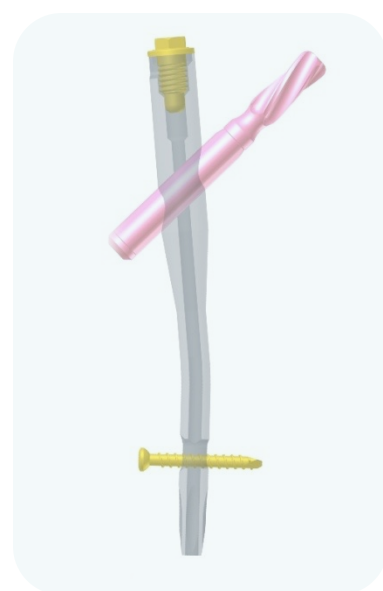


# BISON

Trochanteric Fixation Nailing (TFN) System



# INTRODUCTION

BISON™ Trochanteric Fixation Nailing (TFN) System is designed to treat unstable, comminuted, proximal fractures of the femur, specifically, the intertrochanteric and subtrochanteric regions. The Lag Screw design offers superior cutting behavior during Lag Screw insertion, providing extremely low insertion torque. The Locking Blade design offers excellent grip in the cancellous bone of the femoral head and strong resistance against cut-out. The BISON™ design is truly versatile in offering the combined features of intramedullary nail and hip screw systems.

## Features and Benefits

- **Anatomical nail design guarantees an optimal fit in the femur**
  - The nail is cannulated for Guide-Wire-controlled insertion and features a conical tip.
  - Two different target angles [130°, 135°] are available for Lag Screw and Locking Blade entry to accommodate variations in femoral neck anatomy.
- **Static and dynamic distal locking options for clinical choice**
- **Better stability in anchoring and anti-rotation**
  - The Lag Screw features a rounded profile at its tip and a self-tapping thread designed for easy insertion.
  - Inserting the large surface Locking Blade compacts the cancellous bone providing additional anchoring, which is especially important in osteoporotic bone.



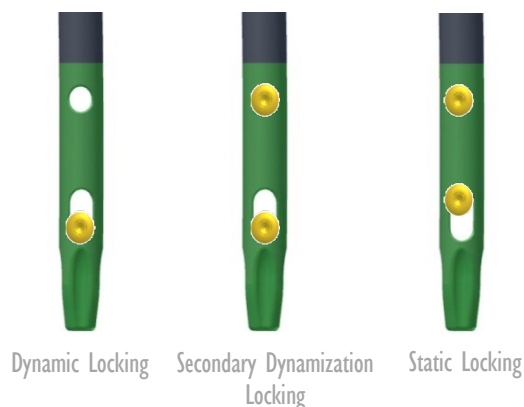
## Indications

The indications for the BISON™ Short Trochanteric Nail.

- ◆ Intertrochanteric fractures
- ◆ Pertrochanteric fractures
- ◆ Nonunion and malunion



### Distal Locking Options for Long Trochanteric Nail



### Distal Locking Options \_ Long Trochanteric Nail



The indications for the BISON™ Long Trochanteric Nail.

- ◆ Subtrochanteric fractures
- ◆ Pertrochanteric fractures associated with shaft fractures
- ◆ Pathological fractures (including prophylactic use) in both trochanteric and Diaphysal areas
- ◆ Nonunion and malunion

# TECHNICAL SPECIFICATION

## Implant Material

All implants are manufactured from Ti-6Al-4V medical grade, anodized titanium alloy (ASTM F1472) due to this material's superior properties. The titanium alloy offers a lower modulus of elasticity and increased fatigue strength over stainless steel.

## Nail

Outer Diameter:

|                   | SHORT NAIL | LONG NAIL |      |
|-------------------|------------|-----------|------|
| Size (mm)         | 11         | 11        | 12   |
| Proximal Dia (mm) | 16.0       | 16.0      | 16.0 |
| Shaft Dia (mm)    | 11         | 11        | 12   |

Inner Diameter:

4.5 mm for all nails. It can allow the Guide Wire with Ball Tip 2.5X1000 mm pass through.

