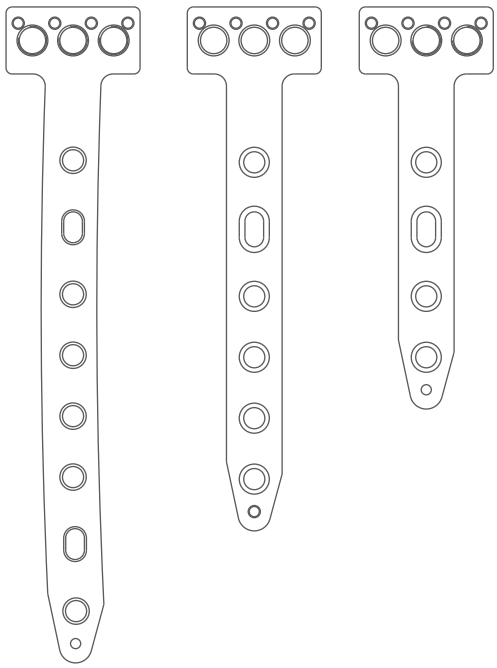
ISO 9001:2015
ISO 13485:2016
CE 1984

# Specifications

Proximal Medial Tibial Plate is indicated for fractures of trochanteric region, trochanterodiaphyseal, proximal and shat fractures, malunion / nonunion and proximal tibia osteotomies. Used with Ø5mm locking screw, Ø4,5 cortical screw and Ø6,5 cancellous screw. 8, 10, 12, 14, 16 hole right and left length options are available. The plate is made of titanium material produced according to ISO 5832-2.



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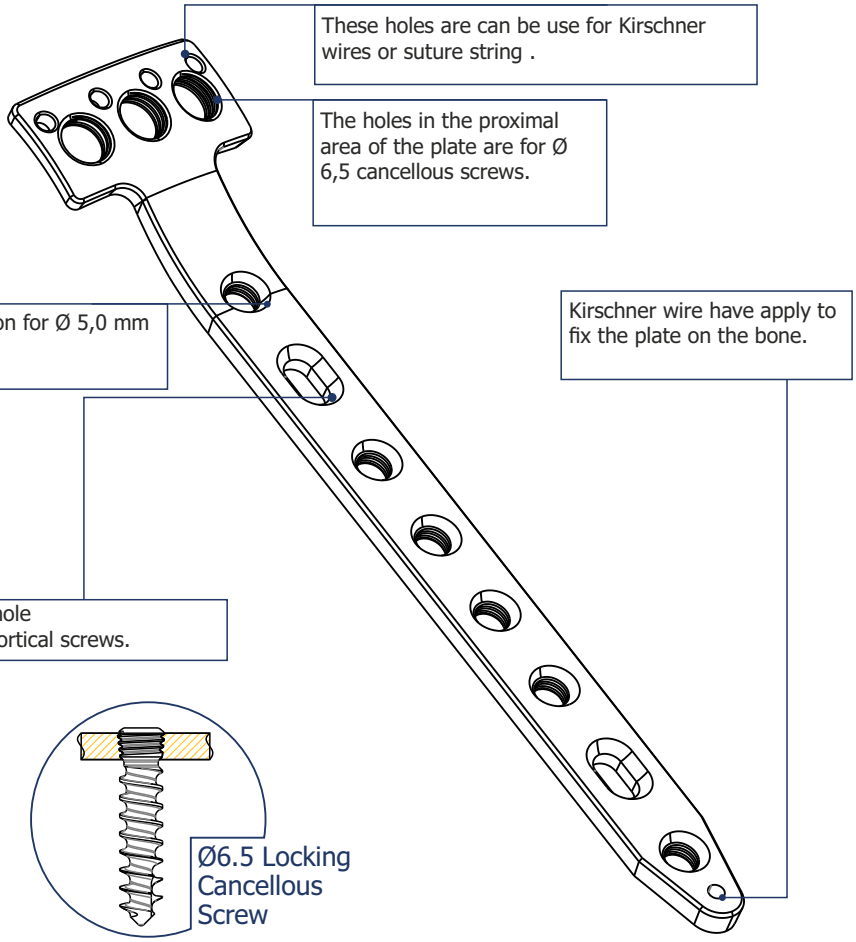
## PROXIMAL MEDIAL TIBIAL T PLATE

**(with Ø 5,0 / Ø 6,5 /4.5mm screw)**

| REF. NO | HOLES |
|---|---|
| 1792-1007 | 7-R |
| 1792-1009 | 9-R |
| 1792-1011 | 11-R |
| 1792-2007 | 7-L |
| 1792-2009 | 9-L |
| 1792-2011 | 11-L |




## 2.2.Fracture

### 2.2.1.Tibia Plateu Fractures


*Type IV tibial plateau schatzker*

Tibial plateau fractures are complex injuries of the knee. The tibial plateau is one of the most critical load-bearing areas in the human body. Early detection and appropriate treatment of these fractures is very important to minimize the patient's disability in terms of range of motion and stability and to reduce the risk of complications.

