

TOPFIX OSTEOTOMY SYSTEM

A PLATING SYSTEM FOR STABLE FIXATION OF
OSTEOTOMIES AROUND KNEE



SURGICAL TECHNIQUE

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Warning

This description alone does not provide sufficient background for direct use of the instrument set. Instruction by a surgeon experienced in handling these instruments is highly recommended.

INTRODUCTION

The Topfix Osteotomy System provides stable fixation of osteotomies close to the knee, and consists of three plates designed for specific parts of the anatomy:



Topfix Medial High Tibia Plate



Topfix Lateral High Tibia Plate



Topfix Lateral Distal Femur Plate

All the plates in the Topfix Osteotomy System are designed according to locking compression plate (LCP) principles. The fixed-angle locking holes provide multiple fixed-angle constructs throughout the plate, improving retention of screws in the plate and in cortical bone. Dynamic compression can be achieved by eccentric insertion of 4.5 mm cortex screws in the dynamic compression hole. The plates are available in titanium and accept 5.0 mm locking screws and 4.5mm cortex screws.

FEATURES&BENEFITS

Absolute stability

The plates' high strength in combination with the axially and angular stable locking screw ensures absolute stability of the osteotomy fixation. This maintains the correction until consolidation occurs, and favors early active mobilization.

Anatomical shape

Prevents soft-tissue irritations and increases patient comfort. Pre-operative plate contouring is not required.

Optimum support

The orientation of the screw meets the requirements of osteotomies, and ensures an optimum support of the articular surfaces.

INDICATION&CONTRAINDICATION

Indication:

The Topfix Osteotomy System is intended for:

- Open-wedge and closed-wedge osteotomies of the
 - Medial proximal tibia
 - Lateral proximal tibia
 - Lateral distal femur
- Treatment of bone and joint deformities
- Fractures
- Malalignment caused by injury or disease such as osteoarthritis

Contraindication:

- Inflammatory arthritis

SURGICAL TECHNIQUE

Medial High Tibia Plate

This technique guide will explain the procedure of an open- wedge osteotomy. For more detailed information on how to perform a closed-wedge osteotomy, as well as transverse and sagittal plane osteotomies please consult "Osteotomies around the knee" by Lobenhoffer P, RJ van Heerwaarden, AE Staubli, RP Jakob

Preoperative Planning

A precise preoperative plan is crucial to the success of this procedure. The recommended method for planning must be done on the basis of the weight-bearing x-ray of the full leg in AP view, either on paper or at a digital workstation.

- Determine the mechanical axis of the leg: Draw a straight line from the center of the femoral head to the center of the ankle joint (a).
- Draw the new weight-bearing line from the center of the femoral head, passing the knee through the desired position (a').
- Determine a hinge point (H). Generally the hinge point should be chosen on the lateral cortex and at the upper border of the proximal tibiofibular joint.
Note: The optimal position of the hinge point may vary according to patient specific anatomy. However, it must always be at least 1.5 cm below the joint level!
- Connect the hinge point with the new (a') and with the old (a) center of the ankle joint. The opening angle corresponds to the angle between the two resulting lines.(cx)



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Medial High Tibia Plate

Determine the entry point of the transverse osteotomy. It lies just above the pes anserinus. Make sure there is still enough space for the plate head, so that the screw in the neck hole can be inserted without protruding into the wedge. Depending on the determined opening angle and the length of the osteotomy cut (mediolateral diameter of the osteotomy) the corresponding opening height can be derived from Hernigou's trigonometric chart.

NOTE: These instructions alone do not replace in-depth training in planning for osteotomies. It only serves as a general guideline.

Trigonometric chart

	Correction angle															
	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
	50 mm	3	4	5	6	7	8	9	10	10	11	12	13	14	15	16
Mediolateral diameter of the osteotomy (mm)	55 mm	4	5	6	7	8	9	10	11	11	12	13	14	15	16	17
	60 mm	4	5	6	7	8	9	10	11	12	14	15	16	17	18	19
	65 mm	5	6	7	8	9	10	11	12	14	15	16	17	18	19	20
	70 mm	5	6	7	8	10	11	12	13	15	16	17	18	20	21	22
	75 mm	5	6	8	9	10	12	13	14	16	17	18	20	21	22	24
	80 mm	6	7	8	10	11	13	14	15	17	18	19	21	22	24	25
	85 mm	6	7	8	10	11	13	14	15	17	18	19	21	22	24	25

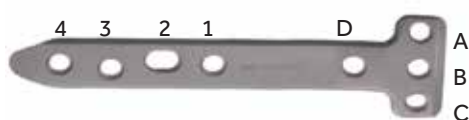
1. Attach drill guides to plate

Place the guiding block on the plate. The guiding block serves as an aid for attaching the LCP drill guides at the correct angle. Screw in and tighten a LCP drill guide into holes A, B and C. Insert a LCP spacer 5.0 mm into hole D and hole 4.

NOTE: Using spacers allows for the pes anserinus to move freely underneath the plate as well as for bending of the plate. This creates a tension that will act on the lateral hinge, thus generating compression.

