







LINK[®] 

ENDO-MODEL SL

Surgical Technique

CE 0482

Explanation of Pictograms			
	Manufacturer		Article number
	Material number		Product meets the applicable requirements, which are regulated in the EU harmonization legislation for the affixing of the CE marking.

Endo-Modell SL

Rotating and Pure Hinge Knee System

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- 03 Variety of Assembly Applications
- 04 Preoperative Planning

Surgical Technique

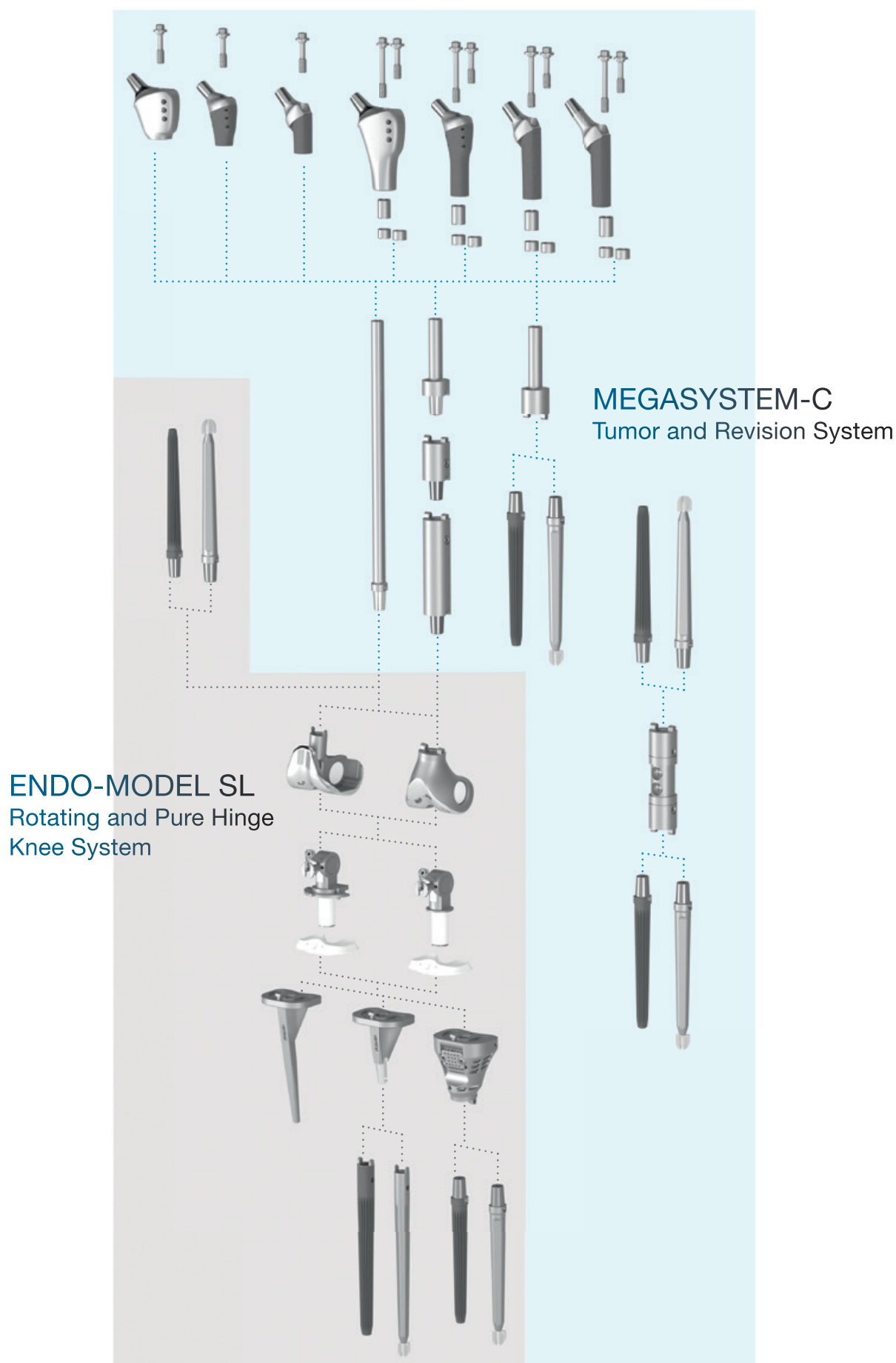
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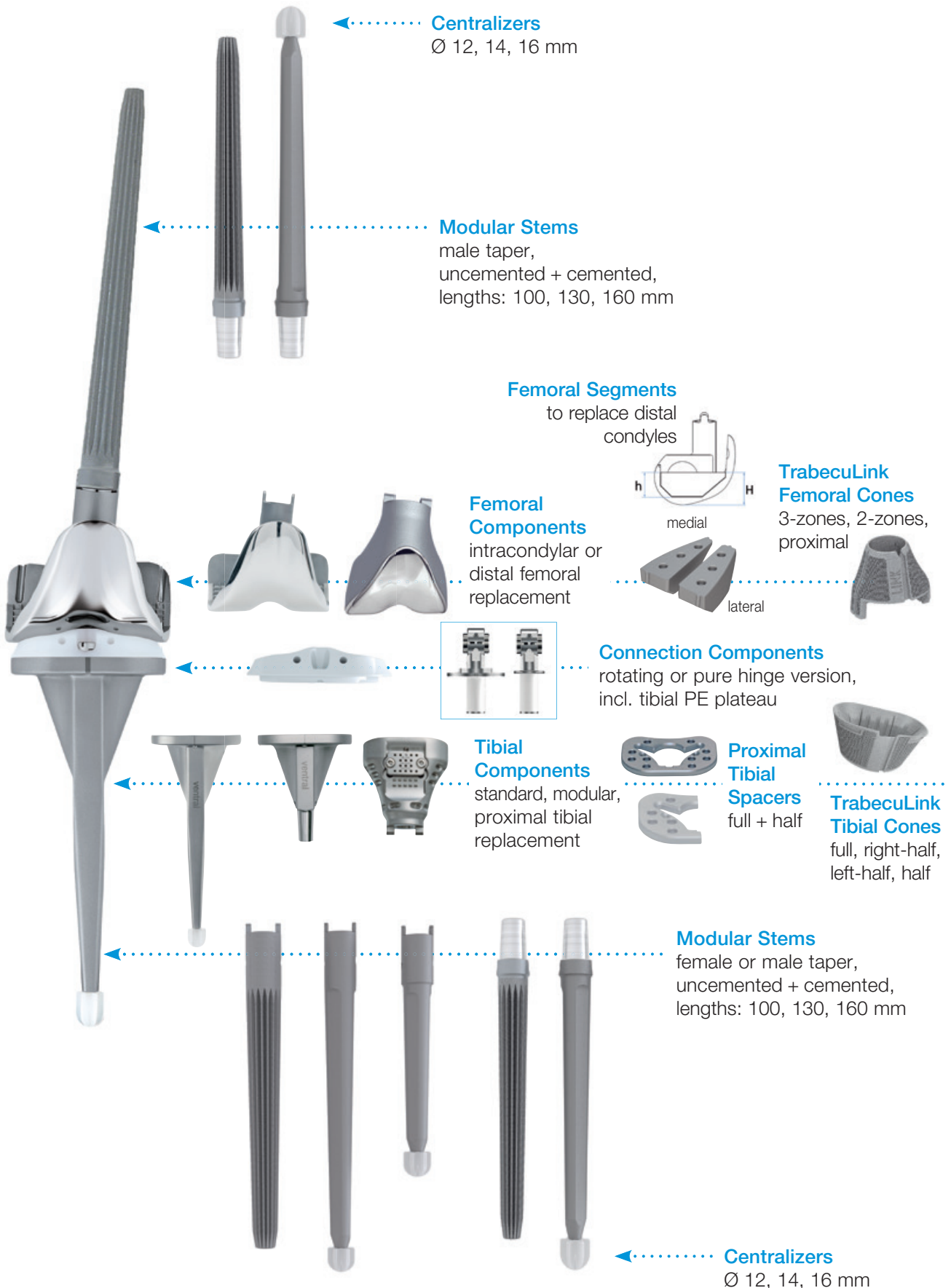
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For the sake of clarity, in the following, also shorter versions of the above-mentioned product name is used: Endo-Model SL, Megasytem-C



Preoperative Planning

Measurement tables and X-ray templates are available for the preoperative planning of revision and tumor surgery with the Endo-Model SL Rotating and Pure Hinge Knee System, which enable the surgeon to plan precisely the implants that will be used.

