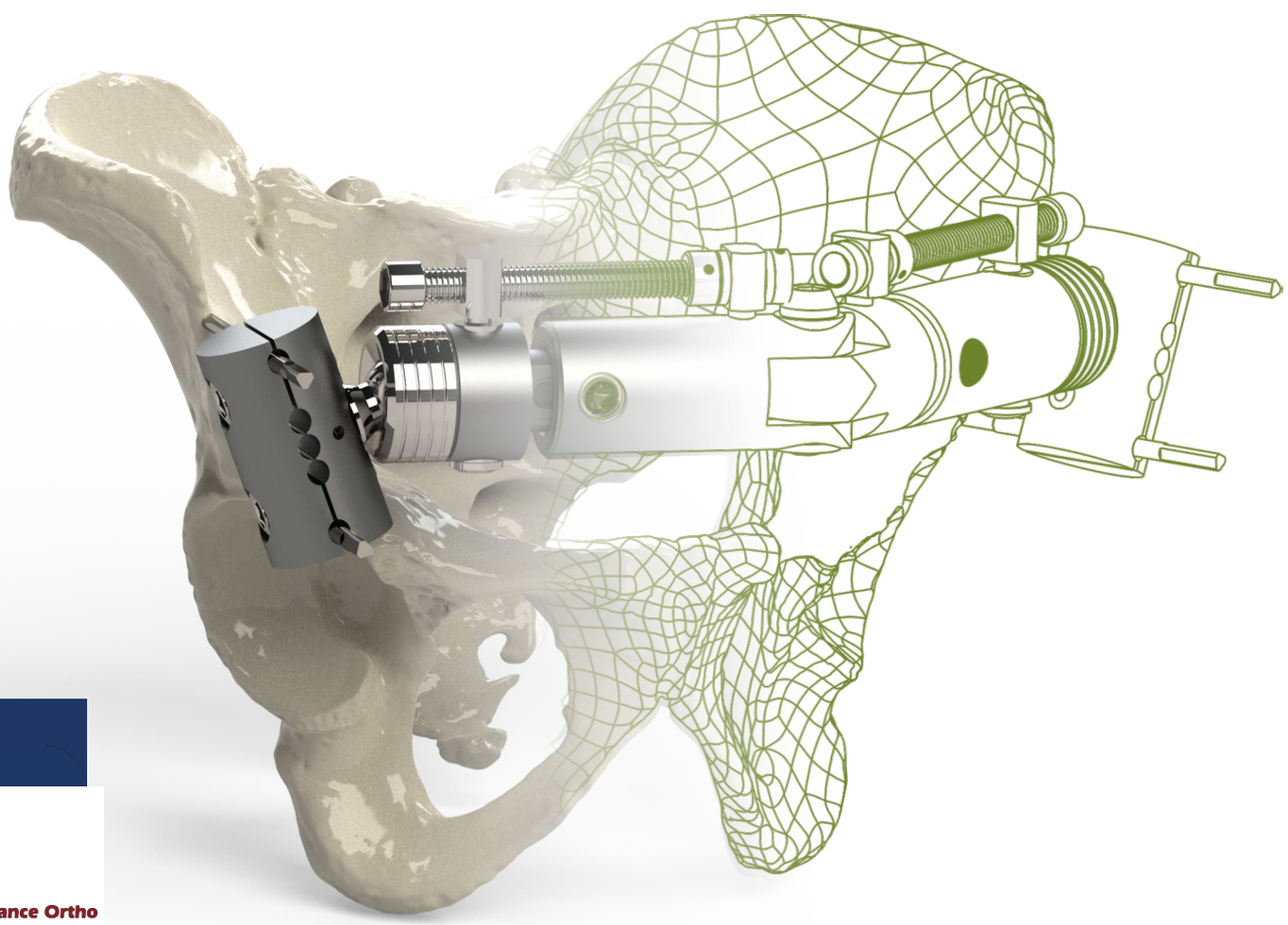
Ostéo France Ortho

Pelvic Dynamic Axial

External FIXATOR

Surgical Technique



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Contents

zimed®

ISO 9001
ISO 13485 CE 1984

Pelvic Dynamic Axial
1.1.External Fixator
1.1.1.Specifications

External Fixator is offered as both sterile and not sterile. Its used for fix perpendicular fracture on the pelvic and stabilization . Three different length option is available. Short, medium and long. It is produced from aluminum and stainless steel metarial.