829100 TopFix Guiding Block for Medial High Tibia

226100 Drill Guide 4.1



Hole 2 accepts 4.5mm cortex screw

Hole 3,4 accept 5.0mm unicortical self drilling locking screw

Hole A,B,C,D and 1 accept 5.0mm locking screw

SURGICAL TECHNIQUE

Medial High Tibia Plate

3. Positioning of patient

Perform the surgery with the patient in a supine position. Attach a lateral support and foot pad to the operating table so that the leg can be easily positioned in 90° flexion and in full extension. Position the patient so that the hip, knee and ankle joint can be visualized with the image intensifier. Lower the contralateral leg at the hip joint to facilitate access to the medial proximal tibia. The sterile draping also exposes the iliac crest so that the leg axis can be checked intraoperatively. A sterile tourniquet can be used, but is not mandatory.

NOTE: Allow enough space so that the leg can later be positioned in full extension as the intraoperative verification of the weight-bearing line has to be done with the leg in full extension.

4. Approach

Position the knee in 90° flexed position. Mark the anatomic landmarks (medial joint line, cranial border of pes anserinus, course of the medial collateral ligament, and tibial tuberosity) on the skin. Make a 6 – 8 cm long skin incision running from a point anterior to the insertion of the pes in a posterocranial direction. The incision ends over the posteromedial corner of the medial tibial plateau.(1)

NOTE: This incision runs essentially in line with the skin lines and the saphenous nerve.

First, divide the subcutaneous tissues and the fascia at the cranial border of the pes anserinus. Retract the pes tendons distally. The anterior border of the superficial layer of the medial collateral ligament now comes into view (2). Pass a periosteal elevator under the ligament that is then lifted from the tibia. Detach the long fibers of the superficial part of this ligament from the tibia with a scalpel until the posterior ridge of the tibia is exposed. Insert a Hohmann retractor behind the tibia (3). Expose the insertion of the patellar tendon into the tibial tuberosity at the anterior edge of the incision and the medial border of the patellar ligament.

NOTE: The distal insertion of the patellar tendon must be clearly visualized to allow determination of the endpoint of the anteriorly ascending cut of the biplanar osteotomy later on.

Precaution: During the dissection, make sure that the dermal branches of the saphenous nerve are not damaged.



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Medial High Tibia Plate

5. Osteotomy

Position the leg in full extension and adjust the knee joint exactly into AP view under fluoroscopy. Align the medial and lateral compartments in AP projection. Rotate the leg in a position which locates the patella exactly anteriorly (one third of the fibular head is then usually covered by the tibia).(1)

NOTE: A correct view of the tibia is crucial to ensure the proper orientation of the osteotomy.

Place two 2.5 mm Kirschner wires into the tibial head under image intensification to mark the direction of the osteotomy. Both wires must run parallel and aim towards the hinge point which was previously defined as part of the preoperative plan.(1)

