Femur

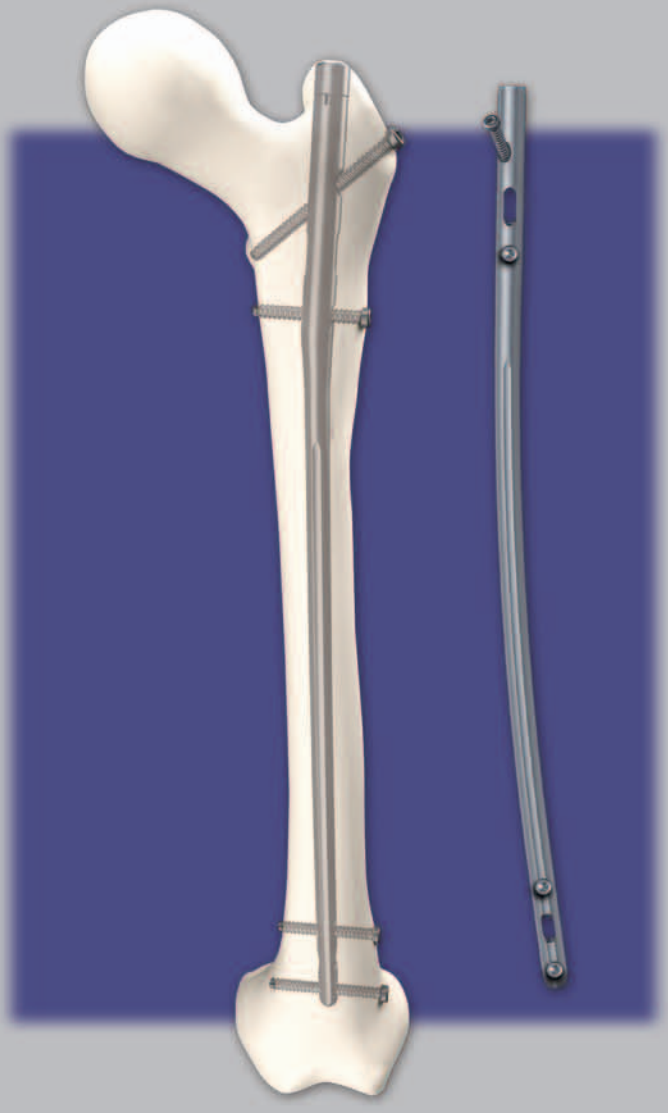
stryker®

T2 GTN

Greater Trochanter Entry Femoral Nailing System

Operative Technique

Femur Fractures



Femoral Nailing System

Contributing Surgeons

Prof. Dr. med. Volker Bühren
Chief of Surgical Services
Medical Director of Murnau Trauma Center
Murnau, Germany

Joseph D. DiCicco III, D.O.
Director Orthopaedic Trauma Service
Good Samaritan Hospital
Dayton, Ohio
Associate Clinical Professor of Orthopaedic Surgery
Ohio University and Wright State University
USA

Anthony T. Sorkin, M.D.
Rockford Orthopaedic Associates, LLP, Clinical Instructor,
Department of Surgery University of Illinois,
College of Medicine Director,
Orthopaedic Traumatology Rockford Memorial Hospital
Rockford, Illinois,
USA

This publication sets forth detailed recommended procedures for using Stryker Osteosynthesis devices and instruments.

It offers guidance that you should heed, but, as with any such technical guide, each surgeon must consider the particular needs of each patient and make appropriate adjustments when and as required.

A workshop training is recommended prior to first surgery.

All non-sterile devices must be cleaned and sterilized before use. Follow the instructions provided in our reprocessing guide (L24002000). Multi-component instruments must be disassembled for cleaning. Please refer to the corresponding assembly/ disassembly instructions.

See package insert (L22000023) for a complete list of potential adverse effects, contraindications, warnings and precautions. The surgeon must discuss all relevant risks, including the finite lifetime of the device, with the patient, when necessary.

Warning:

Fixation Screws
Stryker Osteosynthesis bone screws are not approved or intended for screw attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic or lumbar spine.

Contents

Introduction

Introduction

Over the past several decades **antegrade femoral nailing** has become the treatment of choice for most femoral shaft fractures.

The T2 GTN System is one of the first femoral nailing systems to offer an option for tip of greater trochanteric entry point insertion with the option to apply compression either by an external compression device or by an internal compression screw.

Through the development of a common, streamlined and intuitive surgical approach the T2 GTN System offers **the potential for more efficient treatment** of fractures as well as simplifying the training requirements for all personnel involved.

Implant Features

The T2 GTN Nailing System is the realization of excellent biomechanical intramedullary stabilization using small caliber, strong, cannulated implants for internal fixation of the femur. According to the fracture type, the system offers the option of different locking modes. In addition to static locking, a controlled dynamization with rotational stability is an option.

In some indications, a controlled apposition/compression of bone fragments can be applied by attaching an external compression device to the top of a shaft screw inserted in the oblong hole. Alternatively, an internal Compression Screw can be introduced from the top of the nail. To further help increase rotational stability, the nail can be locked statically after using the controlled dynamization and apposition/compression option. When compression is applied the Partially Threaded Locking Screw (Shaft Screw) that has been placed in the oblong hole is drawing either the distal or the proximal segment towards the fracture site. In stable fractures, this offers the biomechanical advantage of creating active circumferential compression to the fracture site, transferring axial load to the bone, and reducing the function of the nail as a load bearing device (1).

This ability to transfer load back to the bone may reduce the incidence of implant failure secondary to fatigue. Typical statically locked nails function as load bearing devices, and failure rates in excess of 20 % have been reported (2).

The beneficial effect of apposition/compression in treating long bone fractures in cases involving transverse and short oblique fractures that are axially stable is well documented (3, 4).

Common 5mm cortical screws* simplify the surgical procedure and promote a minimally invasive approach. Fully Threaded Locking Screws are available for regular locking procedures. Partially Threaded Locking Screws (Shaft Screws) are designed to apply apposition/compression.

A Cannulated Compression Screw to close the fracture site and End Caps are available in various sizes to allow an improved fit.

All implants of the T2 Nailing Systems are made of Type II anodized titanium alloy (Ti6AL4V) for enhanced biomechanical and biomedical performance**.

See the detailed chart on the next page for the design specifications and size offerings.

* Special order 8mm T2 Femoral Nails can only be locked with 4mm Fully Threaded screws at the nondriving end. As with all diameters of T2 Femoral Nails, the screws for driving end locking are 5mm.

** Axel Baumann, Nils Zander, Ti6Al4V with Anodization Type II: Biological Behaviour and Biomechanical Effects, White Paper, March 2005.

Introduction

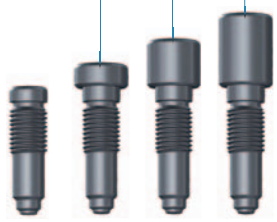
Nails
Diameter 8–15mm* (8,14 and 15mm nails are special order)
Sizes Ø8-15mm: 240–480mm****

5.0mm Partially Threaded Locking Screws (Shaft Screws)
L = 25–120mm

5.0mm Fully Threaded Locking Screws
L = 25–120mm

Note:
Screw length is measured from top of head to tip.

End Caps GTN **



0mm +5mm +10mm +15mm

Cannulated Compression Screw

End Caps T2 ***

Standard +5mm +10mm +15mm

* 8mm nails require 4mm Fully Threaded Screws for Distal Locking

** Cannot be used when the internal compression screw is applied

*** To be used when the Cannulated Compression Screw is applied

**** Check with your local representative regarding availability of implant sizes

Introduction

Instrument Features

A major advantage of the instrument system is a breakthrough in the integration of the instrument platform which can be used for the complete T2 Nailing System, thereby helping to reduce complexity and inventory.

The instrument platform offers advanced precision and usability, and features ergonomically styled targeting devices.

Symbol coding on the instruments indicates the type of procedure, and dissimilar instruments must not be mixed.

Symbol

■ Square = Long instruments

▲ Triangular = Short instruments

Drills

Drills feature color coded rings :
4.2mm = Green
For 5.0mm Fully Threaded Locking Screws and for the second cortex when using 5.0mm Partially Threaded Locking Screws (Shaft Screws).

5.0mm = **Black**
For the first cortex when using 5.0mm Partially Threaded Locking Screws (Shaft Screws).

References

1. T. E. Richardson, M. Voor, D. Seligson, Fracture Site Compression and Motion with Three Types of Intramedullary Fixation of the Femur, Osteosynthese International (1998), 6: 261-264

2. Hutson et al., Mechanical Failures of Intramedullary Tibial Nails Applied without Reaming, Clin. Orthop. (1995), 315: 129-137

3. M.E. Müller, et al., Manual of Internal Fixation, Springer-Verlag, Berlin, 1991

4. O. Gonschorek, G. O. Hofmann, V. Bühren, Interlocking Compression Nailing: a Report on 402 Applications. Arch. Orthop. Trauma Surg (1998), 117: 430-437

5. Mehdi Mousavi, et al., Pressure Changes During Reaming with Different Parameters and Reamer Designs, Clinical Orthopaedics and Related Research, Number 373, pp. 295-303, 2000

6. Axel Baumann, Nils Zander, Ti6Al4V with Anodization Type II: Biological Behaviour and Biomechanical Effects, White Paper, March 2005.

7. Jan Paul M. Frolke, et al. ; Intramedullary Pressure in Reamed Femoral Nailing with Two Different Reamer Designs., Eur. J. of Trauma, 2001 #5

Indications, Precautions & Contraindications

Indications

- Open and closed femoral fractures
- Pseudarthrosis and correction osteotomy
- Pathologic fractures, impending pathologic fractures and tumor resections
- Ipsilateral femur fractures
- Fractures proximal to a total knee arthroplasty
- Non-unions and mal-unions

Precautions

Stryker Osteosynthesis systems have not been evaluated for safety and use in MR environment and have not been tested for heating or migration in the MR environment, unless specified otherwise in the product labeling or respective operative technique.

Contraindications

The physician's education, training and professional judgement must be relied upon to choose the most appropriate device and treatment. Conditions presenting an increased risk of failure include:

- Any active or suspected latent infection or marked local inflammation in or about the affected area.
- Compromised vascularity that would inhibit adequate blood supply to the fracture or the operative site.
- Bone stock compromised by disease, infection or prior implantation that can not provide adequate support and/or fixation of the devices.
- Material sensitivity, documented or suspected.
- Obesity. An overweight or obese patient can produce loads on the implant that can lead to failure of the fixation of the device or to failure of the device itself.
- Patients having inadequate tissue coverage over the operative site.
- Implant utilization that would interfere with anatomical structures or physiological performance.
- Any mental or neuromuscular disorder which would create an unacceptable risk of fixation failure or complications in postoperative care.
- Other medical or surgical conditions which would preclude the potential benefit of surgery.

Additional Information

Locking Options

Static Mode (1)

Static Mode (2)

Static Mode (3)

Dynamic Mode

Internal Apposition/ Compression Mode

External Apposition/ Compression Mode

Pre-operative Planning

An X-Ray Template **1806-1605** is available **with a magnification of 15%** for pre-operative planning.

Thorough evaluation of pre-operative radiographs of the affected extremvity is critical. Careful radiographic examination of the trochanteric region and intercondylar regions may prevent certain intra-operative complications.

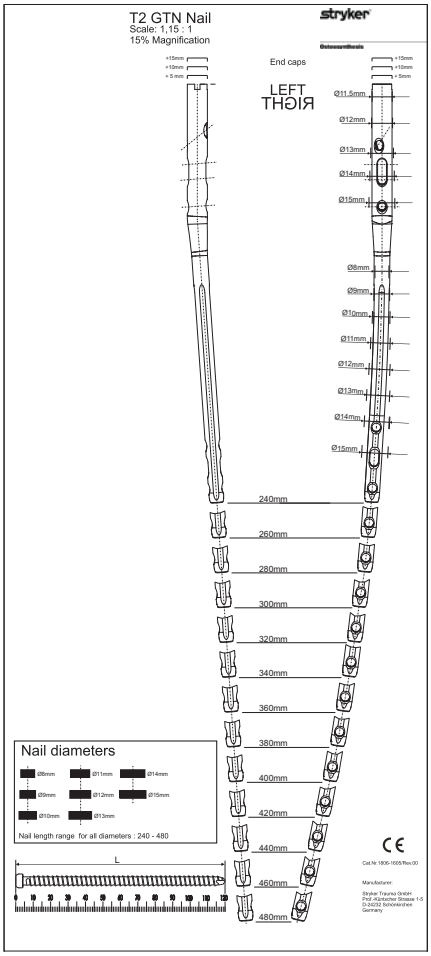
The proper nail length should extend from the tip of the greater trochanter to the epiphyseal scar.

This allows the surgeon to consider the apposition/compression feature of the T2 GTN knowing that up to 10mm of active apposition/ compression is possible, prior to determining the final length of the implant.

If apposition/compression is planned, the nail should be 10mm to 15mm shorter.