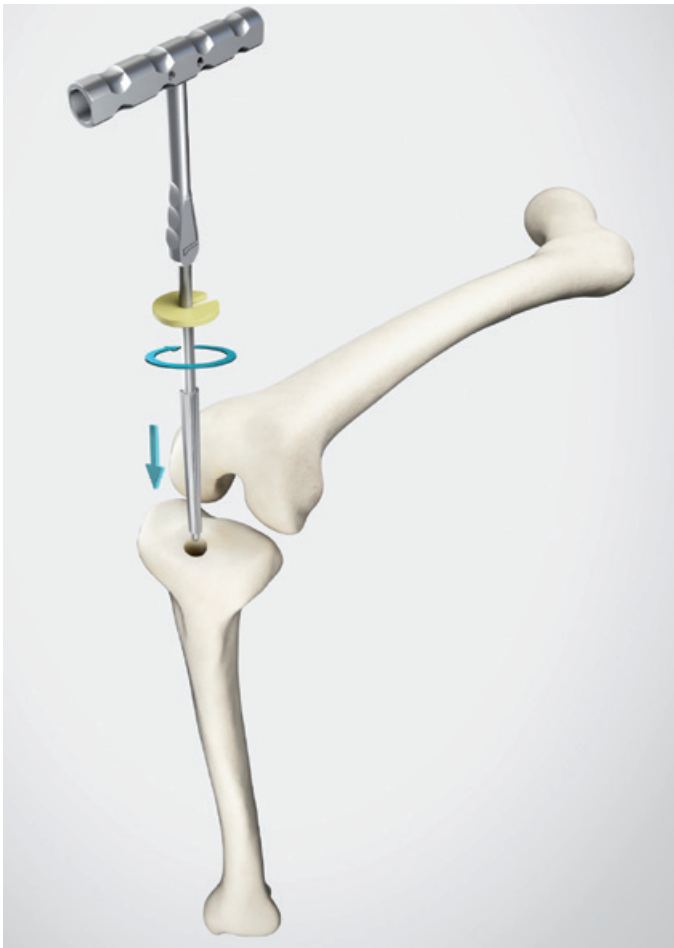
True-to-scale radiographs or precise knowledge of the actual magnification factor are the foundation for exact preoperative planning. LINK X-ray templates show the implant illustrations in 110% magnification as standard. If different scales are desired, we will meet these wishes as far as technically possible. We provide data for digital planning on request to providers of digital planning software in the current formats.

Despite good preoperative planning, unforeseeable extensive bone loss in tumor and revision cases often presents a challenge for the surgeon. Especially in these cases the Endo-Model SL Rotating and Pure Hinge Knee Prosthesis also in conjunction with the MEGASYSTEM-C – proves its user friendliness. There is a high degree of modularity and flexibility in the adaptation of the implants to the respective bone situation in 10-mm steps.

In contrast to the use of normal hip and knee joint prostheses, management of extensive bone loss depends on the conditions in each individual situation. Structural changes in the muscles and ligaments, fixation conditions etc. increase the operative demands of tumor prostheses. Accordingly, management of extensive bone loss presents particular problems and is therefore subject to greater risk compared with the use of normal joint prostheses.



Standard Preparation Tibia



Intramedullary Alignment

01

Mark the entry site with the bone awl (317-658/01) and open the tibial canal with the conical drill (15-6037/00).

02

Mount the tapered reamer of the previously planned length (100 mm, 130 mm or 160 mm) at the T-handle (15-6053/00). The impactation plate (16-3203/00) latches into the slot on the shaft of the tapered reamer.

When uncemented modular stems are used, ream with an increasing diameter until the tapered reamer makes cortical contact over a continuous distance of approx. 50 mm. The uncemented implant that will be used must correspond in length and diameter to the last tapered reamer used.

For cemented modular stems, the tapered reamer should be at least 2 mm larger than the planned stem diameter.

CAUTION:

The position of the impactation plate represents the level of the joint line. Using the tapered reamers with a power tool is not permitted.



03

After the desired stability is achieved, the T-handle (15-6053/00) and the impaction plate (16-3203/00) are removed.

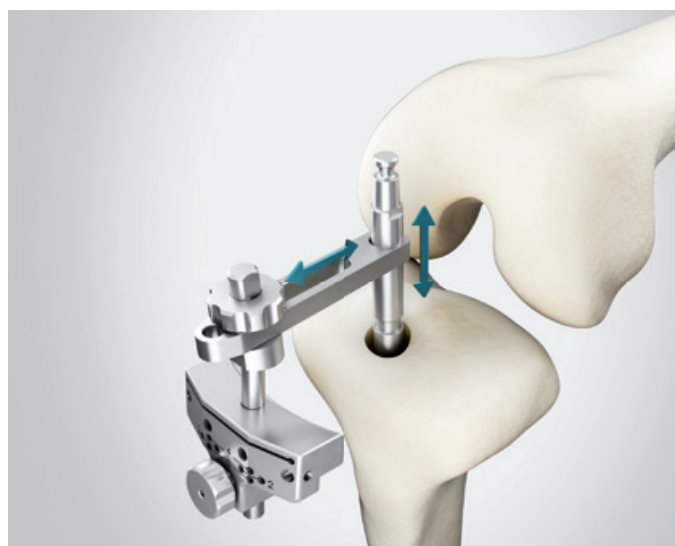
Please Note:

Surgical procedures for TrabecuLink Femoral and Tibial Cones are described in the implant-specific surgical technique.



04

Attach the connector (16-3212/08) to the shaft of the tapered reamer.

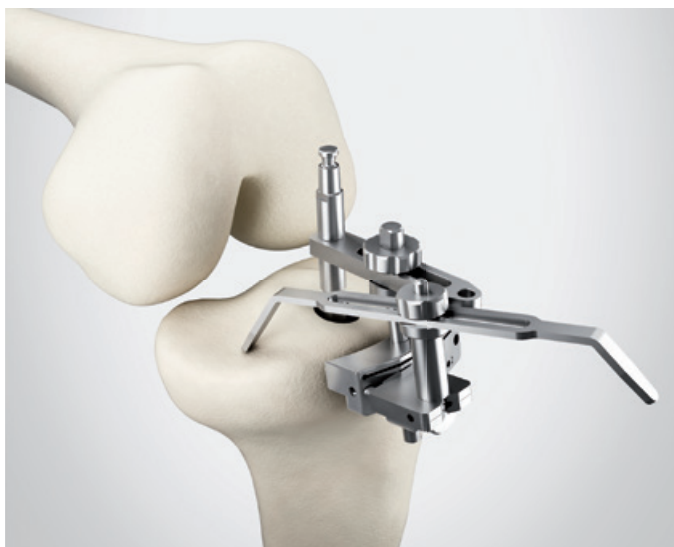


05

Attach the tibial saw guide (16-3241/00) to the anterior shaft of the connector and fix it provisionally by tightening the knurled screw.

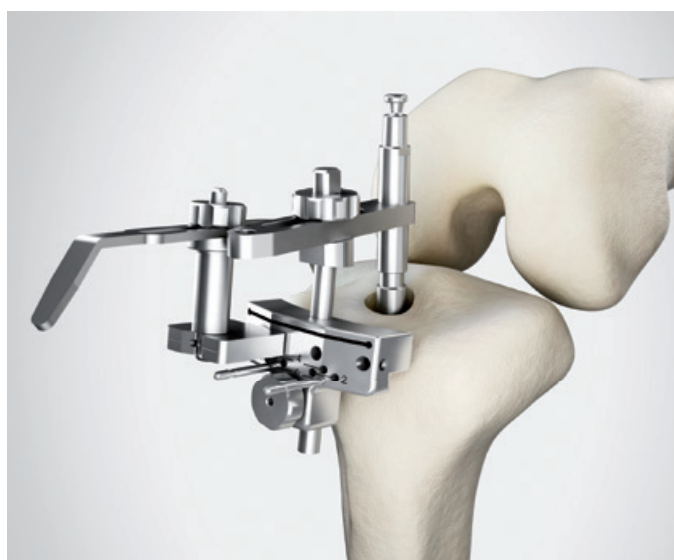
INFORMATION:

Drop post for tibial cut block must show „Front“ facing front to confirm proper posterior slope.



