Distal femoral osteotomies

A single fixation system



Universal plate for distal femoral osteotomies

Versatile and low-profile, the OTIS-F[®] plate can be used for opening-wedge or closing-wedge osteotomies through both lateral and medial approaches.

OTIS-F[®] plates used in association with High Tibial Osteotomy OTIS-C-PLUS[®] plates constitute a complete solution for Double Level Osteotomies.

Stability

Optimal fixation

Because the density of cortical bone varies at the distal femur, SBM chose two types of screws to ensure a reliable stability:

OTIS screws

pre-oriented \varnothing 6.5 mm screws with locking head,

AO screws

Ø 4.5 mm cortical screws with and without compressive effects, and a Ø 6.5 mm cancellous screw.

Versatile

Adjustable

Designed for lateral femoral osteotomies, OTIS-F[®] plates are conformable and can therefore also be used for medial osteotomies, whether of the openingwedge or closing-wedge osteotomy type.

Specifications

RIGHT MEDIA

Anatomically-shaped

Low-profile

only 3 mm.

The plate conforms to the tubular section of the bone diaphysis. Two models of OTIS-F[®] plates are available: right lateral (can also be used for left medial) and left lateral (can also be used for right medial).

The reduced dimensions of the

plate allow for a minimally-invasive

approach. The OTIS-F[®] plate is

particularly thin with a thickness of

Rigid

Biocompatible stainless steel increases plate rigidity while facilitating its removal.



Right lateral / Left medial

Left lateral / Right medial

Ø 4.5 mm AO cortical screws Provide a compression effect for a closing-wedge osteotomy and a simple fixation for a opening osteotomy.

Ø 6.5 mm OTIS screws Lock the plate in place.



Ø6.5 mm Ø4.5 mm Ø6.5 mm OTIS AO AO

Ø 6.5 mm AO cancellous screw

Surgical technique

OTIS-F® plate

To ensure proper positioning of the plate, it is important to adhere to the following procedures:



Right lateral / Left medial Hole 1: Ø 6.5 mm AO screw Holes 2, 3: OTIS screws Holes 4, 5, 6: Ø 4.5 mm AO screws Hole 5 Hole 4

Hole 3

Closing wedge osteotomy

Step 1



Performing the osteotomy

The osteotomy incision is positioned according to the chosen approach, lateral in this example. Proceed with the closing wedge osteotomy.

Step 2



Hole 2

Plate preparation

Position the plate against the femur.

Hole 1

If needed, use the OTIS-C $^{\circ}$ plate twister to shape the plate to the femur if needed.

Repeat this operation several times if required for an optimal anatomical positioning, then position the plate against the femur.

Set the AO drill guide on \emptyset 3.2 mm then drill slightly through hole #4 while aiming at the top part of the hole with the \emptyset 3.2 mm AO drill bit in order to maintain the plate in position with the OTIS-C[®] temporary round-head screw.

Step 3



Inserting the Ø 6.5 mm AO screw (hole #1)

Set the AO drill guide on Ø 4.5 mm, then drill with the Ø 4.5 mm OTIS-C[®] drill bit.

Measure the screw length with the OTIS-C[®] depth gauge (to keep the screws from going through to the intercondylar notch).

Tap if needed the bone with the Ø 6.5 mm AO tap then lock the Ø 6.5 mm AO screw in hole number 1.

Step 4

Step 5



Drilling the OTIS locking screws (holes #3 & 2)

Use the Ø 4.5 mm OTIS[®] drill guide and drill with the Ø 4.5 mm OTIS-C[®] drill bit in holes #3 and #2. Use the OTIS-C[®] coutersinkbit to ease the insertion of the screws. Measure the screw length using the OTIS-C[®] depth gauge.

Step 6



Compression Ø 4.5 mm AO screw (hole #6)

In order to get a compression effect, aim the top part of the hole (blue zone).

Set the AO drill guide on position \emptyset 3.2 mm and drill with the \emptyset 3.2 mm AO drill bit through hole number 6 while aiming at the top part of the hole in order to get a compression effect.