Note:

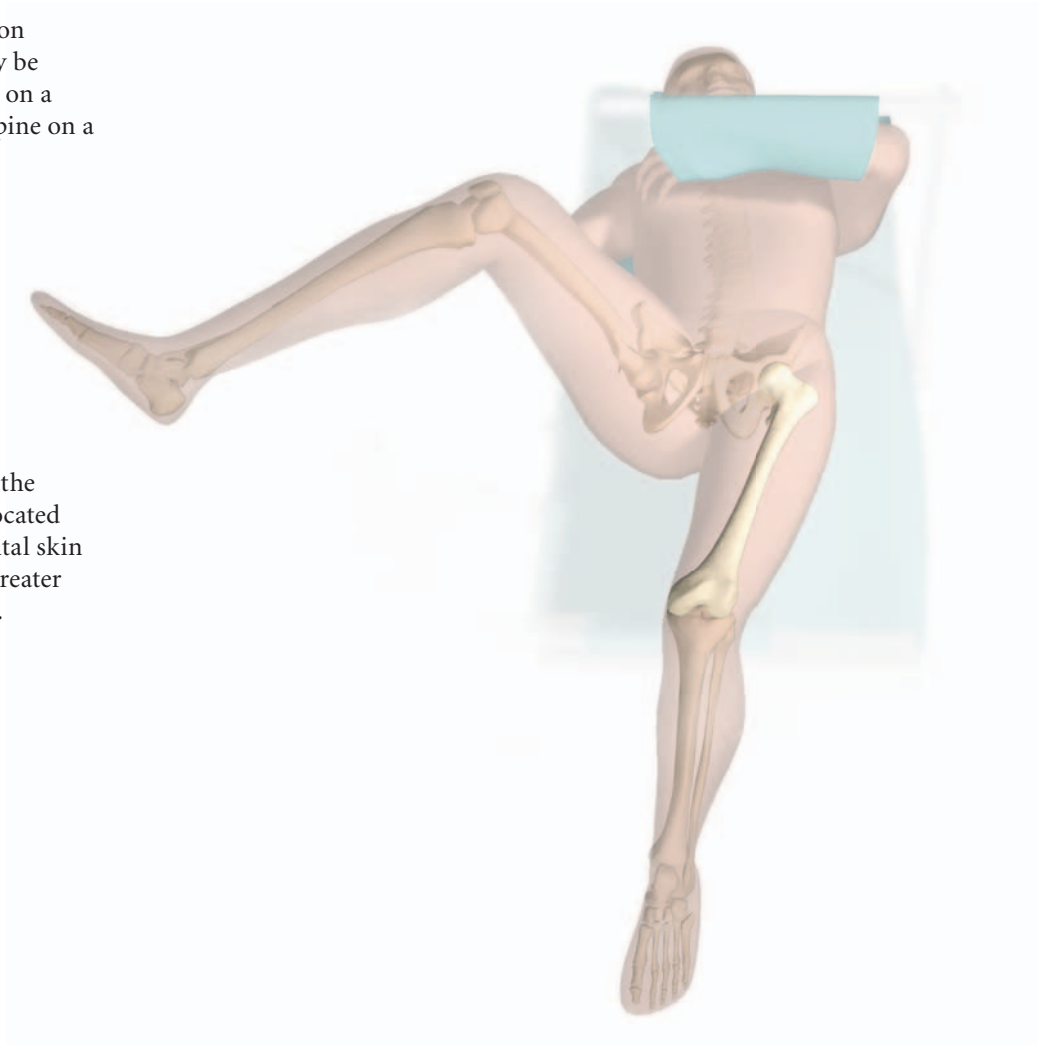
Check with local representative regarding availability of nail sizes.



Operative Technique

Patient Positioning

Patient positioning is surgeon dependent. The patient may be positioned supine or lateral on a fracture table, or simply supine on a radiolucent table.



Incision

With experience, the tip of the greater trochanter can be located by palpation, and a horizontal skin incision is made from the greater trochanter to the iliac crest.

Entry Point

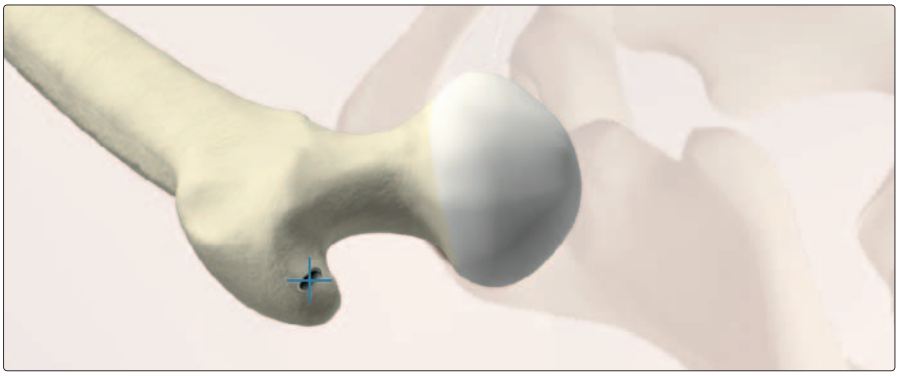


Fig. 1

Fig. 2

Fig. 3

The medullary canal is opened with the Curved Awl (1806-0041) at the junction of the anterior third and posterior two-thirds of the greater trochanter, on the medial edge of the tip itself (Fig. 1 & Fig. 2). Image intensification (A/P and lateral) is used for confirmation.

Once the tip of the greater trochanter has been penetrated, the 3 × 1000mm Ball Tip Guide Wire (1806-0085S) may be advanced through the cannulation of the Curved Awl with the Guide Wire Handle (1806-1095 and 1806-1096) (Fig. 3).

Note:

During opening the entry portal with the Awl, dense cortex may block the tip of the Awl. An Awl Plug (1806-0032) can be inserted through the Awl to avoid penetration of bone debris into the cannulation of the Awl shaft.

Operative Technique

Unreamed Technique

If an unreamed technique is preferred, the 3 × 1000mm Ball Tip Guide Wire (1806-0085S) is passed through the fracture site using the Guide Wire Handle.

The Ø9mm Universal Rod (1806-0110) with Reduction Spoon (1806-0125) may be used as a fracture tool to faciliate Guide Wire insertion through the fracture site (Fig. 4), and in an unreamed technique, may be used as a "sound" to help determine the diameter of the medullary canal.

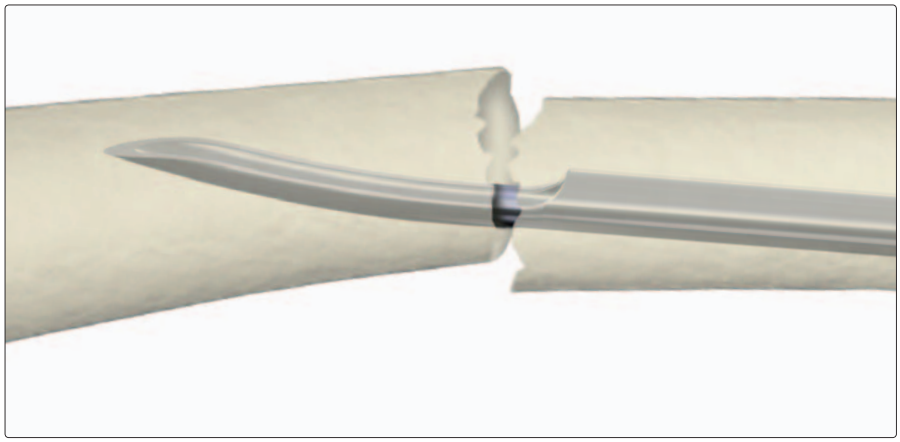


Fig. 4

Universal Rod (1806-0110) with attached Reduction Spoon (1806-0125)

Internal rotation during insertion will aid in passing the Guide Wire down the femoral shaft. The Guide Wire is advanced until the tip rests at/or to the level of the epiphyseal scar or the mid-pole of the patella. The Guide Wire should lie in the center of the metaphysis in the A/P and M/L views to avoid offset positioning of the nail. The Guide Wire Handle is removed, leaving the Guide Wire in place.

Reamed Technique

If the procedure will be performed using a reamed technique, the 3 × 1000mm Ball Tip Guide Wire is inserted with the Guide Wire Handle through the fracture site to the level of the epiphyseal scar or the mid-pole of the patella and does not need a Guide Wire exchange.

The Ø9mm Universal Rod (1806-0110) with Reduction Spoon (1806-0125) may be used as a fracture reduction tool to facilitate Guide Wire insertion through the fracture site (Fig. 4), and as in an unreamed technique, may be used as a "sound" to help determine the diameter of the medullary canal.

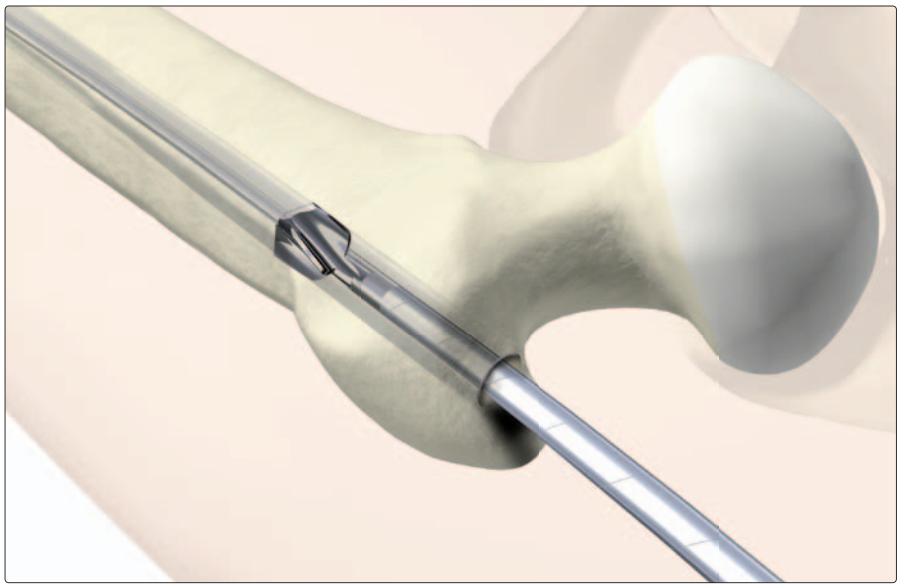
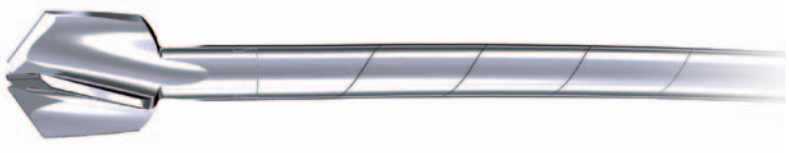


Fig. 5

Note:

The Ball Tip at the end of the Guide Wire will stop the reamer head.



Bixcut Reamer

Reaming is commenced in 0.5mm increments until cortical contact is achieved (Fig. 5). Final reaming should be 1mm-1.5mm larger than the diameter of the nail to be used.

Operative Technique

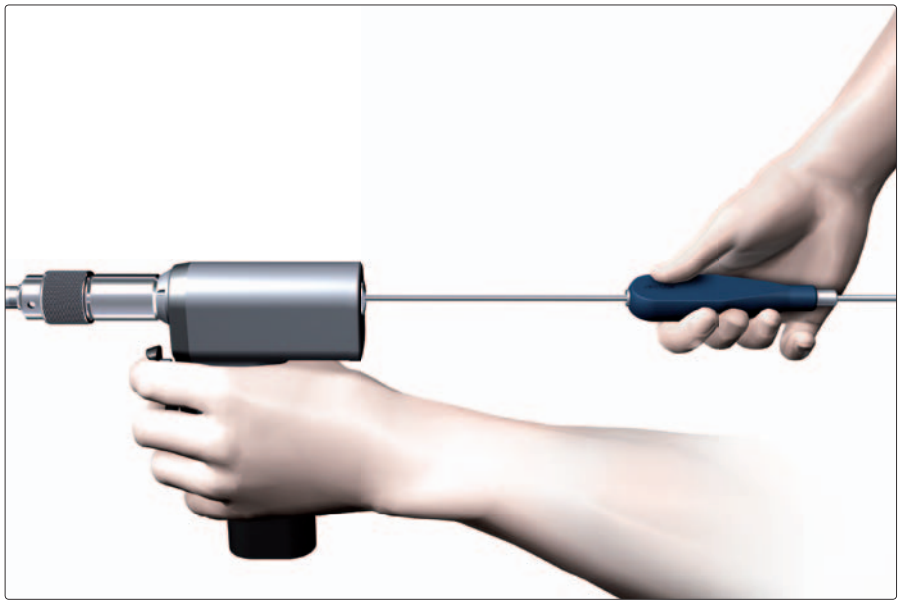


Fig. 6

The Guide Wire Pusher can be used to help keep the Guide Wire in position during reamer shaft extraction. The metal cavity at the end of the handle pushed on the end of the power tool facilitates to hold the Guide Wire in place when starting to pull the power tool (Fig. 6).

When close to the Guide Wire end place the Guide Wire Pusher with its funnel tip to the end of the power tool cannulation (Fig. 7).

While removing the power tool the Guide Wire Pusher will keep the Guide Wire in place.

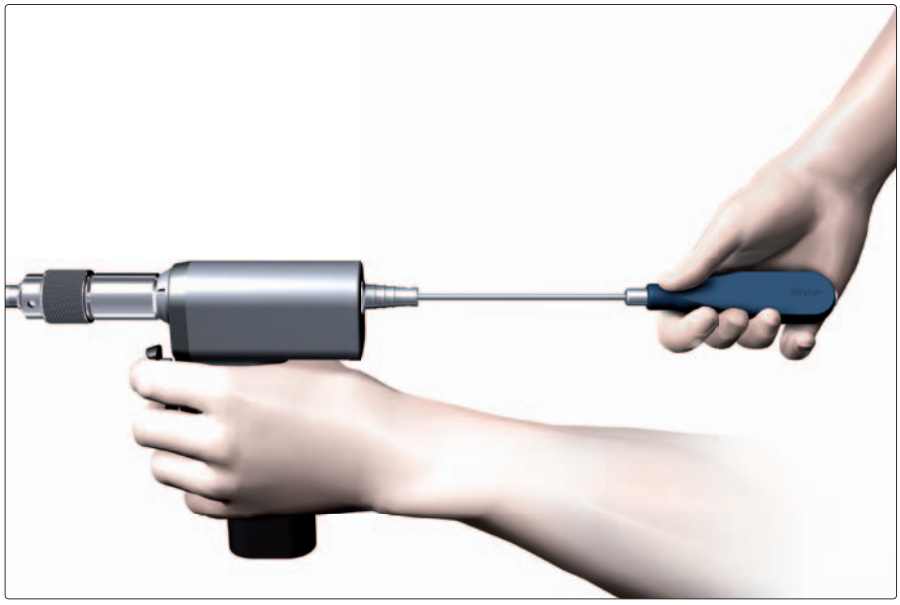


Fig. 7

Note:

The proximal diameter (driving end) of the 8mm–11mm diameter nails is 11.5mm. Nail sizes 12–15mm have a constant diameter. Additional metaphyseal reaming may be required to facilitate nail insertion.