06

Attach the stylus for the tibial saw guide (317-802/52), preferably medially. The stylus tip marked **10**, marks the resection level in the primary procedure (10 mm resection level). The stylus tip marked **2** can be used in revision surgery and marks a resection level of 2 mm. Alternatively, the stylus can be omitted and the resection level can be set using the cutting template (317-607/50).



07

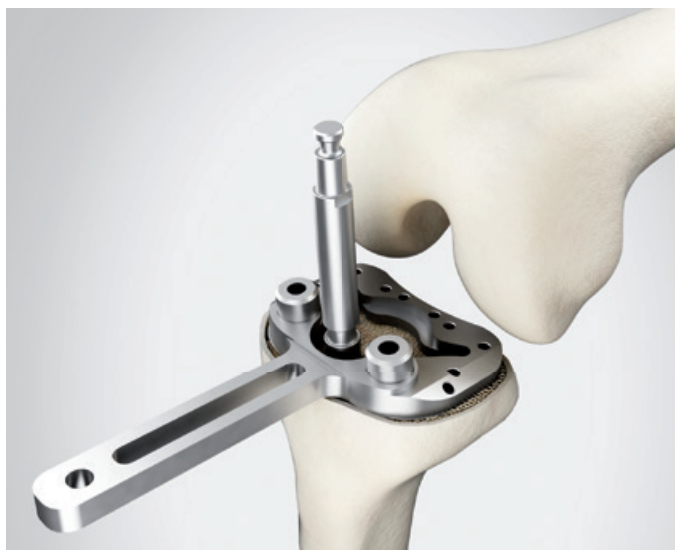
The tibial saw guide (16-3241/00) is fixed to the proximal tibia by means of two wire pins (317-585/65 or /95) through the lower row of parallel holes.



08

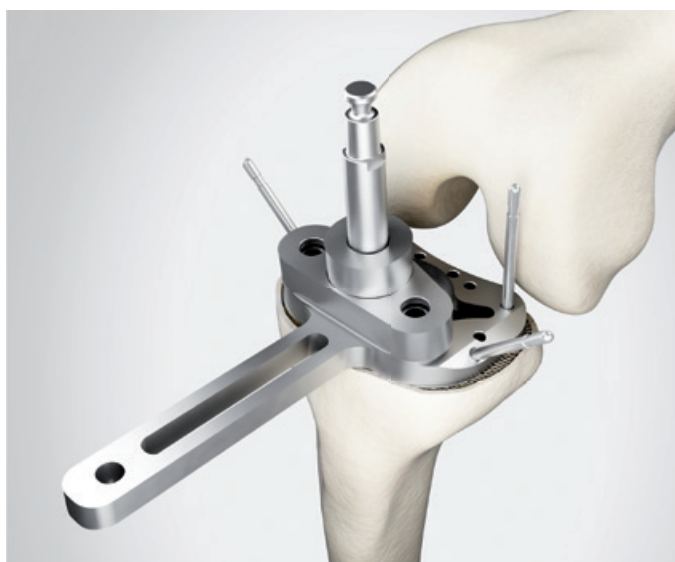
The bone is resected following removal of the stylus, connector and tapered reamer. The resection can be extended distally by 2 mm or 4 mm by shifting the tibial saw guide.

To achieve the correct resection geometry, sawblades with a thickness between 1.24 mm and 1.27 mm must be used.



09

The last used tapered reamer is inserted into the medullary cavity again. By placing the drill template (16-3198/12, /13, /14) that corresponds exactly to the implant size, the definitive implant size is determined. It is important that the implant covers the resection surface as far as possible. Projection over the cortical margin of the tibia must be avoided.



10

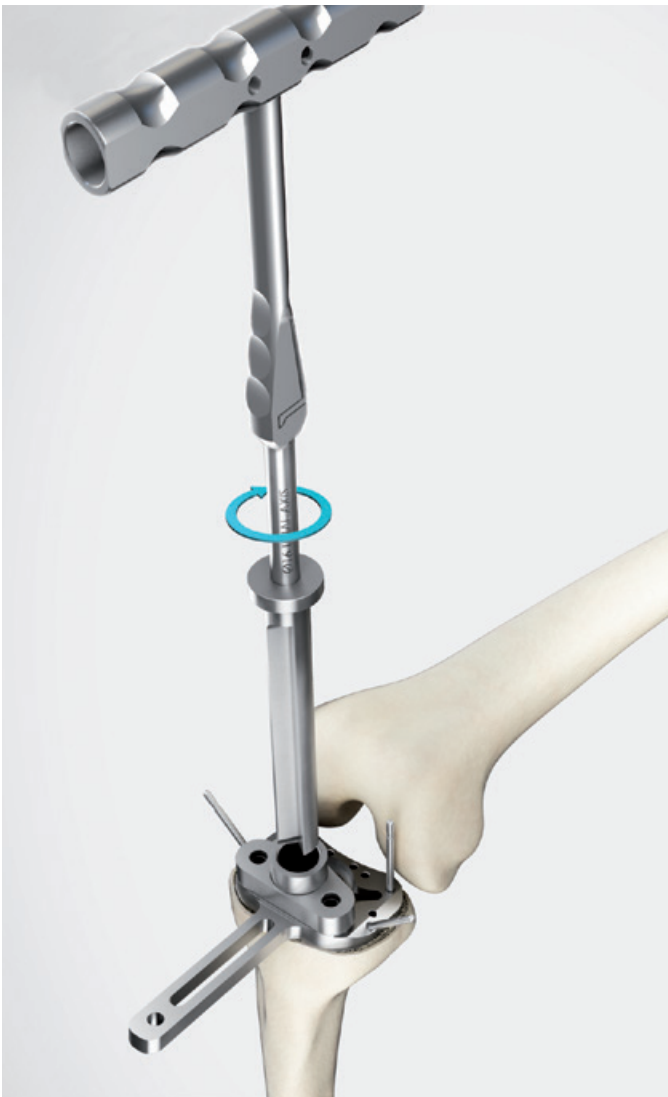
The tibial alignment gauge (16-3266/00) is placed over the shaft of the tapered reamer and connected to the pegs of the drill template. After rotational alignment of the drill template is determined, it is fixed to the resection surface with at least two wire pins.

For rotational alignment, the alignment rod (16-3242/00) can be pushed from ventral onto the drill template. The ventral alignment rod must be aligned in the area between the middle of the tibial tuberosity and its medial margin.



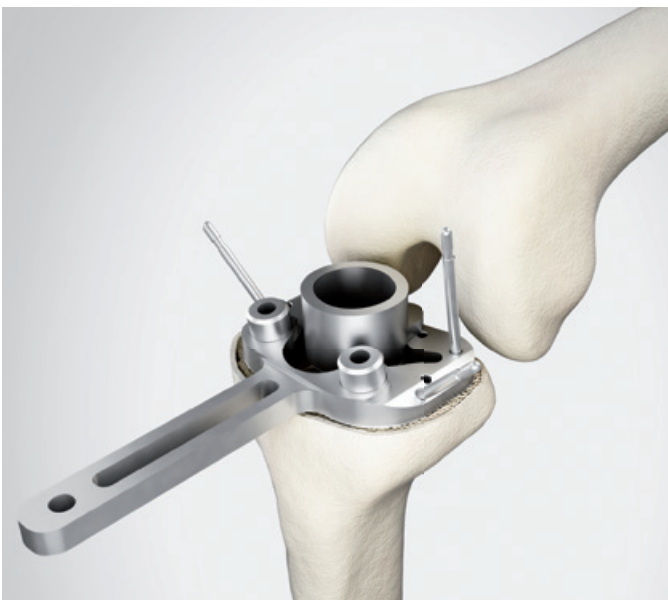
11

Removal of the alignment gauge. The tapered reamers Ø 19–24 mm must also be removed temporarily and then reinstalled.