Type IV is a medial tibial plateau fracture with a split or depressed component. These fractures occur as a result of varus forces combined with axial loading in a hyperflexed knee. *(Fig.1)*


*Oblique split depression*

Oblique split depression. It occurs as a result of severe effects. This type of fracture brings with it various fractures. Depending on the severity, fibula fractures may occur in the other leg. The ACL and lateral meniscus are frequently injured.*(Fig.2)*


Medial tibial plates can be used in these fracture types. Fracture is fixed proximally with Kirshner wires or Lag screws if necessary, then plate is applied or T plate can be applied *(Fig.3)*

## 2.3 Proximal Medial Tibial T Plate

### 2.3.1.Locating plate,and placement

Plate is located under imaging and by other methods. Depending on the fracture, fixations may be required first.*(Fig.4-5)*

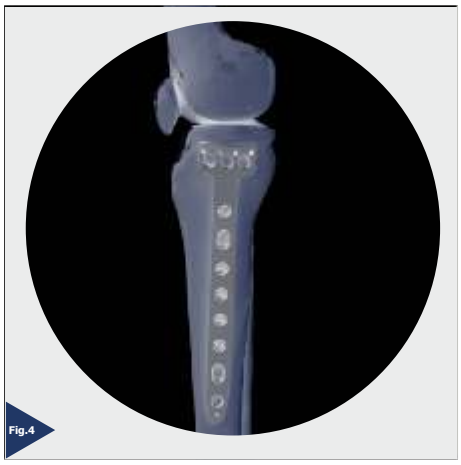


Fig.4


Fig.5

1 Piece drill guide (Ø4.5) is attached to the plate . Hold the guide and place the plate on the bone *(Fig.6)*


Fig.6


Fig.6

After the location of the plate is decided, 1. Kirshner wire is attached.*(Fig.6)*


Fig.7

The location is checked again. Some more adjustments are made. Temporarily fixed with Second Kirschner wire. *(Fig.7)*

## 2.3 Proximal Medial Tibial T Plate

### 2.3.2.Ø6.5mm Cancellous Screw


Drilling is done with a (Ø4,5)guide (Ø4,3) with a drill.*(Fig.8)*


Screw length is determined with a depth guide. *(Fig.9)*


Ø6.5 Cancellous screw attached with Ø.4.5 screw driver . Same procedure is apply for other screws at the proximal,*(Fig.10)*

## 2.3 Proximal Medial Tibial T Plate

### 2.3.3.Ø4.5mm Cortical Screw

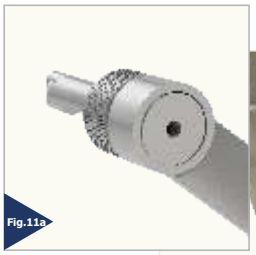


Fig.11a


Fig.11b


Fig.11

Proximally, the plate is fixed.  can be passed for shaft region. First, the cortical screws on the plate will be inserted. Drilling is done from the part of the drill guide for neutral holes*(Fig.11a)*


Fig.12

Screw length is determined with a depth guide. *(Fig.12)*


Fig.13

The cortical screw of the appropriate size is sent with a Ø3.5mm screwdriver. *(Fig.13)*

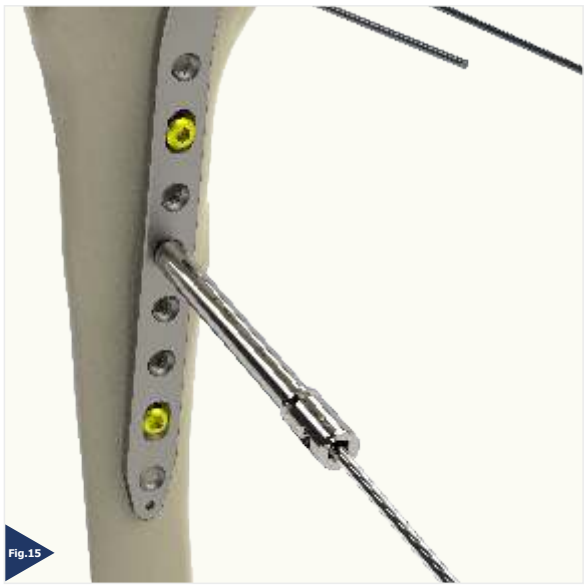

Fig.14

After the cortical screw in the distal* of the plate is sent, the locked screw stage is started. Locking screws should not be used without inserting cortical screws. If you start with locking screws, there will be a gap between the plate and the bone*(Fig.14)*.

** There are 2 Cortical screw holes in 11 holes*

## 2.3 Proximal Medial Tibial T Plate

### 2.3.4. Ø5.0mm Locking Screw




The plate is fixed proximally and in the shaft region. Placing the plate will be completed by sending it in its locked screws. The drill guide Ø4.3 is inserted. Drilling is done.*(Fig.15)*

*If there is a size-measured guide in the set, the length of the screw can be determined while "drilling" at this stage.*


Screw length is determined with a depth guide. *(Fig.16)*


Ø5.0mm Locking screw is attached with Ø4.5 screw driver.*(Fig.17)*


According to need other locking screws are attached. Kirschner wire is removed. Do not forget control to locking screw torque.*(Fig.18)*

## 3.1 DEVICE CLEANING CONDITIONS

Do not use metal brushes or rubbing pads during Decontamination of the tools should be performed immediately after the surgical procedure is completed. Contaminated tools must not be allowed to dry before reprocessing.

