SURGICAL PROCEDURE
DISTAL FEMORAL PLATE

MEDIN®

## Distal Femoral Plate

### Indications

The distal femoral plate (hereinafter plate) is intended for the osteosynthesis of all fractures of the distal femur (AO-33). It is also intended for type C fractures and periprosthetic fractures. An alternative for type A fractures is the osteosynthesis of the distal femoral nail. For type B fractures it can be used as an additional implant if separate tension screws cannot fix sufficiently (e.g. during osteoporosis).

### Description of the implants

The implant system consists of a plate and several screws.

## Plate

The plates are for the right or left femur ranging from 4–14 holes (165–336 mm) in size. The plate is attached from the lateral side of the femur and its shape corresponds to the physiological antecurvation. The proximal end of the plate is rounded for easier deployment. For the diaphysis and metaphysis area the plate is 6 mm thick, in the condyle area it broadens and thins. The plate is fitted with angular stable holes along its entire length. The screw can only be locked in the plate in the exact direction of the drill sleeve. This direction gives the join maximum stability. Screws in the diaphysis area are introduced at right angles to the plate. In the area of the condyle, they are inserted at a skew to avoid the screws coming out of the bone. The most distal screw is crucial for repositioning and X-ray alignment. It is introduced at an angle of 95° to the external cortical of the diaphysis. In the diaphysis – metaphysis transition area there is an oval hole that allows primary attachment of the plate or the proximal bone to be pulled to the plate and eventually fragment distraction when introducing the cortical screw.

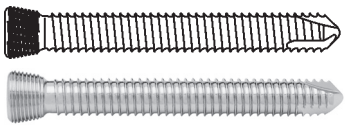

Distal femoral plate
right


Distal femoral plate
left

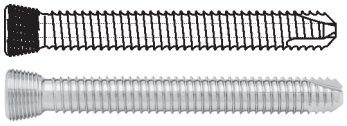
## Screws

Locking bone screws (hereinafter screws) Ø 5 mm, or Ø 5/3.5 mm or Ø 5 mm cannulated in lengths of 16–50 mm increasing by 2 mm and in lengths of 50–105 mm increasing by 5 mm.
Cortical screw HA 4.5 in lengths of 14–60 mm increasing by 2 mm and in lengths of 60–110 mm by 5 mm.
Alternatively, a 5 HA cortical screw in lengths of 20–80 mm increasing by 5 mm and in lengths of 90 and 100 mm.

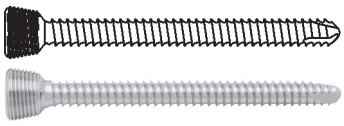
Note:
To use all the advantages of the internal fixator, only introduce locking bone screws into the plate. This does not compress the plate against the periosteum, or bone, thus the vascular supply is not further damaged. Using locking bone screws avoids the screws becoming loose and travelling away from the bone. The desired micro-movement supporting bone healing will not take place at the screw/plate level, but in the space between the proximal and distal screws.



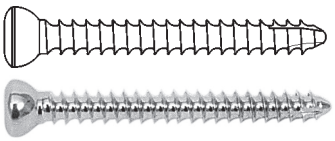
Locking bone screw
Ø 5 mm



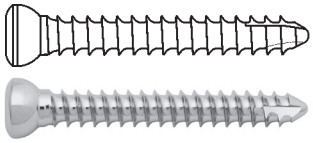
Cannulated locking bone
screw Ø 5 mm



Locking bone screw
Ø 5/3,5 mm



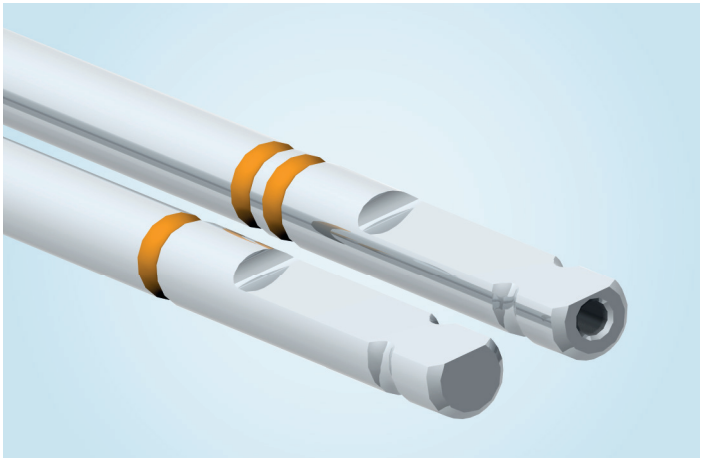
Self-tapping cortical bone
screw Ø 4,5 mm



Self-tapping cortical bone
screw Ø 5 mm
(alternativa)

This brochure only serves as an illustrative guide for distal femoral plates and the instrumentarium. The aim of the brochure is to give physicians and suture nurses a quick guide in the use of the instruments and implant and their composition in order to achieve the best operational outcome. If you have any questions, please contact the MEDIN, a.s. sales representative.

## Description of instrumentarium

## Instrumentarium

### Aiming device

It consists of two aiming device bodies (for a left and right plate), an arm and three different connecting screws, which connect the arm with the body, the body with the plate and the third screw is used to fix the Ø8/4 mm drill sleeve in the last hole of the plate.
The aiming device's body and connecting screws are made of steel. The aiming device's arm is partly made of X-ray transparent material.

### Sleeves

To protect the soft tissues.
Used to guide long rotating instruments.
Sleeves are made of steel.

### Trocar

Equipped with a triangular piercing-tip for the primary manual perforation of the bone before drilling.

### Drills

Intended for easy pre-drilling of the hole for the bolts.
Ø3.9 mm drills are cannulated and non-cannulated and can be differentiated by the number of coloured grooves. The drills are marked with a scale for measuring the length of the screw from the end of the drill sleeve.

### Depth Gauge

Used to measure the length of the screw.
The scale has dual colouring, just like the measuring probe, due to shortening of the instrument.

### Insertion instruments

The cannulated T-screwdriver is equipped with a hexagonal end for assembly onto the aiming device, or introducing the screws, but not for tightening the screws into the splints.
The T-handle, torque limiter (not part of the sieve) and screwdriver tips are intended for introducing and tightening the locking bone screws to the plate with a set torque. As with the drills, the screwdrivers' terminals are divided into cannulated and non-cannulated. They are distinguished by the number of coloured grooves.