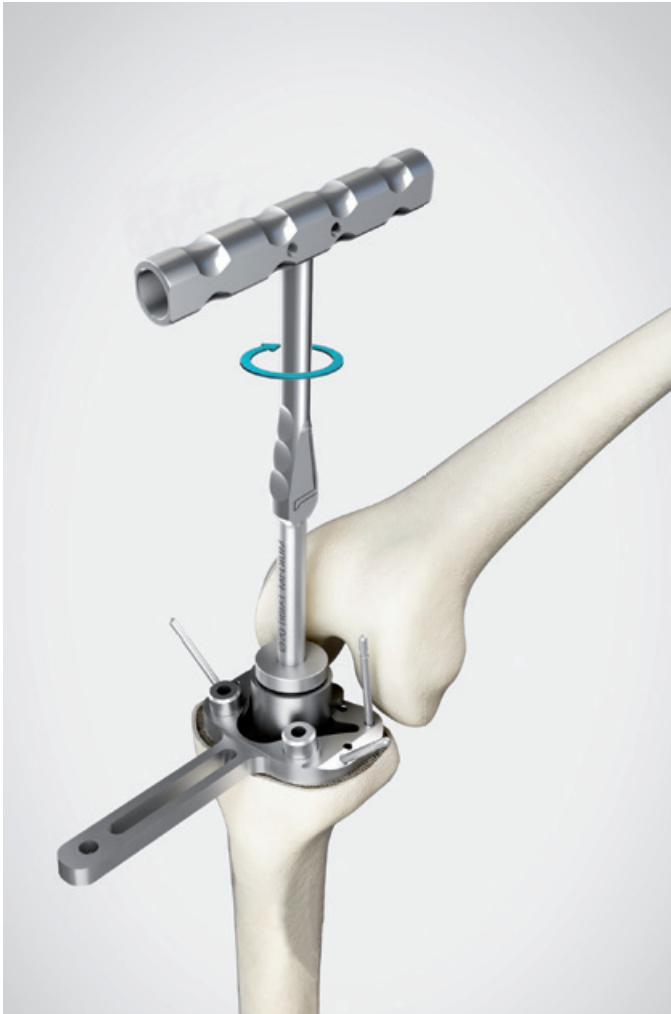
12

Attach Ø 16 mm tibial drill guide (16-3267/00) and drill the proximal tibia (manually or machine-operated) with the Ø 16 mm tibial drill (16-3207/16) until stop.



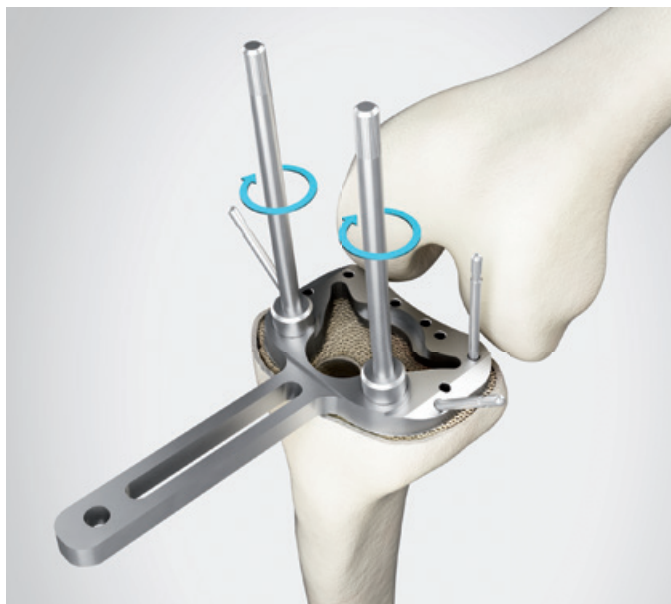
13

After removing the Ø 16 mm tibial drill guide, the tibial drill guide (16-3270/18, /20, /22) is attached to drill the central tibial opening. The tibial drill guide must correspond to the size of the drill template.



14

Drill the central tibial opening manually with the tibial drill (16-3208/18, /20, /22) corresponding in diameter to the tibial drill guide until stop.



15

Screw the guide rods (16-3211/00) into the anterior threaded holes of the drill template.



16

Screw the stem compressor (16-3201/02, /03, /04) to the corresponding bone compressor (16-3199/12, /13, /14) for the proximal contour. Attach the handle (16-3197/00).



17

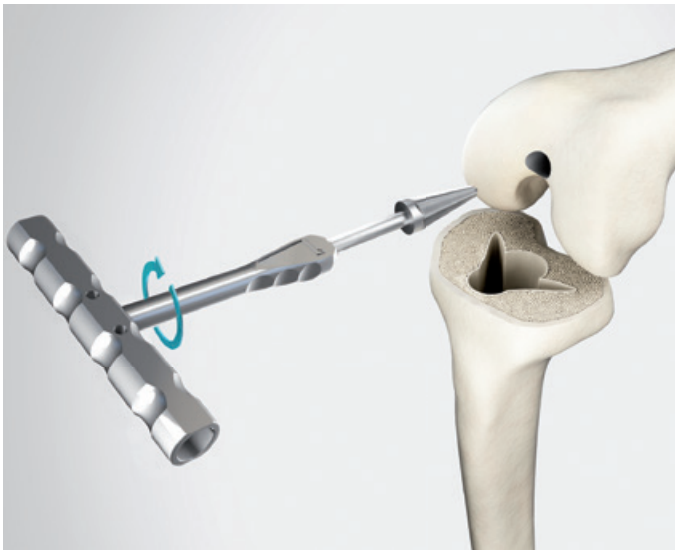
Drive in the compressor over the guide rods until the compressor touches the drill template.



18

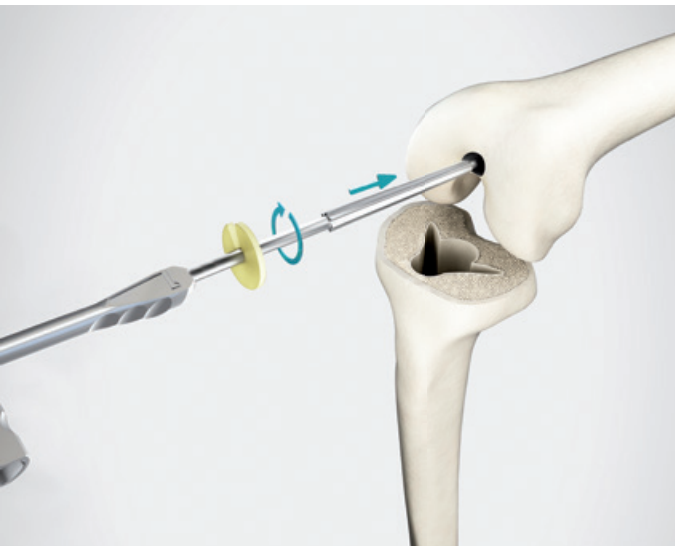
Preparation of the tibia is now complete.

Standard Preparation Femur



19

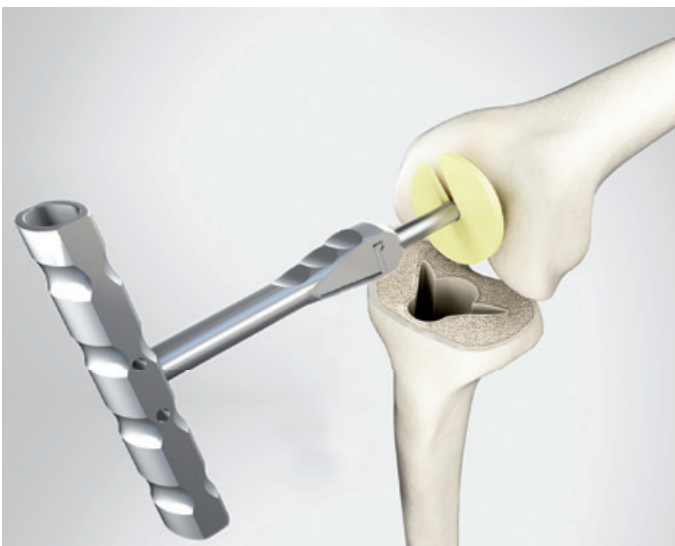
Mark the entry site with the bone awl (317-658/01) and open the femoral canal with the conical drill (15-6037/00).



20

Attach the tapered reamer of the planned length (100 mm, 130 mm or 160 mm) to the T-handle (15-6053/00). The impaction plate (16-3203/00) latches into the slot on the shaft of the tapered reamer.

When uncemented modular stems are used, ream with an increasing tapered reamer diameter until the tapered reamer makes cortical contact over a continuous distance of approx. 50 mm. The uncemented implant that will be used must correspond in length and diameter to the last tapered reamer used.



21

For cemented modular stems, the tapered reamer should be at least 2 mm larger than the planned stem diameter.

CAUTION:

The position of the impaction plate represents the level of the joint line. Using the tapered reamers with a power tool is not permitted.

Please Note:

Surgical procedures for TrabecuLink Femoral and Tibial Cones are described in the implant-specific surgical technique.

