

# ChM<sup>®</sup>


































5,0 ChM Locked Plating  
ChLPsystem

HEPI plates 3.4160

- *SURGICAL TECHNIQUE*
- *IMPLANTS*
- *INSTRUMENT SET*



## SYMBOLS DESCRIPTION

	Titanium or titanium alloy		H length [mm]
	Cobalt		Angle
	Left		available lengths
	Right		Available number of holes
	Available versions: left/right		Thickness [mm]
	Length		Scale 1:1
	Torx drive		Number of threaded holes in the shaft part of the plate
	Torx drive cannulated		Number of locking holes in the plate
	Hexagonal drive		Variable angle
	Hexagonal drive cannulated		Cortical
	Cannulated		Cancellous
	Locking		Available in sterile/ non- sterile condition
	Diameter [mm]		Refer to surgical technique
	Caution - pay attention to a special procedure.		
	Perform the activity under X-Ray control.		
	Information about the next stages of a procedure.		
	Proceed to the next stage.		
	Return to the specified stage and repeat the activity.		
	Before using the product, carefully read the Instructions for Use. It contains, among others, indications, contraindications, side effects, recommendations and warnings related to the use of the product.		
	The above description is not a detailed instruction of conduct. The surgeon decides about choosing the operating procedure.		

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The manufacturer reserves the right to introduce design changes.  
Updated INSTRUCTIONS FOR USE are available at the following website: ifu.chm.eu

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## 1. INTRODUCTION

This surgical technique applies to plates used for correction of the angle deformity of long bones by inhibiting longitudinal growth of the physis. The presented range of implants is made of materials in accordance with ISO 5832 standards.

The system includes:

- implants (*plates and screws*),
- instrument set used in the surgery,
- surgical technique.

### Indications

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Angular deformity of long bones of upper and lower limbs in patients with active epiphyseal plate.

### Plate selection and shaping

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The plates are available in different variants of screw holes spacing. This allows for optimal selection of the implant to the deformity type. Shaping of the plates is not allowed.



Before using the product, carefully read the Instructions for Use. It contains, among others, indications, contraindications, side effects, recommendations and warnings related to the use of the product.

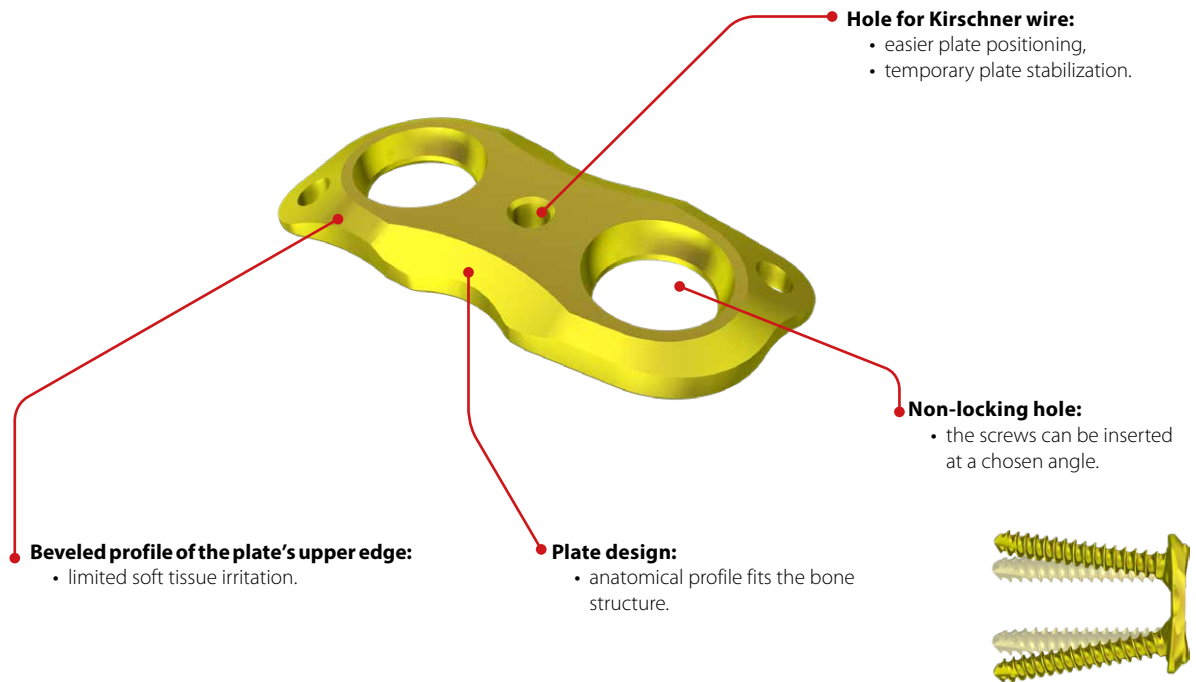


The above description is not a detailed instruction of conduct. The surgeon decides about choosing the operating procedure.