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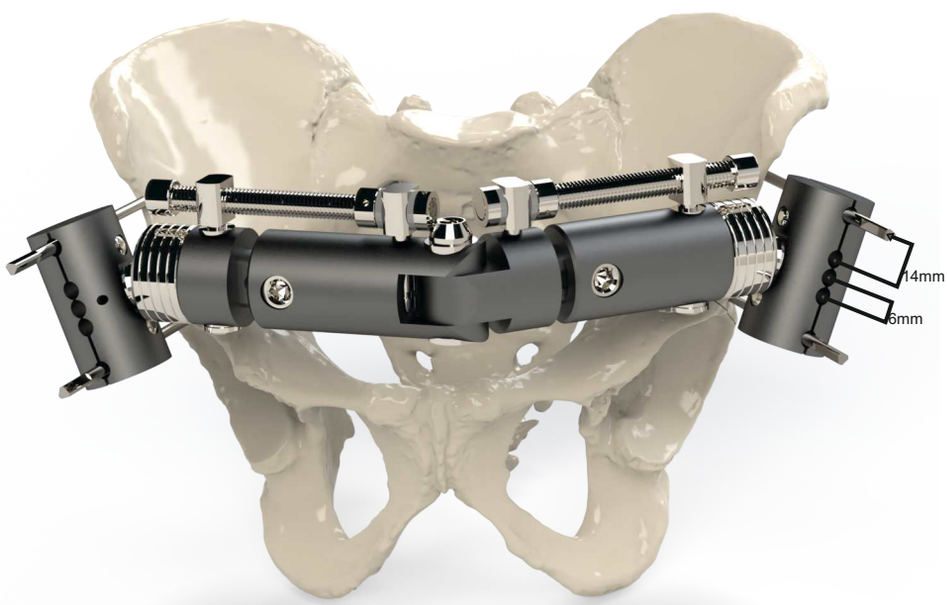
REF. NO	SIZE
5044-0001	S
5044-0002	M
5044-0003	L



Instruments

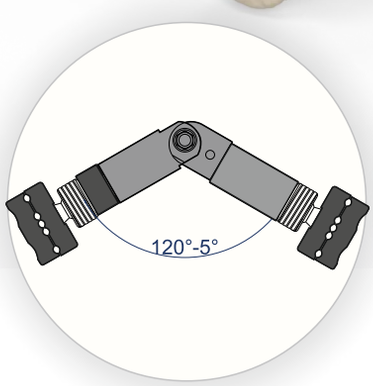

Dril Guide

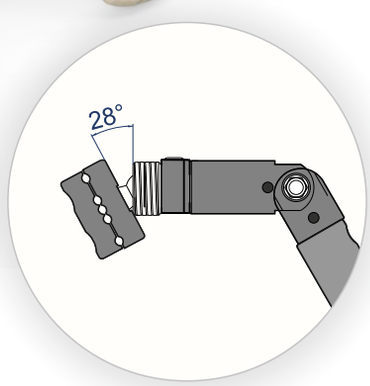

Allen Wrench


Drill


Drill Guide


Schanz Holder





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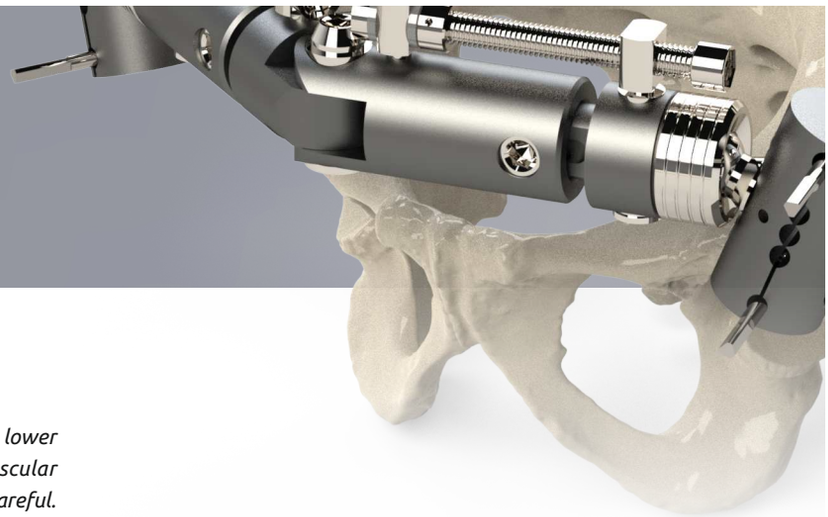