Guide Wire Pusher (1806-0271)

Nail Selection

Diameter
The diameter of the selected nail should be 1-1.5mm smaller than that of the last reamer used. Alternatively, the nail diameter may be determined using the Femur X-Ray Ruler T2 GTN (1806-1606) (Fig. 8).

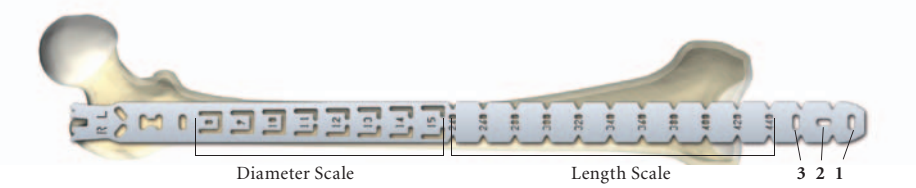


Fig. 8

Fig. 8
Hole Positions (non-driving end)
1. Round hole – static locking – M/L
2. Oblong hole – dynamic locking – M/L
3. Round hole – static locking – M/L

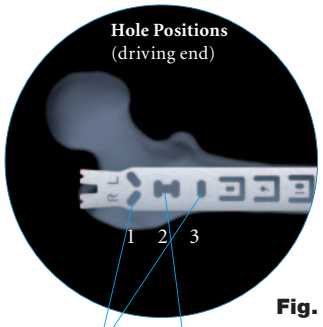


Fig. 9

Fig. 9
Hole Positions (driving end)
1. Round hole (oblique) – static locking – M/L
2. Oblong hole – dynamic or static locking – M/L
3. Round hole – static locking – M/L

Static and **Dynamic** Slot Locking Options

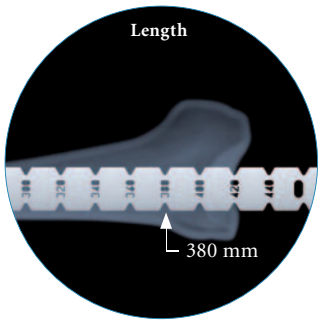


Fig. 10

Length Calibration

Determination of Nail Length
Nail length may be determined by measuring the remaining length of the Guide Wire. The Guide Wire Ruler (1806-0022) may be used by placing it on the Guide Wire reading the correct nail length at the end of the Guide Wire on the Guide Wire Ruler (Fig. 11 and Fig. 12).

Alternatively, the X-Ray Ruler (1806-1606) may be used to determine nail diameter and length (Fig. 8 and 10). Additionally, the X-Ray Ruler can be used as a guide for locking screw positions and the entry point of the nail in the greater trochanter.

Caution:
If the fracture is suitable for apposition/compression, the implant selected should be 10–15mm shorter than measured, to help avoid migration of the nail beyond the insertion site.

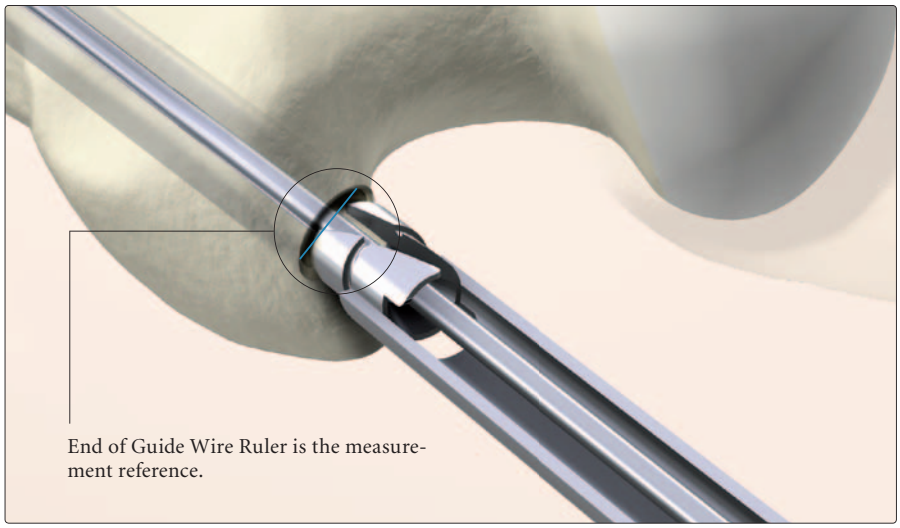


Fig. 11

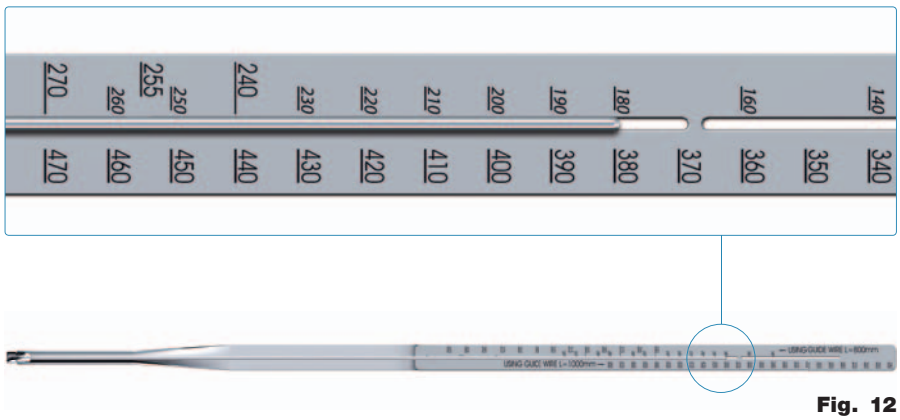


Fig. 12

Guided Locking Mode (via Target Device)

The Target Device is designed to provide three options for proximal locking.

In Static Locking Mode, the round oblique hole and the round M/L hole are to be used. (Fig. 13, 14, 15).

1. Round M/L static
2. Oblique static

Alternatively,
1. Round M/L static
2. Oblong M/L static

or,
1. Round M/L static
2. Oblique static
3. Oblong M/L static

In controlled Dynamic Mode, and/or controlled internal Apposition/ Compression Mode, the oblong hole is required. This hole is also used for compression (Fig. 16).

3. Dynamic

In External Compression Mode, the dynamic hole is required first. After utilizing compression the static M/L hole is to be used. (Fig. 17).

3. Dynamic
2. Static

In Internal Compression Mode, the dynamic hole is required.
A second ML screw is recommended.

3. Dynamic
2. Static

Friction Locking Mode

The Long Tissue Protection Sleeve (1806-0185) together with the Long Drill Sleeve (1806-0215) and the Long Trocar (1806-0315) is inserted into the Target Device by pressing the friction lock clip. This mechanism will help keep the sleeve in place and help prevent it from falling out.

It will also help prevent the sleeve from sliding during screw measurement. To release the Tissue Protection Sleeve, the friction lock mechanism must be pressed again.

Fig. 13

Fig. 14

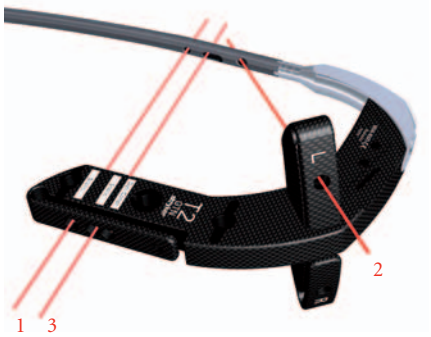


Fig. 15

Static Locking Mode

Fig. 16

Conternal Dynamic Locking Mode

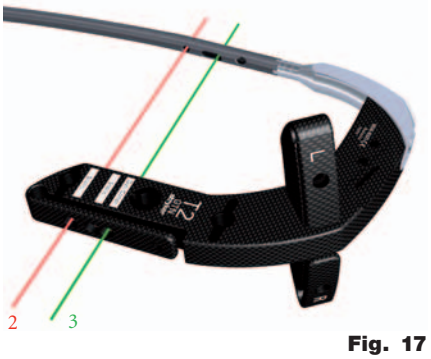


Fig. 17

Internal/external Compression Mode

Nail Insertion

The selected nail is assembled onto the GTN Target Device (1806-1600) with the Nail Holding Screw (1806-1602) (Fig. 18 a).
Tighten the Nail Holding Screw with the Ball Tip Screwdriver (1320-0065) securely so that it does not loosen during nail insertion (Fig. 19).

Caution:

Prior to nail insertion confirm correct alignment by inserting a drill bit through the assembled Tissue Protection and Drill Sleeve placed in the required holes of the targeting device.

Upon completion of reaming, the appropriate size nail is ready for insertion. Unique to the T2 GTN, the 3 × 1000mm Ball Tip Guide Wire does not need to be exchanged for any of the available sizes.

The Strike Plate (1806-0150) may be threaded into the hole next to the Nail Holding Screw and the nail is advanced through the entry point past the fracture site to the appropriate level (Fig. 20).

Additionally, the 3 × 285mm K-Wire may be inserted through the dedicated K-Wire hole in the Targeting Device which identifies the junction of the nail and insertion post which helps determine nail depth through a mini incision using X-Ray (Fig. 18 b).

Caution:

- **Do not use bent K-Wires.**
- **Curvature of the nail must match the curvature of the femur.**

Note:

DO NOT hit the Target Device. Only hit the Strike Plate.

The Slotted Hammer can be used on the Strike Plate to insert the nail over a Guide Wire (Fig. 20).

Fig. 19

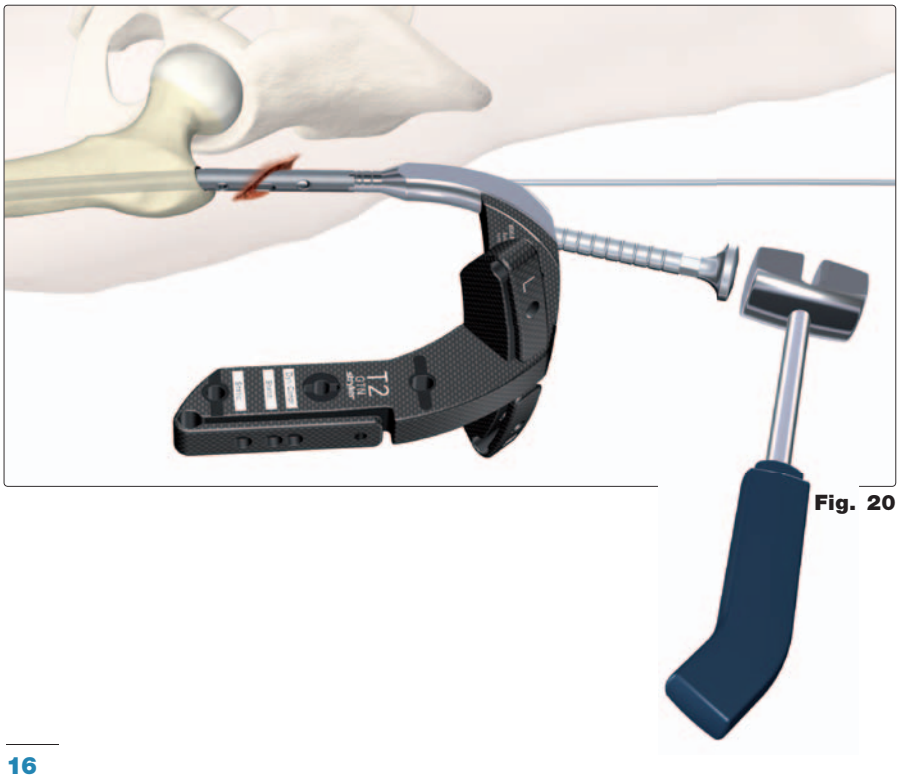


Fig. 20

Operative Technique

Note:

A chamfer is located on the working end of the nail to denote the end under X-Ray. Three circumferential grooves are located on the insertion post at 1 mm, 5 mm, and 10 mm from the driving end of the nail (Fig. 21). The start of the cone on the metal piece of the targeting arm indicates the 15mm mark. Depth of insertion may be visualized with the aid of fluoroscopy.

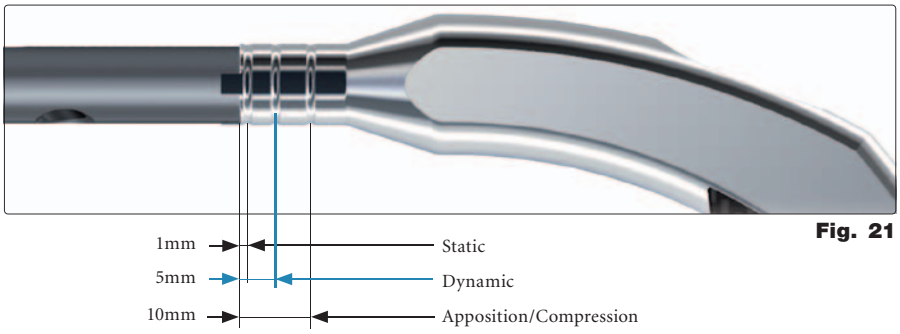


Fig. 21

Repositioning should be carried out either by hand or by using the Strike Plate on the top of the Target Device. The Universal Rod and Slotted Hammer may then be attached to the Strike Plate to carefully and smoothly extract the assembly.

In static locking mode, the nail is countersunk a minimum of 5mm (Fig. 22).

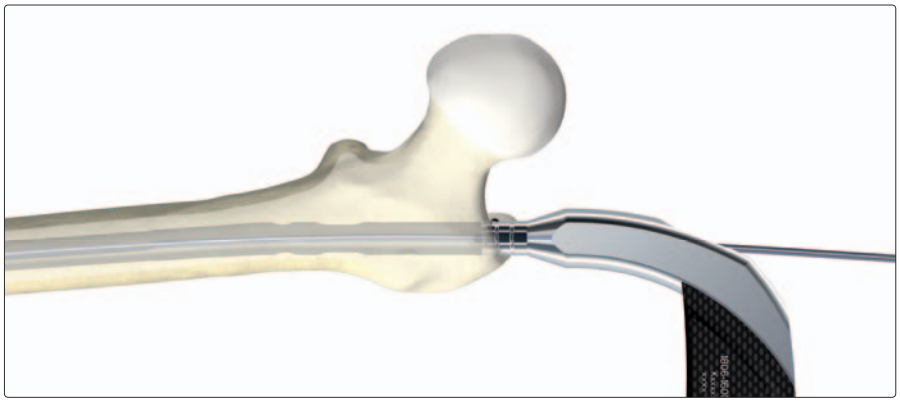


Fig. 22

When the implant is inserted in the dynamic mode, or when the implant is inserted with active apposition/compression, the recommended depth of insertion is 15mm (Fig. 23).