Tap if needed the cortical bone using the \emptyset 4.5 mm AO tap, then screw a \emptyset 4.5 mm AO screw through hole number 6 without engaging the head of the screw in the plate.

Remove the temporary screw in hole number 4.



Locking the OTIS screws (holes 3# & 2)

Screw the two self-tapping locking screws through holes #3 and #2 with the OTIS-C[®] hex head screwdriver.

Step 7



Inserting Ø 4.5 mm AO screws (holes #5 & 4)

Lock the Ø 4.5 mm AO screw in hole #6.

Set the AO drill guide on the \emptyset 3.2 mm position and drill using the \emptyset 3.2 mm AO drill bit in holes #5 and #4 while aiming at the top part of the holes in order to get a compression effect.

Tap if needed using the Ø 4.5 mm AO tap in holes #5 and #4.

Screw a Ø 4.5 mm AO screw in holes #5 and #4 while aiming at the top part of the hole in order to get a compression effect.



Placing the OTIS-F[®] plate

Once screws #5 & #4 have been inserted, tighten all the screws with the OTIS-C[®] hex head screwdriver.

Opening wedge osteotomy

Step 1

Performing the osteotomy

The osteotomy incision is positioned according to the chosen approach, lateral in this example.

In order to facilitate the osteotomy incision opening, impact the metallic trial implant with the head of the OTIS-C $^{\circ}$ slotted hammer and retrieve it using the slotted end.

Proceed with the opening-wedge osteotomy.



Graft positioning

Step 2

Use the metallic trial implants to determine the appropriate size of the definitive graft.

From heights between 8 to 15 mm, directly screw the handle from the stainless steel OTIS-C[®] basket to the distracting trial implant. For the distracting trial implants of height 6 and 7 mm, take the trial implant and insert it directly inside the osteotomy incision.

The impactor and impactor tip provided in the ancillary instrumentation set are designed to ease graft insertion. Screw the impactor tip to the impactor body for graft impaction.

Step 3



Plate preparation

Position the plate against the femur.

If needed, use the OTIS-C[®] plate twister to shape the plate to the femur if needed.

Repeat this operation several times if required for an optimal anatomical positioning, then position the plate against the femur.

Set the AO drill guide on the Ø 3.2 mm position, then drill slightly with the Ø 3.2 mm AO drill bit through hole #4 in order to screw the OTIS-C[®] round head temporary screw to maintain the plate in an appropriate position.

Step 4



Inserting the Ø 6.5 mm AO screw (hole #1)

Set the AO drill guide using the Ø 4.5 mm position, then drill with the Ø 4.5 mm OTIS-C[®] drill bit.

Measure the screw length with the OTIS-C[®] depth gauge (to keep the screws from going through to the intercondylar notch).

If needed, tap the cortical bone with the \emptyset 6.5 mm AO tap then lock the \emptyset 6.5 mm AO screw in hole #1.

Step 5

Step 6



Drilling the OTIS locking screws (holes #3 & 2)

Use the Ø 4.5 mm OTIS[®] drill guide and drill with the Ø 4.5 mm OTIS-C[®] drill bit in holes #3 and #2. Use the OTIS-C[®] coutersinkbit to ease the insertion of the screws. Measure the screw length using the OTIS-C[®] depth gauge.

Step 7



Inserting the Ø 4.5 mm AO screw (hole #6)

Compression is not advised for opening-wedge osteotomies, aim at the bottom of the holes (blue zone).

Set the AO drill guide on position \emptyset 3.2 mm and drill with the \emptyset 3.2 mm AO drill bit in hole #6.

If needed, tap the cortical bone using the \emptyset 4.5 mm AO tap and screw a \emptyset 4.5 mm AO screw in hole #6.



Locking the OTIS screws (holes #3 & 2)

Screw the two self-tapping locking screws through holes #3 and #2 with the OTIS-C[®] hex head screwdriver.

Step 8



Inserting the Ø 4.5 mm AO screws (holes #5 & 4)

Remove the unicortical temporary screw in hole number 4.

Set the AO drill guide on the Ø 3.2 mm position and drill without compression with the Ø 3.2 mm AO drill bit in holes #5 and #4.