2.1 Pelvic Fracture

Pelvic is provide structural continuity between axial skeleton and lower limb.Protects the genitourinary, gastrointestinal and neurovascular systems. Therefore treatment of the pelvic circle trauma it must be careful. In addition Lumbo Sacral and coccygeal nerve and male urethra are important structures in this area.

Pelvic circle consist of sacrum and innomant (ilium+ischium+pupis)bone. Ligamentous support is important for the pelvic stabilization.
Stabilization of the pelvic ,depends on pelvic substratum lumbosacral ligaments in addition especially posterior weight bearing sacroiliac complex tension bands.

Surgeon,is peruse pelvic instability status, to type and injures in a classification

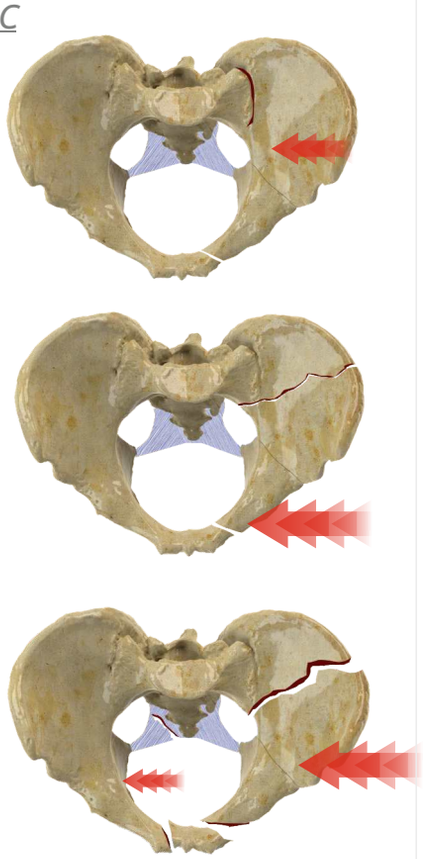
Pelvic external fixation is depending to hemodynamics and structural instability, may serve the purpose in a few different ways

Pelvic external fixation, provides in some injuries enough temporary stabilization for facilitating patient mobilization.It is insufficient in long term aim

After temporary stabilization and patient is been resuscitated, external fixation can be changed wit internal fixation. If external fixation is used more than enough, discomport, skin problem, local infection can be seen

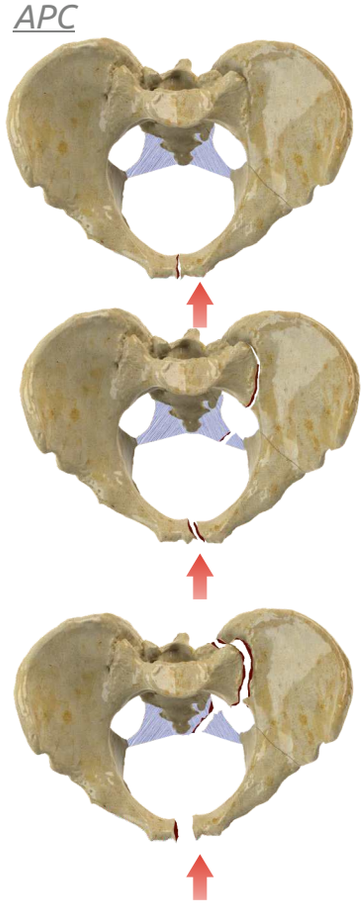
Applying problem can be seen on obese patient to iliac crest

LC



Lateral compression force causing more vertical rami fractures in the front

APC

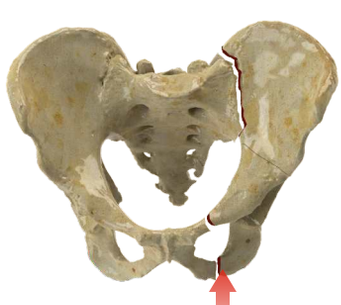


AP compression fractures.