### K-wires

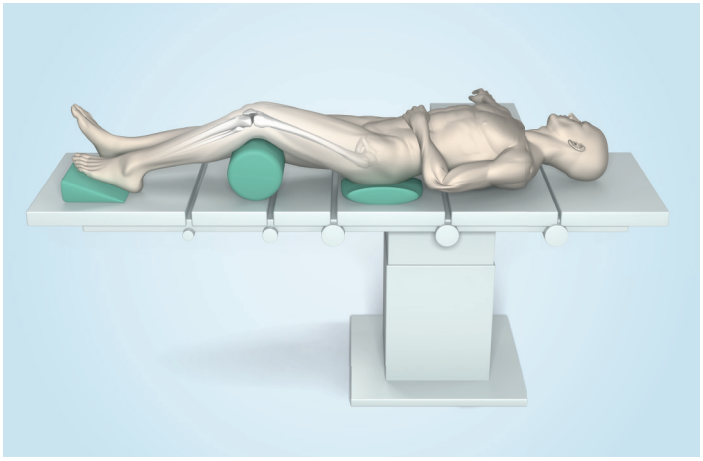
Can be used for fixing the plate to the bones.

## Color coding description

- I. Aimer arm (blue)
  - II. Sleeve Ø 8/7 mm (blue/orange)
    - III. Sleeve Ø 7/4 mm (orange/yellow)
      - IV. Drill Ø 3.9 mm (yellow)
      - IV. Drill Ø 3.9 mm cannulated (yellow/yellow)
      - IV. Sleeve Ø 4/2.9 mm (yellow/green)
        - V. Drill Ø 2.9 mm (green)
      - IV. Sleeve Ø 4/1.8 mm (yellow/purple)
    - III. Locking bone screw (hexagonal 3.5 mm terminal [orange])
    - III. Cannulated locking bone screw (hexagonal 3.5 mm cannulated terminal [orange/orange])
  - II. Sleeve Ø 8/4 mm (blue/yellow)

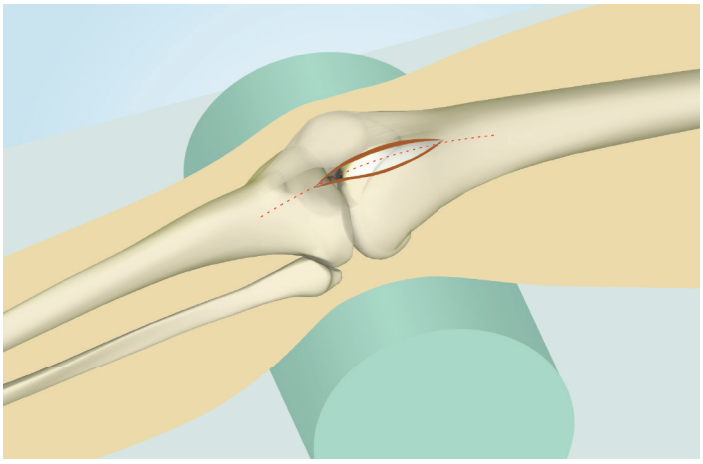
**Operating technique**

The plate can be introduced with the aiming device or without it by using just the sleeves and other instruments. The technique using the aiming device is described below.



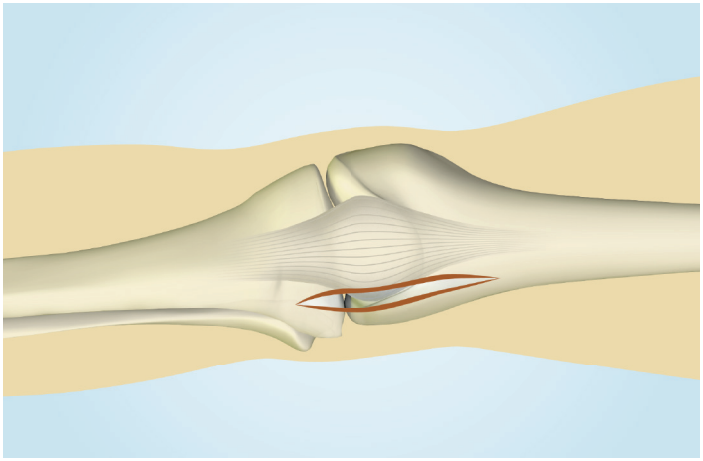
## 1. Pre-operation planning

Before the operation, we recommend going through the procedure of the operation. Compare the limb to be operated upon with the healthy one and the X-rays of both limbs. Plan: the incision site, repositioning, the location of the spongious lag screws or K-wires so as not to hamper plate placement. Choose an appropriate implant length and screw location. Choose the plate length so that between the distal fragment and the most distal screw from the proximal fragments there is a space corresponding to approximately the length of the distal fragment. This free part of the plate limits straining and eventual fracture fatigue by the implant during rigid fixation.
The C arm only displays a limited part of the limb. For a pre-operation control, it is suitable to assess in advance the limb's axis and length according to the healthy side (X-ray measurement, the limb's axis with a cable system).
It is also appropriate to ascertain whether there is no important blood circulation and nervous tissue, which should not be damaged, at the site of the incision and the introduction of ancillary or supplementary implants.



## 2. Patient position

The patient is supine with a support for the knee or on a traction table. The second limb is placed above or below the knee to be operated on. The position of the limbs must enable X-ray checks using the C arm in the M-L and A-P projection and stabilize the rough repositioning. If an auxiliary external fixator or distractor is used, it must not prevent the subsequent attachment of the plate or checks using the C arm.



## 3. Procedure

For simple extra articular fractures, a 6 cm incision above the lateral condyle, eventually distally extended towards the Gerdy's Tubercle, is sufficient. Cut longitudinally through the iliotibial tract to the bone and free the bone with a raspatory to the extent of the plate's widened end. Using a raspatory or forceps, cranially create a space for the plate between the periosteum and the outer thigh muscle.

For intra articular fractures a lateral parapatellar cut with sufficient arthrotomy is suitable. Eversion of the patella allows visualisation and an open repositioning of the condylar area of the fracture.

## 4. Repositioning the fragments

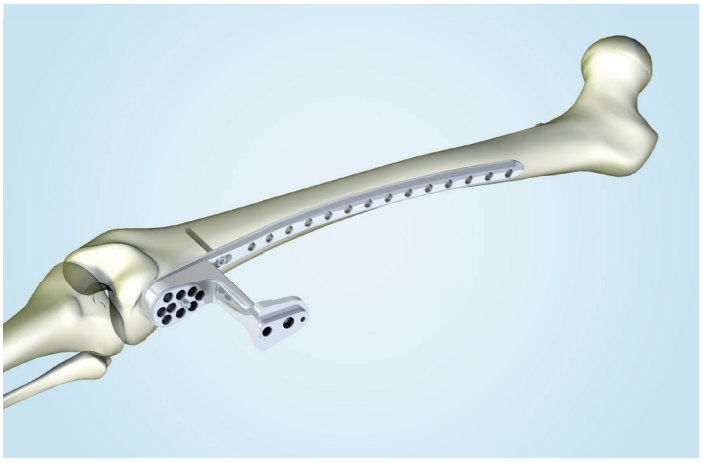
Repositioning and osteosynthesis of the femur condyle must be carried out before attaching the plate because it is not specified as a repositioning plate. Use bone forceps or K-wires to fix reduced condyles outside the planned plate attachment area. K-wires can also be guided medially through the skin, and laterally introduced up to the level of the cortical. It is best to introduce cannulated spongious tensile screws from the inner side. Keep in mind that bad repositioning of the fragments may result in restriction or pain during movement!