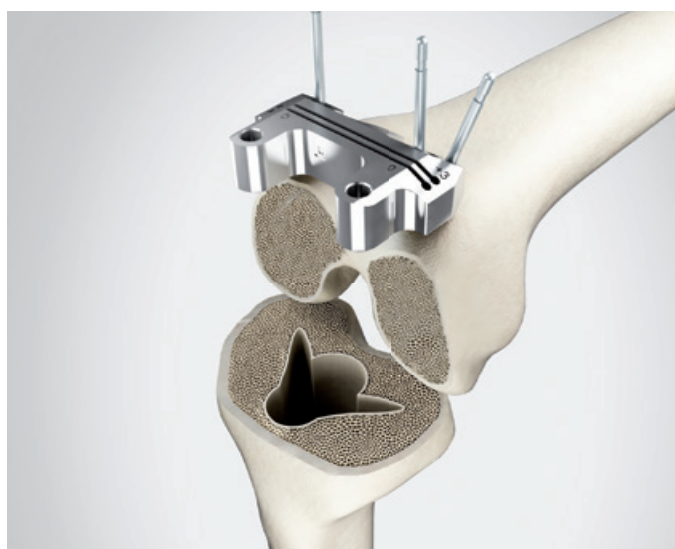
**22**

Remove the impaction plate and attach the alignment instrument for valgus angulation (16-3275/00). Ensure that the correct instrument for the right or left side is attached. The word “**Left**” or “**Right**” must face upward.

**23**

The appropriate cutting block (16-3228/02, /03, /04) for the distal saw cut – according to the previously determined size – is fixed to the valgus alignment instrument using the clamp. The cut can be simulated with the cutting template (317-607/50).

There is a +3 mm slot for proximal offset of the cut or the instrument can be moved by +2 mm after it is fixed by wire pins.

**24**

After fixing the cutting block by means of two parallel and one oblique wire pins, the valgus alignment instrument and the tapered reamer are removed and the distal cut is made.

To achieve the correct resection geometry, sawblades with a thickness between 1.24 mm and 1.27 mm must be used.



25

With the alignment instrument for determination of external rotation (16-3276/00), the selected femoral size is first set and fixed with a pin.

The alignment instrument allows external rotation to be set to 0°, 3° and 5° with reference to the posterior condylar tangent. Alternatively, external rotation can also be aligned using the Whiteside line with the small dipstick in the center of the instrument. Small alignment rods can be attached medially and laterally for orientation to the epicondylar line (Insall line).

Deficits in flexion and extension gap can be balanced by using femoral segments or tibial spacers.



26

Once the correct position is found, the instrument is fixed with two wire pins through the medial and lateral holes.



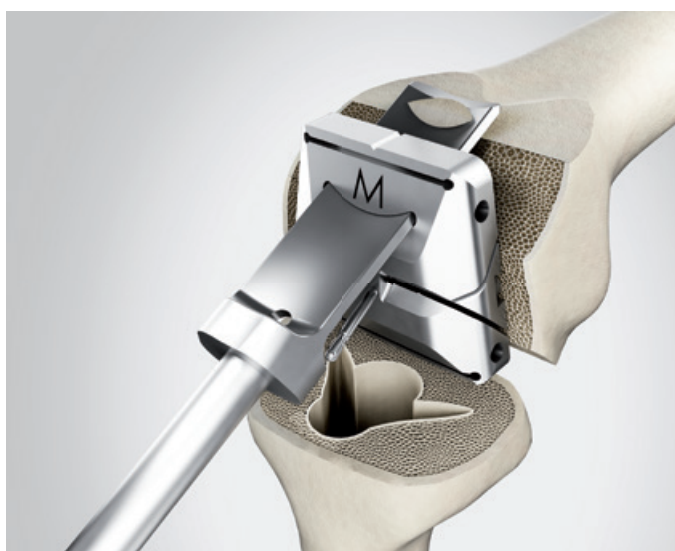
27

After the wire pins and alignment instrument have been removed, the dove tail adapter (317-802/36) is inserted in the depressions created by the wire pins.

**28**

The femur cutting block for chamfer cuts (16-3250/02, /03, /04) is pushed onto the side of the dove tail adapter and the central hex screw is fixed in the selected position with the hex screwdriver, hex 2.5 mm (10-5373/01). Two wire pins can then be inserted for additional fixation. The anterior cut is made first, then the dorsal and finally the anterior and posterior oblique cut.

To achieve the correct resection geometry, sawblades with a thickness between 1.24 mm and 1.27 mm are to be used.

**29**

Before the trochlea is prepared with the chisel (317-802/32) for the patellar gliding groove, the femur cutting block for chamfer cuts is aligned somewhat lateral to the center. Then the chisel is connected to the diver/extractor (15-8516/45), and the trochlea is prepared with it.

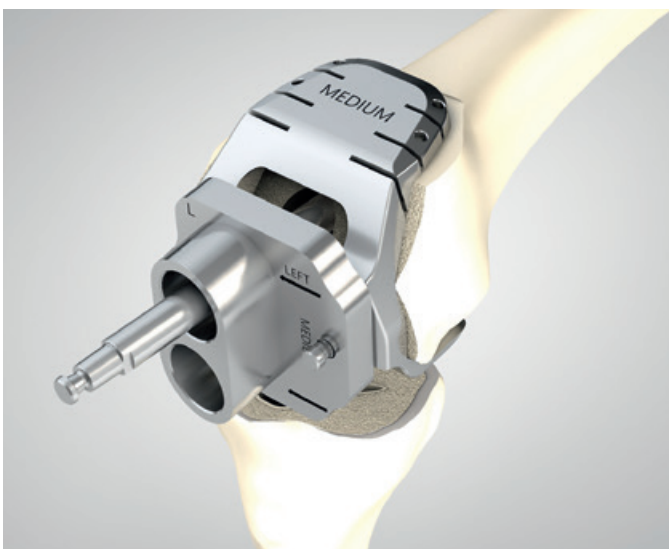
**30**

Following preparation of the distal femur, the last used tapered reamer is inserted into the medullary canal again.



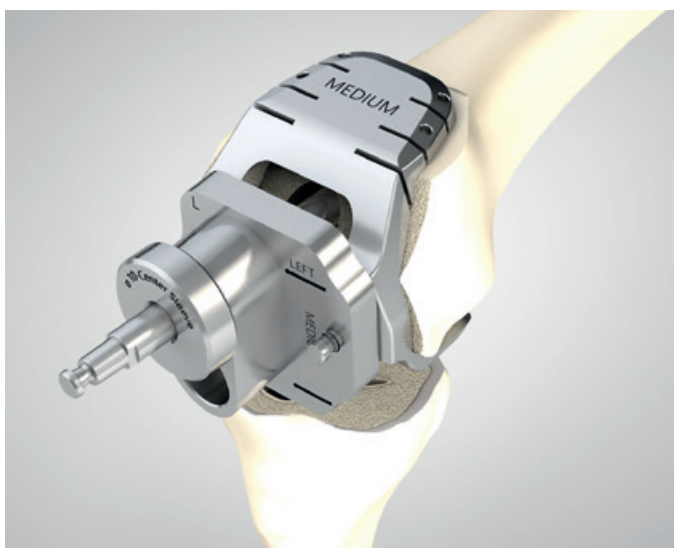
31

The femur condyle cap (16-3241/02, /03, /04; alternatively: 16-3240/02, /03, /04) is placed on the prepared bone surfaces. The shaft of the tapered reamer forms the center. Through the ventral saw slots the bone can be prepared, matched to the femoral segments in 15 mm, 25 mm or full.



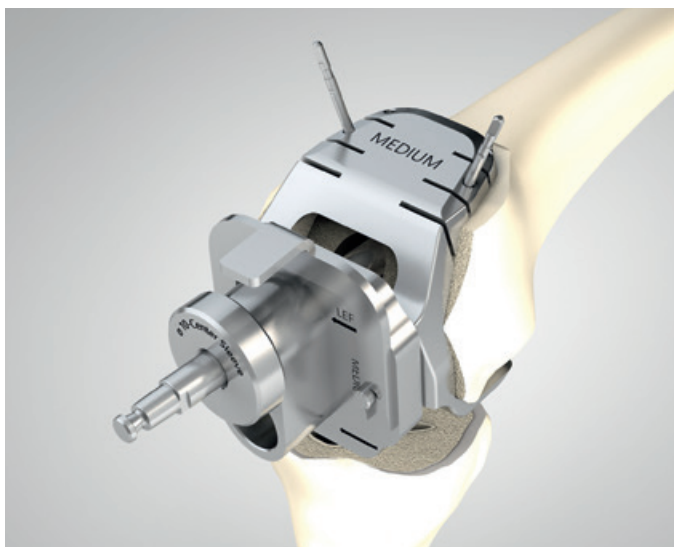
32

A femur drill cap (16-3213/02, /03, /04) of the same size as the femur condyle cap is placed on the pegs of the femur condyle cap. The word “**Left**” or “**Right**” must be situated horizontally.