2.1.1. Pelvic Circle Fracture

Many of the pelvic circle fracture is being due to with vehicle , industrial and extreme sport accident etc. Normally those fracture related excessive retroperitoneal bleeding trauma in firsth few hour end with moratily

VS

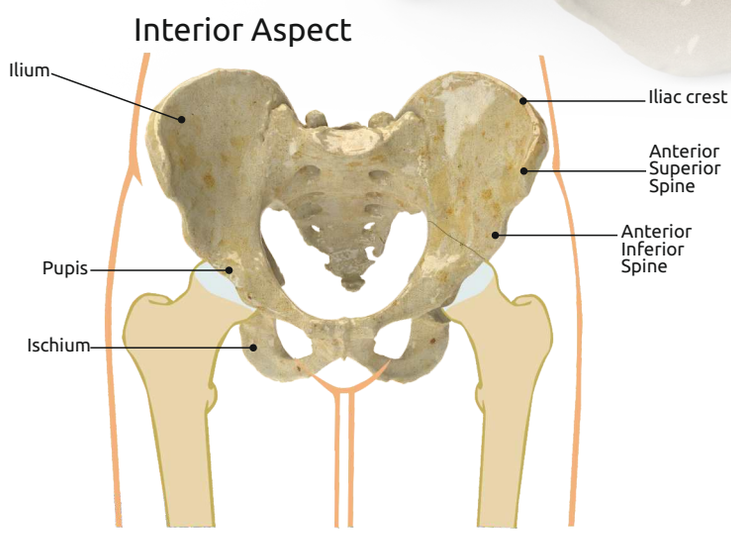


A vertically directed force or forces at right angles to the supporting structures of the pelvis leading to vertical fractures in the rami and disruption of all the ligamentous structures.

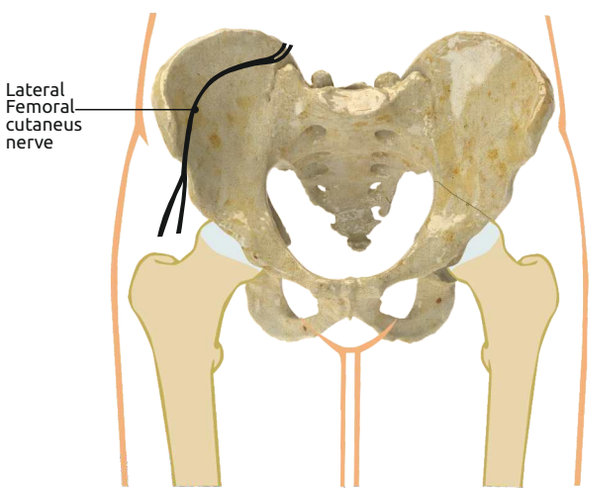
Young and Burgess classification.

2.2 Pelvic Anatomy and Approach

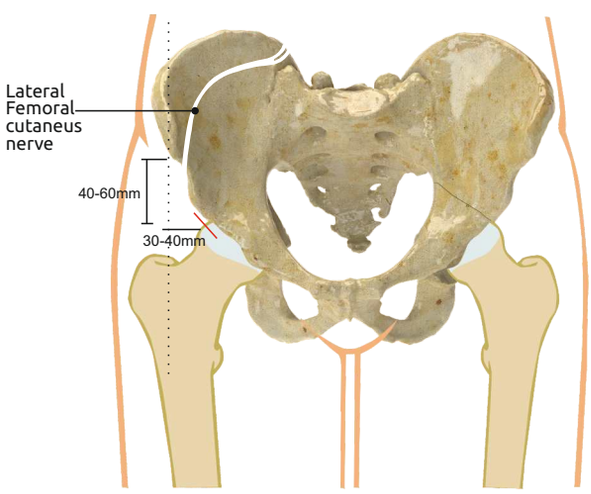
Anterior lower illiac spine is used starting point for Shanzes placement to the supraacetabular area.