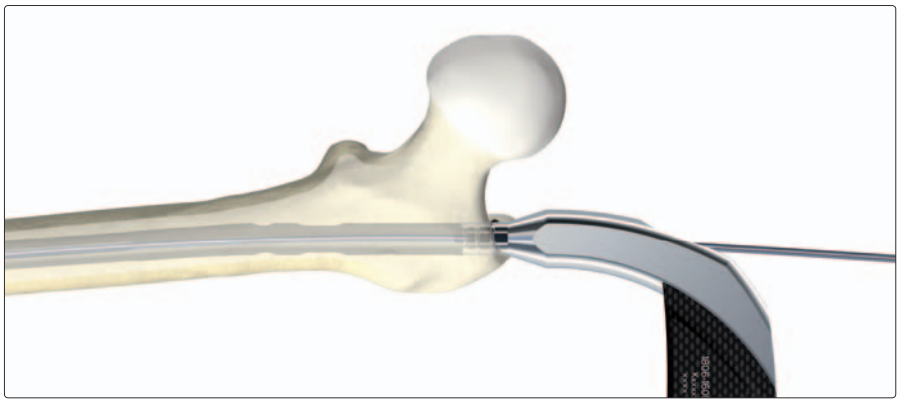


Fig. 23

Note:

Remove the Guide Wire prior to drilling and inserting the Locking Screws (Fig. 24).

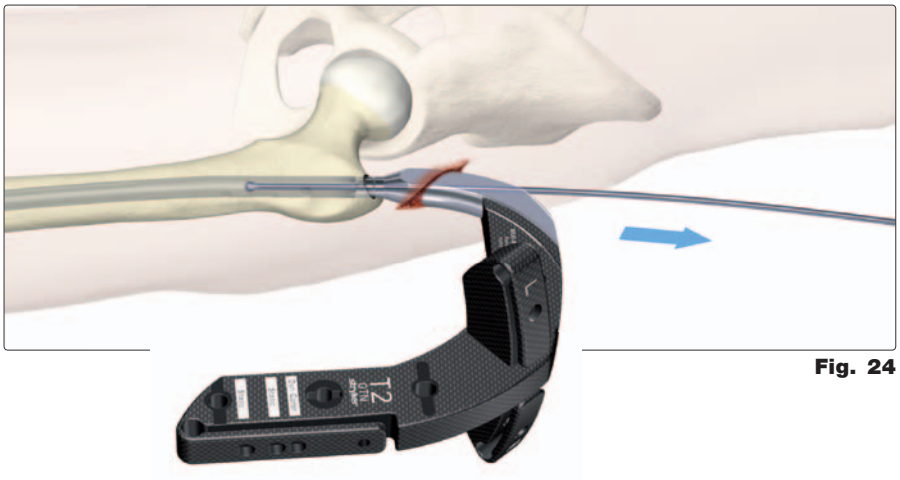


Fig. 24

Static Locking Mode

The Long Tissue Protection Sleeve together with the Long Drill Sleeve and the Long Trocar are positioned through the static locking hole on the Target Device by pressing the friction lock clip. A small skin incision is made, and the assembly is pushed through until it is in contact with the lateral cortex of the femur (Fig. 25). The friction lock clip is released to hold the Tissue Protection Sleeve in place.

The Trocar is removed while the Tissue Protection Sleeve and the Drill Sleeve remain in position.

Alternatively, the Trocar, Paddle (1806-0311) can be advanced together with the Tissue Protection Sleeve while pressing the friction lock clip. Push the assembly down to the bone (Fig. 26) and release the friction lock clip. The paddle tip design may help to pass the soft tissue and prepare the way for drilling.

Remove the Trocar to insert the Drill Sleeve. Forward the Tissue Protection Sleeve onto the cortex.

To help ensure accurate drilling and easy determination of screw length, use the center tipped, calibrated Ø4.2 × 340mm Drill (1806-4260S).

The centered Drill is forwarded through the Drill Sleeve and pushed onto the cortex (Fig. 27).

After drilling both cortices, the screw length may be read directly off of the calibrated Drill at the end of the Drill Sleeve (Fig. 28).

Alternatively, the Screw Gauge, Long can be used through the Tissue Protection Sleeve to read off the length at the end of the Tissue Protection Sleeve.

Fig. 25

Fig. 26

Fig. 27

Fig. 28

Fig. 29

Fig. 30

Fig. 31

Fig. 32

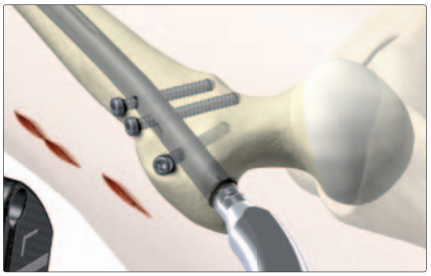


Fig. 33

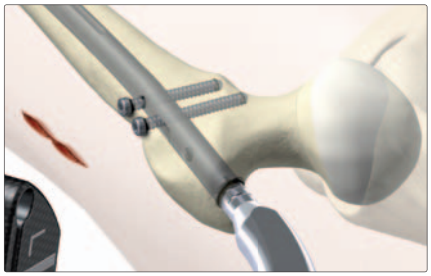


Fig. 34

When the Drill Sleeve is removed, the correct Locking Screw is inserted through the Tissue Protection Sleeve using the Long Screwdriver Shaft (1806-0227) with Teardrop Handle (702429) (Fig. 29).

Alternatively, the 3.5mm Hex Self-Holding Screwdriver Long (1806-0233) can be used for screw insertion.

The screw is advanced through both cortices. The screw is near its proper seating position when the groove around the shaft of the screwdriver is approaching the end of the Tissue Protection Sleeve (see Fig. 30).

Repeat the locking procedure for the oblique positioned Locking Screw (Fig. 31, 32).

Caution:

- **The oblique locking hole is threaded medially, which may lead to increased torque during screw insertion.**
  The lateral cortex shall therefore be opened with the 5.0 × 230mm Drill (1806-5000).
- **A partially threaded locking screws should never be placed in the oblique locking hole.**
- **In unstable fracture patterns, static locking should always be performed with at least two distal Locking Screws and two proximal Locking Screws.**

In order to increase proximal fragment stability a third locking screw can be inserted (Fig. 33).

If fracture pattern allows, it is possible to insert two M/L locking screws in static position (Fig. 34).

Freehand Distal Locking

The freehand technique is used to insert Fully Threaded Locking Screws into all distal M/L holes in the nail. Rotational alignment must be checked prior to locking the nail.

Multiple locking techniques and radiolucent drill devices are available for freehand locking. The critical step with any freehand locking technique, proximal or distal, is to visualize a perfectly round locking hole or perfectly oblong locking hole with the C-Arm.

The center-tipped Ø4.2 × 180mm Drill (1806-4270S) is held at an oblique angle to the center of the locking hole (Fig. 35). Upon X-Ray verification, the Drill is placed perpendicular to the nail and drilled through the lateral and medial cortex (Fig. 36). Confirm in both the A/P and M/L planes by X-Ray that the Drill passes through the hole in the nail.

Caution:

8mm diameter T2 GTN Nails can only be locked with 4mm Fully Threaded screws at the non-driving end.

Use the Ø3.5 × 180mm Drill (1806-3570S) for freehand locking.

The Depth Gauge, Long for Freehand Locking (1806-0331), may be used after drilling to determine the required screw length (Fig. 37).

Alternatively, the Screw Scale, Long can be used with the 4.2 × 230mm Drill(1806-4290S) to read off the length directly at the green ring.

Routine Locking Screw insertion is employed with the assembled Long Screwdriver Shaft and Teardrop Handle (Fig. 38).

Alternatively, the 3.5mm Hex Self-Holding Screwdriver Long (1806-0233) or Extra-short (1806-0203) can be used for screw insertion.