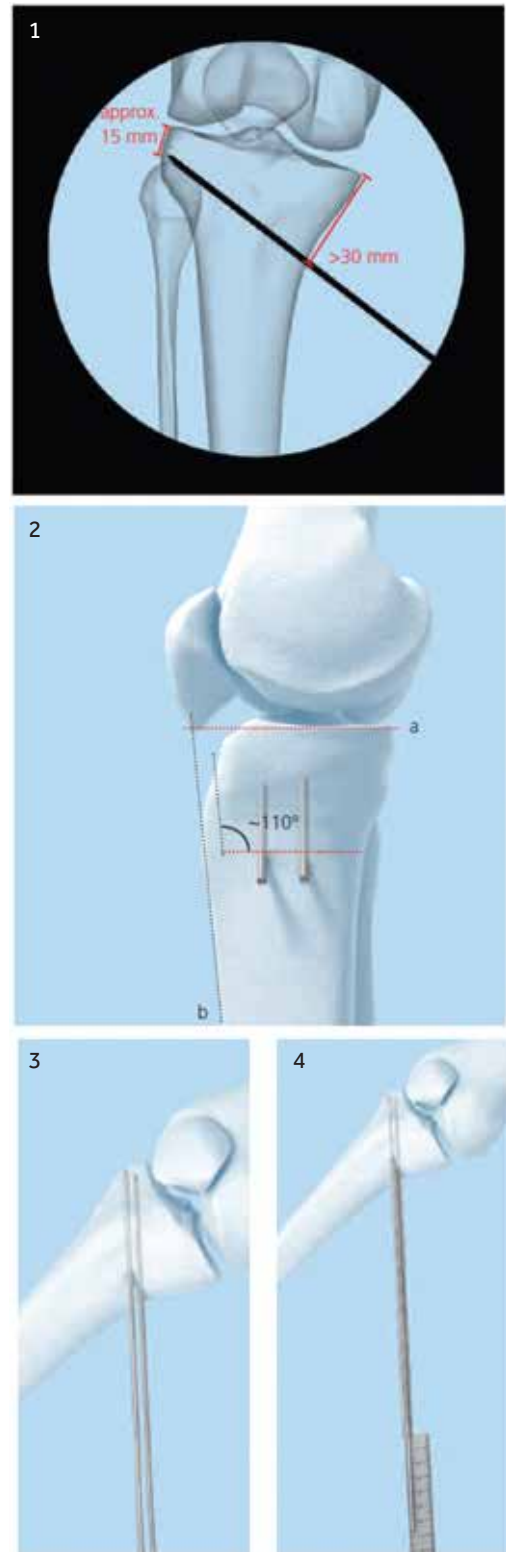
10706280 Trocar K wires, 2.5×280

The wires must end exactly at the lateral tibial cortex. Place the first posterior wire at the cranial border of the pes anserinus just in front of the posterior tibial ridge. Place the second wire about 2 cm anterior and parallel to the first wire. When placing the two wires, it is important to ensure that there is sufficient space cranial to the saw cut for the four locking screws A, B, C and D in the TopFix plate, leaving at least 30 mm of distance to the ridge of the medial tibial plateau.

Precaution: To maintain the inclination of the tibial slope, the wires must run at the same angle to the tibial plateau (a). Performing the ascending osteotomy cut parallel to the anterior cortex of the tibial shaft (b; at a resulting angle of around 110° to the transverse osteotomy cut) is supposed to ensure good bony contact in the area of the ascending cut, after opening the osteotomy.(2)

NOTE: To determine the cutting depth, hold a third wire of the same length against the cortex and measure the excess length compared to the inserted wires. Generally the tibial diameter is 5 –10 mm smaller anteriorly than posteriorly. Note the measured values.(3,4)

For convenience the guide wires can be shortened to allow better access to the osteotomy.



SURGICAL TECHNIQUE

Medial High Tibia Plate

6. Biplanar Osteotomy

Flex the knee in 90° flexion again and mark the course of the anterior or ascending osteotomy, which runs at an angle of around 110° to the horizontal saw cut ending behind the patellar tendon. This tuberosity segment should be at least 15 mm wide.

Mark the cutting depth (determined in the previous step) on the saw blade.

Perform the transverse osteotomy with an oscillating saw below the two Kirschner wires that act as a guide. Pay attention to completing the osteotomy cut of the hard posteromedial tibial cortex. Protect the anatomical structures dorsal to the posterior tibial surface with a Hohmann retractor.(1)

Perform the entire sawing procedure slowly, with very little pressure and under constant cooling of the saw blade by irrigation. When the planned depth is achieved in the posterior two thirds of the tibia, perform the anterior ascending saw cut with the narrow saw blade. The ascending cut is a complete osteotomy including the medial and lateral aspects of the anterior cortex.(2)

Precaution: Observe caution with the neurovascular structures. Saw slowly in full control since the blade could deviate into the back of the knee.

NOTE: After performing the osteotomy cut, a ruler can be used to measure the osteotomy, making sure the saw cuts were completed as planned.(3)



SURGICAL TECHNIQUE

Medial High Tibia Plate

7. Open the osteotomy

Insert an osteotomy chisel into the transverse osteotomy up to the lateral bony hinge using light hammer blows. The insertion depth corresponds with the cutting depth. Mark it on the first osteotomy chisel. Then slowly insert a second osteotomy chisel between the first one and the guide wires. Insert it 10 mm less far than the first one.(1)

829170	TopFix Osteotomy Chisel, width 10mm
829180	TopFix Osteotomy Chisel, width 15mm
829190	TopFix Osteotomy Chisel, width 20mm
829200	TopFix Osteotomy Chisel, width 25mm

NOTE: Leave the two guide wires in place while opening and spreading the osteotomy. This will stiffen the proximal segment and prevent fracturing of the articular surface of the tibia.(2)

8. Spreading the osteotomy

Open and spread the osteotomy slowly over a period of several minutes in order to prevent fracturing of the lateral cortex. Intra-articular secondary fractures can arise if the osteotomy is spread too quickly.

NOTE: Due to the medial collateral ligament complex, the osteotomy tends to open more anteriorly during spreading, thus increasing the caudal inclination of the tibial plateau. It is therefore important to ensure sufficient release of the long superficial fibers of the medial collateral ligament and symmetrical opening of the horizontal osteotomy. If needed, dissect the medial collateral ligament to provide subperiosteal and caudal release.

8a . Spreading the osteotomy with the chisel technique

Additional chisels may be inserted between the first two for gradual spreading of the osteotomy. Continue inserting a third, fourth and fifth one, until the desired opening angle is reached. Insert each new chisel a little less far than its predecessor.



SURGICAL TECHNIQUE

Medial High Tibia Plate

8a . Spreading the osteotomy with the chisel technique

As an alternative to spreading the osteotomy with chisels, the bone spreader forceps may be used.

Use at least two chisels to gain an initial osteotomy gap. Insert the bone spreader in the dorsomedial intercortical portion of the osteotomy gap. Slowly spread the osteotomy by opening the bone spreader forceps until the desired opening angle is reached.