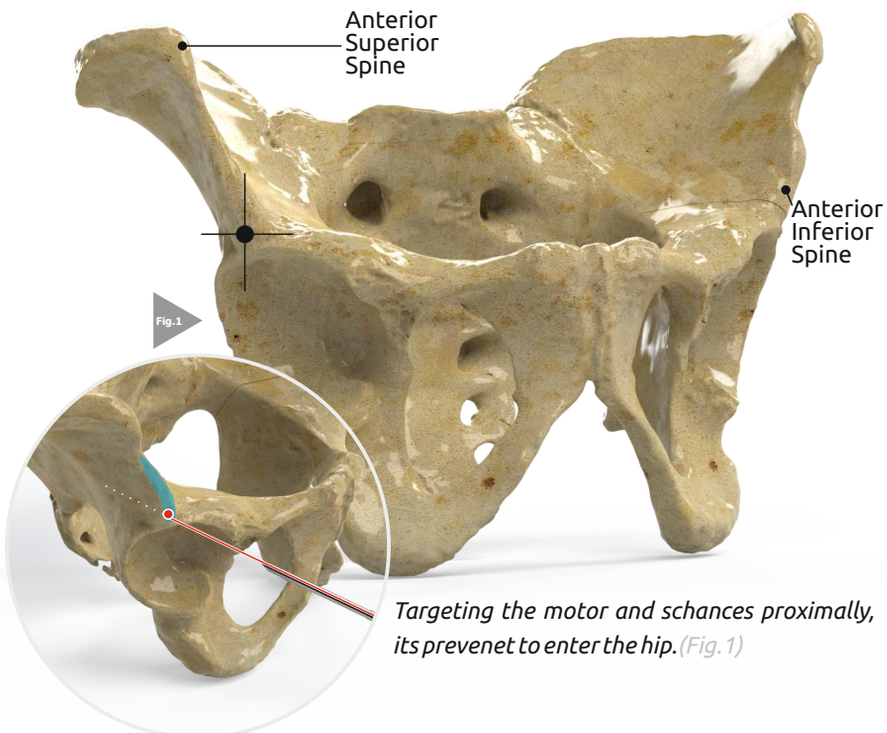
Lateral femoral cutaneus nerve is under the risk while doing Schanz placement to anterior lower illiac spine.



Make an oblique 2-3cm incision from 4-6cm distally anterior superior iliac and 3-4cm medially



2.3 Fixator Placement

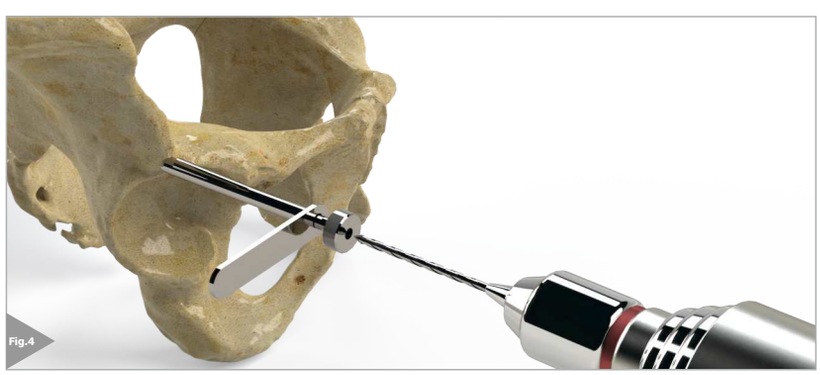


Targeting the motor and schances proximally, its prevenet to enter the hip. (Fig.1)