## 5. Introducing and positioning the plate

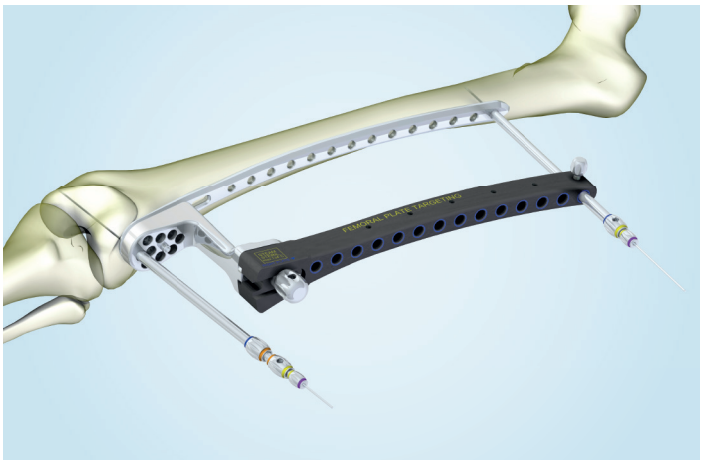
Attach the plate to the aiming device body with a screw.

Screw the aiming device arm screw before introducing a K-wire to the plate's proximal hole. While assembling make sure you have the correct aiming device body and the aiming device arm is correctly positioned (LEFT PLATE/RIGHT PLATE).

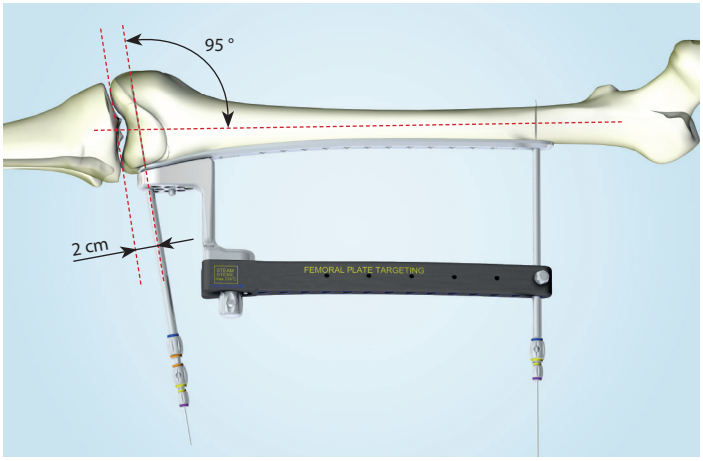

Use the aiming device to cranially introduce the plate around the lateral condyle. The distal end of the plate lies is on the condyle about 2 cm above the joint space. Viewing from the side, the centre of the plate is on the divide between the front and middle thirds of the condyle width. Cranially the plate runs along the epiperiostal area in parallel with the diaphysis. For initial anchorage a HA 4.5 cortical screw can be introduced through the oval hole. This anchorage allows the plate's position on the bone to be corrected.



As needs be, fix the plate to the condyle with a Ø 1.5 mm K-wire through a Ø8/7 mm guide sleeve, a Ø7/4 mm drill sleeve and a Ø 4/1.8 mm guide sleeve. Above the proximal end of the plate, measured according to the aiming device, make an incision to the bone and set the plate on the centre of the bone. Drill a Ø 1.5 mm K-wire through the aiming device, the Ø 8/4 mm drill sleeve and the Ø 4/1.8 mm guide sleeve. The Ø8/4 mm drill sleeve is tightened by the screw in the aiming device. This eliminates any plate spring-back. When the plate is in the correct position on the bone, introduce a K-wire through the entire bone to the inner cortical.



Introduce a Ø1.5 mm central K-wire, a Ø 8/7 mm guide sleeve, Ø7/4 mm drill sleeve and Ø4/1.8 mm guide sleeve into the most distal hole in the plate through the aiming device. Use the A-P projection to check the distance of the K-wire from the joint space and whether the K-wire is in parallel with the joint space. If not, the resulting position will deviate accordingly in the sense of the varus-valgus. At a fragmentation zone it is subsequently revealed by a large format X-ray.
Check the correct axial position with the cable technique using coagulation cords.



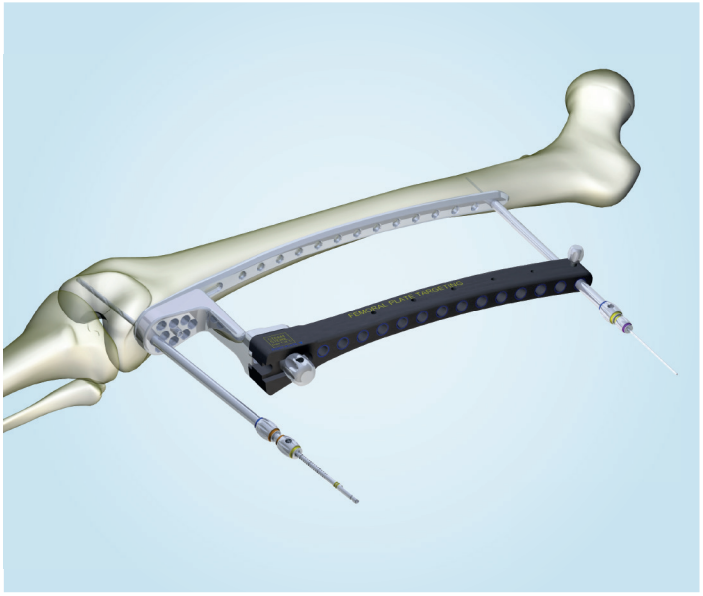
**Before introducing the screws we recommend that you check:**

- The fragmentation zone, whether the plate does not contract the limb. If there is uncertainty compare the length of the operative limb by X-ray or clinically with the healthy limb measured previously.
- The plate's proximal end, whether the planned number of screws is sufficiently distant from the fracture (whether the plate is long enough).
- In the side view, assess the position of the plate on the condyle. Check the position of the condyle with regards to the diaphysis and any recurvation is removed by, for instance, bracing.
- The plate's position with regards to diaphysis, whether the plate and aiming device are in parallel with the bone.
- Whether the linear, rotary and angular position is correct on the X-ray and clinically.