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## 2. IMPLANT FEATURES

HEPI plates are compatible with cortical screws 3.5mm.  
To facilitate their identification, both plates and screws are gold anodized.



### 3. SURGICAL TECHNIQUE

#### 3.1. PATIENT'S POSITIONING

It is recommended to place a patient supine.

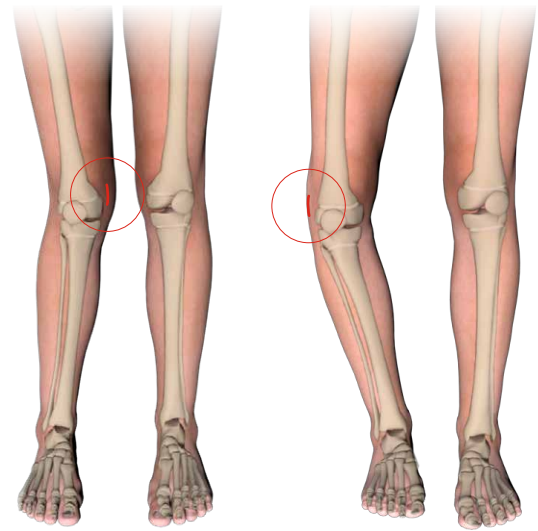


#### 3.2. SURGICAL APPROACH

The surgical approach depends on the type and location of the deformity. Perform a longitudinal skin incision of approx. 2-3 cm above the epiphyseal plate. Retract the tissues to expose the implantation site



**NOTE:** confirm the activity and location of the epiphyseal plate using X-Ray imaging.



#### 3.3. IMPLANT SELECTION

Select the right size of an implant to the anatomical bone structure.



The length of the plate should allow insertion of screws above and below the epiphyseal plate.

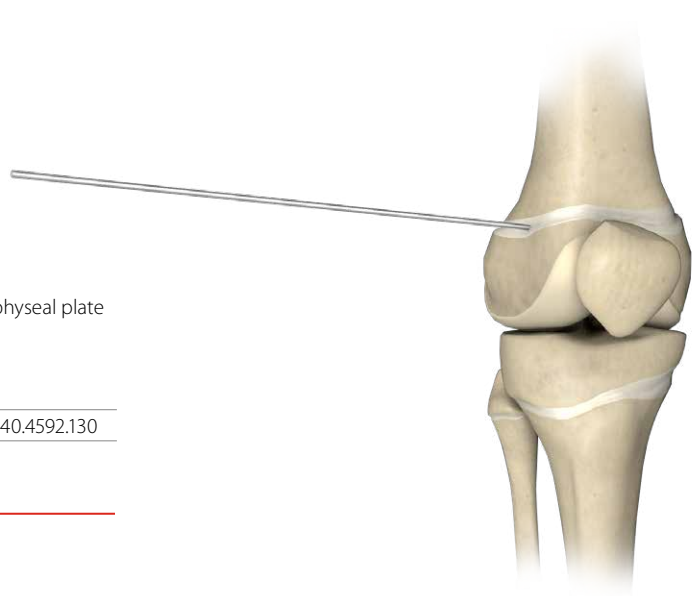
#### 3.4. INTRODUCTION OF KIRSCHNER WIRE

Insert Kirschner wire 1.5/130 **[40.4592.130]** centrally into the epiphyseal plate to a depth of approx. 1 cm.

40.4592.130

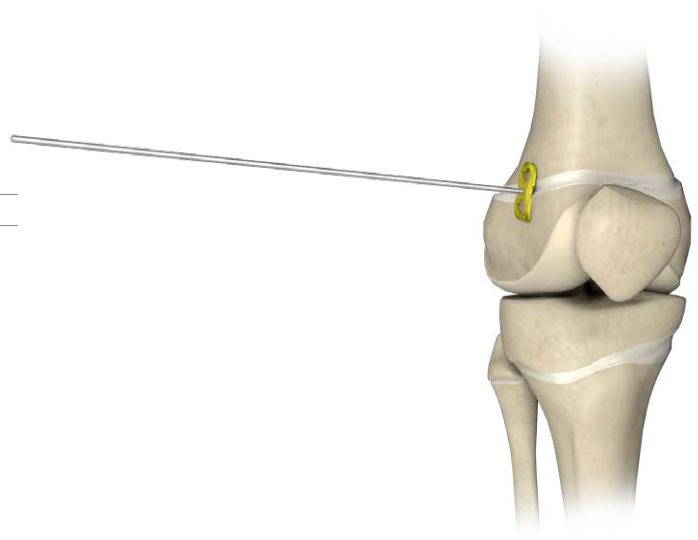


**NOTE:** introduce the wire under X-Ray control.



### 3.5. PLATE INSERTION

Implant the chosen plate using the Kirchner wire 1.5/130 **[40.4592.130]**



### 3.6. TEMPORARY PLATE STABILIZATION

If necessary, temporarily stabilize the implant position with Kirschner wires inserted into the dedicated holes in the plate.