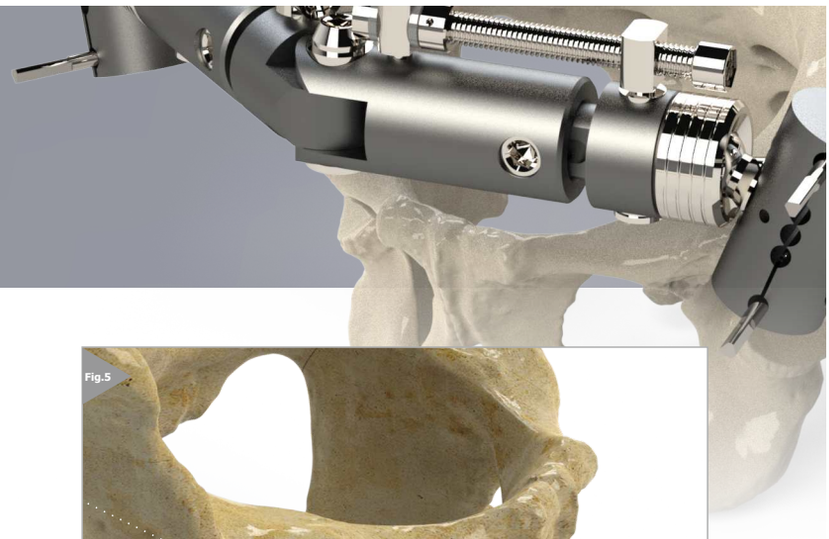
2.2.1 Drilling

Drill guide is placed on Anterior lower ilica spine,
Don't forget attach inner sleeve before drilling.

Drill and then Schanzes are send proximally to sacroiliac. (Fig.2-4)



After determine suitable pressure point , outer cortex is drilled with motor (Fig.4)

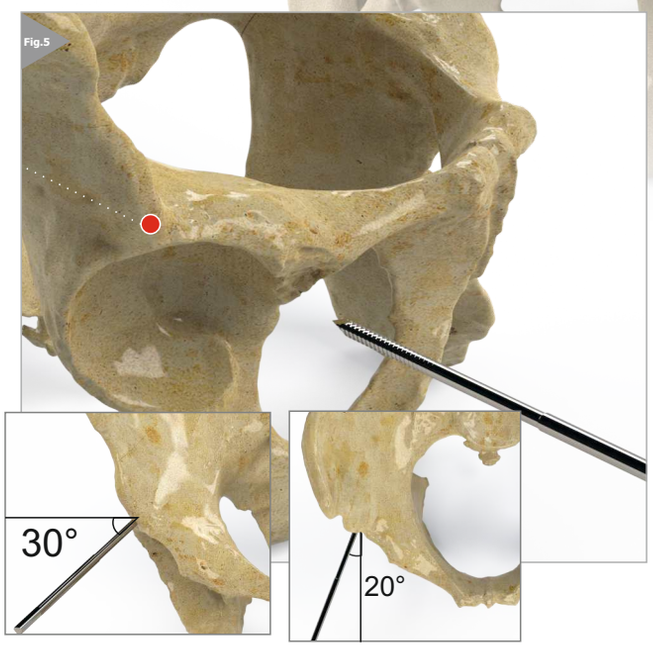


2.2 Fixator Placement

2.2.2 Schanz

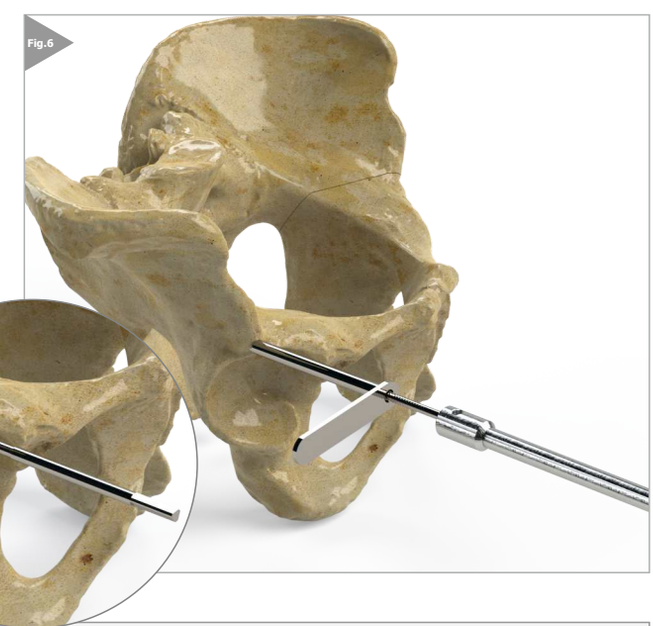
According to possibilty push forwad to Schanz for better attachment to bone. It is important at osteoporotic bone

After place and path of the Schanz approved, Schanz can be send backside of the illium. *(Fig.5)*