Excessive blood or debris must be removed in order to prevent the drying on the surface. All users must be qualified staff with documented evidence of training and competence. Training should include the current guidelines, standards and hospital policies. Even if they are made of high-grade stainless steel, the surgical tools must be thoroughly dried in order to prevent rust formation. Prior to sterilization, all the tools should be examined for the cleanliness of the lumens of the joints of the surfaces. manual cleaning process. Use cleaning agents with low-foam surfactant to be able to see the tools in the cleaning solution. Rinse the cleaning materials easily from the tool in order to prevent residue formation.

Mineral oil or silicon lubricants should not be used

materials are recommended for cleaning the reusable instruments. It is very important to neutralize and rinse the alkaline cleaning materials thoroughly from the tools. Anodized aluminum should not contact with certain cleaning or disinfectant solutions. Avoid strong alkaline cleaners and disinfectants and solutions containing iodine, chlorine or certain metal salts.

### 3.1.1 Manual Cleaning/Disinfection

Prepare the enzymatic and cleaning materials at the dilution rates and temperatures as recommended by the manufacturer. New solutions should be prepared when the existing solutions are heavily contaminated. Place the tools in the enzymatic solution so that they are completely immersed. Operate all the movable parts so that the detergent contacts with all the surfaces.

Keep in the fluid for minimum 20 min. Use a nylon, soft-bristled brush to gently rub the tools until all visible debris is cleaned. Pay particular attention to the accessible areas and use a suitable bottle brush. In order to remove the dirt in the open springs, coils or flexible parts, wash the recesses with plenty of cleaning solution. Rub the surface with a scrubbing brush to remove all the visible dirt from the surface and the recesses. To ensure that all the recesses are cleaned, turn the component while rubbing. Remove the tools and rinse them for minimum 3 min. under running water. Pay particular attention to the cannulas and use a syringe to pass the fluid through the hard-to-reach areas. Place all the tools that are completely immersed in water, in an ultrasonic unit containing teh cleaning solution. Operate all the movable parts so that the detergent contacts with all the surfaces. Expose the tools to sonification process for minimum 10 min..

Remove the tools and rinse with deionized water for at least 3 minutes or unless all the blood or dirt traces are eliminated in the rinsing water. Examine the tools under normal light to verify that visible dirt is removed. If visible dirt is present, repeat the above mentioned sonification procedure and the rinsing steps. Remove the excessive moisture on the tool with a clean, absorbent, lint-free cloth.

### 3.1.2 *Combination Manual / Automated Cleaning and Disinfection*

Prepare the enzymatic and cleaning materials at the dilution rates and temperatures as recommended by the manufacturer. New solutions should be prepared when the existing solutions are heavily contaminated. Place the tools in the enzymatic solution so that they are completely immersed. Operate all the movable parts so that the detergent contacts with all the surfaces. Keep in the fluid for minimum 10 min. Use a nylon, soft-bristled brush to gently rub the tools until all visible debris is cleaned. Pay particular attention to the accessible areas and use a suitable bottle brush. A sonicator will help to clean the instruments thoroughly. The use of a syringe or a water fountain will facilitate passing of the liquid from the low-spaced areas and difficult-to-access areas. Remove the tools from the enzyme solution and rinse them for minimum 1 min. under deionized water. Place the tools in a suitable washer / disinfector basket and perform a standard washer / disinfector cycle. Specific minimum parameters are essential for a complete cleaning and disinfection. These parameters are given in a below mentioned table.

### 3.1.3 *Automated Cleaning and Disinfection*

Automated washing / drying systems are not recommended as the only cleaning method for surgical tools. An automated system can be used as a follow-up operation after manual cleaning. To ensure an effective cleaning, tools must be thoroughly examined before sterilization. For detailed information on Washing and Disinfection see

***Specific minimum parameters used for a complete cleaning and disinfection:***

| | Definition |
|---|---|
| 1 | Pre-washing for 2 minutes with cold tap water |
| 2 | enzyme sprey for 20 seconds with hot tap water |
| 3 | Immersion in enzyme after 1 minute |
| 4 | rinsing for 15 seconds with cold tap water (Should be repeated twice) |
| 5 | Washing with detergent for 2 minutes with hot tap water |
| 6 | rinsing for 15 seconds with hot tap water |
| 7 | Rinsing with 10 seconds with optional lubricated purified water |
| 8 | Drying for 7 minutes with hot air |

*Note: Follow the isntruction of the washer/disinfector manufacturer*

*Medical, as the manufacturer of this device, and their surgical consultants do not recommend this or any other surgical technique for use on a specific patient. The surgeon who performs any implant procedure is responsible for determining and utilizing the appropriate techniques for implantina the device in each individual patient. surgical consultants are not responsible for selection of the appropriate surgical technique to be utilized for an individual patient.*

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