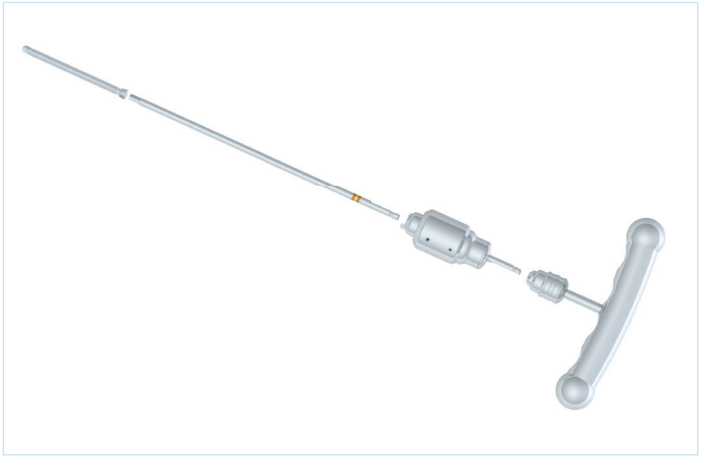
NOTE: The distal femoral plate is used for fixation using a similar procedure as a 95° condylar plate or DCS. Thus the plate is 95° to the lateral cortical of the diaphysis. The techniques used in previous implants (positioning join surfaces using wires) can be used. The key distal K-wire must be introduced through the aiming device and sleeves in parallel with the femur-tibia and femur-patella joint space, similar to the central wire in the DCS method.

## 6. Introducing the cannulated screws

A hole is drilled to the condyle through the K-wire in the distal fragment using a Ø3.9 mm drill, measure the length directly on the drill.



Introduce the locking bone screw. Or introduce 2 to 3 locking bone screws around the most distal screw and, after removing the K-wire, introduce the most distal screw.



## 7. Procedure for introducing locking bone screws

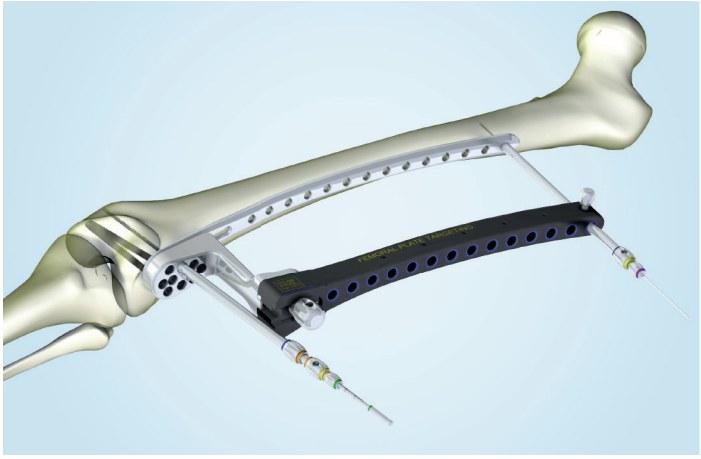
Introduce a Ø8/7 mm guide sleeve into the aiming device, which is used to introduce the locking bone screw. Insert a Ø7/4 drill sleeve into the Ø8/7 guide sleeve and then screw into the plate. Prepare a depression with the Ø4 mm trocar to make drilling easier and to prevent the drill from slipping.

Then drill a hole with a Ø3.9 mm drill. The screw length can be subtracted on the drill. After drilling the hole remove the Ø3.9 mm drill and the Ø7/4 mm drill sleeve.

Measure screw length with the depth gauge through the Ø8/7 mm guide sleeve.

Add a torque limiter and a 6HR 3.5 mm screwdriver to the handle and introduce a screw through the Ø8/7 mm guide sleeve.

If the osteosynthesis requires the introduction of a **5/3.5 mm locking bone screw**, introduce a Ø8/7 guide sleeve, a Ø7/4 drill sleeve and a 4/2.9 mm guide sleeve into the aiming device. Drill the hole for the 5/3.5 mm locking bone screw with the Ø2.9 mm drill. The screw is then introduced in the same way as previously.



Distal screws are introduced on the medial side subcortically just before the end of the cortical, so that it does not interfere with the joint or irritate the joint capsule and ligaments. In the distal part of the plate, it is best to use the maximum number of holes in the plate.

If at least 3 locking-screws are introduced in the distal fragment, fix the plate proximally. Introduce at least 3 locking screws from a longer incision above the proximal end of the plate or from several smaller incisions. When drilling, check the drill goes through the centre of the bone or through two corticals.

## 8. Notes

The locking bone screws are self-tapping, thus a screw–tap is not necessary.

Do not lock a screw into the plate in any of the fragments if the plate is not fixated against the bone in several points. This prevents the plate from rotating on the bone (the helicopter effect).

If the proximal fragment or a large chip deviates from the plate when it has a correct distal position, temporarily pull the bone to the plate with a cortical screw. After tightening and other fixations you can decide whether to leave this screw or replace it with a locking screw.

If you fix the proximal end of the plate and the other locking screws go through the edge of the medullary cavity or just the cortical (e.g. due to enormous diaphysis curvature with a long plate), it is safer to introduce

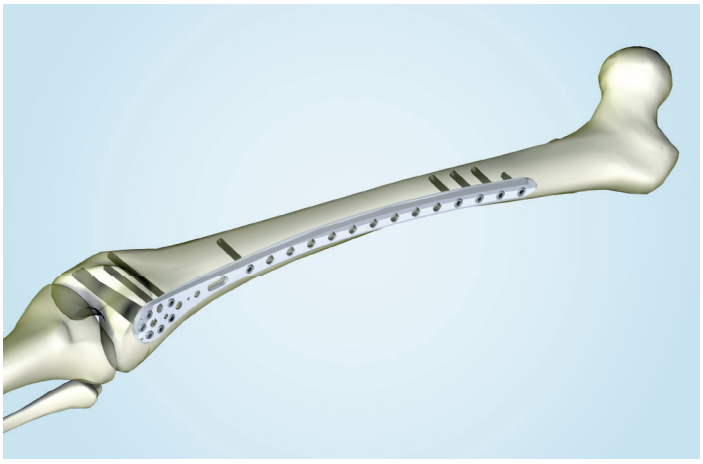
other 4.5 HA "unlockable" cortical screws and introduce them at an angle through the centre of the femur's medullary cavity.

Introduce at least three proximal screws load bicortically, but with a sufficiently strong lateral cortical it is possible to fix some of the screws monocortically. Of course, the number of screws must be increased.

For osteoporotic bones, it is an advantage to introduce the first proximal screw only monocortically, the medial cortical must not be perforated.