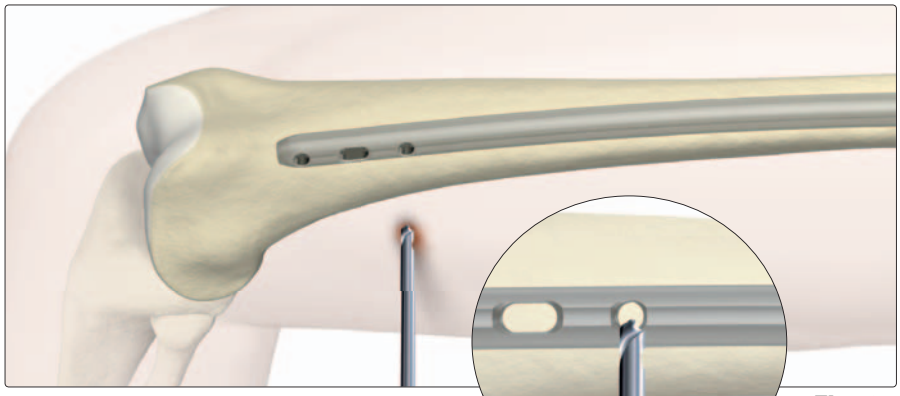


Fig. 35

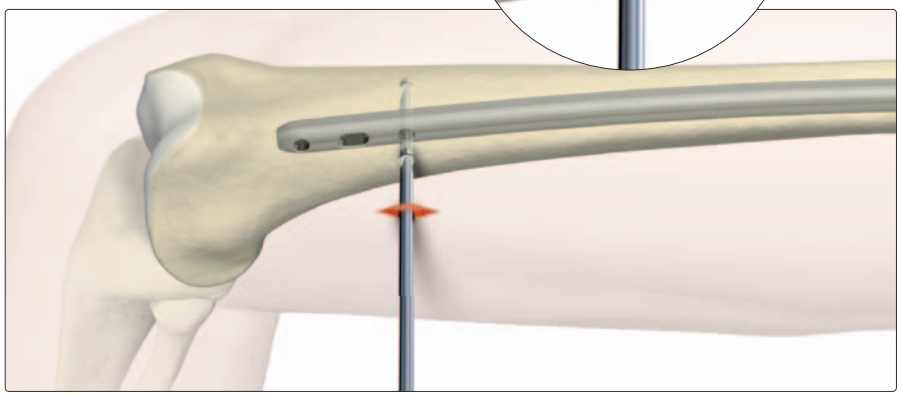


Fig. 36

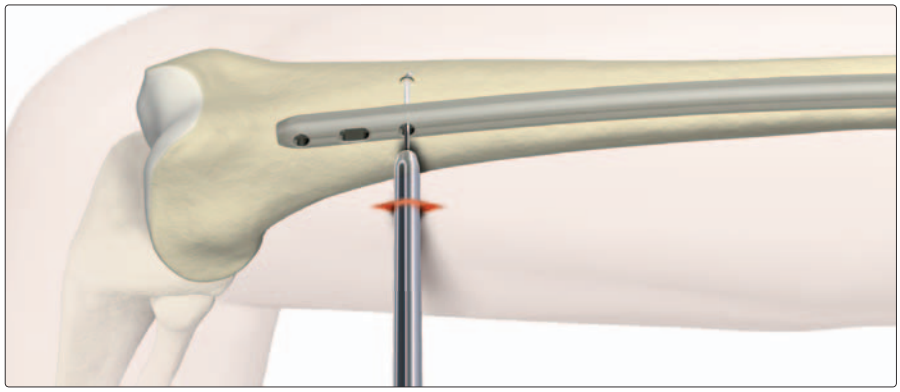


Fig. 37

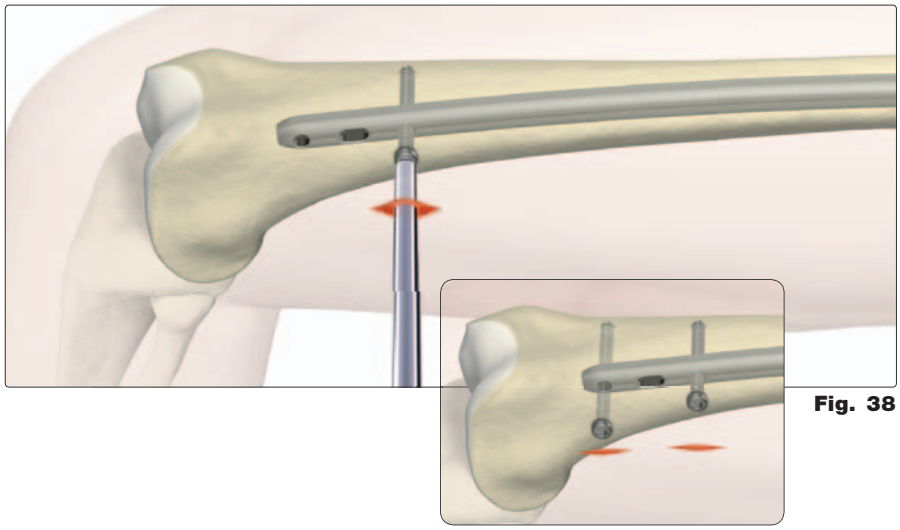


Fig. 38

End Cap Insertion

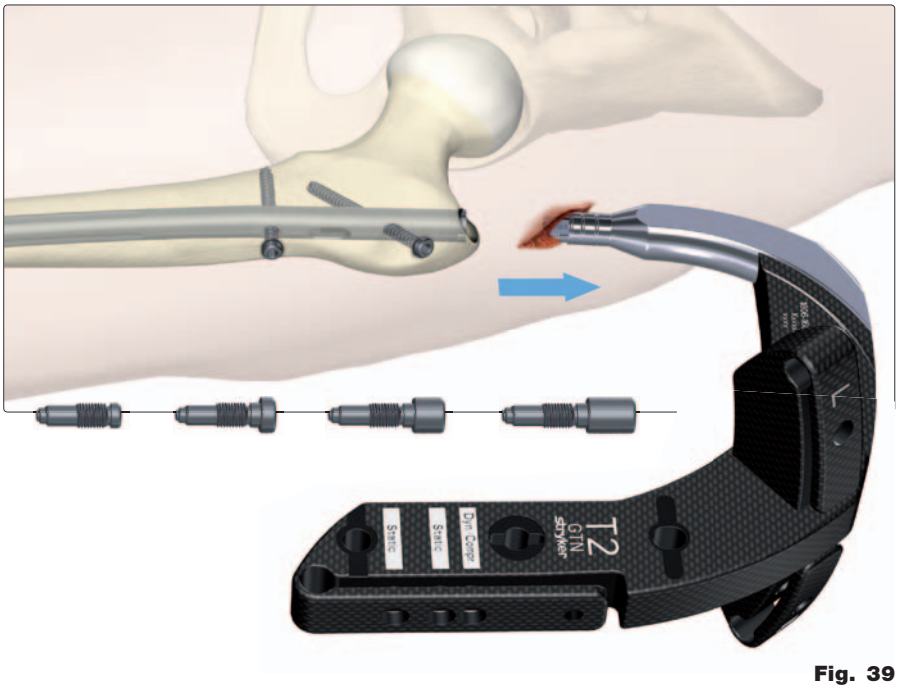


Fig. 39

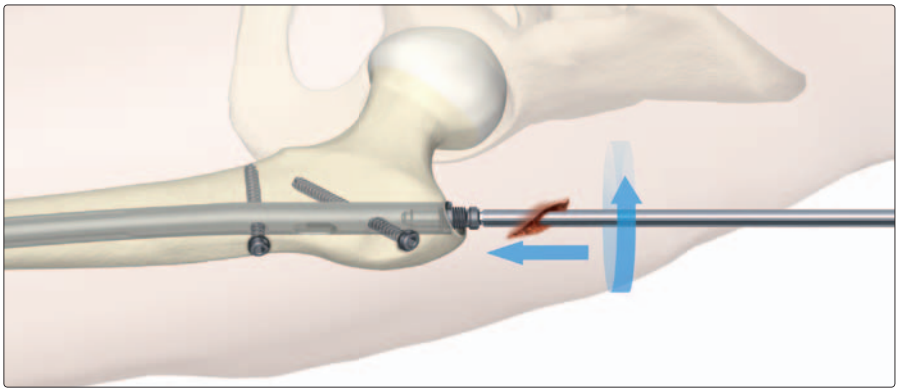


Fig. 40

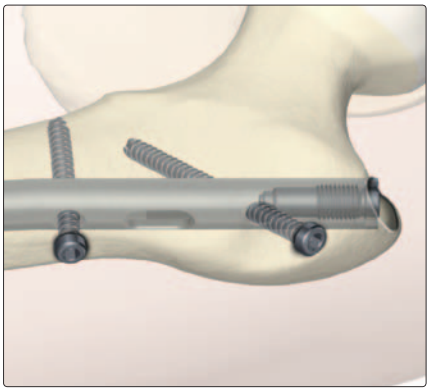


Fig. 41

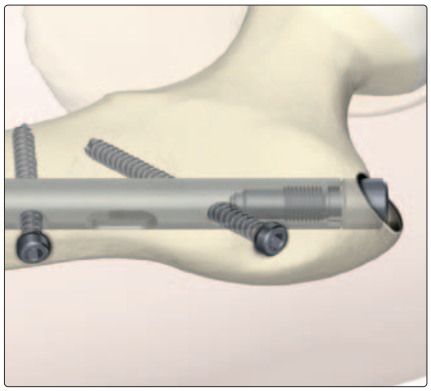


Fig. 42

After removal of the Target Device, an End Cap is used. Different sizes of End Caps are available to adjust nail length and to reduce the potential for bony in-growth into the proximal thread of the nail (Fig.39).

Note:

All T2 GTN End Caps are designed to tigthen down onto the oblique Locking Screw at the driving end of the nail.

The End Cap is inserted with the Self-Holding Screwdriver Long (1806-0233) after intra-operative radiographs show satisfactory reduction and hardware implantation (Fig. 40 - 42). Fully seat the End Cap to minimize the potential for loosening.

Caution:

- **Final verification of implants should be confirmed by X-Ray at this time.**
- **If the internal compression screw is applied, the T2 GTN End Caps can not be used.**

When a Cannulated Compression Screw is applied a standard T2 End Cap has to be used instead of the GTN End Cap.

Thoroughly irrigate the wound to prevent debris from remaining. Close the wound using the standard technique.

Dynamic Locking Mode

If the fracture profile permits, dynamic locking may be utilized for transverse, axially stable fractures.

The Partially Threaded Locking Screw is placed in the dynamic position of the oblong hole via the Target Device.

This allows the nail to move and the fracture to settle while providing torsional stability (Fig. 43).

Dynamization is performed by statically locking the nail distally with two M/L Fully Threaded Locking Screws in a freehand technique.

For screw insertion follow the steps as already described.

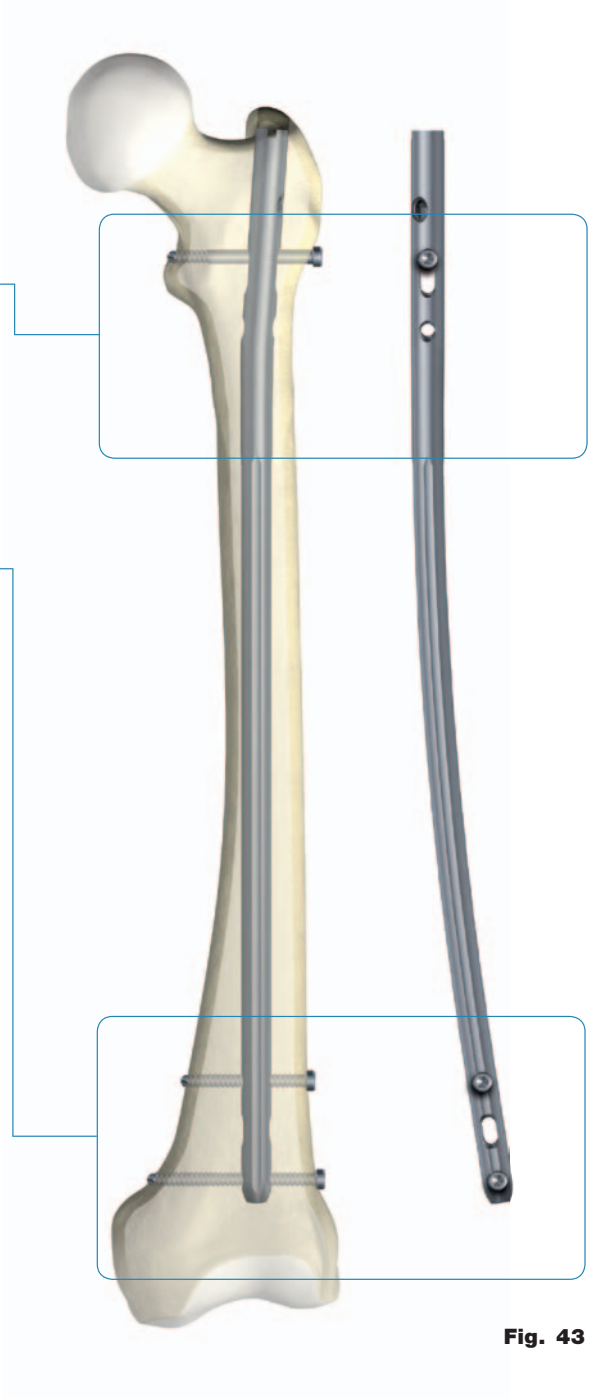


Fig. 43

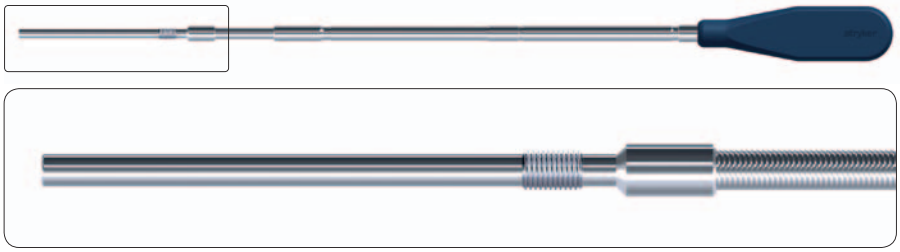
External Apposition/Compression Mode

Fig. 44

In transverse, axially stable fracture patterns, active apposition / compression increases fracture stability while potentially enhancing fracture healing and allowing for early weight bearing. The T2 GTN gives the option to treat a femur fracture with active mechanical apposition/compression prior to leaving the operating room.

Caution:

Distal freehand static locking with two Fully Threaded Locking Screws must be performed prior to applying active, controlled apposition/compression to the fracture site.



If active apposition/compression is required, a Partially Threaded Locking Screw (Shaft Screw) is inserted via the Target Device in the dynamic position of the oblong hole (Fig. 44).

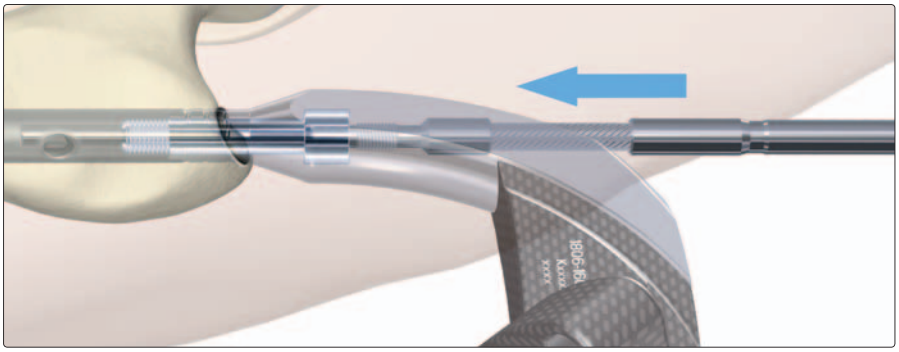


Fig. 45

After the Shaft Screw is inserted, the External Compression Device (1806-1601) is inserted through the target device and threaded into the Nail Holding Screw (Fig. 45, 46).

Caution:

Apposition/compression must be carried out under X-Ray control. Over-compression may cause the nail or the Shaft Screw to fail.

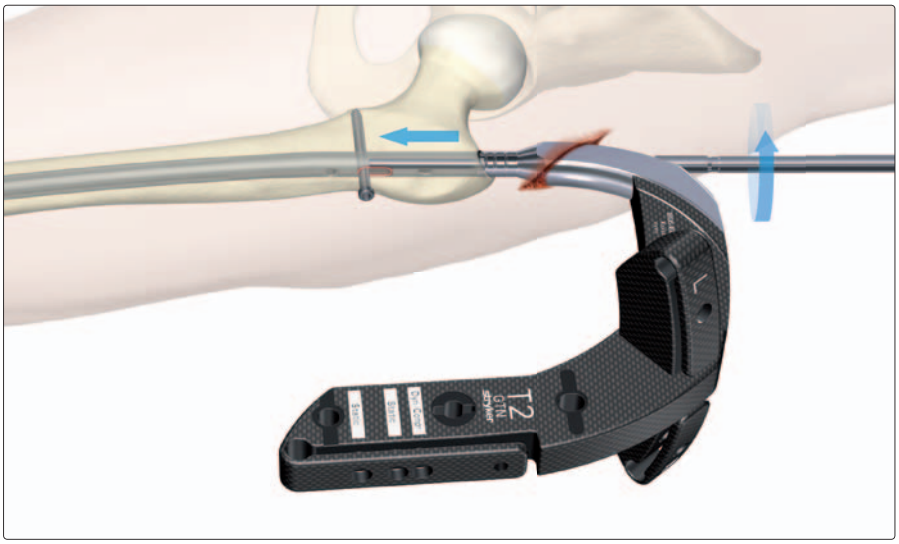


Fig. 46

When compressing the nail, the implant must be inserted at a safe distance from the entry point to accommodate for the 10mm of active compression. The three grooves on the insertion post help attain accurate insertion depth of the implant.

External Apposition/Compression Mode

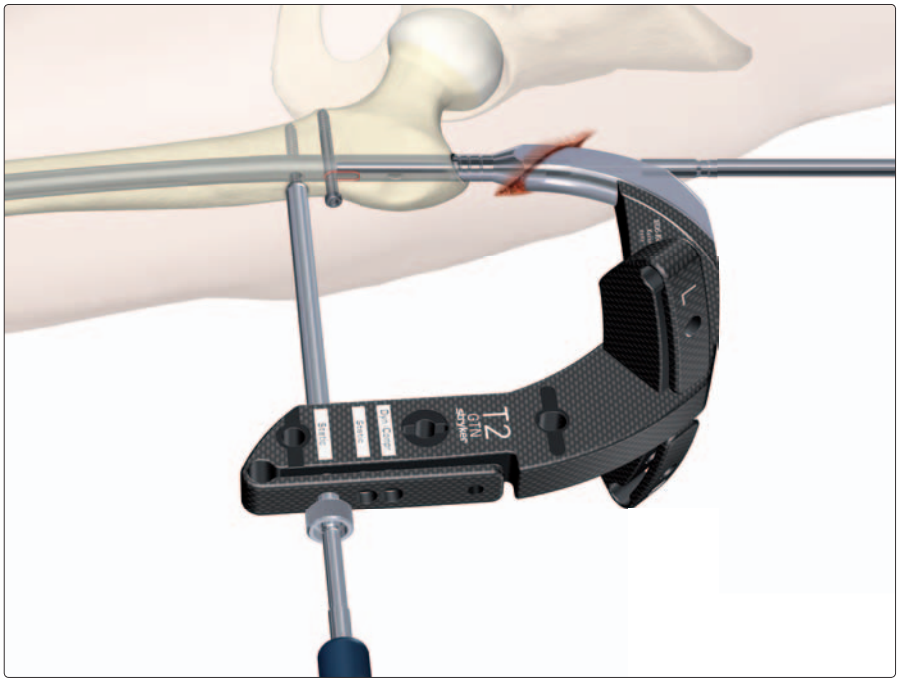


Fig. 47

After successful apposition / compression a second Locking Screw is inserted in the round hole distally to the oblong hole. This will keep the nail in compressed position (Fig. 47).