829160 Bone Spreader with 8mm blade, medium handle, soft ratchet

While spreading the osteotomy using the techniques, it is necessary to adjust it according to the preoperative plan. Therefore constantly check the alignment of the leg and the height of the opening while spreading. For verification of the weight-bearing axis, put the leg in full extension. When the knee is extended, pay attention to the adaptation of the surfaces of the anterior ascending part of the osteotomy.

Precaution: The control and the fine adjustment of the osteotomy must always occur with the leg in full extension. Always monitor the osteotomy with the image intensifier in two planes. Check the tibial slope for possible changes. Avoid malrotation and medial and lateral destabilization.

To measure the height of the osteotomy, use the gap measuring device which measures the opening height in millimeters.

Hammer the gap measuring device into the opened osteotomy gap until it grips the bone. Slide the sledge towards the gap until it has reached the cortex. The opening value in millimeters can then be read from the scale.(1)

A second measuring device may be used to maintain the opening of the osteotomy after the instrument used for spreading has been removed. The implant can be placed between the two measuring devices.(2)



SURGICAL TECHNIQUE

Medial High Tibia Plate

9. Determine the plate position

Center the plate over the osteotomy and place onto the bone. The three holes in the head and the most proximal locking hole on the shaft should be positioned proximal to the correction gap. The solid midsection of the plate should be placed over the osteotomy.

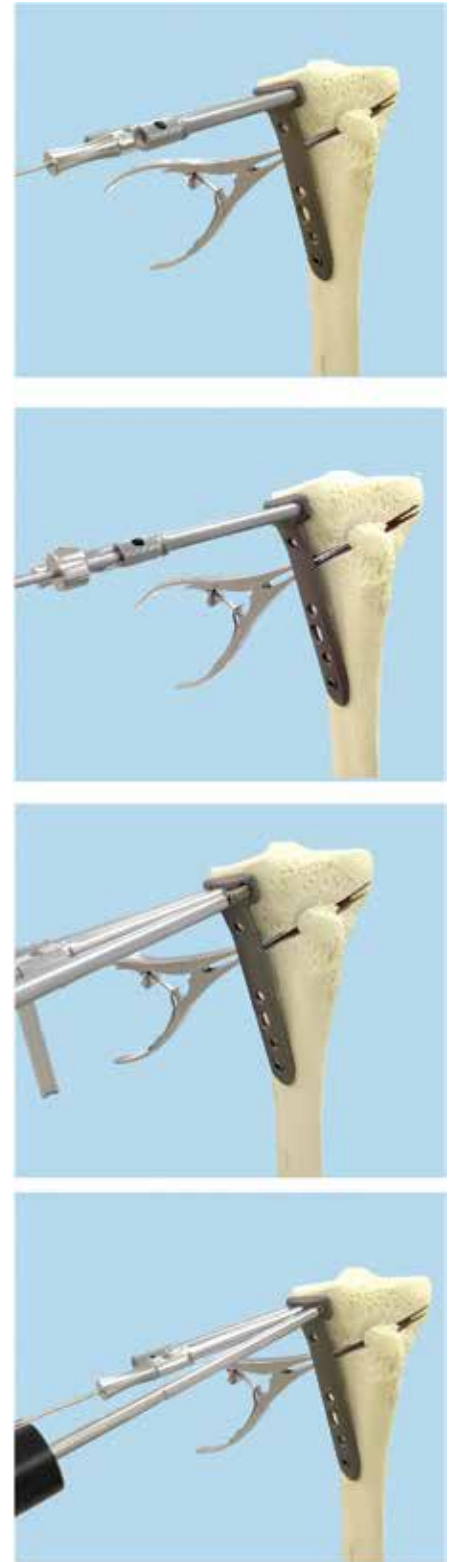
226100	Drill Guide 4.1
226120	Guide Sleeve for K-Wire, Φ 2.0mm
10737230	Kirschner Wire, Φ 2.0mm
226110	Drill Bit with Stop, Φ 4.1mm
221180	Allen Key
206170	Depth Gauge, 90mm

Insert the guide sleeve for K-Wire into the middle drill guide and insert a K-wire. The K-wire will aid in positioning the screw, which should be parallel to the articular surface. The wire also allows confirmation of screw position under radiographic imaging.

Use the Drill Bit with Stop, Φ 4.1mm to drill hole A and B. Determine screw length either by reading the drilled depth from the laser mark on the drill bit or with the depth gauge after removing the drill sleeve. The chosen 5.0mm locking screws should be as long as possible but without them protruding from the lateral cortical bone to ensure optimal support the tibia plateau.

While pressing the plate onto the tibia in its correct position, insert screws into holes A and C. Remove K-wire from hole B and replace it with a locking screw. Insert the locking screws using Torx Screwdriver, with Quick coupling connected to a power tool but do not fully tighten the screws. Finally, lock the screws manually with a Torque-limiting Screwdriver. Optimum torque is reached after one click. Screw holding sleeve will assist holding the locking screw.