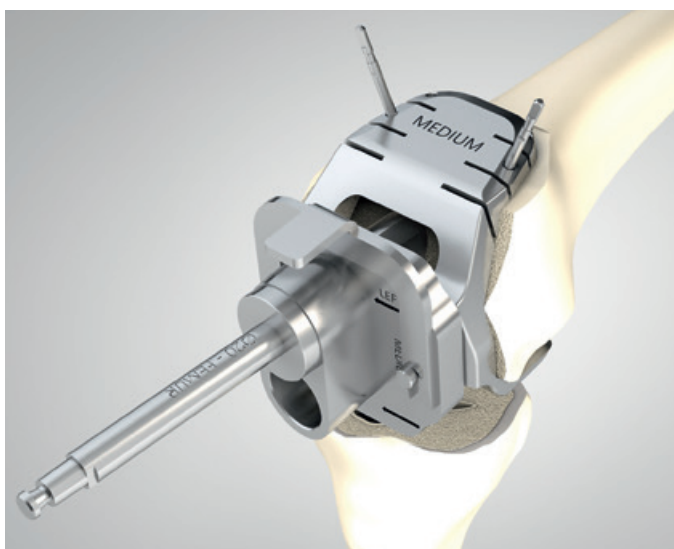
33

Using the center sleeve (16-3281/00), the instruments are aligned and centered on the shaft of the tapered reamer.



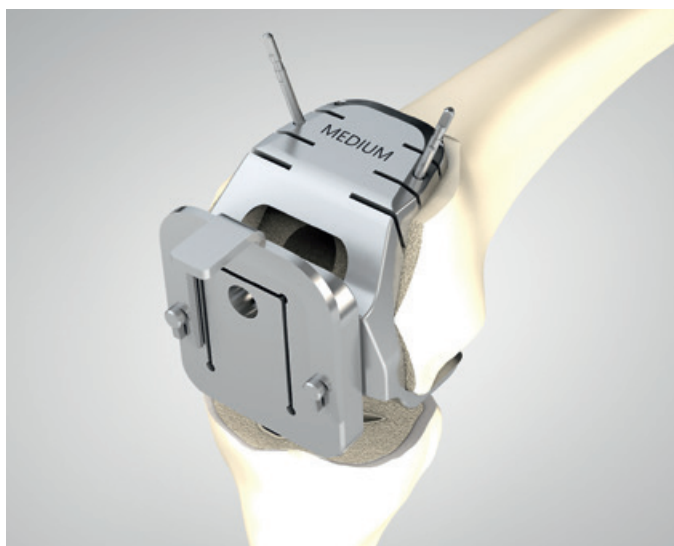
34

Following alignment, the femur drill cap is fixed to the femur condyle cap with the holding clamp (16-3279/00). The femur condyle cap is fixed to the bone with two wire pins. The center sleeve and tapered reamer are removed. If necessary, the femur drill cap must also be removed temporarily and then reattached again.



35

The drill for femur Ø 20 mm (16-3206/20) is inserted as far as stop.



36

After removing the holding clamp, the femur drill cap is removed, the saw attachment matching the selected prosthesis size (e.g. 16-3223/02) is attached and secured again with the holding clamp. The femur box is then prepared with an oscillating saw.

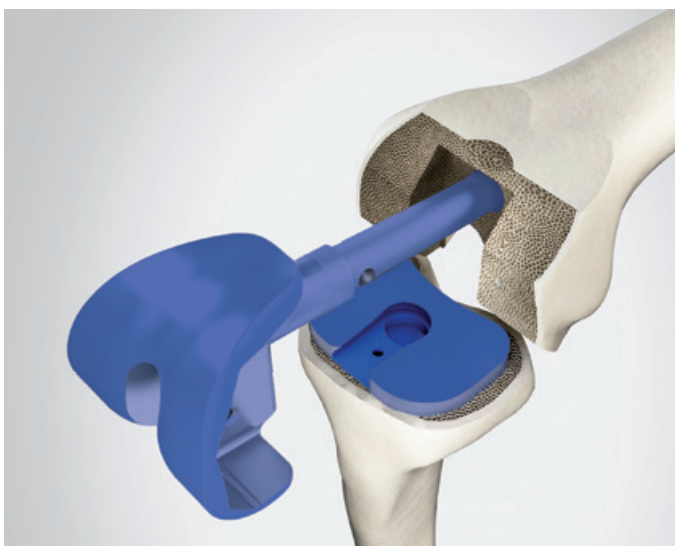
Sawblade depth:
 Small: 51 mm
 Medium: 54 mm
 Large: 57 mm



37
Preparation of distal femur is complete.



38
The tibial trial stem and tibial trial prosthesis are joined by screwing them together and inserted into the prepared tibia.



39
The femoral trial stem and femoral trial prosthesis are joined by screwing them together and inserted into the prepared femur.



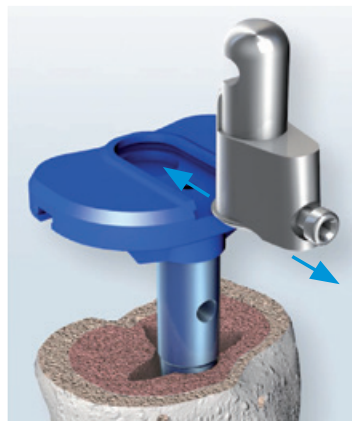
40

Connect the two joint pieces by inserting the posterior recess of the trial axis onto the axis of the femoral component and then pushing the tibia up. Fix the screw with the hex screwdriver (64-8008/02).

Test the trial prosthesis. Deficits in the flexion and extension gap are compensated with femoral trial segments and/or tibial trial spacers. The components are separated by proceeding in reverse order.

INFORMATION:

A combination of several femoral segments or proximal tibial spacers is not allowed!



41

Remove the trial femoral and tibial components with the extraction instrument for trial prostheses (15-6061/00).

Assembling the Tibial Components



42

The tibial modular stems are fixed by means of a tapered connection on the tibial component. It should be ensured that the flanges of the prosthesis stems are inserted into the intended slots. The modular stem is then fixed to the tibial component with screw assembly. **Screws are only to be tightened hand-tight.**

INFORMATION:

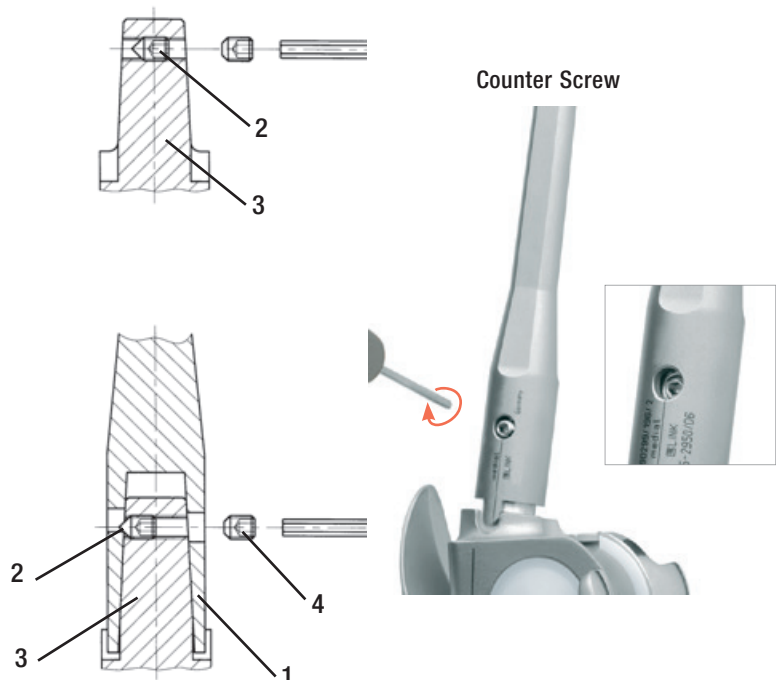
When using cemented modular stems or the monoblock tibial component, the use of centralizers is mandatory. They might not be part of the sterile package for tibial components 16-2817/02, /05 and /07 when indicated.