Note:

The round oblique hole above the oblong hole is blocked by the External Compression Device and cannot be used while the latter is attached.

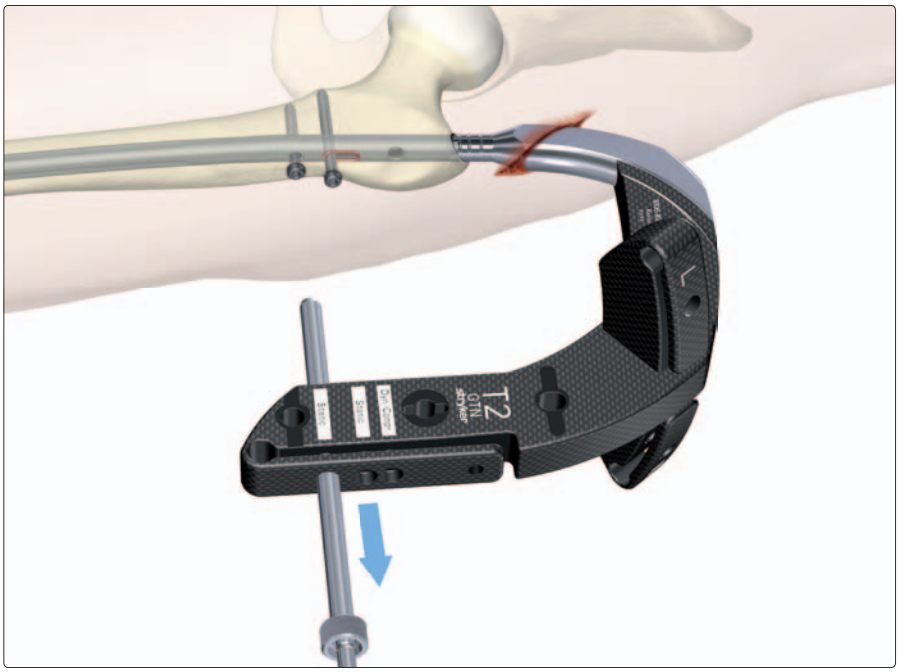


Fig. 48

After inserting the locking screw distally, the External Compression Device can be detached (Fig. 48).

Internal Apposition/Compression Mode

Alternatively, to apply apposition/compression the Cannulated Compression Screw can be utilized.

The Cannulated Compression Screw is attached onto the Preloader (1806-1604) and then inserted into the nail until the Preloader disengages itself from the Compression Screw. This position of the Compression Screw indicates that the oblong hole is free to receive the Shaft Locking Screw in the oblong part of the hole (Fig. 49). After this, pull back the Preloader.

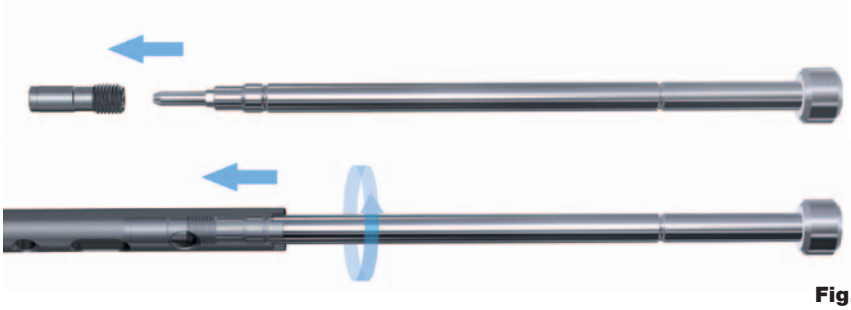


Fig. 49

After the nail is attached to the Target Device and the locking holes are checked with a Drill, the nail is ready for insertion (Fig. 50).

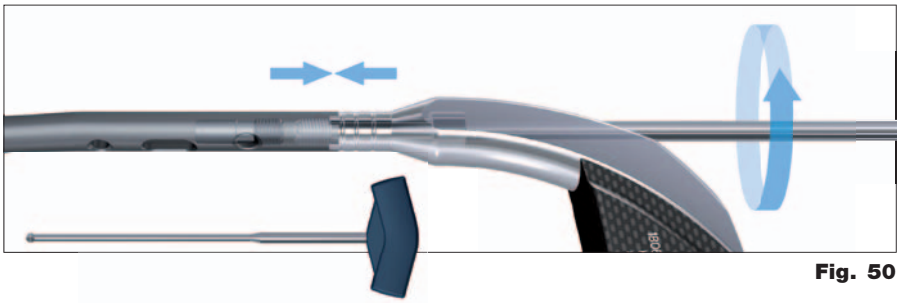


Fig. 50

As the Compression Screw is cannulated, the nail can be inserted over the Guide Wire (1806-0085S). There is no need to exchange the Guide Wire. This is also true for the 8mm dia. GTN.

Distal Locking Screw and Shaft Locking Screw insertion is conducted in a standard manner as previously described.

When the shaft screw is seated, the Flexible Compression Screwdriver (1806-1603) is inserted and apposition/compression is applied (Fig. 51).

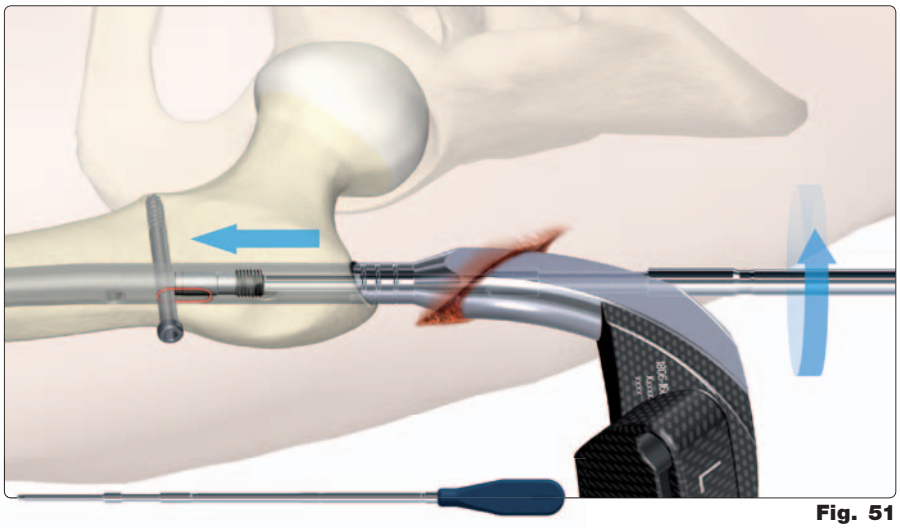


Fig. 51

Leave the Flexible Compression Screwdriver in place while proceeding to insert the second Locking Screw in the static hole below (Fig. 52).

When the second Locking Screw is seated the Flexible Compression Screwdriver can be removed (Fig. 53).

Note:

When using the Cannulated Compression Screw, the proximal oblique locking hole can not be used.

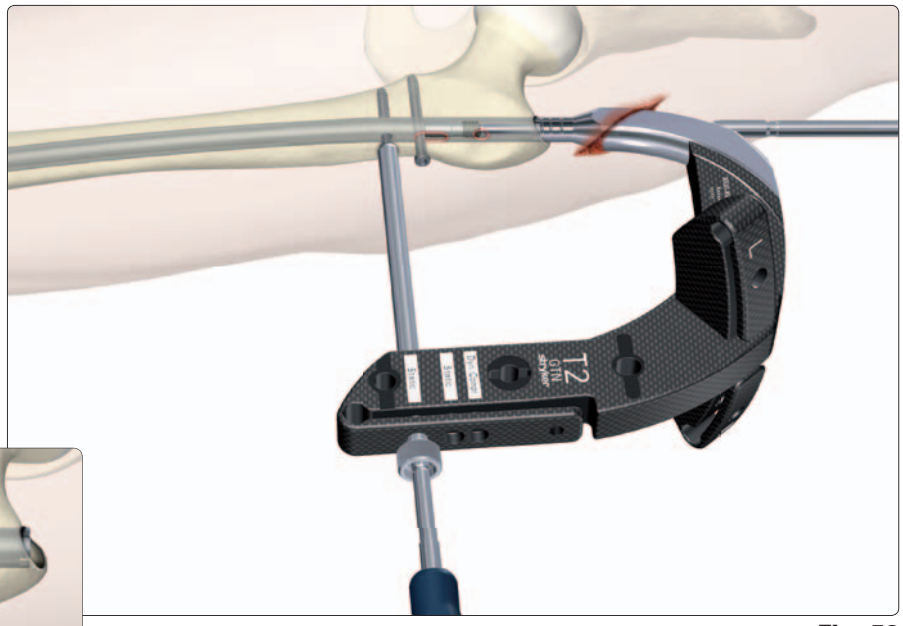


Fig. 52

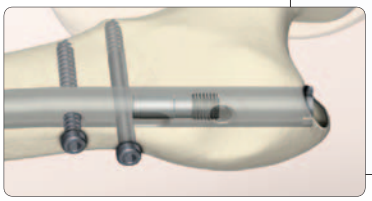


Fig. 53

Nail Removal

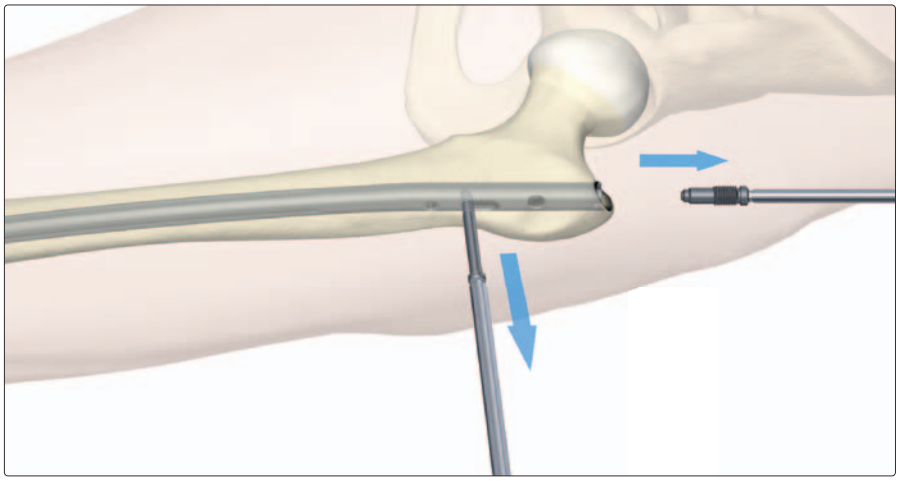


Fig. 54

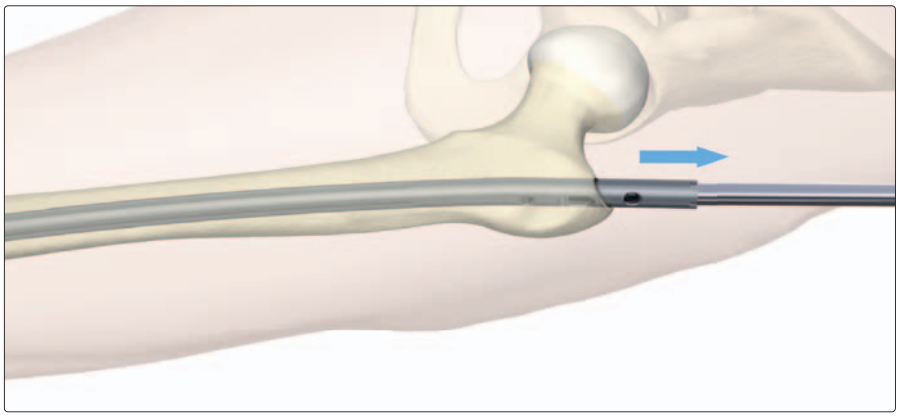


Fig. 55

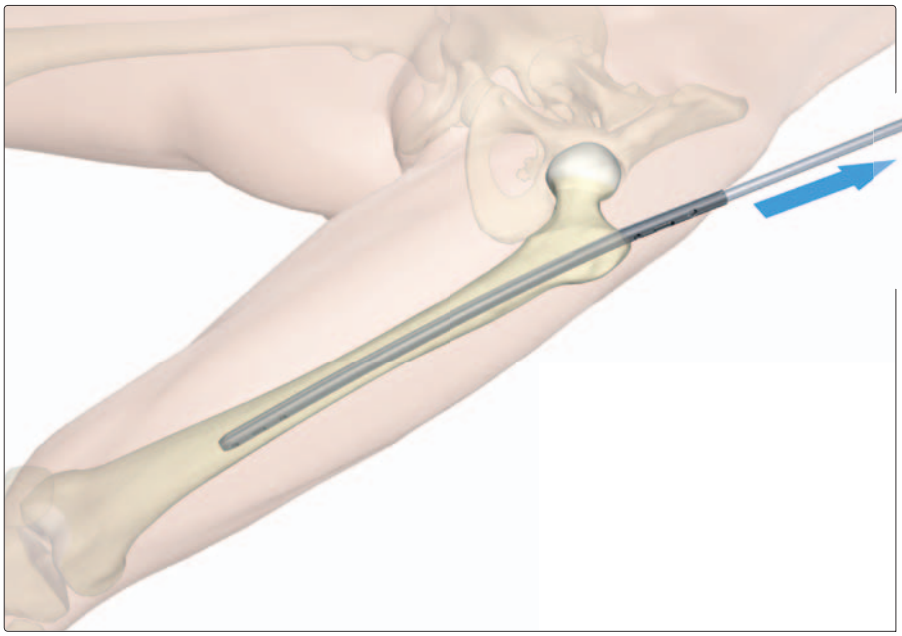


Fig. 56

If needed, the End Cap is removed with the Long Screwdriver Shaft and Teardrop Handle. Alternatively, the 3.5mm Hex Self-Holding Screwdriver Long can be used. For removal of the Cannulated Compression Screw the 4.0mm Hex Flexible Compression Screwdriver is to be used.