CCD Angle:

130° and 135°

Lengths:

Short Nail: 180 mm

Long Nail: 280 mm to 440 mm, in 20 mm increments

Direction:

Short Nail: Universal design

Long Nail: In Left and Right version

Cannulation:

All nails are cannulated

## Lag Screws 10.0 mm

Lengths:

70 mm to 120 mm (5 mm increments)

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

Design:

10.0 mm shaft diameter

6.0 mm core diameter

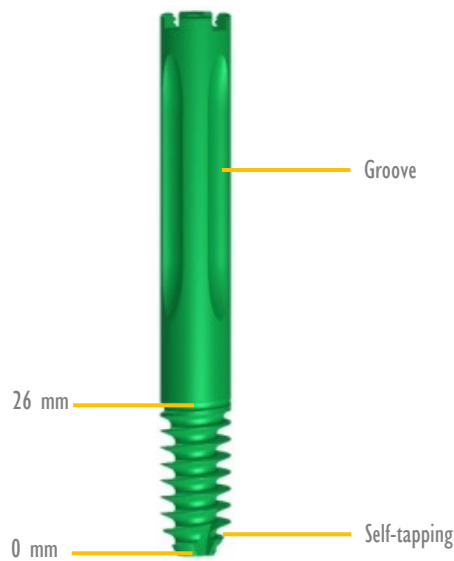
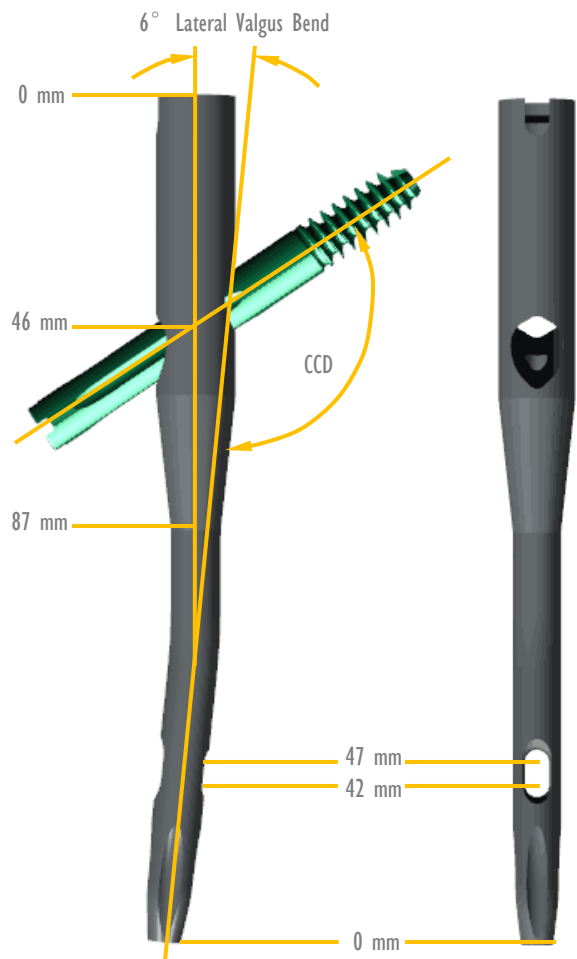
Thread length 26 mm

Four grooves against rotation

Self-tapping design

Cannulated (Inner diameter 3.2 mm allows the 3.0 mm Guide Wire to pass through)

## Short Nail



## TECHNICAL SPECIFICATION

### Locking Blade 10.0 mm

**Lengths:**

80 mm to 120 mm (5 mm increments)

Note: Blade length is measured from top of head to tip

**Design:**

10.0 mm shaft diameter

Blade length 26.5 mm with 4-Flute

5 mm compression length

Lateral locking - fast and reliable insertion of the blade

Compaction of cancellous bone design

Cannulated (Inner diameter 3.2 mm allows the 3.0 mm Guide Wire to pass through)



### Distal Locking Screws 5.0 mm

**Lengths:**

30 mm to 90 mm (5 mm increments)

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

**Design:**

4.0 mm core diameter

3.5mm hexagonal recess

Fully threaded

Self-tapping, blunt tip



### Fixing Screws

**Lengths:**

17 mm

**Design:**

3.5mm hexagonal recess

Protect the lag screw against rotation



### Condyle Screw 5.0 mm

**Lengths:**

40 mm to 100 mm (5 mm increments)