226140	Screw Holding Sleeve for StarDrive Screw
226200	Torx Screwdriver, with Quick Coupling
226151	Torque-limiting Screwdriver, T25



SURGICAL TECHNIQUE

Medial High Tibia Plate

10. Insert lag screw

Insert a temporary lag screw in a neutral position of the compression hole. Use the Double Drill Guide 4.5/3.2 to drill a hole and determine the required screw length with the depth gauge.

206120	Double Drill Guide 4.5/3.2
010020	Drill Bit, Φ 3.2mm
206170	Depth Gauge, 90mm
030100	T-handle with Quick Coupling
020030	Tap, Φ 4.5mm
206280	Hex Screwdriver
206300	Screw Holding Sleeve for Hex Screw



It is mandatory to place the leg in full extension at this stage of the operation. Use a hard bolster under the heel and manual stress to achieve full extension before the lag screw is tightened.

Tap through Double Drill Guide 4.5/3.2 for the 4.5mm cortex screw. Use Hex Screwdriver to insert the 4.5mm cortex screw. Screw Holding Sleeve will assist holding the cortex screw.

Precaution: Monitor potential correction loss and the ventral bone contact of the ascending osteotomy. Check the bone axis and, if necessary, make final corrections.

This lag screw compresses the lateral hinge by pulling the distal osteotomy segment towards the plate and also by forcing the plate into suspension which will impose pressure upon the lateral hinge. Potential fissures within the lateral bone hinge are brought under elastic preload and distraction on the lateral side is eliminated. Watch the osteotomy gap constantly while the lag screw is slowly tightened to avoid secondary loss of correction.

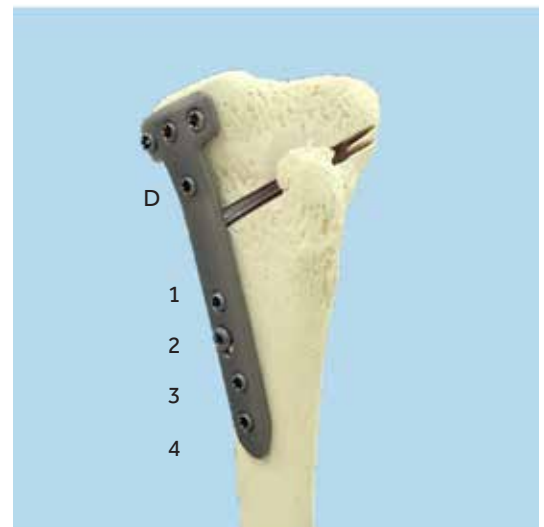


To secure the shaft portion of the plate onto the tibia, insert 5.0mm unicortical self-drilling locking screws into hole 3. Replace the spacer in hole 4 with a 5.0mm unicortical self-drilling locking screw by using Torx screwdriver, with quick coupling.

226140	Screw Holding Sleeve for StarDrive Screw
226200	Torx Screwdriver, with Quick Coupling
226151	Torque-limiting Screwdriver, T25

Remove the spacer in hole D. Insert 5.0mm locking screws into hole 1 and D, with sufficient length, appropriate to patient anatomy by using the same technique described in step 9. Always lock the screws manually with a Torque-limiting Screwdriver to prevent cold welding.

Verify the result of the correction and the position of the implant using the image intensifier in two planes.



SURGICAL TECHNIQUE

Lateral High Tibia Plate

1. Attach drill guides to plate

Place the appropriate TopFix Guiding Block for the lateral high tibia, left or right, on the proximal part of the plate. The three-point seating ensures correct positioning.

Insert a LCP drill guide into hole A of the plate and tighten the locking nut by turning it clockwise, to lock the drill guide. Thread another LCP drill guide into additional proximal plate hole D or E.

Install a 5.0mm spacer into hole 3.

226230	TopFix Guiding Block for Lateral High Tibia, left
226240	TopFix Guiding Block for Lateral High Tibia, right
226100	Drill Guide 4.1

2. Determine plate position

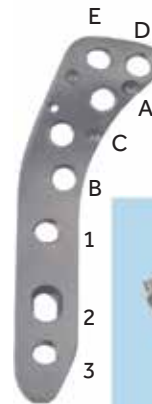
After performing the osteotomy, situate the prepared implant parallel to the tibial shaft. To temporarily fix the plate, insert guide sleeve for K-Wire into the drill guide and insert the 2.0mm K-wire. The K-wire helps to determine screw position and length under the image intensifier.

Use the Drill Bit with Stop, Φ 4.1mm to drill holes D and E. Determine screw length either by reading the drilled depth from the laser mark on the drill bit or with the depth gauge after removing the drill sleeve. The chosen 5.0mm locking screws should be as long as possible but without them protruding from the lateral cortical bone to ensure optimal support the tibia plateau.

226100	Drill Guide 4.1
226120	Guide Sleeve for K-Wire, Φ 2.0mm
10737230	Kirschner Wire, Φ 2.0mm
226110	Drill Bit with Stop, Φ 4.1mm
221180	Allen Key
206170	Depth Gauge, 90mm
226140	Screw Holding Sleeve for StarDrive Screw
226200	Torx Screwdriver, with Quick Coupling
226151	Torque-limiting Screwdriver, T25

Insert 5.0mm screws into holes A or C as desired. Insert the locking screws using Torx Screwdriver, with Quick coupling connected to a power tool but do not fully tighten the screws. Finally, lock the screws manually with a Torque-limiting Screwdriver. Optimum torque is reached after one click. Screw holding sleeve will assist holding the locking screw.

