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Locking High Tibia Osteotomy TYPE I-II Plates

Surgical Technique

Ostéo France Ortho

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Locking
High Tibia Osteotomy TYPE I-II
Plates

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ISO 9001:2015
ISO 13485:2016
CE 1984

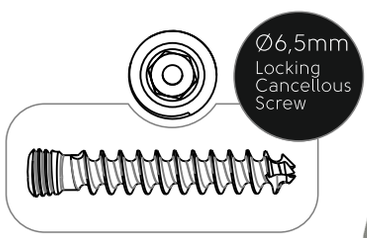
1.1. Locking High Tibia Osteotomy Plate Type 1

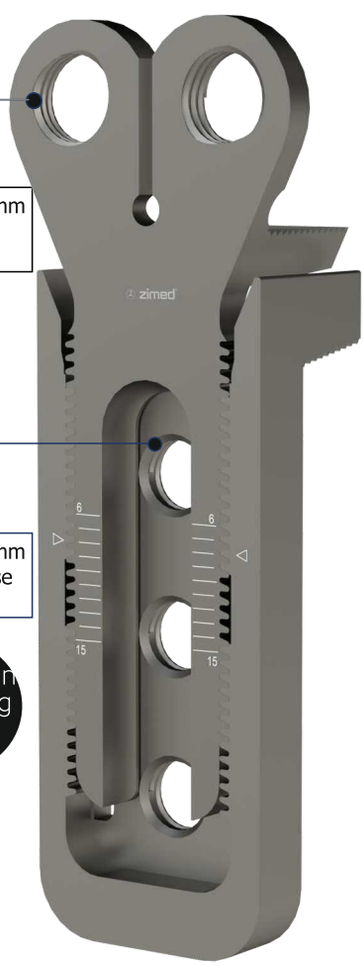
1.1.1 Specifications

Open wedge osteotomies of the medial proximal tibia are indicated for idiopathic or post-traumatic varus deformities of the proximal tibia. It is used with (2052)Ø5mm locking screw and (2182)Ø6.5 Locking Cancellous screw. There is an option to open from 6–15 mm. Plate is produced from ISO 5832-2 TiGr3 (ASTM F 67) material.

zimed®

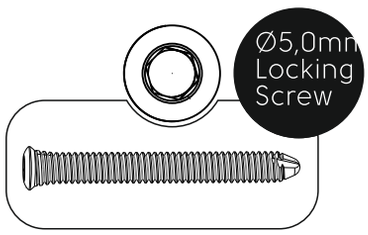
Locking High Tibia
Osteotomy Plate Type 1





Theread hole section for Ø 6,5 mm locking cancellous screws

Theread hole section for Ø 5,0 mm locking screws.(Also it can be use Cortical Screw Ø 4.5mm



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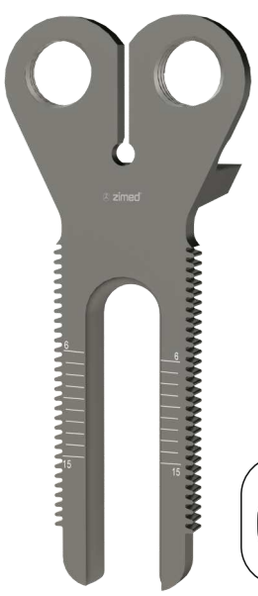

REF. NO
1972-0020

1.2.1 Specifications

Open wedge osteotomies of the medial proximal tibia are indicated for idiopathic or post-traumatic varus deformities of the proximal tibia. It is used with (2052)Ø5mm locking screw and (2182)Ø6.5 Locking Cancellous screw. There are 5 types of wedge to provide 6-14 mm range. Plate is produced from ISO 5832-2 TiGr3 (ASTM F 67) material.