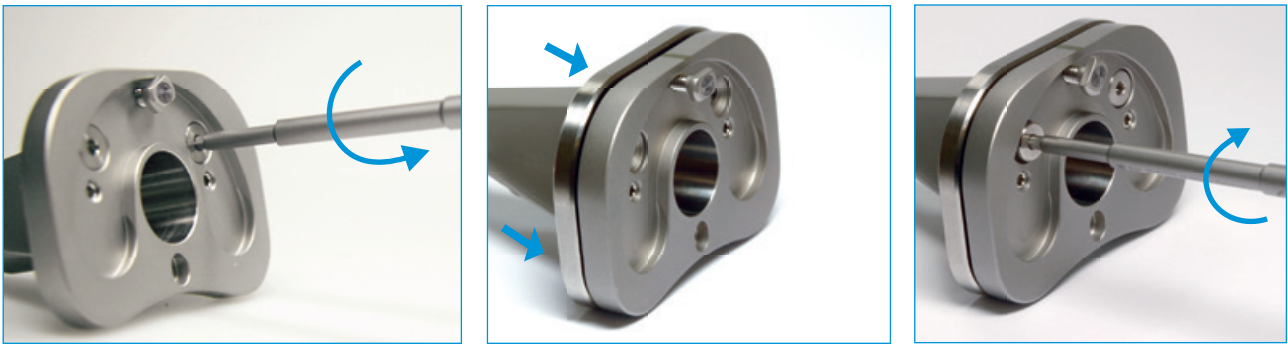
After the underside of the tibial prosthesis component has been coated with a thin layer of bone cement, the prosthesis is inserted into the tibia with the tibial grooved driver (16-0018/02).

By tightening the locking screw (2) located in the taper (3) of the tibial respectively femoral component its pointed tip presses the stem (1) firmly onto the taper. A counter screw (4) secures the stem locking screw against loosening. The screw fixation is performed medially. **Screws are only to be tightened hand-tight.**

INFORMATION:

The locking screw (optionally pre-assembled), the counter screw and one replacement screw each are included separately in the packaging.





When using a Tibial Spacer, assemble the Tibial Spacer before assembling the stem. The Proximal Tibial Spacers are available for each size in 5 mm, 10 mm and 15 mm, full and half.

CAUTION:

It is only allowed to combine the same designated sizes for Tibial Component and the Proximal Tibial Spacers. A size mismatch between these two final components is not permitted.

Proximal Tibial Spacer Assembly

Remove one (Half Spacer) or two (Full Spacer) Screws from the Tibial Plateaus, and put the Spacer under the implant. Screw in the final Screw, one (Half Spacer) or two (Full Spacer) to fix the Proximal Tibial Spacer on the Tibia. The final Screws are included in the package of the Proximal Tibial Spacer.

Optional: Cementing Technique for Proximal Tibial Spacers

The bone cement is prepared following the specific manufacturer's instructions. Put cement on the backside of the tibial component.



INFORMATION:

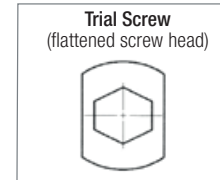
It has to be observed that a homogenous cement mantle between the Tilastan proximal spacer (full & half) and modular tibial component is ensured. The cement mantle should be 1-2 mm thick.

Remove all the extruded cement.



43

Until the bone cement has set, the trial screw remains in the prosthesis thread in order to protect it (excess bone cement is removed). After the bone cement has set, the plateau trial screw is removed with the hex screwdriver (64-8008/02).



The femoral prosthesis component coated with bone cement is placed on the femur and gently tapped home with the femoral grooved driver (317-646/01) until the implant fits snugly (excess bone cement is removed).

INFORMATION:

Bone cement must be used to fix femoral segments onto the intracondylar femoral components.



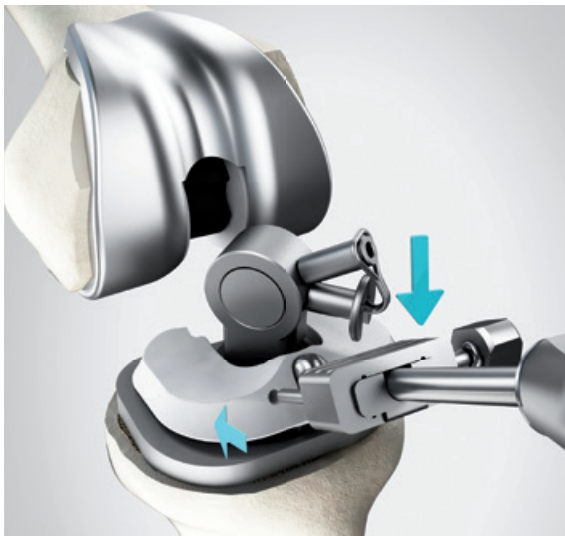
44

After the bone cement has set, the transport lock is removed by loosening the screw joint with the 2.5 mm hex screwdriver (10-5373/01) and withdrawing the lock with slight rotation.



The PE-plateau is connected to the inserter positioner (15-8035/03).

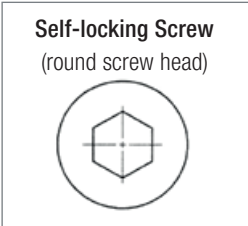
If required, the PE plateau can be inserted after the connection component (rotating version) has been assembled.



45

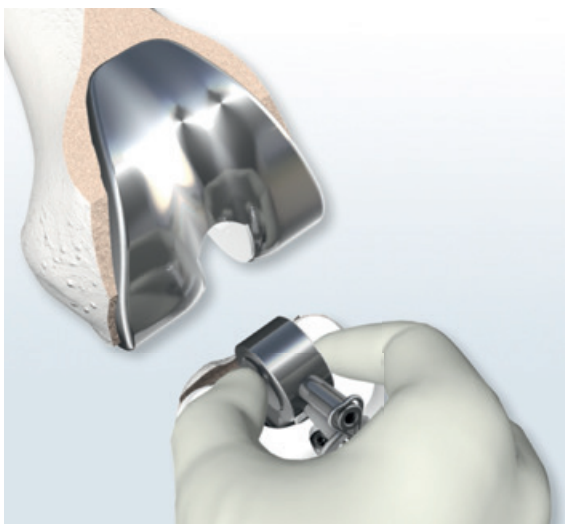
The connector with the rotation axis is put on the tibial component, and the PE plateau with the inserter positioner (15-8035/03) is then inserted and screwed on. The self-locking screw is screwed with the hex screwdriver (64-8008/02).

For easier access to the plateau self-locking fixation screw, the connector is rotated slightly.



CAUTION:

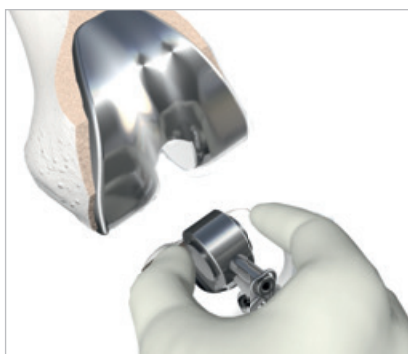
The self-locking fixation screw may only be used during the final assembly of the plateau. Loosening the fixation screw destroys the screw retention system in the polyethylene plateau, and a new plateau must then be inserted.



46

The axis of the connector is compressed to be flush with the bearing using the thumb and the index finger. The axis is held in place while the connector is inserted into the intracondylar slot of the femoral component.

The connector axis is released when the connector is inserted. To assist in alignment, the tibia is placed as far posteriorly as possible, relative to the femur. The connection component axis is inserted into the femoral component axis bushings by slightly lifting the connecting component and carefully moving the joint components.

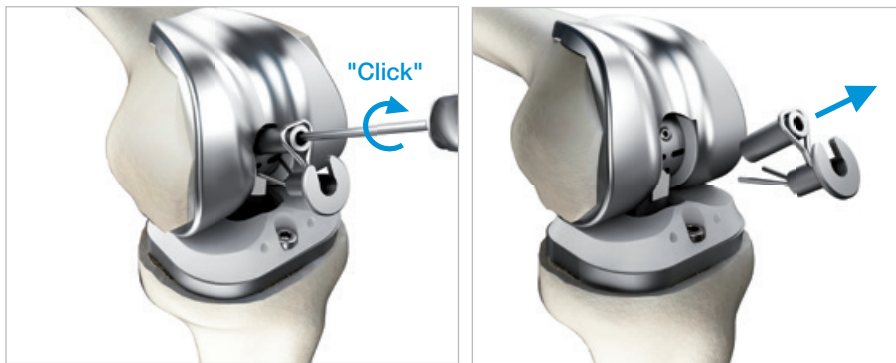


An audible "click" indicates that the connector axis has been successfully deployed into the rotational axis of the femoral component.