To compress the osteotomy, insert a 4.5mm cortex screw into hole 2. The spacer maintains adequate distance between the plate and the periosteum and helps minimize damage to the blood supply.



Hole A,B,C,D,E,1 and 3 accept 5.0mm locking screw;
Hole 2 accept 4.5mm cortex screw.



SURGICAL TECHNIQUE

Lateral High Tibia Plate

To secure the shaft portion of the plate onto the tibia, insert 5.0mm locking screws into hole 1. Replace the spacer in hole 3 with a 5.0mm unicortical self-drilling locking screw by using Torx screw-driver, with quick coupling.

For maximum stability, insert three locking screws into the proximal part of the osteotomy, and be sure to use all of the plate holes in the shaft. The first screw in hole 1 inserted on the distal part of the correction must a bicortical locking screw.

Always lock the screws manually with a Torque-limiting Screw-driver to prevent cold welding.

Verify the result of the correction and the position of the implant using the image intensifier in two planes.



829130	TopFix Guiding Block for Lateral Distal Femur, left
829140	TopFix Guiding Block for Lateral Distal Femur, right
226100	Drill Guide 4.1

Lateral Distal Femur Plate

1. Attach drill guides to plate

Place the appropriate TopFix Guiding Block for the lateral distal Femur, left or right, on the proximal part of the plate. The three-point seating ensures correct positioning.

Insert a LCP drill guide into hole A of the plate and tighten the locking nut by turning it clockwise, to lock the drill guide. Thread another LCP drill guide into additional proximal plate hole F or E.

Install a 5.0mm spacer into hole 4.

2. Determine plate position

After performing the osteotomy, adjust the prepared implant parallel to the femoral shaft. To temporarily fix the plate, insert guide sleeve for K-Wire into the drill guide and insert the 2.0mm K-wire. The K-wire helps to determine screw position and length under the image intensifier.

226100	Drill Guide 4.1
226120	Guide Sleeve for K-Wire, Φ 2.0mm
10737230	Kirschner Wire, Φ 2.0mm



Hole A,C,D,E,F,1 ,3,4 and 5 accept 5.0mm locking screw;
Hole 2 accept 4.5mm cortex screw.



SURGICAL TECHNIQUE

Lateral Distal Femur Plate

Use the Drill Bit with Stop, Φ 4.1mm to drill holes C,D,E and F. Determine screw length either by reading the drilled depth from the laser mark on the drill bit or with the depth gauge after removing the drill sleeve. The chosen 5.0mm locking screws should be as long as possible but without them protruding from the lateral cortical bone to ensure optimal fixation of the distal femur.

Insert the locking screws using Torx Screwdriver, with Quick coupling connected to a power tool but do not fully tighten the screws. Finally, lock the screws manually with a Torque-limiting Screwdriver. Optimum torque is reached after one click. Screw holding sleeve will assist holding the locking screw.

Opening the correction gap can break the far cortex, therefore, insert a 4.5mm cortex screw into hole 2 as lag screw to achieve reduction and compression of the osteotomy. The spacer maintains adequate distance between the plate and the periosteum and helps minimize damage to the blood supply.

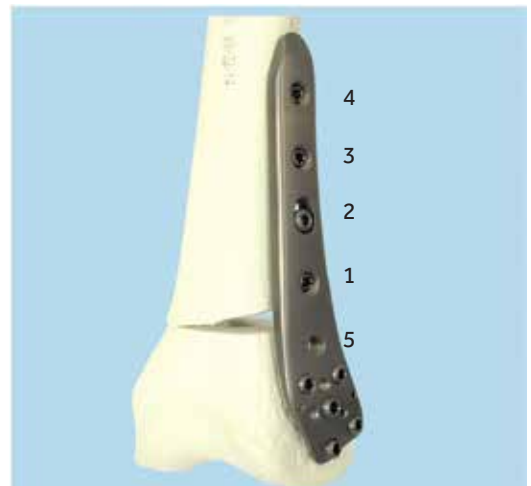
226100 Drill Guide 4.1
226120 Guide Sleeve for K-Wire, Φ 2.0mm
10737230 Kirschner Wire, Φ 2.0mm
226110 Drill Bit with Stop, Φ 4.1mm
221180 Allen Key
206170 Depth Gauge, 90mm
226140 Screw Holding Sleeve for StarDrive Screw
226200 Torx Screwdriver, with Quick Coupling
226151 Torque-limiting Screwdriver, T25

To secure the shaft portion of the plate onto the femur, insert 5.0mm locking screws into hole 1. Replace the spacer in hole 4 and insert in hole 3 with 5.0mm unicortical self-drilling locking screws by using Torx screwdriver, with quick coupling.

For maximum stability, use all of the plate holes in the shaft. The first screw in hole 1 inserted proximal to the correction must be a bicortical locking screw.