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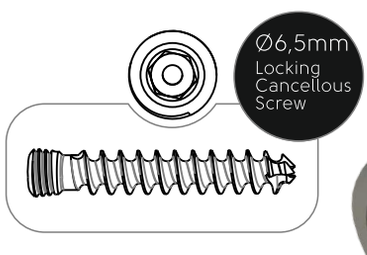
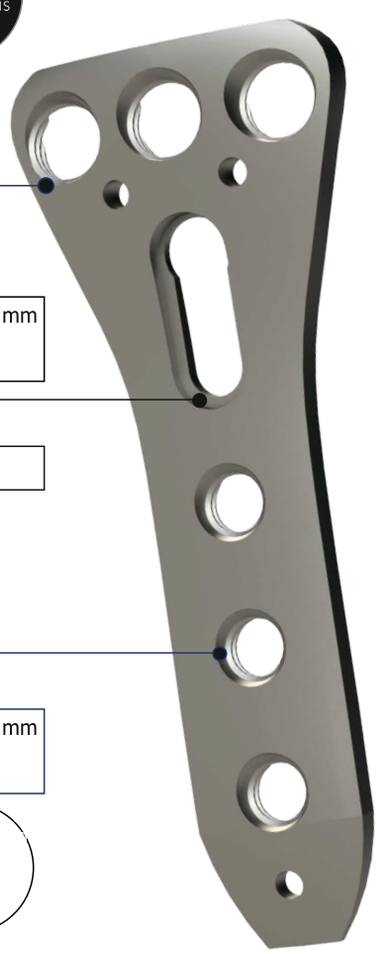
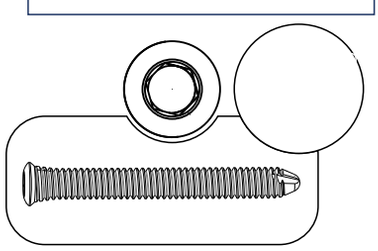
Locking High Tibia
Osteotomy Plate Type 2







REF. NO
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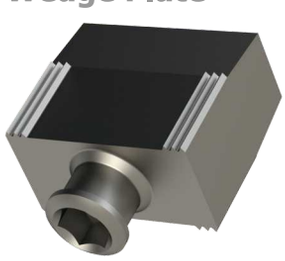
Wedge Plate



REF. NO	LENGTH (mm)
1972-0006	6
1972-0008	8
1972-0010	10
1972-0012	12
1972-0014	14

2.1. High Tibial Osteotomy

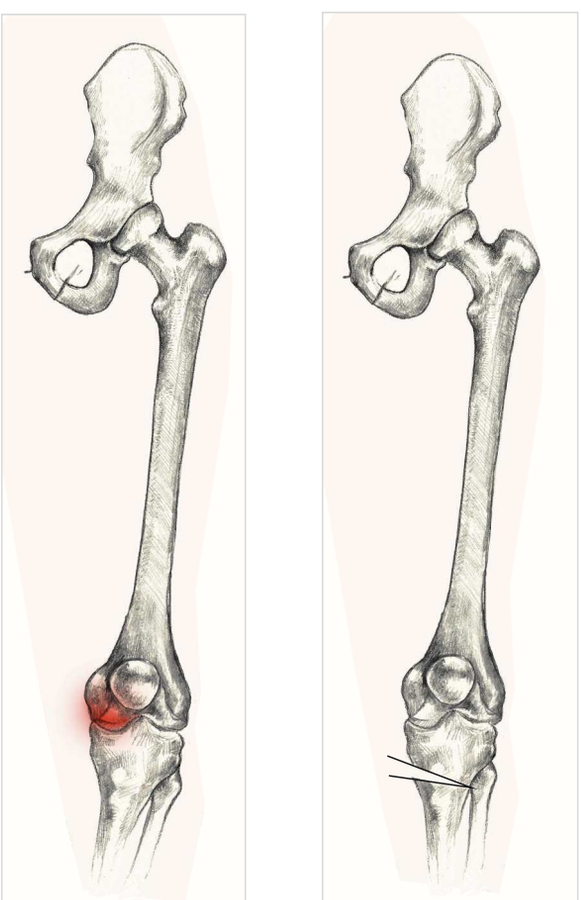
2.1.1. Causes of surgery

High tibia Osteotomy is a surcigal procedure for relieve the pressure on arthritic knee joint damaged area.
a wedge cut is done from proximal tibia and bone graft can be add according to patient need. It is used to relieve when non-surgical treatments fail.