**Design:**

5.0 mm shaft diameter

4.5mm hexagonal recess

Thread length 14.0 mm

Cannulated (Inner diameter 3.2 mm allows the 3.0 mm Guide Wire to pass through)

### End Cap

**Sizes:**

0 mm, 5 mm, 10 mm, 15 mm

**Design:**

5.0mm hexagonal recess



# IMPLANT INFORMATION

## End Cap



| REF (TIT)    | LEN (mm) |
|--------------|----------|
| MOI 31706000 | 0        |
| MOI 31706005 | 5        |
| MOI 31706010 | 10       |
| MOI 31706015 | 15       |

## Fixing Screw



| REF (TIT)    | LEN (mm) |
|--------------|----------|
| MOI 31712017 | 17       |

## Lag Screw 10.0 mm



| REF (TIT)    | DIA (mm) | LEN (mm) |
|--------------|----------|----------|
| MOI 31524070 | 10.0     | 70       |
| MOI 31524075 | 10.0     | 75       |
| MOI 31524080 | 10.0     | 80       |
| MOI 31524085 | 10.0     | 85       |
| MOI 31524090 | 10.0     | 90       |
| MOI 31524095 | 10.0     | 95       |
| MOI 31524100 | 10.0     | 100      |
| MOI 31524105 | 10.0     | 105      |
| MOI 31524110 | 10.0     | 110      |
| MOI 31524115 | 10.0     | 115      |
| MOI 31524120 | 10.0     | 120      |

## Locking Blade 10.0 mm



| REF (TIT)    | DIA (mm) | LEN (mm) |
|--------------|----------|----------|
| MOI 31508080 | 10.0     | 80       |
| MOI 31508085 | 10.0     | 85       |
| MOI 31508090 | 10.0     | 90       |
| MOI 31508095 | 10.0     | 95       |
| MOI 31508100 | 10.0     | 100      |
| MOI 31508105 | 10.0     | 105      |
| MOI 31508110 | 10.0     | 110      |
| MOI 31508115 | 10.0     | 115      |
| MOI 31508120 | 10.0     | 120      |

## Distal Locking Screw 5.0 mm



| REF (TIT)    | DIA (mm) | LEN (mm) |
|--------------|----------|----------|
| MOI 31509030 | 5.0      | 30       |
| MOI 31509035 | 5.0      | 35       |
| MOI 31509040 | 5.0      | 40       |
| MOI 31509045 | 5.0      | 45       |
| MOI 31509050 | 5.0      | 50       |
| MOI 31509055 | 5.0      | 55       |
| MOI 31509060 | 5.0      | 60       |
| MOI 31509065 | 5.0      | 65       |
| MOI 31509070 | 5.0      | 70       |
| MOI 31509075 | 5.0      | 75       |
| MOI 31509080 | 5.0      | 80       |
| MOI 31509085 | 5.0      | 85       |
| MOI 31509090 | 5.0      | 90       |

## Nut for Condyle Screw 5.0 mm



| REF (TIT)    | LEN (mm) |
|--------------|----------|
| MOI 31713017 | 17       |

## Condyle Screw 5.0 mm



| REF (TIT)    | DIA (mm) | LEN (mm) |
|--------------|----------|----------|
| MOI 31525040 | 5.0      | 40       |
| MOI 31525045 | 5.0      | 45       |
| MOI 31525050 | 5.0      | 50       |
| MOI 31525055 | 5.0      | 55       |
| MOI 31525060 | 5.0      | 60       |
| MOI 31525065 | 5.0      | 65       |
| MOI 31525070 | 5.0      | 70       |
| MOI 31525075 | 5.0      | 75       |
| MOI 31525080 | 5.0      | 80       |
| MOI 31525085 | 5.0      | 85       |
| MOI 31525090 | 5.0      | 90       |
| MOI 31525095 | 5.0      | 95       |
| MOI 31525100 | 5.0      | 100      |

## Short Trochanteric Nail (Cannulated)



| REF (TIT)    | NECK ANGLE | DIA (mm) | LEN (mm) |
|--------------|------------|----------|----------|
| MOI 31353180 | 130°       | 16/11    | 180      |
| MOI 31354180 | 135°       | 16/11    | 180      |