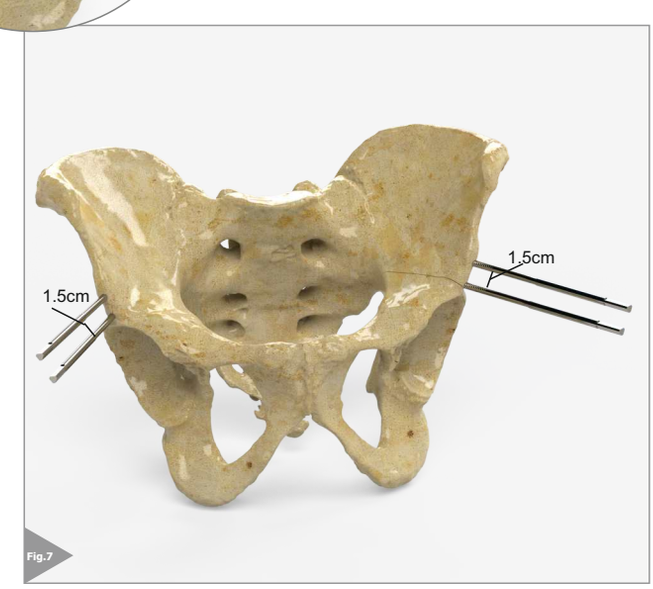
Schanz is send with T Handle. *(Fig.6)*

At the extended external fixation case, to both side two Schanz can be think.



In this case, one of the Schanz send slightly above Anterior lower iliac spine another one placed below. Distance between must be approximately 1,1,5cm *(Fig.7).*

Repeat same procedure another side *(Fig.7)* .



2.2 Fixator Placement

2.2.3 Fixator

Clamps push forwad over the Schanz. Reduction is not been made yet in this stage for pelvic ring so clamps is not tighten. *(Fig 8-9)*