2.1.2. Open and Closed Wedge Osteotomy

The purpose of the surgery, fixing the wrong alignment of tibia at the same time releasing the associated joint area and hold straight to joint line to legs mechanic axis.
It can be use two tecnique. Closing wedge osteotomy and opening wedge osteotomy. Surgeon is choosing tecnique according to patients need. In this surgical tecnique include; Opening wedge of tibia and How to use High tibia Plates for fixing varus tilt. In this surgical tecnique include offer two different plate for same purpose.

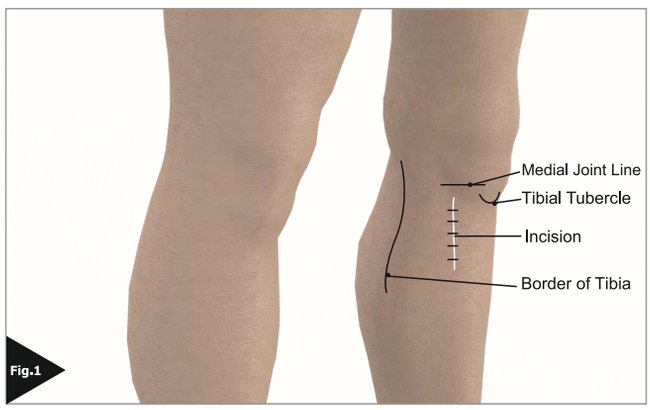
Locking proximal Medial Tibial Plate is can be a suggestion for the valgus tilt. You can ask for more information for this plate.



2.2. Locking High Tibia Osteotomy Plate Type 1

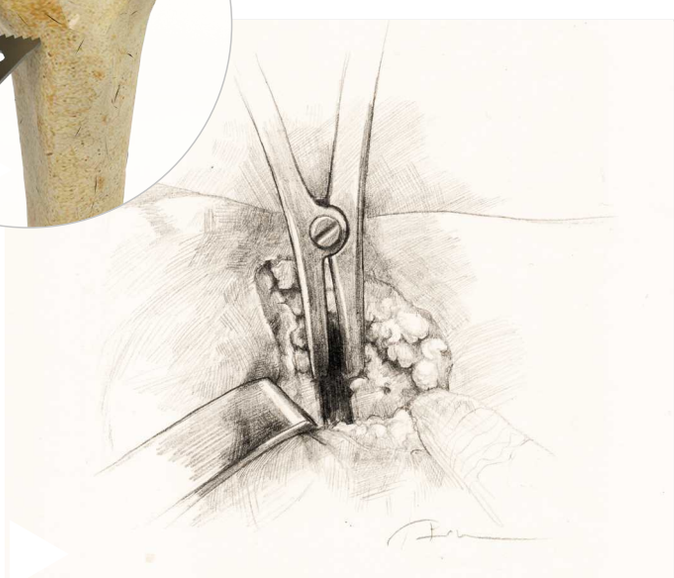
2.2.1 Approach

İn this tecnique Surgeon start with incision from anterior of knee and under the distal edge of patella. This incision from medial joint line reach 5cm distal and anterior tubercle between posteromedial edge of tibia centered a vertical (Fig.1)

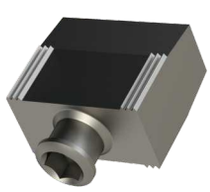


2.2.2 Osteotomy

Wedge cut is made to tibia with oscillating saw (Fig.2)



An opening is created from the incision made on the bone. (Fig.3). Openness is fastened with distraction pliers. Height is determined for the wedge implant.(Fig.4). It's provide height possibility from 6mm to 14mm. Bone graft can be added before wedge implant attachment (Fig.5).