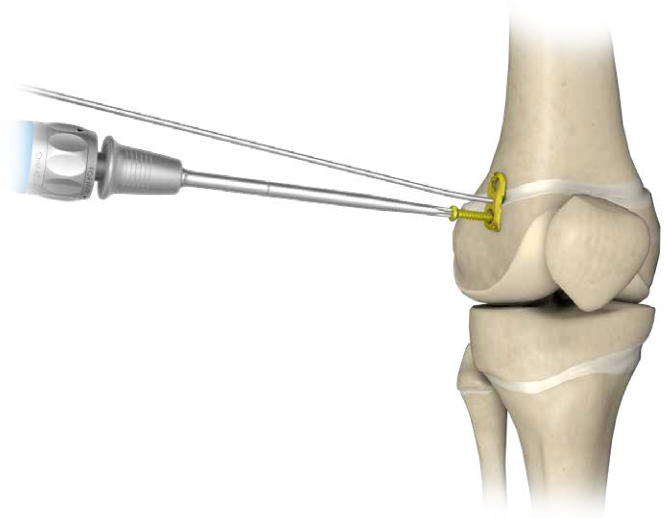
### 3.7. SCREWS INSERTION



Make sure the screws do not interfere with the epiphyseal plate and the articular surface.

Insert self-tapping cortical screws 3.5 **[3.1306]** of appropriate length into the holes of the plate (*acc. to procedure 4a*). Use X-Ray imaging to verify the correct positioning of the plate and screws.

Remove the Kirschner wire.



### 3.8. WOUND CLOSURE

Before closing the wound, take X-Ray images in at least two projections to confirm implant position. Make sure all the screws are properly tightened.

Use appropriate surgical technique to close the wound.



## 4. SURGICAL PROCEDURES

### 4a. PROCEDURE OF CORTICAL SELF-TAPPING SCREW 3.5 [3.1306] INSERTION

#### Compression guide positioning

Position the compression guide 2.5 [40.4804.725] in a desired position.



#### Hole drilling

Perform a hole for a cortical screw 3.5 insertion. For drilling, use drill with scale 2.5/210 [40.5912.212] and compression guide in a desired position.