Always lock the screws manually with a Torque-limiting Screwdriver to prevent cold welding.

Verify the result of the correction and the position of the implant using the image intensifier in two planes.



IMAPLANTS

Medial High Tibia Plate



Code		Size	Material	Model. No.
29401800		4H	PT	SDDG65

Lateral High Tibia Plate



Code	Direction	Size	Material	Model. No.
29402000	Right	3H	PT	SDDG66
29401900	Left	3H	PT	SDDG67

Lateral Distal Femur Plate



Code	Direction	Size	Material	Model. No.
29402200	Right	4H	PT	SDDG68
29402100	Left	4H	PT	SDDG69

Spacer, 2mm



Code		Size	Material	Model. No.
31454007		5.0mm	TA	SDLD04

IMPLANTS

5.0mm Locking Head Screws, self-tapping



Code	Size	Material	Model. No.
31452014	5.0x14mm	TA	SDLD01
31452016	5.0x16mm	TA	SDLD01
31452018	5.0x18mm	TA	SDLD01
31452020	5.0x20mm	TA	SDLD01
31452022	5.0x22mm	TA	SDLD01
31452024	5.0x24mm	TA	SDLD01
31452026	5.0x26mm	TA	SDLD01
31452028	5.0x28mm	TA	SDLD01
31452030	5.0x30mm	TA	SDLD01
31452032	5.0x32mm	TA	SDLD01
31452034	5.0x34mm	TA	SDLD01
31452036	5.0x36mm	TA	SDLD01
31452038	5.0x38mm	TA	SDLD01
31452040	5.0x40mm	TA	SDLD01
31452042	5.0x42mm	TA	SDLD01
31452044	5.0x44mm	TA	SDLD01
31452046	5.0x46mm	TA	SDLD01
31452048	5.0x48mm	TA	SDLD01
31452050	5.0x50mm	TA	SDLD01
31452055	5.0x55mm	TA	SDLD01
31452060	5.0x60mm	TA	SDLD01
31452065	5.0x65mm	TA	SDLD01
31452070	5.0x70mm	TA	SDLD01
31452075	5.0x75mm	TA	SDLD01
31452080	5.0x80mm	TA	SDLD01
31452085	5.0x85mm	TA	SDLD01
31452090	5.0x90mm	TA	SDLD01

IMAPLANTS

5.0mm Locking Head Screws, self-tapping, self-drilling

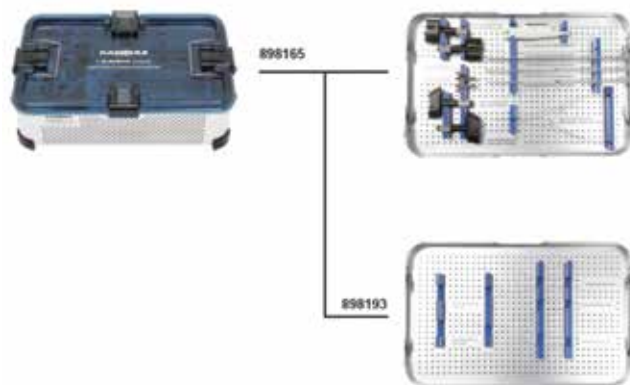


Code	Size	Material	Model. No.
32582014	5.0x14mm	TA	SDLD02
32582016	5.0x16mm	TA	SDLD02
32582018	5.0x18mm	TA	SDLD02
32582020	5.0x20mm	TA	SDLD02
32582022	5.0x22mm	TA	SDLD02
32582024	5.0x24mm	TA	SDLD02
32582026	5.0x26mm	TA	SDLD02
32582028	5.0x28mm	TA	SDLD02
32582030	5.0x30mm	TA	SDLD02
32582032	5.0x32mm	TA	SDLD02
32582034	5.0x34mm	TA	SDLD02
32582036	5.0x36mm	TA	SDLD02
32582038	5.0x38mm	TA	SDLD02
32582040	5.0x40mm	TA	SDLD02
32582042	5.0x42mm	TA	SDLD02
32582044	5.0x44mm	TA	SDLD02
32582046	5.0x46mm	TA	SDLD02
32582048	5.0x48mm	TA	SDLD02
32582050	5.0x50mm	TA	SDLD02
32582055	5.0x55mm	TA	SDLD02
32582060	5.0x60mm	TA	SDLD02
32582065	5.0x65mm	TA	SDLD02
32582070	5.0x70mm	TA	SDLD02
32582075	5.0x75mm	TA	SDLD02
32582080	5.0x80mm	TA	SDLD02
32582085	5.0x85mm	TA	SDLD02