REF. NO	LENGTH (mm)
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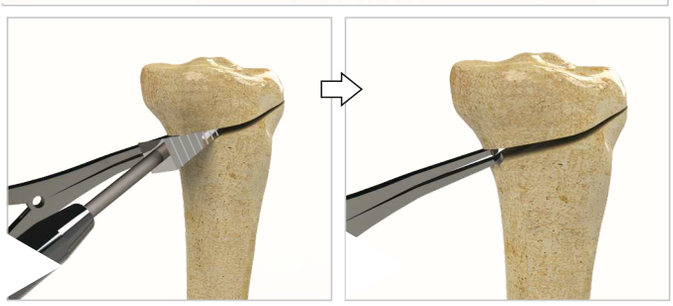
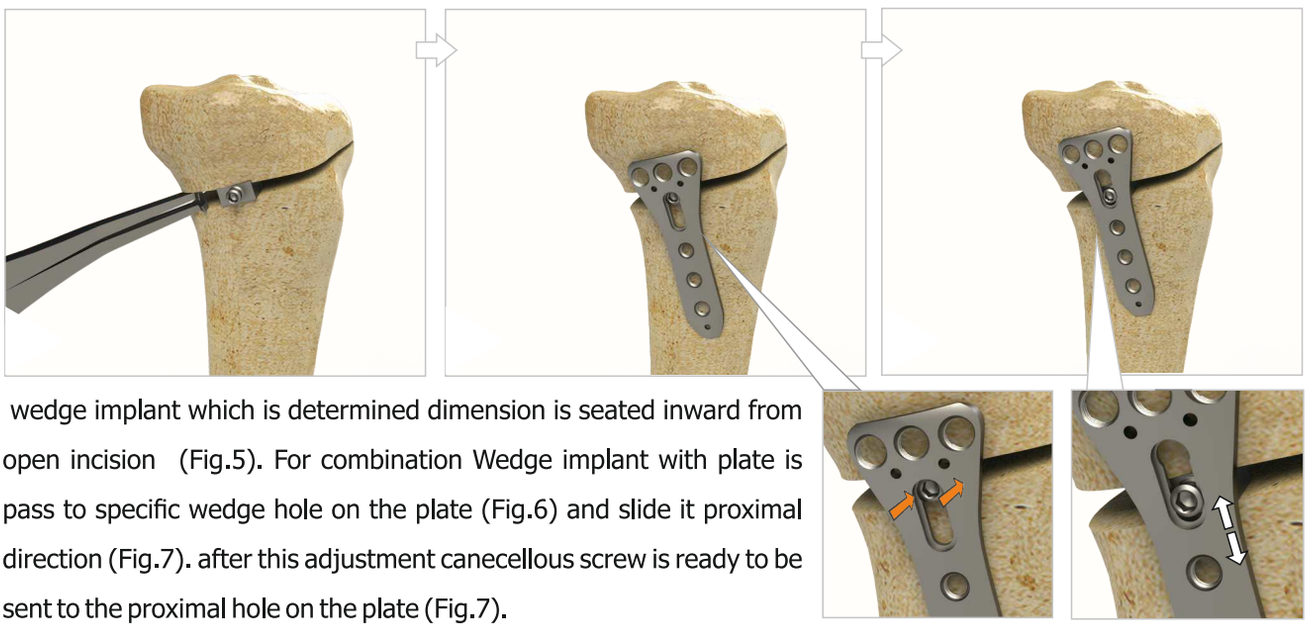
1972-0008	8
1972-0010	10
1972-0012	12
1972-0014	14