## 9. Completing the operation

After completing the osteosynthesis, take an X-ray and introduce a Redon Drain to the plate area. If the joint is open, drain it too. Suture the wound in layers and put the limb into Semiflex in the knee joint. With sufficient analgesia, promptly commence rehabilitation.



### Implant extraction

Loosen all the screws and then remove them, this prevents the last screw from rotating along with the plate. In the event of complications, use the instrumentarium to remove the screws.

### Important notes

Before osteosynthesis always check the proximal end of the aiming device is precisely aligned with the holes in the plate using a Ø8/4 mm drill (tapping) sleeve.

For guaranteed safe usage of the implant, MEDIN a.s. requires only this company's implants be used. There must be no combination of implants from other firms.

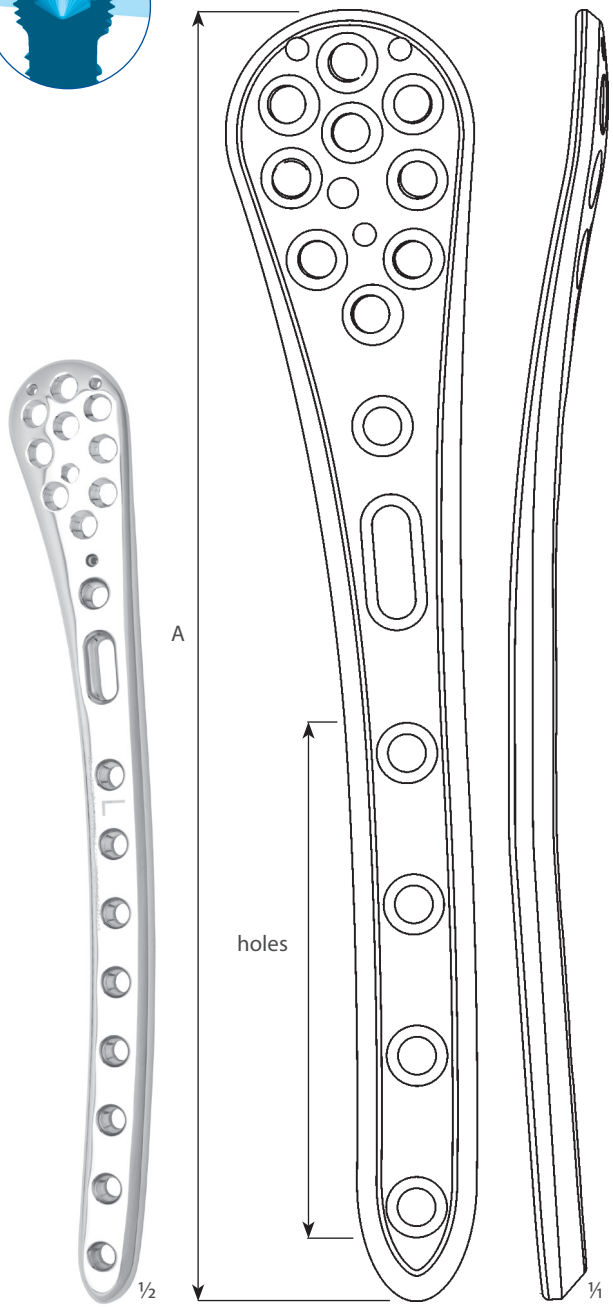
The patient must be warned that the implant will not bear the patient's entire weight. The patient must use a means of support when walking and gradually increase the burden depending on how the muscles are forming in the site of the fracture.

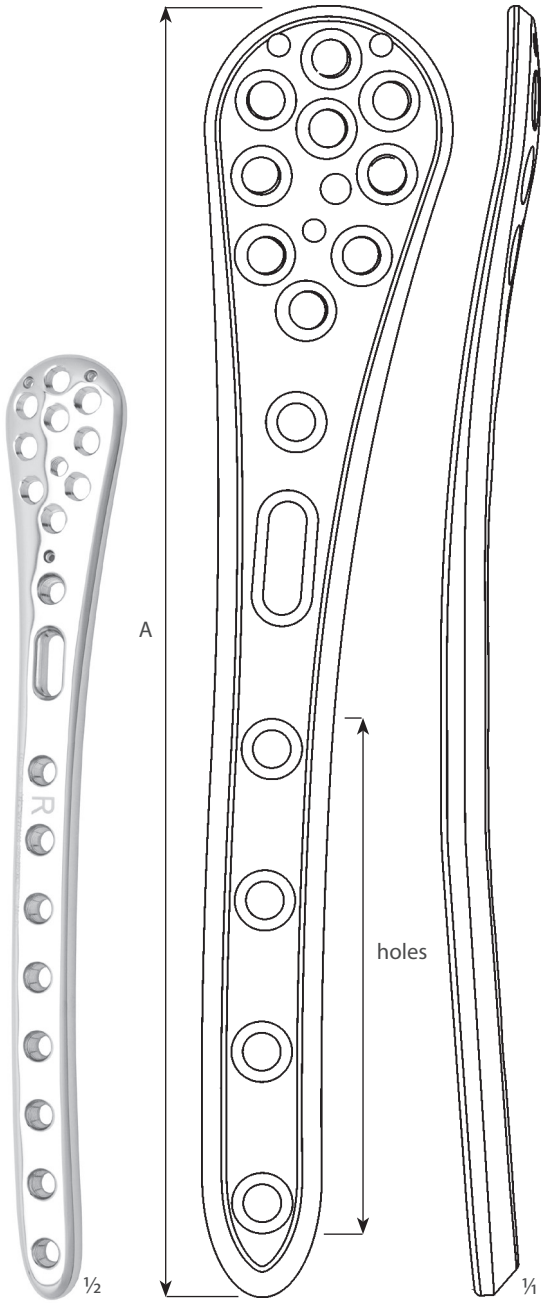
When applied to one patient there should never be a combination of different materials.

The implants are intended for single use, for one patient and for one stabilisation of the damaged bone. Re-use is prohibited. This fact is mentioned in the package leaflet and concerns all implants.

Packaging leaflets PL0201 and PL0088 contain all the important information necessary.