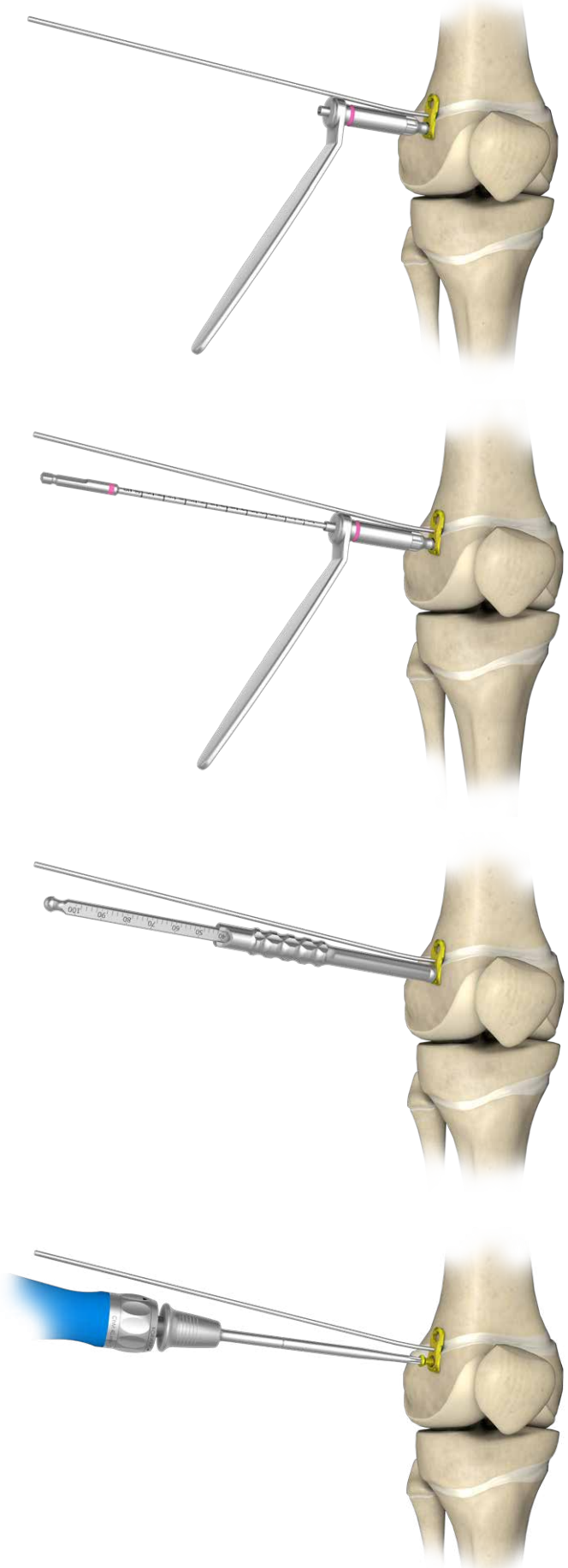
#### Measurement of hole depth

Use depth measure [40.4639.550] to determine the length of a screw.



#### Screw insertion

Insert cortical screw using handle ratchet device [40.6654.000] and screwdriver tip T25 [40.5677.000].



## 5. POSTOPERATIVE PROCEDURE

Introduce appropriate post-operative treatment. The physician decides on the post-operative treatment and its conduct.

## 6. IMPLANT REMOVAL









The physician decides about implant removal. Use screwdriver tip T25 **[40.5677.000]** to remove all the screws.

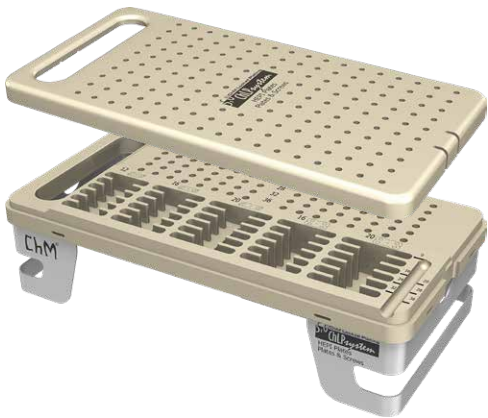
## 7. CATALOGUE PAGES

## 7a. INSTRUMENT SET

## Instrument set for 5.0ChLP 4x4

15.0205.106

	Name	Catalogue no.	Pcs
	Compression guide 2.5	40.4804.725	1
	Kirschner wire 1.5/130	40.4592.130	4
	Drill with scale 2.5/210	40.5912.212	2
	Depth measure	40.4639.550	1
	Screwdriver tip T15	40.5677.000	1
	Handle ratchet device	40.6654.000	1
	5.0ChLP container lid 4x4 H	14.0205.107	1
	5.0ChLP container 4x4 H	14.0205.106	1



HEPI plate



Cortical self-tapping screw 3.5



L [mm]	16	20	24	28	32	36
Pcs	8	8	8	8	8	8

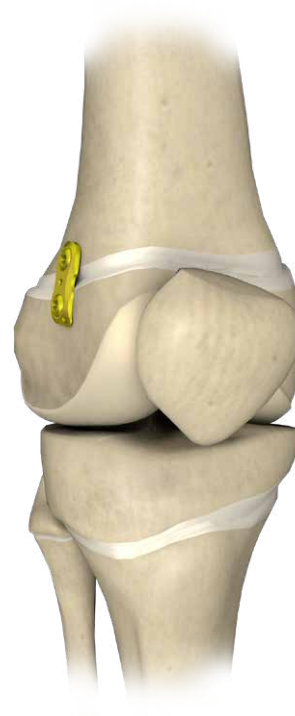
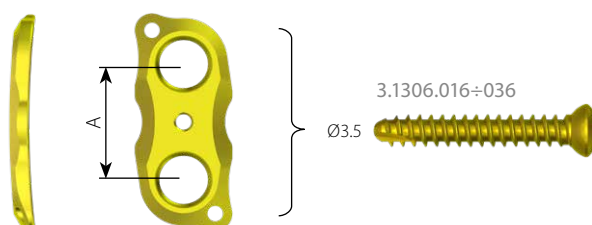
\* Stand does not include implants



## HEPI plate 2hol.

O	A [mm]	Ti
2	12	3.4160.112
2	16	3.4160.116
2	20	3.4160.120

O – screws holes numer



## Cortical self-tapping screw 3.5

	Len	Ti
	16	3.1306.016
	20	3.1306.020
	24	3.1306.024
	28	3.1306.028
	32	3.1306.032
	36	3.1306.036





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