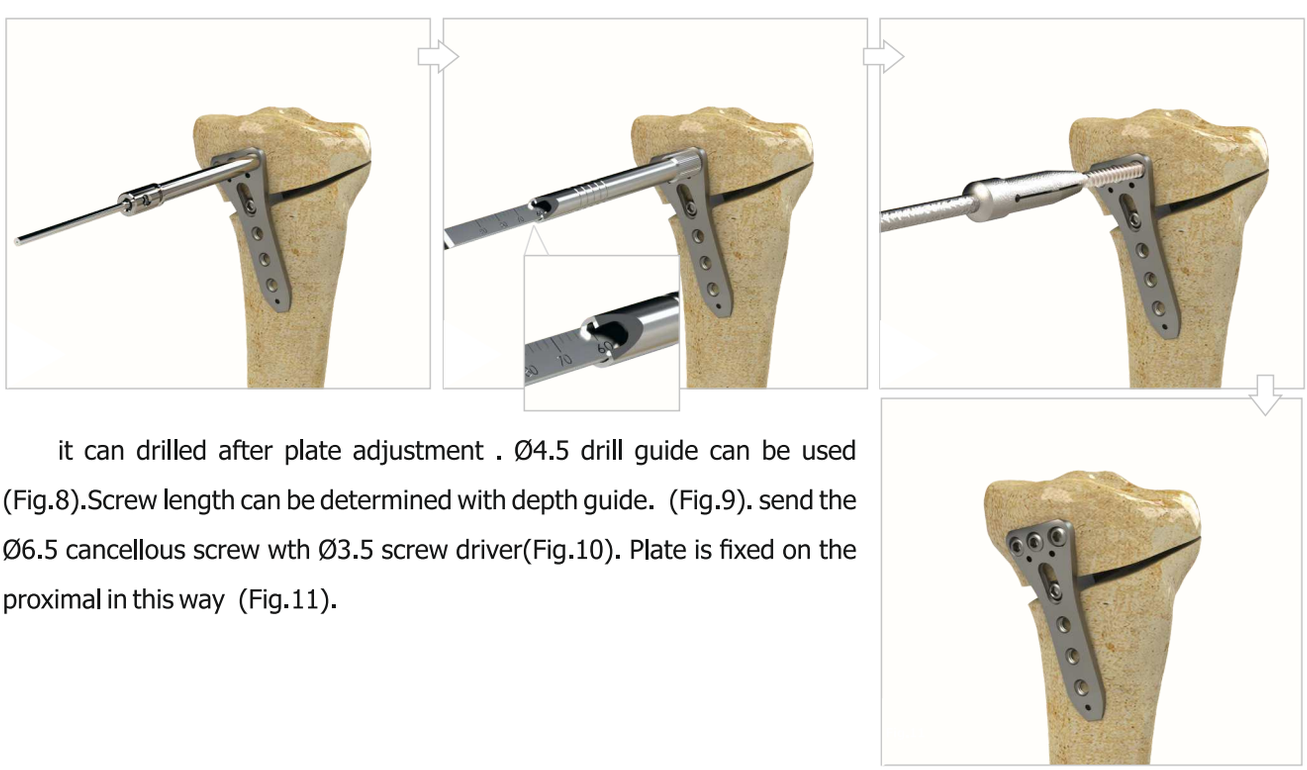


2.2.3 Plate placement and wedge



wedge implant which is determined dimension is seated inward from open incision (Fig.5). For combination Wedge implant with plate is pass to specific wedge hole on the plate (Fig.6) and slide it proximal direction (Fig.7). after this adjustment canecellous screw is ready to be sent to the proximal hole on the plate (Fig.7).

2.2.4. Ø6.5 Locking Cancellous Screw



it can drilled after plate adjustment . Ø4.5 drill guide can be used (Fig.8).Screw length can be determined with depth guide. (Fig.9). send the Ø6.5 cancellous screw wth Ø3.5 screw driver(Fig.10). Plate is fixed on the proximal in this way (Fig.11).

2.2.5. Ø5.0 Locking Screw

For the Ø5.0 Locking screw Ø4.5 drill guide is placed distally of the plate (Fig.12).Drilling can be done.Decide the screw lenght with depth guide (Fig.13).Send the Ø5.0 locking screw with Ø3.5 screw driver(Fig.14).

2.2.6. Torque and finishing

After the screw sending process, torque is done and all control is made (Fig.15-16)