## DISTAL FEMORAL PLATE




LEFT

| SSt | Ti | A | holes |
|---|---|---|---|
| **129 77 9520** | **129 77 9523** | 169,3 mm | 4 |
| **129 77 9530** | **129 77 9533** | 220 mm | 6 |
| **129 77 9540** | **129 77 9543** | 250,3 mm | 8 |
| **129 77 9550** | **129 77 9553** | 299 mm | 10 |
| **129 77 9560** | **129 77 9563** | 329 mm | 12 |

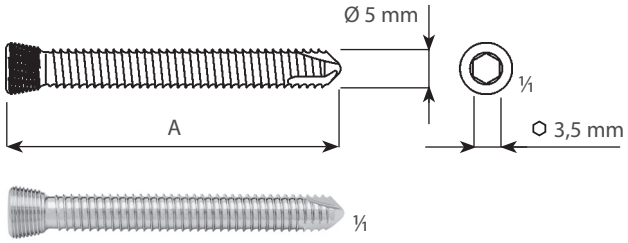
RIGHT

| SSt | Ti | A | holes |
|---|---|---|---|
| **129 77 9580** | **129 77 9583** | 169,3 mm | 4 |
| **129 77 9590** | **129 77 9593** | 220 mm | 6 |
| **129 77 9600** | **129 77 9603** | 250,3 mm | 8 |
| **129 77 9610** | **129 77 9613** | 299 mm | 10 |
| **129 77 9620** | **129 77 9623** | 329 mm | 12 |

NOTES: SSt – stainless steel in accordance with ISO 5832-1 Ti – titanium version, material: Ti6Al4V ELI in accordance with ISO 5832-3

# DISTAL FEMORAL PLATE

## LOCKING BONE SCREWS 5 mm

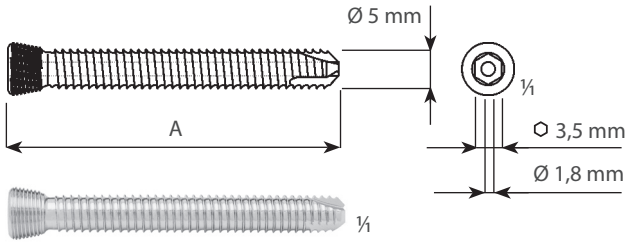



**129 77 8121**
self-tapping
44 mm

NOTES:
drilled with Ø 3.9 mm drill
introduction by a screwdriver with 3.5 mm socket

| SSt | Ti | A |
|---|---|---|
| **129 77 7981** | **129 77 7984** | 16 mm |
| **129 77 7991** | **129 77 7994** | 18 mm |
| **129 77 8001** | **129 77 8004** | 20 mm |
| **129 77 8011** | **129 77 8014** | 22 mm |
| **129 77 8021** | **129 77 8024** | 24 mm |
| **129 77 8031** | **129 77 8034** | 26 mm |
| **129 77 8041** | **129 77 8044** | 28 mm |
| **129 77 8051** | **129 77 8054** | 30 mm |
| **129 77 8061** | **129 77 8064** | 32 mm |
| **129 77 8071** | **129 77 8074** | 34 mm |
| **129 77 8081** | **129 77 8084** | 36 mm |
| **129 77 8091** | **129 77 8094** | 38 mm |
| **129 77 8101** | **129 77 8104** | 40 mm |
| **129 77 8111** | **129 77 8114** | 42 mm |
| **129 77 8121** | **129 77 8124** | 44 mm |
| **129 77 8131** | **129 77 8134** | 46 mm |
| **129 77 8141** | **129 77 8144** | 48 mm |
| **129 77 8151** | **129 77 8154** | 50 mm |
| **129 77 8161** | **129 77 8164** | 55 mm |
| **129 77 8171** | **129 77 8174** | 60 mm |
| **129 77 8181** | **129 77 8184** | 65 mm |
| **129 77 8191** | **129 77 8194** | 70 mm |
| **129 77 8201** | **129 77 8204** | 75 mm |
| **129 78 7401** | **129 78 7404** | 80 mm |
| **129 78 7411** | **129 78 7414** | 85 mm |
| **129 78 7421** | **129 78 7424** | 90 mm |
| **129 78 7431** | **129 78 7434** | 95 mm |
| **129 78 7441** | **129 78 7444** | 100 mm |
| **129 78 7451** | **129 78 7454** | 105 mm |

## CANNULATED LOCKING BONE SCREWS 5 mm




**129 77 8821**
self-tapping
44 mm

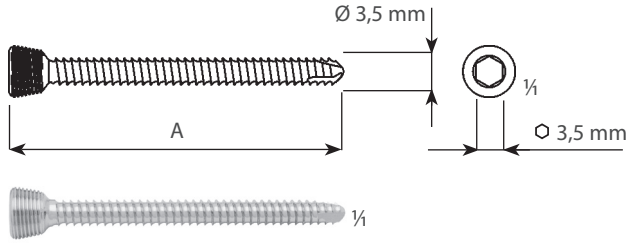
NOTES:
drilled with Ø 3.9 mm drill
introduction by a cannulated screwdriver with 3.5 mm socket

CANNULATED

| SSt | Ti | A |
|---|---|---|
| **129 77 8681** | **129 77 8684** | 16 mm |
| **129 77 8691** | **129 77 8694** | 18 mm |
| **129 77 8701** | **129 77 8704** | 20 mm |
| **129 77 8711** | **129 77 8714** | 22 mm |
| **129 77 8721** | **129 77 8724** | 24 mm |
| **129 77 8731** | **129 77 8734** | 26 mm |
| **129 77 8741** | **129 77 8744** | 28 mm |
| **129 77 8751** | **129 77 8754** | 30 mm |
| **129 77 8761** | **129 77 8764** | 23 mm |
| **129 77 8771** | **129 77 8774** | 34 mm |
| **129 77 8781** | **129 77 8784** | 36 mm |
| **129 77 8791** | **129 77 8794** | 38 mm |
| **129 77 8801** | **129 77 8804** | 40 mm |
| **129 77 8811** | **129 77 8814** | 42 mm |
| **129 77 8821** | **129 77 8824** | 44 mm |
| **129 77 8831** | **129 77 8834** | 46 mm |
| **129 77 8841** | **129 77 8844** | 48 mm |
| **129 77 8851** | **129 77 8854** | 50 mm |
| **129 77 8861** | **129 77 8864** | 55 mm |
| **129 77 8871** | **129 77 8874** | 60 mm |
| **129 77 8881** | **129 77 8884** | 65 mm |
| **129 77 8891** | **129 77 8894** | 70 mm |
| **129 77 8901** | **129 77 8904** | 75 mm |
| **129 78 7541** | **129 78 7544** | 80 mm |
| **129 78 7551** | **129 78 7554** | 85 mm |
| **129 78 7561** | **129 78 7564** | 90 mm |
| **129 78 7571** | **129 78 7574** | 95 mm |
| **129 78 7581** | **129 78 7584** | 100 mm |
| **129 78 7591** | **129 78 7594** | 105 mm |

NOTES: SSt – stainless steel in accordance with ISO 5832-1 Ti – titanium version, material: Ti6Al4V ELI in accordance with ISO 5832-3