Note:

As an alternative to removing the Cannulated Compression Screw entirely (if used), it can be just disengaged from the Partially Threaded Locking Screw (Shaft Screw) by turning the Flexible Compression Screwdriver (1806-1603) one full turn in a counter-clockwise direction. There is no need to remove it from the nail.

The Universal Rod is inserted into the driving end of the nail. All Locking Screws are removed with the Long Screwdriver Shaft and Teardrop Handle (Fig. 55).
The "optional" Long Screw Capture Sleeve may be used on the Screwdriver Shaft. The Slotted Hammer is used to extract the nail in a controlled manner (Fig. 56).

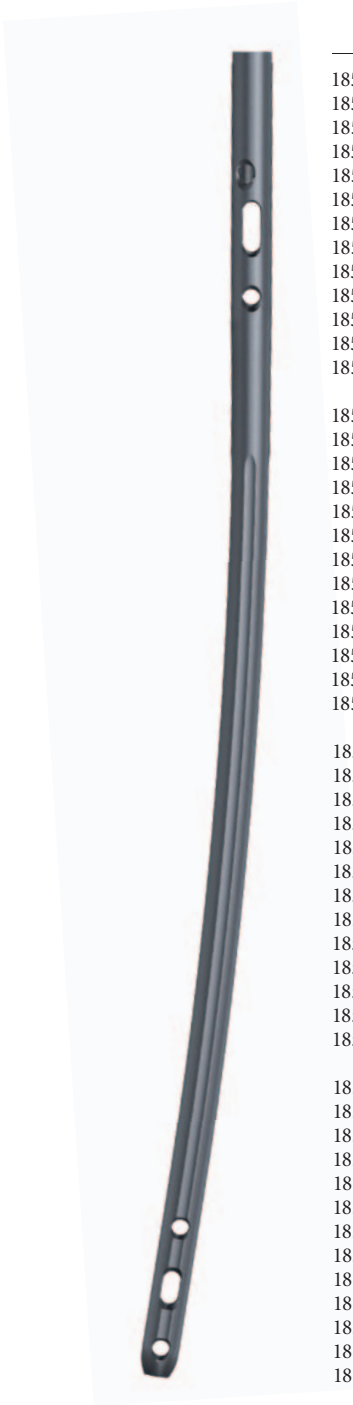
A captured Sliding Hammer (1806-0175) is available as an "optional" addition to the basic instrument set.

Note:

- **Stryker offers also a universal Implant Extraction Set for the removal of internal fixation systems and associated screws.**
- **Check with local representative regarding availability of optional instrumens and the Implant Extraction Set.**

Ordering Information – Implants

T2 FEMUR GTN (LEFT)



REF	Diameter mm	Length mm
1850-0824S	8.0	240
1850-0826S	8.0	260
1850-0828S	8.0	280
1850-0830S	8.0	300
1850-0832S	8.0	320
1850-0834S	8.0	340
1850-0836S	8.0	360
1850-0838S	8.0	380
1850-0840S	8.0	400
1850-0842S	8.0	420
1850-0844S	8.0	440
1850-0846S	8.0	460
1850-0848S	8.0	480
1850-0924S	9.0	240
1850-0926S	9.0	260
1850-0928S	9.0	280
1850-0930S	9.0	300
1850-0932S	9.0	320
1850-0934S	9.0	340
1850-0936S	9.0	360
1850-0938S	9.0	380
1850-0940S	9.0	400
1850-0942S	9.0	420
1850-0944S	9.0	440
1850-0946S	9.0	460
1850-0948S	9.0	480
1850-1024S	10.0	240
1850-1026S	10.0	260
1850-1028S	10.0	280
1850-1030S	10.0	300
1850-1032S	10.0	320
1850-1034S	10.0	340
1850-1036S	10.0	360
1850-1038S	10.0	380
1850-1040S	10.0	400
1850-1042S	10.0	420
1850-1044S	10.0	440
1850-1046S	10.0	460
1850-1048S	10.0	480
1850-1124S	11.0	240
1850-1126S	11.0	260
1850-1128S	11.0	280
1850-1130S	11.0	300
1850-1132S	11.0	320
1850-1134S	11.0	340
1850-1136S	11.0	360
1850-1138S	11.0	380
1850-1140S	11.0	400
1850-1142S	11.0	420
1850-1144S	11.0	440
1850-1146S	11.0	460
1850-1148S	11.0	480
1850-1224S	12.0	240
1850-1226S	12.0	260
1850-1228S	12.0	280
1850-1230S	12.0	300
1850-1232S	12.0	320
1850-1234S	12.0	340
1850-1236S	12.0	360
1850-1238S	12.0	380
1850-1240S	12.0	400
1850-1242S	12.0	420
1850-1244S	12.0	440
1850-1246S	12.0	460
1850-1248S	12.0	480

REF	Diameter mm	Length mm
1850-1324S	13.0	240
1850-1326S	13.0	260
1850-1328S	13.0	280
1850-1330S	13.0	300
1850-1332S	13.0	320
1850-1334S	13.0	340
1850-1336S	13.0	360
1850-1338S	13.0	380
1850-1340S	13.0	400
1850-1342S	13.0	420
1850-1344S	13.0	440
1850-1346S	13.0	460
1850-1348S	13.0	480
1850-1424S	14.0	240
1850-1426S	14.0	260
1850-1428S	14.0	280
1850-1430S	14.0	300
1850-1432S	14.0	320
1850-1434S	14.0	340
1850-1436S	14.0	360
1850-1438S	14.0	380
1850-1440S	14.0	400
1850-1442S	14.0	420
1850-1444S	14.0	440
1850-1446S	14.0	460
1850-1448S	14.0	480
1850-1524S	15.0	240
1850-1526S	15.0	260
1850-1528S	15.0	280
1850-1530S	15.0	300
1850-1532S	15.0	320
1850-1534S	15.0	340
1850-1536S	15.0	360
1850-1538S	15.0	380
1850-1540S	15.0	400
1850-1542S	15.0	420
1850-1544S	15.0	440
1850-1546S	15.0	460
1850-1548S	15.0	480

Implants in sterile packaging.

Note:
Check with your local representative regarding availability of nail sizes.

Ordering Information – Implants

T2 FEMUR GTN (RIGHT)

REF	Diameter mm	Length mm
1851-0824S	8.0	240
1851-0826S	8.0	260
1851-0828S	8.0	280
1851-0830S	8.0	300
1851-0832S	8.0	320
1851-0834S	8.0	340
1851-0836S	8.0	360
1851-0838S	8.0	380
1851-0840S	8.0	400
1851-0842S	8.0	420
1851-0844S	8.0	440
1851-0846S	8.0	460
1851-0848S	8.0	480
1851-0924S	9.0	240
1851-0926S	9.0	260
1851-0928S	9.0	280
1851-0930S	9.0	300
1851-0932S	9.0	320
1851-0934S	9.0	340
1851-0936S	9.0	360
1851-0938S	9.0	380
1851-0940S	9.0	400
1851-0942S	9.0	420
1851-0944S	9.0	440
1851-0946S	9.0	460
1851-0948S	9.0	480
1851-1024S	10.0	240
1851-1026S	10.0	260
1851-1028S	10.0	280
1851-1030S	10.0	300
1851-1032S	10.0	320
1851-1034S	10.0	340
1851-1036S	10.0	360
1851-1038S	10.0	380
1851-1040S	10.0	400
1851-1042S	10.0	420
1851-1044S	10.0	440
1851-1046S	10.0	460
1851-1048S	10.0	480
1851-1124S	11.0	240
1851-1126S	11.0	260
1851-1128S	11.0	280
1851-1130S	11.0	300
1851-1132S	11.0	320
1851-1134S	11.0	340
1851-1136S	11.0	360
1851-1138S	11.0	380
1851-1140S	11.0	400
1851-1142S	11.0	420
1851-1144S	11.0	440
1851-1146S	11.0	460
1851-1148S	11.0	480
1851-1224S	12.0	240
1851-1226S	12.0	260
1851-1228S	12.0	280
1851-1230S	12.0	300
1851-1232S	12.0	320
1851-1234S	12.0	340
1851-1236S	12.0	360
1851-1238S	12.0	380
1851-1240S	12.0	400
1851-1242S	12.0	420
1851-1244S	12.0	440
1851-1246S	12.0	460
1851-1248S	12.0	480

REF	Diameter mm	Length mm
1851-1324S	13.0	240
1851-1326S	13.0	260
1851-1328S	13.0	280
1851-1330S	13.0	300
1851-1332S	13.0	320
1851-1334S	13.0	340
1851-1336S	13.0	360
1851-1338S	13.0	380
1851-1340S	13.0	400
1851-1342S	13.0	420
1851-1344S	13.0	440
1851-1346S	13.0	460
1851-1348S	13.0	480
1851-1424S	14.0	240
1851-1426S	14.0	260
1851-1428S	14.0	280
1851-1430S	14.0	300
1851-1432S	14.0	320
1851-1434S	14.0	340
1851-1436S	14.0	360
1851-1438S	14.0	380
1851-1440S	14.0	400
1851-1442S	14.0	420
1851-1444S	14.0	440
1851-1446S	14.0	460
1851-1448S	14.0	480
1851-1524S	15.0	240
1851-1526S	15.0	260
1851-1528S	15.0	280
1851-1530S	15.0	300
1851-1532S	15.0	320
1851-1534S	15.0	340
1851-1536S	15.0	360
1851-1538S	15.0	380
1851-1540S	15.0	400
1851-1542S	15.0	420
1851-1544S	15.0	440
1851-1546S	15.0	460
1851-1548S	15.0	480

Implants in sterile packaging.

Note:

Check with your local representative regarding availability of nail sizes.

Ordering Information – Implants

5MM FULLY THREADED LOCKING SCREWS

REF	Diameter mm	Length mm
1896-5025S	5.0	25.0
1896-5027S	5.0	27.5
1896-5030S	5.0	30.0
1896-5032S	5.0	32.5
1896-5035S	5.0	35.0
1896-5037S	5.0	37.5
1896-5040S	5.0	40.0
1896-5042S	5.0	42.5
1896-5045S	5.0	45.0
1896-5047S	5.0	47.5
1896-5050S	5.0	50.0
1896-5052S	5.0	52.5
1896-5055S	5.0	55.0
1896-5057S	5.0	57.5
1896-5060S	5.0	60.0
1896-5065S	5.0	65.0
1896-5070S	5.0	70.0
1896-5075S	5.0	75.0
1896-5080S	5.0	80.0
1896-5085S	5.0	85.0
1896-5090S	5.0	90.0
1896-5095S	5.0	95.0
1896-5100S	5.0	100.0
1896-5105S	5.0	105.0
1896-5110S	5.0	110.0
1896-5115S	5.0	115.0
1896-5120S	5.0	120.0

5MM PARTIALLY THREADED LOCKING SCREWS

(Shaft Screws)

REF	Diameter mm	Length mm
1891-5025S	5.0	25
1891-5030S	5.0	30
1891-5035S	5.0	35
1891-5040S	5.0	40
1891-5045S	5.0	45
1891-5050S	5.0	50
1891-5055S	5.0	55
1891-5060S	5.0	60
1891-5065S	5.0	65
1891-5070S	5.0	70
1891-5075S	5.0	75
1891-5080S	5.0	80
1891-5085S	5.0	85
1891-5090S	5.0	90
1891-5095S	5.0	95
1891-5100S	5.0	100
1891-5105S	5.0	105
1891-5110S	5.0	110
1891-5115S	5.0	115
1891-5120S	5.0	120

T2 GTN END CAPS

+0mm +5mm

+10mm +15mm

REF	Diameter mm	Length mm
1850-0002S	8.0	+ 0mm
1850-0005S	11.5	+ 5mm
1850-0010S	11.5	+10mm
1850-0015S	11.5	+15mm

CANNULATED COMPRESSION SCREW

REF	Diameter mm	Length mm
1850-0003S	8.0	

4MM FULLY THREADED LOCKING SCREWS *

REF	Diameter mm	Length mm
1896-4020S	4.0	20
1896-4025S	4.0	25
1896-4030S	4.0	30
1896-4035S	4.0	35
1896-4040S	4.0	40
1896-4045S	4.0	45
1896-4050S	4.0	50
1896-4055S	4.0	55
1896-4060S	4.0	60

* For distal locking of 8mm nails.

END CAPS T2

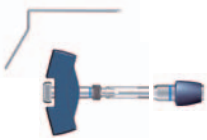
Standard +5mm

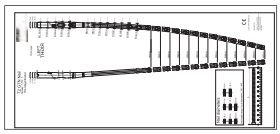
+10mm +15mm

REF	Diameter mm	Length mm
1822-0003S	8.0	Standard
1822-0005S	11.5	+ 5mm
1822-0010S	11.5	+10mm
1822-0015S	11.5	+15mm

Note:
Check with your local representative regarding availability of implant size.