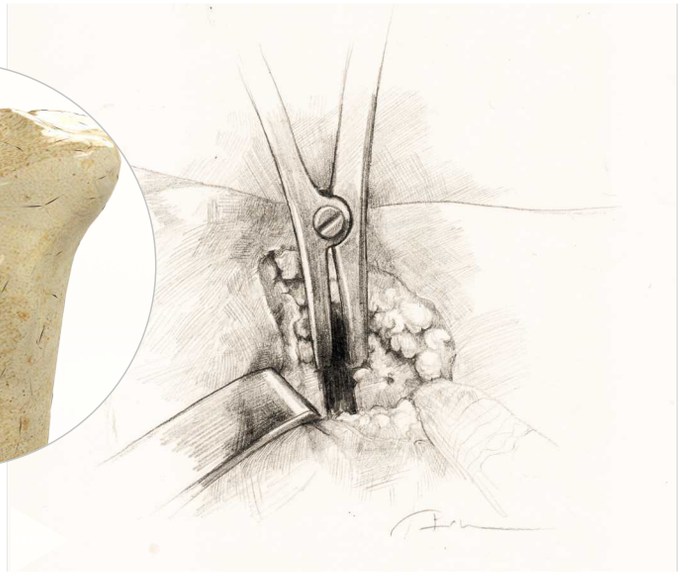
2.3. Locking High Tibia Osteotomy Plate Type 2

2.3.1. Approach

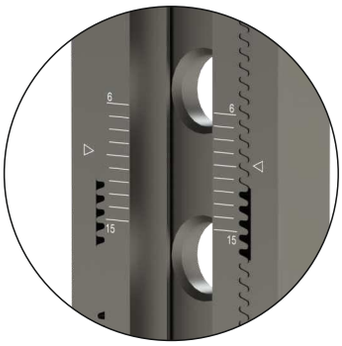
İn this tecnique Surgeon start with incision from anterior of knee and under the distal edge of patella. This incision from medial joint line reach 5cm distal and anterior tubercle between posteromedial edge of tibia centered a vertical

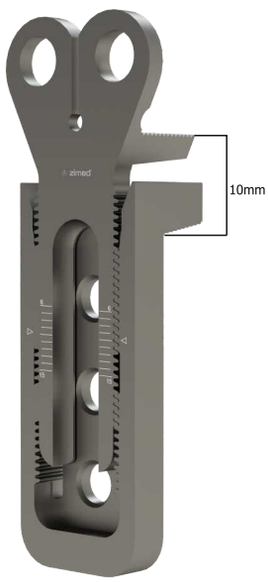
2.3.2 Osteotomy

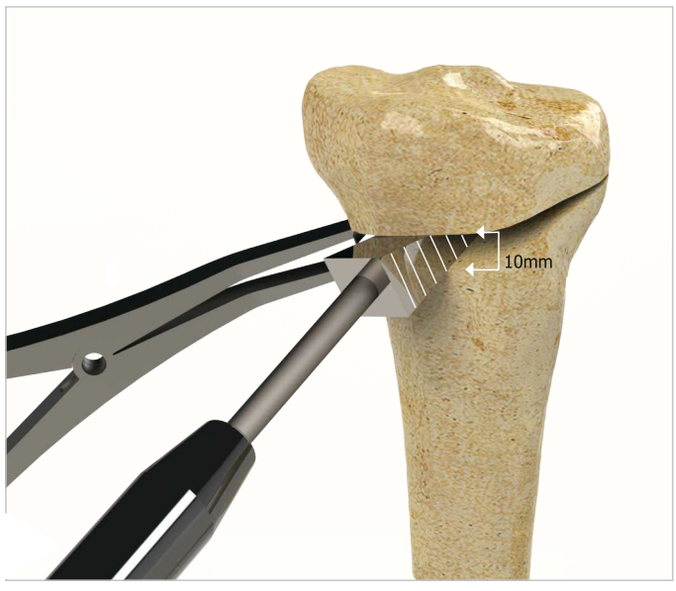
Wedge cut is made to tibia with oscillating saw (Fig.17)



An opening is created from the incision made on the bone. Openness is fastened with distraction pliers.(Fig.18). the plate itself is used to this oppenness instead of wedge impant. Openness of height is determined (Fig.19). It's provide height possibility from 6mm to 15mm. (Fig.20).Bone graft can be added before plate attachment .







2.3.3 Plate Placement and Ø5.0 Locking Screw or Ø4.5 Cortical Screw

Adjusted plate can attach to the openness(Fig.21). For the Ø5.0 Locking screw Ø4.5 drill guide is placed distally of the plate (Fig.22). Drilling can be done.Decide the screw lenght with depth guide(Fig.23).