## LOCKING BONE SCREWS 3,5 mm




**129 77 8371**
self-tapping
44 mm

NOTES:
drilled with Ø 2.9 mm drill
introduction by a screwdriver with 3.5 mm socket

| SSt | Ti | A |
|---|---|---|
| **129 77 8231** | **129 77 8234** | 16 mm |
| **129 77 8241** | **129 77 8244** | 18 mm |
| **129 77 8251** | **129 77 8254** | 20 mm |
| **129 77 8261** | **129 77 8264** | 22 mm |
| **129 77 8271** | **129 77 8274** | 24 mm |
| **129 77 8281** | **129 77 8284** | 26 mm |
| **129 77 8291** | **129 77 8294** | 28 mm |
| **129 77 8301** | **129 77 8304** | 30 mm |
| **129 77 8311** | **129 77 8314** | 32 mm |
| **129 77 8321** | **129 77 8324** | 34 mm |
| **129 77 8331** | **129 77 8334** | 36 mm |
| **129 77 8341** | **129 77 8344** | 38 mm |
| **129 77 8351** | **129 77 8354** | 40 mm |
| **129 77 8361** | **129 77 8364** | 42 mm |
| **129 77 8371** | **129 77 8374** | 44 mm |
| **129 77 8381** | **129 77 8384** | 46 mm |
| **129 77 8391** | **129 77 8394** | 48 mm |
| **129 77 8401** | **129 77 8404** | 50 mm |
| **129 77 8411** | **129 77 8414** | 55 mm |
| **129 77 8421** | **129 77 8424** | 60 mm |
| **129 77 8431** | **129 77 8434** | 65 mm |
| **129 77 8441** | **129 77 8444** | 70 mm |
| **129 77 8451** | **129 77 8454** | 75 mm |
| **129 78 7471** | **129 78 7474** | 80 mm |
| **129 78 7481** | **129 78 7484** | 85 mm |
| **129 78 7491** | **129 78 7494** | 90 mm |
| **129 78 7501** | **129 78 7504** | 95 mm |
| **129 78 7511** | **129 78 7514** | 100 mm |
| **129 78 7521** | **129 78 7524** | 105 mm |

NOTES: SSt – stainless steel in accordance with ISO 5832-1 Ti – titanium version, material: Ti6Al4V ELI in accordance with ISO 5832-3

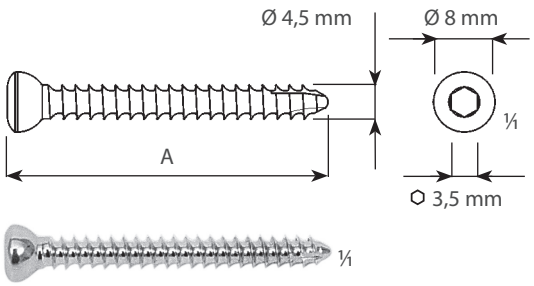
## STANDS FOR LOCKING SCREWS

STAND FOR
LOCKING SCREWS 5/3,5
**129 69 5741**
214 × 186 mm
height 120 mm

STAND FOR
LOCKING SCREWS 5/3,5
**129 69 6390**
214 × 126 mm
height 120 mm

STAND FOR
CANNULATED LOCKING SCREWS 5
**129 69 6395**
214 × 126 mm
height 120 mm

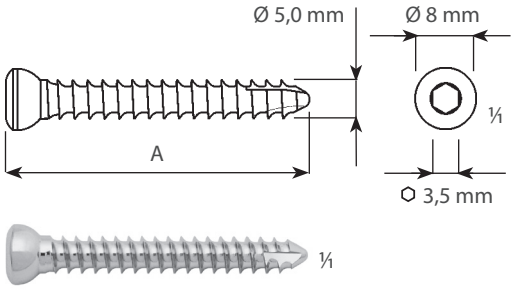
## SELF-TAPPING CORTICAL BONE SCREWS – HA 4,5 mm




**129 79 9511**
self-tapping
42 mm

| SSt | Ti | A |
|---|---|---|
| **129 79 9421** | **129 79 9424** | 14 mm |
| **129 79 9431** | **129 79 9434** | 16 mm |
| **129 79 9441** | **129 79 9444** | 18 mm |
| **129 79 5521** | **129 79 5524** | 20 mm |
| **129 79 9451** | **129 79 9454** | 22 mm |
| **129 79 9461** | **129 79 9464** | 24 mm |
| **129 79 5541** | **129 79 5544** | 26 mm |
| **129 79 9471** | **129 79 9474** | 28 mm |
| **129 79 5551** | **129 79 5554** | 30 mm |
| **129 79 9481** | **129 79 9484** | 32 mm |
| **129 79 9491** | **129 79 9494** | 34 mm |
| **129 79 5571** | **129 79 5574** | 36 mm |
| **129 79 9501** | **129 79 9504** | 38 mm |
| **129 79 5581** | **129 79 5584** | 40 mm |
| **129 79 9511** | **129 79 9514** | 42 mm |
| **129 79 9521** | **129 79 9524** | 44 mm |
| **129 79 9531** | **129 79 9534** | 46 mm |
| **129 79 9541** | **129 79 9544** | 48 mm |
| **129 79 5601** | **129 79 5604** | 50 mm |
| **129 79 9551** | **129 79 9554** | 52 mm |
| **129 79 9561** | **129 79 9564** | 54 mm |
| **129 79 9571** | **129 79 9574** | 56 mm |
| **129 79 9581** | **129 79 9584** | 58 mm |
| **129 79 5621** | **129 79 5624** | 60 mm |
| **129 79 5631** | **129 79 5634** | 65 mm |
| **129 79 5641** | **129 79 5644** | 70 mm |
| **129 79 5651** | **129 79 5654** | 75 mm |
| **129 79 5661** | **129 79 5664** | 80 mm |
| **129 79 5671** | **129 79 5674** | 85 mm |
| **129 79 5681** | **129 79 5684** | 90 mm |
| **129 79 5691** | **129 79 5694** | 95 mm |
| **129 79 5701** | **129 79 5704** | 100 mm |
| **129 79 5711** | **129 79 5714** | 105 mm |
| **129 79 5721** | **129 79 5724** | 110 mm |