If needed, tap the cortical bone with the Ø 4.5 mm AO tap in holes #5 and #4 and screw without compression a Ø 4.5 mm AO screw in holes #5 and #4.



Placement of OTIS-F[®] plate

Once screws #5 & #4 have been inserted, tighten all the screws using the OTIS-C[®] screwdriver.

Instrumentation

OTIS-F® instruments are packaged in an inlay which can complete the OTIS-C® basket.



Ordering information

OTIS-F® plates and screws for distal femoral osteotomies

Codes	Designation	Packaging
EVO9067822	OTIS-F femoral plate: lateral right / medial left	1
EVO9067922	OTIS-F femoral plate: lateral left / medial right	1
EVO9066050	OTIS locking screw - ø 6.5 mm length 50 mm	1
EVO9066055	OTIS locking screw - ø 6.5 mm length 55 mm	1
EVO9066060	OTIS locking screw - ø 6.5 mm length 60 mm	1
EVO9066065	OTIS locking screw - ø 6.5 mm length 65 mm	1
EVO9066070	OTIS locking screw - ø 6.5 mm length 70 mm	1
EVO9066075	OTIS locking screw - ø 6.5 mm length 75 mm	1
EVO9066080	OTIS locking screw - ø 6.5 mm length 80 mm	1

Complete OTIS-F[®] instrumentation for distal femoral osteotomies

Codes	Designation	On the inlay
EVO90T4000	OTIS-F AO drill guide	1
EVO900T878	OTIS-F AO ø 3,2 mm - length 145 mm drill	1
EVO90T3741	Handle for OTIS-F AO tap	1
EVO900T868	OTIS-F AO tap ø 4,5 mm	1
EVO90T8086	OTIS-F AO tap ø 6,5 mm	1
EVO9069430	OTIS-F ø 4,5 mm drill guide	1
EVO9080000	OTIS-F in-lay with silicone holders	1
EVO900000	Complete OTIS-F in-lav	

OTIS-C® instrumentation for distal femoral osteotomies

Codes	Designation	In the basket
EVO9069622	OTIS-C plate twister	1
EVO9069A45	OTIS-C round head ø 3,5 mm temporary screw	1
EVO9069434	OTIS-C ø 4,5 mm drill - length 195 mm	1
EVO9040203	OTIS-C countersink bit	1
EVO9069436	OTIS-C ø 3,5 mm hexagonal screwdriver	1
EVO9069438	OTIS-C depth gauge	1
EVO9069444	OTIS impactor body	1
EVO9069446	OTIS impactor tip	1
EVO90FAH06	OTIS one-piece metallic trial implant - height 6 mm	1
EVO90FAH07	OTIS one-piece metallic trial implant - height 7 mm	1
EVO90FAH08	OTIS metallic trial implant - height 8 mm	1
EVO90FAH09	OTIS metallic trial implant - height 9 mm	1
EVO90FAH10	OTIS metallic trial implant - height 10 mm	1
EVO90FAH11	OTIS metallic trial implant - height 11 mm	1
EVO90FAH12	OTIS metallic trial implant - height 12 mm	1
EVO90FAH13	OTIS metallic trial implant - height 13 mm	1
EVO90FAH14	OTIS metallic trial implant - height 14 mm	1
EVO90FAH15	OTIS metallic trial implant - height 15 mm	1
EVO90FAMAN	Handles for OTIS metallic trial implants	2
EVO90FAMAR	Slotted hammer for OTIS metallic trial implants	1

Note: The OTIS-F® plate includes locations for receiving AO type screws, ø 4.5mm for cortical and ø 6.5mm for cancellous bone (according to the standards in force). These screws are not supplied by SBM.





Carefully read the instructions for use that comes with the medical device or labeling provided to medical professionals. Class IIb device. Document not legally binding - Can be modified without prior notice. Manufactured by SBM © 2013. Ref: MGOTFBREN - v11.0113

SBM SAS

ZI du Monge 65100 LOURDES FRANCE Phone: (+33) 5 62 42 32 12 Fax: (+33) 5 62 42 32 52 www.sbm-france.com