Send the Ø5.0 locking screw with Ø3.5 screw driver(Fig.24). Same procedure can do for another Ø5.0 Locking screw for this section. In this way distal fixing is completed . Additionally Ø 4.5 mm cortical can be use for this section (Fig.25)

2.3.4 Plate Placement and Ø6.5 Locking Cancellous Screw

Ø4.5 drill guide can be used(Fig.26). Screw length can be determined with depth guide.(Fig.27). send the Ø6.5 cancellous screw wth Ø3.5 screw driver(Fig.28).

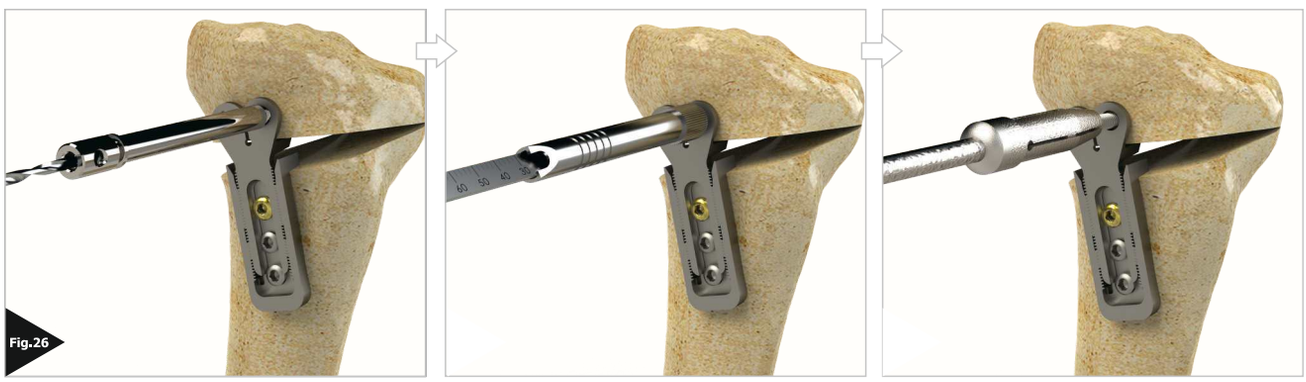
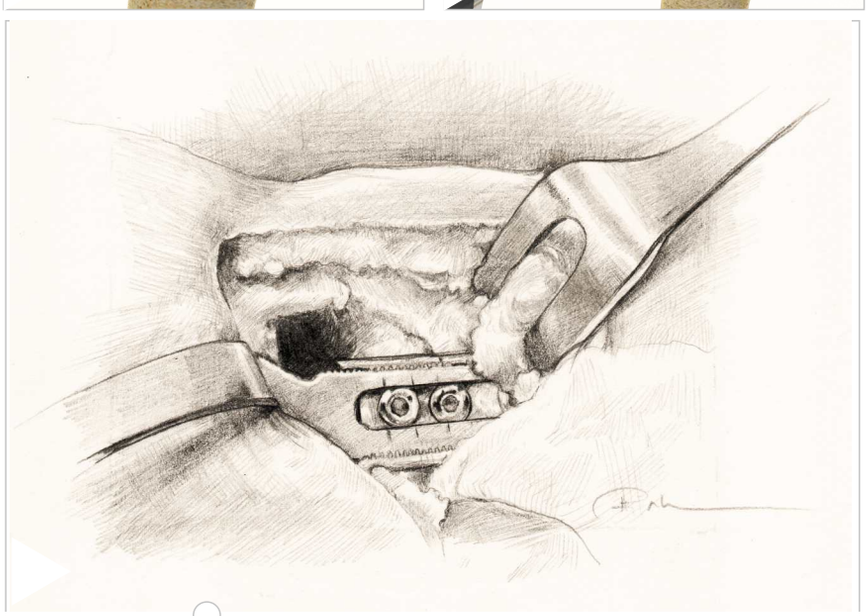


Fig.26

Plate is fixed on the proximal in this way(Fig.29). After the screw sending process, torque is done and all control is made(Fig.30-31).



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 on Zim tools. Neutral pH enzymatic and cleaning 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. Combination Manual / 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*

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