Ordering Information – Instruments

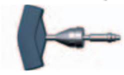
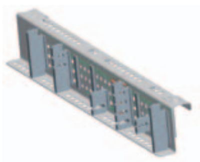
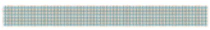
	REF	Description
		T2 Basic Long
	702429	Teardrop Handle, AO Coupling
	703165	Protection Sleeve, Retrograde
	1806-0022	Guide Wire Ruler
	1806-0032	Awl Plug
	1806-0041	Awl, Curved 9mm
	1806-0110	Universal Rod, 9mm
	1806-0125	Reduction Spoon, 9mm
	1806-0130	Wrench 8mm/10mm
	1806-0135	Insertion Wrench, 10mm
	1806-0150	Strike Plate
	1806-0170	Slotted Hammer
	1806-0185	Tissue Protection Sleeve, Long, 9mm
	1806-0203	Screwdriver, Self-Holding, Extra Short (3.5mm)
	1806-0215	Drill Sleeve, Long, 5mm
	1806-0227	Screwdriver Shaft AO, Long, 3.5mm
	1806-0233	Screwdriver, Self-Holding, Long (3.5mm)
	1806-0268	Screwdriver Shaft, Compression (hex 3.5)
	1806-0271	Guide Wire Pusher
	1806-0315	Trocar, Long
	1806-0325	Screw Gauge, Long
	1806-0331	Screw Gauge (20-120mm)
	1806-0350	Extraction Rod, Conical (Ø8mm)
	1806-0365	Screw Scale, Long
	1806-1095	Guide Wire Handle
	1806-1096	Guide Wire Handle Chuck, 2-3.5mm
	1806-2014	Rigid Reamer Ø12mm
	1806-9900	T2 Basic Long Instrument Tray

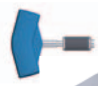
	REF	Description
		T2 GTN Instruments
	1320-0065	G3 Screwdriver T-Handle 8mm, Ball Tip
	1806-0050S	K-Wire 3 × 285mm*
	1806-0311	Trocar, Paddle
	1806-1600	GTN Target Arm
	1806-1601	External Compression Device
	1806-1602	GTN Nail Holding Screw
	1806-1603	Flexible Compression Screwdriver, (4.0)
	1806-1604	Preloader
	1806-1605	T2 X-Ray Template GTN
	1806-1606	X-Ray Ruler, GTN
	1806-4260S	Drill Ø4.2 × 340mm, AO 340mm*
	1806-4270S	Drill Ø4.2 × 180mm, AO 180mm*
	1806-4290S	Drill Ø4.2 × 230mm, AO 230mm*
	1806-5000S	Drill Ø5.0 × 230mm, AO 230mm*
	1806-9080	T2 GTN Indication Metal Tray
		T2 GTN 8mm Instruments
	1806-3570S	Drill Ø3.5 × 180mm AO, sterile*

Caution:
8mm Nails require 4mm Fully Threaded Screws for locking at the non-driving end.

* Please check with your local representative availability of sterile or non-sterile instruments as well as implant sizes.

Ordering Information – Instruments

	REF	Description
	Optional	
	1806-0040	Awl Curved, 10mm
	1806-0045	Awl, Straight, Ø10mm
	1806-0085S	Guide Wire, Ball Tip, 3×1000mm, sterile
	1806-0175	Sliding Hammer
	1806-0232	Screwdriver, Long, 3.5mm
	1806-0237	Screwdriver, Short, 3.5mm
	1806-0240	Screw Capture Sleeve, Long
	1806-0270	Ratchet T-Handle AO
	1806-0300	Screw Driver Shaft, Ball Tip, 3.5mm
	1806-0480	Long Screw Gauge (20mm–80mm)
	1806-9010	Screw Tray
	1806-9971	T2 Femur Drill Rack
	1806-9083	T2 Silicon Mat Drill Rack
	1806-9084	GTN Silicon Mat Free Space

	REF	Description
	Optional	
	702427	T-Handle, AO Coupling
	0140-0002	Reaming Protector
	1806-0047	Awl, Straight Ø11.5mm
	1806-0202	Screwdriver, Extra Short
	1806-0450	Long Freehand Tissue Protection Sleeve
	1806-0460	Long Drill Sleeve Ø4.2mm
	Spare Parts	
	1806-1097	Handle
	1806-0098	Cage
	1806-0099	Clamping Sleeve

Caution:

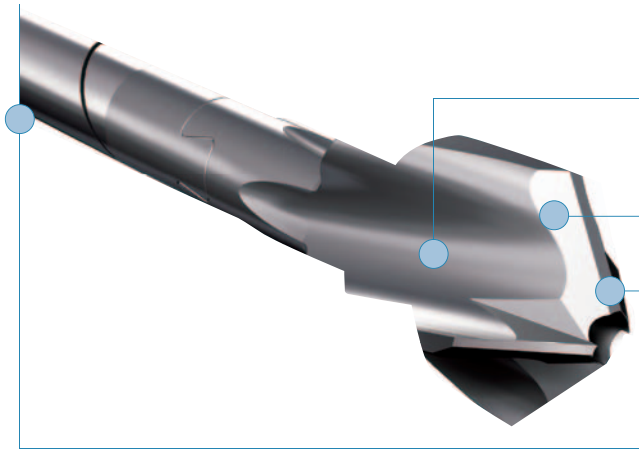
8mm Nails require 4mm Fully Threaded Screws for locking at the non-driving end.

* Please check with your local representative availability of sterile or non-sterile instruments as well as implant sizes.

Ordering Information – Instruments

Bixcut

Complete range of modular and fixed-head reamers to match surgeon preference and optimize O. R. efficiency, presented in fully sterilizable cases.



Large clearance rate resulting from reduced number of reamer blades coupled with reduced length of reamer head to allow for effective relief of pressure and efficient removal of material[3].

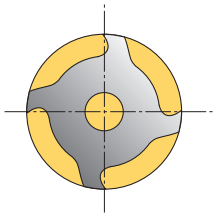
Cutting flute geometry optimized to lower pressure generation[3].

Forward- and side-cutting face combination produces efficient material removal and rapid clearance[3].

Double-wound shaft transmits torque effectively and with high reliability. Low-friction surface finish aids rapid debris clearance[3].

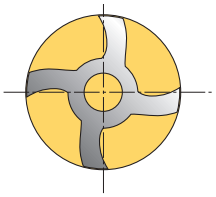
Smaller, 6 and 8mm shaft diameters are designed to reduce IM pressure.

Typical Standard
Reamer Ø14mm



Clearance area:
32% of cross section

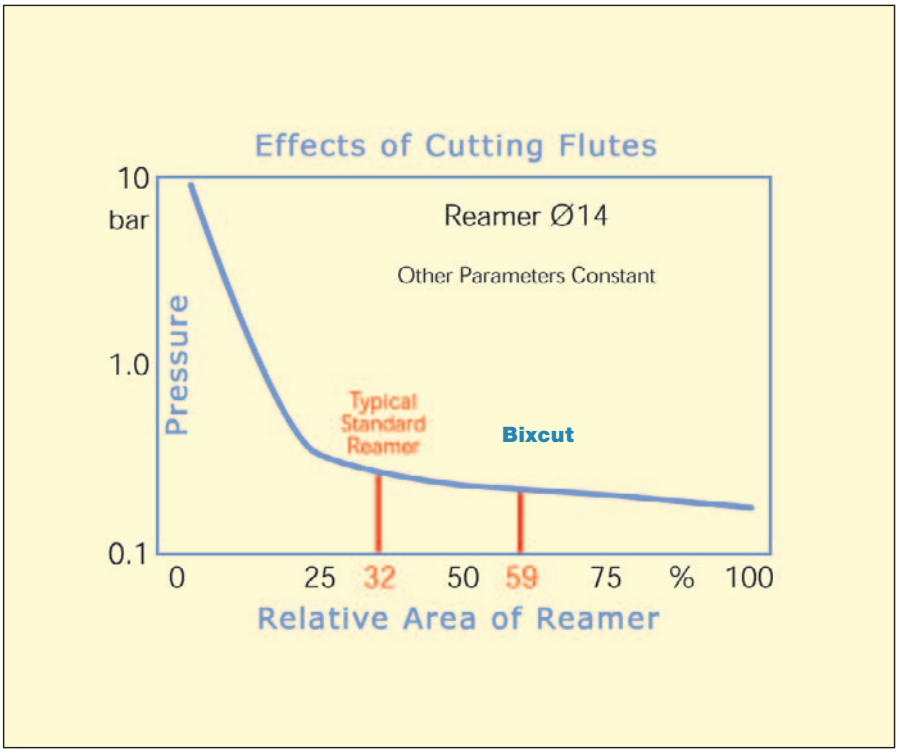
Bixcut
Reamer Ø14mm



Clearance area:
59% of cross section

Studies[1] have demonstrated that the pressures developed within the medullary cavity through the introduction of unreamed IMnails can be far greater than those developed during reaming – but this depends very much upon the design of the reamer.

After a three year development study[2] involving several universities, the factors that determine the pressures and temperatures developed during reaming were clearly established. These factors were applied to the development of advanced reamers that demonstrate significantly better performance than the best of previous designs[3].



1 Jan Paul M. Frolke, et al.;
Intramedullary Pressure in Reamed Femoral Nailing with Two Different Reamer Designs.,
Eur. J. of Trauma, 2001 #5

2 Medhi Moussavi, et al.;
Pressure Changes During Reaming with Different Parameters and Reamer Designs,
Clinical Orthopaedics and Related Research Number 373, pp. 295-303, 2000

3 Andreas Speitling;
Intramedullary Reamers, commented slides of internal test report, Sep 1999

Ordering Information – Instruments

BIXCUT MODULAR HEAD

REF	Description	Diameter mm
0226-3090	Bixcut Head	9.0
0226-3095	Bixcut Head	9.5
0226-3100	Bixcut Head	10.0
0226-3105	Bixcut Head	10.5
0226-3110	Bixcut Head	11.0
0226-3115	Bixcut Head	11.5
0226-3120	Bixcut Head	12.0
0226-3125	Bixcut Head	12.5
0226-3130	Bixcut Head	13.0
0226-3135	Bixcut Head	13.5
0226-3140	Bixcut Head	14.0
0226-3145	Bixcut Head	14.5
0226-3150	Bixcut Head	15.0
0226-3155	Bixcut Head	15.5
0226-3160	Bixcut Head	16.0
0226-3165	Bixcut Head	16.5
0226-3170	Bixcut Head	17.0
0226-3175	Bixcut Head	17.5
0226-3180	Bixcut Head	18.0
0226-4185	Bixcut Head	18.5
0226-4190	Bixcut Head	19.0
0226-4195	Bixcut Head	19.5
0226-4200	Bixcut Head	20.0
0226-4205	Bixcut Head	20.5
0226-4210	Bixcut Head	21.0
0226-4215	Bixcut Head	21.5
0226-4220	Bixcut Head	22.0
0226-4225	Bixcut Head	22.5
0226-4230	Bixcut Head	23.0
0226-4235	Bixcut Head	23.5
0226-4240	Bixcut Head	24.0
0226-4245	Bixcut Head	24.5
0226-4250	Bixcut Head	25.0
0226-4255	Bixcut Head	25.5
0226-4260	Bixcut Head	26.0
0226-4265	Bixcut Head	26.5
0226-4270	Bixcut Head	27.0
0226-4275	Bixcut Head	27.5
0226-4280	Bixcut Head	28.0

BIXCUT SHAFTS (STERILE)[1,2,3,4]

REF	Description	Length mm
0227-8240S	Mod. Trinkle	284
0227-3000S	Mod. Trinkle	448
0227-8510S	Mod. Trinkle	510
0227-8885S	Mod. Trinkle	885
0226-8240S	AO	284
0226-3000S	AO	448

SHAFT ACCESSORIES

REF	Description
3212-0-210	Grommet (pack of 25)
3212-0-220	Grommet inserter/extractor
0225-6010	Grommet Case

BIXCUT FIXED HEAD – AO FITTING**

REF	Diameter mm	Length mm
0225-5060	6.0*	400
0225-5065	6.5*	400
0225-5070	7.0*	400
0225-6075	7.5	480
0225-6080	8.0	480
0225-6085	8.5	480
0225-6090	9.0	480
0225-6095	9.5	480
0225-6100	10.0	480
0225-6105	10.5	480
0225-6110	11.0	480
0225-8115	11.5	480
0225-8120	12.0	480
0225-8125	12.5	480
0225-8130	13.0	480
0225-8135	13.5	480
0225-8140	14.0	480
0225-8145	14.5	480
0225-8150	15.0	480
0225-8155	15.5	480
0225-8160	16.0	480
0225-8165	16.5	480
0225-8170	17.0	480
0225-8175	17.5	480
0225-8180	18.0	480

OPTIONAL INSTRUMENTS

REF	Description
0227-0060	Hand Reamer 6 mm w/Mod Trinkle connection
0227-0070	Hand Reamer 7 mm w/Mod Trinkle connection
0227-0080	Hand Reamer 8 mm w/Mod Trinkle connection
0227-0090	Hand Reamer 9 mm w/Mod Trinkle connection
1806-6520	Curved Reduction Rod 8.5 mm w/Mod Trinkle connection
1806-6500	T-Handle w/Mod Trinkle connection

BIXCUT TRAYS EMPTY

REF	Description
0225-6000	Tray, Modular Head (up to size 22.0mm)
0225-6001	Tray, Modular Head (up to size 28.0mm)
0225-8000	Tray, Fixed Head (up to size 18.0mm)
0225-6040	Mini Trauma Tray (for modular heads 9-18)
0225-6050	Mini Revision Tray (for modular heads 9-28)

Note:

Bixcut Fixed Head – Modified Trinkle fitting available in same diameters and length as the AO Fitting (REF No: 0227-xxxx)

* Use with 2.2mm × 800mm Smooth Tip and 2.5mm × 800mm Ball Tip Guide Wires only.

** Use with Stryker Power Equipment.

1. Non-Sterile shafts supplied without grommet. Use new grommet for each surgery. See Shaft Accessories.
2. Sterile shafts supplied with grommet pre-assembled.
3. For Non-Sterile leave "S" off the REF Number when ordering (510 and 885mm available only sterile Modified Trinkle Fitting).
4. Non-Sterile, AO Fitting Shafts in 510 and 885mm are available as build to order items:

- CM810921 AO Fitting Shaft, length 510mm
- CM810923 AO Fitting Shaft, length 885mm.

Notes

Notes

stryker®

Joint Replacements

Trauma, Extremities & Deformities

Craniomaxillofacial

Spine

Biologics

Surgical Products

Neuro & ENT

Interventional Spine

Navigation

Endoscopy

Communications

Imaging

Patient Care & Handling Equipment

EMS Equipment

Manufactured by:

Stryker Trauma GmbH
Prof.-Küntscher-Straße 1–5
D - 24232 Schönkirchen
Germany

www.osteosynthesis.stryker.com

Literature Number: B1000069 Rev 2
03/11