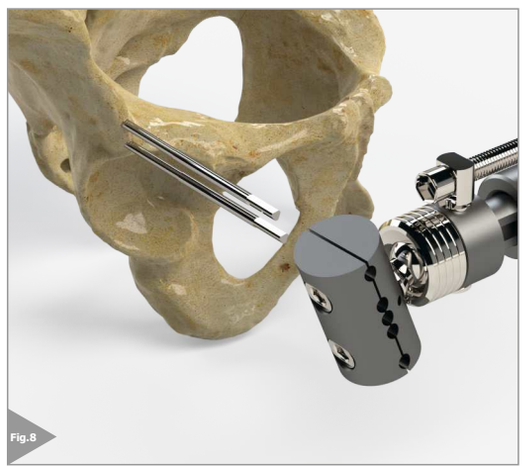


Fig.8

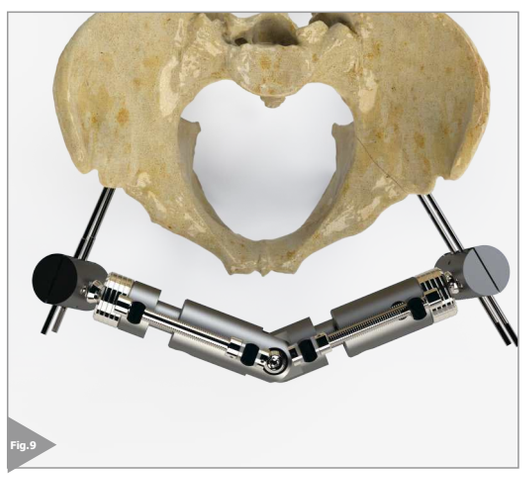
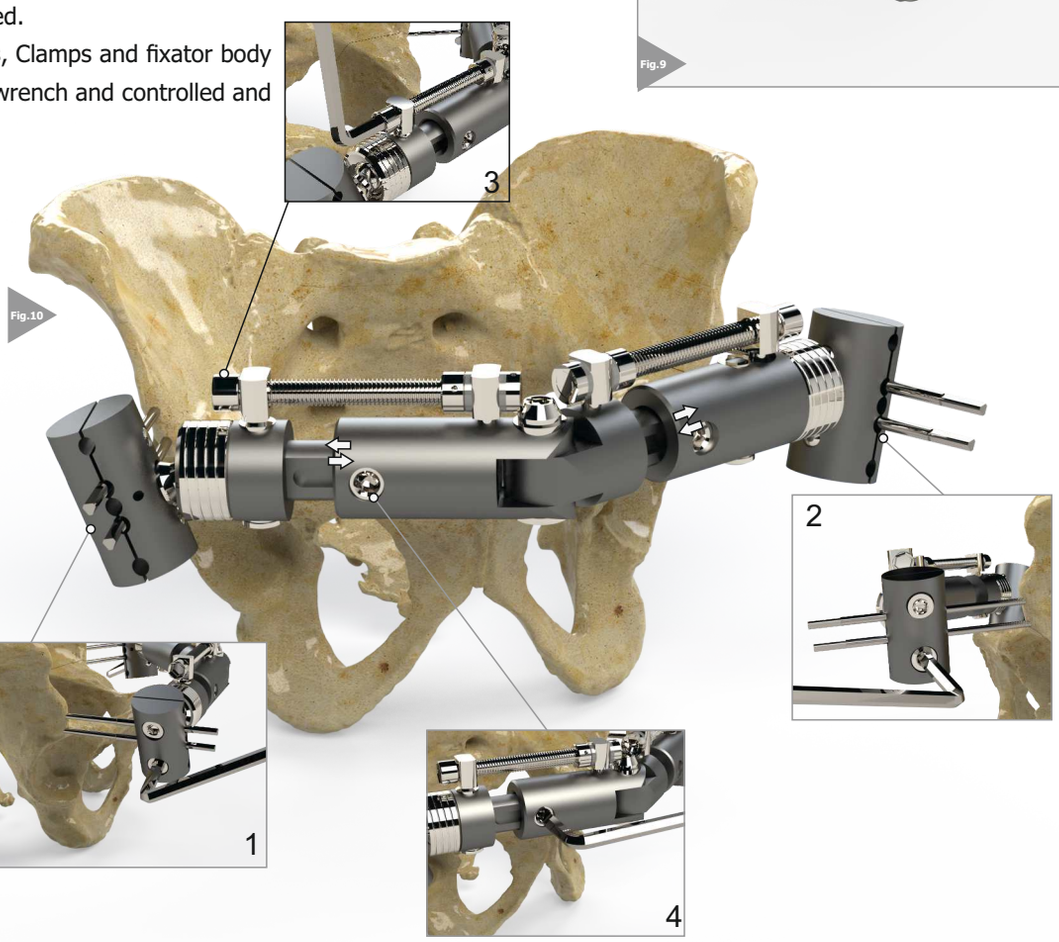
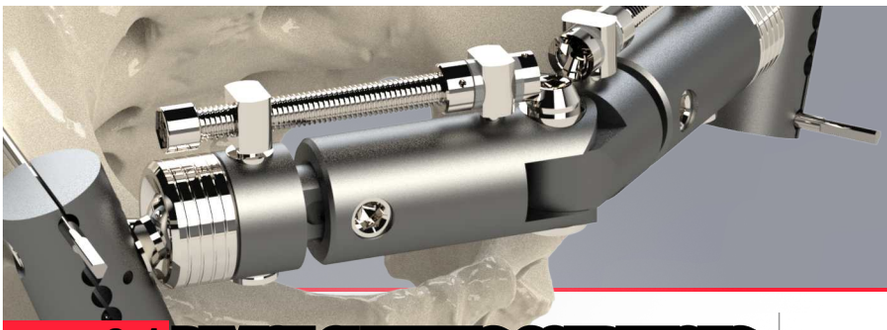


Fig.9

Configuration of Fixator, it must be give enough abdominal area and sitting position.
Manuel reduction can be applied using manuel laterally pressure and compression shaft . Manuplation of foot can be useful on manually reduction.
Under the image, reduction and external rotation is evaluated.
After those stages, Clamps and fixator body is tightened with wrench and controlled and finished *(Fig10)* .





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.

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.

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.

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

Ostéo France Ortho 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 implanting the device in each individual patient. Ostéo France Ortho and their surgical consultants are not responsible for selection of the appropriate surgical technique to be utilized for an individual patient.

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