## SELF-TAPPING CORTICAL BONE SCREWS – HA 5 mm

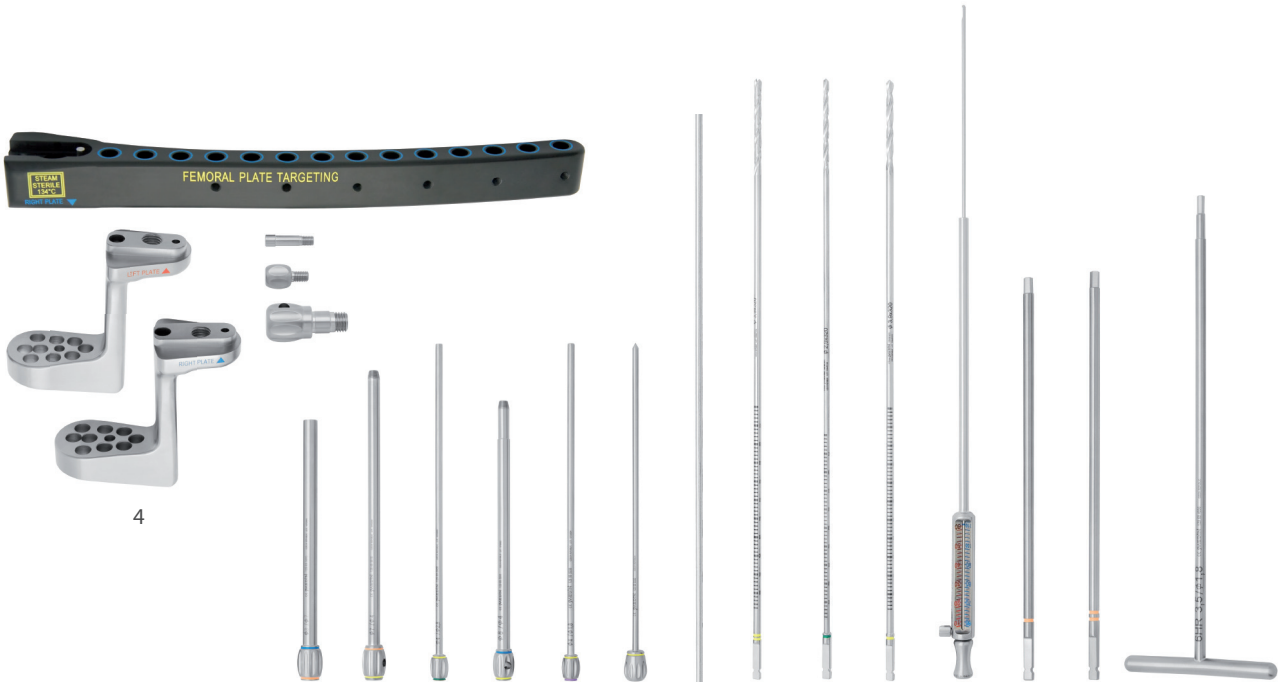



**129 77 3891**
self-tapping
40 mm

| SSt | Ti | A |
|---|---|---|
| **129 77 3851** | **129 77 3854** | 20 mm |
| **129 77 3861** | **129 77 3864** | 25 mm |
| **129 77 3871** | **129 77 3874** | 30 mm |
| **129 77 3881** | **129 77 3884** | 35 mm |
| **129 77 3891** | **129 77 3894** | 40 mm |
| **129 77 3901** | **129 77 3904** | 45 mm |
| **129 77 3911** | **129 77 3914** | 50 mm |
| **129 77 3921** | **129 77 3924** | 55 mm |
| **129 77 3931** | **129 77 3934** | 60 mm |
| **129 77 3941** | **129 77 3944** | 65 mm |
| **129 77 3951** | **129 77 3954** | 70 mm |
| **129 77 3961** | **129 77 3964** | 75 mm |
| **129 77 3971** | **129 77 3974** | 80 mm |
| **129 77 3981** | **129 77 3984** | 90 mm |
| **129 77 3991** | **129 77 3994** | 100 mm |

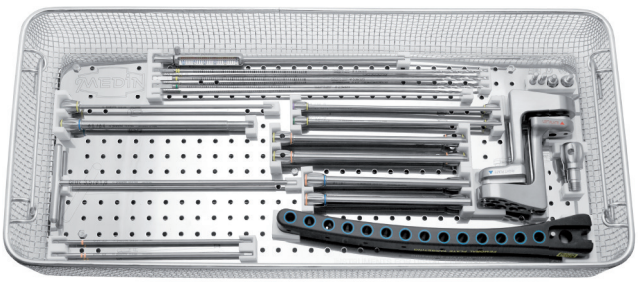
NOTES: SSt – stainless steel in accordance with ISO 5832-1 Ti – titanium version, material: Ti6Al4V ELI in accordance with ISO 5832-3

## INSTRUMENTS FOR DISTAL FEMORAL PLATES

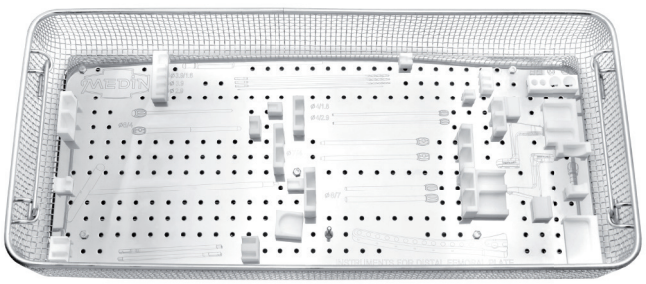



**139 09 0320**
set

| | | | pcs |
|---|---|---|---|
| 1 | **129 09 2550** | K-wire MEDIN Ø 1,5 mm; 300 mm | 3 |
| 2 | **129 69 4056** | T-Screwdriver; hexagon 3,5 mm | 1 |
| 3 | **129 69 4785** | Depth gauge | 1 |
| 4 | **129 69 4800** | Aiming device for distal femoral plate | 1 |
| 5 | **129 69 5256** | Screwdriver; hexagon 3,5 mm | 1 |
| 6 | **129 69 5266** | Cannulated screwdriver; hexagon 3,5 mm | 1 |
| 7 | **129 69 5600** | Guide sleeve Ø 8/7 mm; 150 mm | 4 |
| 8 | **129 69 5610** | Drill sleeve Ø 7/4 mm; 180 mm | 4 |
| 9 | **129 69 5620** | Drill sleeve Ø 4/2,9 mm; 195 mm | 2 |
| 10 | **129 69 5631** | Drill Ø 3,9 mm; 320 mm | 1 |
| 11 | **129 69 5641** | Drill Ø 2,9 mm; 320 mm | 1 |
| 12 | **129 69 5650** | Fastening sleeve Ø 8/4 mm; 180 mm | 1 |
| 13 | **129 69 5930** | Drill sleeve Ø 4/1,8 mm; 195 mm | 2 |
| 14 | **129 69 6171** | Cannulated drill Ø 3,9 mm; 320 mm | 1 |
| 15 | **129 69 6330** | Trocar Ø 4 mm; 180 mm | 1 |



INSTRUMENTS FOR DISTAL FEMORAL PLATES
**139 09 0325**
540 × 240 × 90 mm
with instruments



SIEVE FOR INSTRUMENTS FOR DISTAL FEMORAL PLATES
**129 69 5900**
540 × 240 × 90 mm
without instruments



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2012