## Long Trochanteric Nail, RIGHT (Cannulated)



| REF (TIT)    | NECK ANGLE | DIA (mm) | LEN (mm) |
|--------------|------------|----------|----------|
| MOI 31359320 | 130°       | 16/11    | 320      |
| MOI 31359340 | 130°       | 16/11    | 340      |
| MOI 31359360 | 130°       | 16/11    | 360      |
| MOI 31359380 | 130°       | 16/11    | 380      |
| MOI 31359400 | 130°       | 16/11    | 400      |
| MOI 31359420 | 130°       | 16/11    | 420      |
| MOI 31359440 | 130°       | 16/11    | 440      |
| MOI 31360320 | 135°       | 16/11    | 320      |
| MOI 31360340 | 135°       | 16/11    | 340      |
| MOI 31360360 | 135°       | 16/11    | 360      |
| MOI 31360380 | 135°       | 16/11    | 380      |
| MOI 31360400 | 135°       | 16/11    | 400      |
| MOI 31360420 | 135°       | 16/11    | 420      |
| MOI 31360440 | 135°       | 16/11    | 440      |

## Long Trochanteric Nail, LEFT (Cannulated)



| REF (TIT)    | NECK ANGLE | DIA (mm) | LEN (mm) |
|--------------|------------|----------|----------|
| MOI 31355320 | 130°       | 16/11    | 320      |
| MOI 31355340 | 130°       | 16/11    | 340      |
| MOI 31355360 | 130°       | 16/11    | 360      |
| MOI 31355380 | 130°       | 16/11    | 380      |
| MOI 31355400 | 130°       | 16/11    | 400      |
| MOI 31355420 | 130°       | 16/11    | 420      |
| MOI 31355440 | 130°       | 16/11    | 440      |
| MOI 31356320 | 135°       | 16/11    | 320      |
| MOI 31356340 | 135°       | 16/11    | 340      |
| MOI 31356360 | 135°       | 16/11    | 360      |
| MOI 31356380 | 135°       | 16/11    | 380      |
| MOI 31356400 | 135°       | 16/11    | 400      |
| MOI 31356420 | 135°       | 16/11    | 420      |
| MOI 31356440 | 135°       | 16/11    | 440      |

## Long Trochanteric Nail, LEFT (Cannulated)



| REF (TIT)    | NECK ANGLE | DIA (mm) | LEN (mm) |
|--------------|------------|----------|----------|
| MOI 31357320 | 130°       | 16/12    | 320      |
| MOI 31357340 | 130°       | 16/12    | 340      |
| MOI 31357360 | 130°       | 16/12    | 360      |
| MOI 31357380 | 130°       | 16/12    | 380      |
| MOI 31357400 | 130°       | 16/12    | 400      |
| MOI 31357420 | 130°       | 16/12    | 420      |
| MOI 31357440 | 130°       | 16/12    | 440      |
| MOI 31358320 | 135°       | 16/12    | 320      |
| MOI 31358340 | 135°       | 16/12    | 340      |
| MOI 31358360 | 135°       | 16/12    | 360      |
| MOI 31358380 | 135°       | 16/12    | 380      |
| MOI 31358400 | 135°       | 16/12    | 400      |
| MOI 31358420 | 135°       | 16/12    | 420      |
| MOI 31358440 | 135°       | 16/12    | 440      |

## Long Trochanteric Nail, RIGHT (Cannulated)



| REF (TIT)    | NECK ANGLE | DIA (mm) | LEN (mm) |
|--------------|------------|----------|----------|
| MOI 31361320 | 130°       | 16/12    | 320      |
| MOI 31361340 | 130°       | 16/12    | 340      |
| MOI 31361360 | 130°       | 16/12    | 360      |
| MOI 31361380 | 130°       | 16/12    | 380      |
| MOI 31361400 | 130°       | 16/12    | 400      |
| MOI 31361420 | 130°       | 16/12    | 420      |
| MOI 31361440 | 130°       | 16/12    | 440      |
| MOI 31362320 | 135°       | 16/12    | 320      |
| MOI 31362340 | 135°       | 16/12    | 340      |
| MOI 31362360 | 135°       | 16/12    | 360      |
| MOI 31362380 | 135°       | 16/12    | 380      |
| MOI 31362400 | 135°       | 16/12    | 400      |
| MOI 31362420 | 135°       | 16/12    | 420      |
| MOI 31362440 | 135°       | 16/12    | 440      |



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