INSTRUMENTS

TopFix Osteotomy Instruments Set

Code	Description	QTY.
898165	TopFix Osteotomy Instruments set	1
898356	TopFix Osteotomy Instruments set (Empty)-PPSU	1
898193	TopFix Implants case	1
829100	TopFix Guiding Block for Medial High Tibia	1
226230	TopFix Guiding Block for Lateral High Tibia, left	1
226240	TopFix Guiding Block for Lateral High Tibia, right	1
829130	TopFix Guiding Block for Lateral Distal Femur, left	1
829140	TopFix Guiding Block for Lateral Distal Femur, right	1
829150	TopFix Osteotomy Gap Measuring Device	1
829160	Bone Spreader with 8mm blade, medium handle, soft ratchet	1
829170	TopFix Osteotomy Chisel, width 10mm	1
829180	TopFix Osteotomy Chisel, width 15mm	1
829190	TopFix Osteotomy Chisel, width 20mm	1
829200	TopFix Osteotomy Chisel, width 25mm	1



INSTRUMENTS



829130
TopFix Guiding Block for Lateral
Distal Femur, left



829140
TopFix Guiding Block for Lateral
Distal Femur, right



829150
TopFix Osteotomy Gap Measuring
Device



829160
Bone Spreader with 8mm
blade, medium handle, soft ratchet



829170
TopFix Osteotomy Chisel, width
10mm



829180
TopFix Osteotomy Chisel, width
15mm



829190
TopFix Osteotomy Chisel, width
20mm

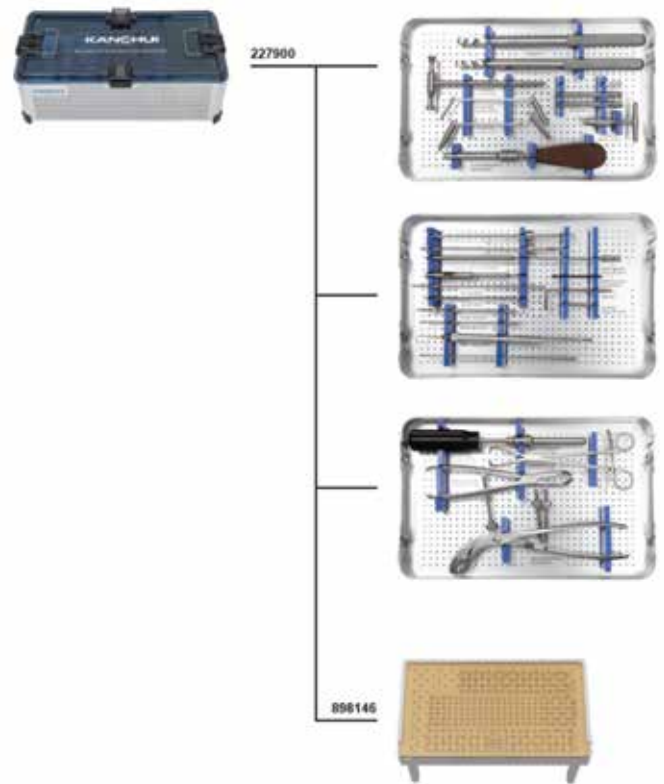


829200
TopFix Osteotomy Chisel, width
25mm

INSTRUMENTS

MonoLoc LCP 5.0mm System Instruments Set

Code	Description	QTY.
226100	Drill Guide 4.1	3
226110	Drill Bit with Stop, Φ 4.1mm	1
227110	Drill Bit with straight shank, Φ 4.1mm	2
226120	Guide Sleeve for K-Wire, Φ 2.0mm	1
226151	Torque-limiting Screwdriver, T25	1
226140	Screw Holding Sleeve for StarDrive Screw	1
226160	Screwdriver, self-retaining	1
226200	Torx Screwdriver, with Quick Coupling	1
226170	Extraction Screw, Φ 5.0mm	1
221180	Allen Key	1
226190	Drill Bit for Screw Head Removal	1
10737230	Kirschner Wire, Φ 2.0mm	3
206110	Double Drill Guide 6.5/3.2	1
206120	Double Drill Guide 4.5/3.2	1
206240	Trephine	1
010040	Drill Bit, Φ 4.5mm	1
010020	Drill Bit, Φ 3.2mm	1
206170	Depth Gauge, 90mm	1
030100	T-handle with Quick Coupling	1
020040	Tap, Φ 6.5mm	1
020030	Tap, Φ 4.5mm	1
206280	Hex Screwdriver	1
206300	Screw Holding Sleeve for Hex Screw	1
206150	Reduction Forceps, serrated jaws, large	1
206160	Reduction Forceps with Points, large	1
206290	Bone Holding Forceps, self-centering	2
206320	Bending Irons, left	1
206340	Bending Irons, right	1



INSTRUMENTS



226151
Torque-limiting Screwdriver, T25



226140
Screw Holding Sleeve for StarDrive Screw



226160
Screwdriver, self-retaining



226200
Torx Screwdriver, with Quick Coupling



226170
Extraction Screw, Ø 5.0mm



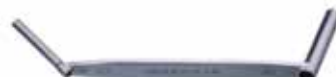
221180
Allen Key



226190
Drill Bit for Screw Head Removal



10737230
Kirschner Wire, Ø 2.0mm



206110
Double Drill Guide 6.5/3.2



206120
Double Drill Guide 4.5/3.2



206240
Trephine



010040
Drill Bit, Ø 4.5mm

INSTRUMENTS





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