47

To fully deploy and lock the connection component axis, the U-shaped opening of the securing sleeve is rotated 180° until the opening faces upwards. The securing sleeve can then be pulled upwards along the spring wire, thereby unloading the spring so that it presses the axis halves of the connection component fully outwards. The prosthesis axis is inserted into the bushings accompanied by an audible “Click” by slightly lifting the connecting component and carefully moving the joint components. A 2-mm torque-limiting hex screwdriver (15-2546) must be used to tighten the securing screw, which is already in the sleeve.



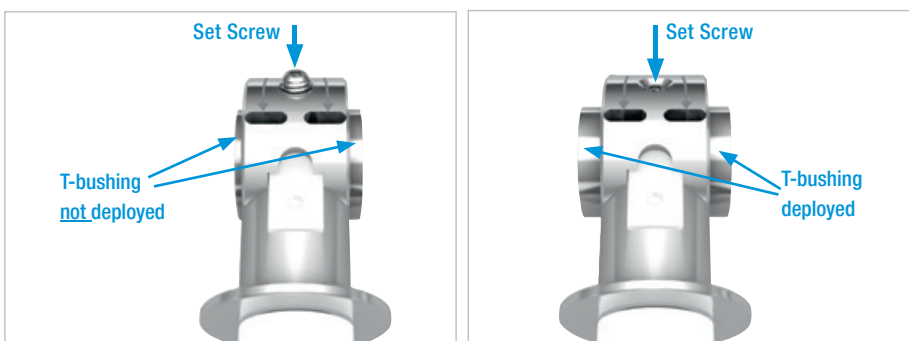
The screw must be tightened until an audible “Click” is heard that indicates that the required torque has been applied, locking the connection component in place.

Then the axis lock is removed.



48

When assembly is complete, the two drill holes in the prosthesis axis are located exactly under the arrow marks. Confirm that the set screw is slightly recessed. If it is not, remove the set screw, deploy the T-bushing with the connecting/disconnecting forceps (16-0020/02) to fully expand the connection component and reinsert the set screw. Using the provided 2-mm torque-limiting hex screwdriver (15-2546), tightening until an audible “click” indicates that the required torque has been applied. The screw must be fully recessed (flush or below flush) to ensure appropriate final locking of the connection component.





49

When assembly is complete, the two drill holes in the prosthesis axis are located exactly under the arrow marks. The PE plateau is then screwed home with the hex screwdriver (64-8008/02).

To remove the connection component, in the event of a revision, the securing screw is removed, the connecting/disconnecting forceps (16-0020/02) are inserted, and the prosthesis axis is squeezed together. Then the connection component can be decoupled ventrally.

Assembling the Connection Components – Pure Hinge



50

If the intention is to use a fixed hinged joint version, the two small screws in the tibial plateau must first be removed with the 2-mm torque-limiting hex screwdriver (15-2546).



The connector with hinge axis is placed on the tibial component. The connector is then screwed in place using the hex screwdriver (10-5373/01) and the PE plateau is inserted.



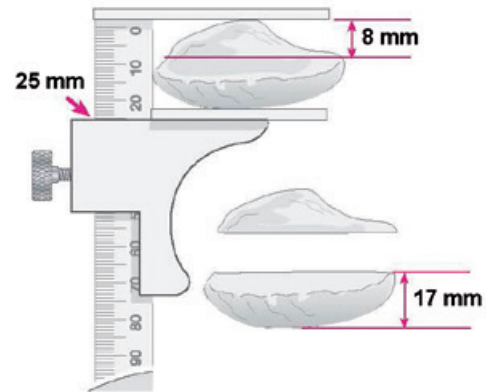
Proceed to step 46 for connection assembly.

Optional: Patella Preparation (Patella Resurfacing)

The following operating instructions describe the use of the **LINK Patella Component** and assume the use of the instrument set available for this procedure. Both the “**resection**” of the patella surface technique and the “**reaming**” of the patella surface technique are shown.

Determination of Patella height/patella Resection

Using the townley femur caliper (65-2000) allows the height of the patella to be determined (1). The dimension is established and an amount corresponding to the size of the selected implant subtracted. The remainder equals the target dimension following resection. A minimal residual dimension of 12 mm should be maintained.



Example:

For a patella size 2 (patella diameter 28 mm), the following calculation is performed:

1. patella 25 mm thick,
2. resection 8 mm,
3. 17 mm remaining patella bone.

Patella size	Patella-Ø	Patella height
1	25 mm	7 mm
2	28 mm	8 mm
3	31 mm	9 mm
4	34 mm	10 mm

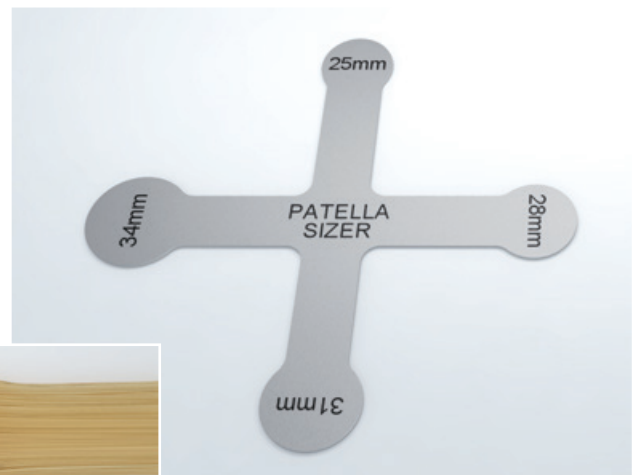
Preparation for Patella Component

The patella surface can be prepared using the onlay technique by resecting with an oscillating saw or by reaming.

Sizing

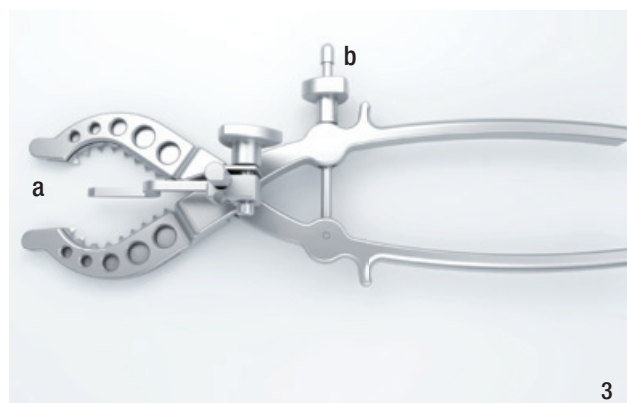
A patella sizing template (340-010) corresponding to the implants is available (2.1)

The template is selected that most adequately covers the articular surface without any overhang. If bone is deficient on the lateral side, the next smaller size is selected, but positioned slightly to the medial side to enhance patellar tracking (2.2).

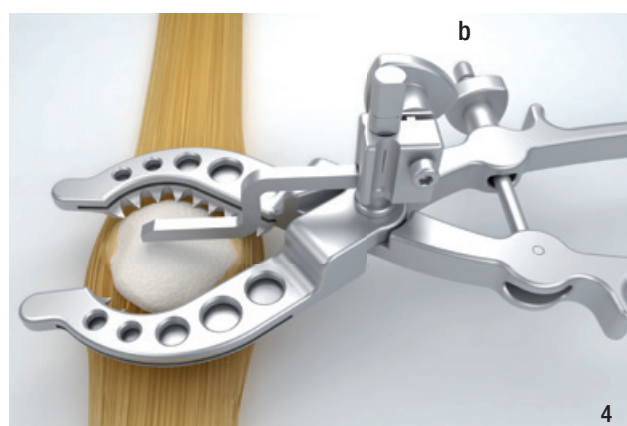


Option: Resection

The height of the bone to be resected can be adjusted using the height stylus (a) on the patella resection clamp (340-006) (3).



In doing this, it is important to ensure that the remaining patella is sufficiently thick. The patella is held using the toothed jaws. The sectional plane must lie parallel to the extended patellar tendon and the height calliper must lie on the bone. In order to clamp the patella firmly, the patella resection clamp (340-006) is compressed firmly and fixed using the lateral setting screw (b) (4).



The resection is carried out using an oscillating saw with a 1.27 mm thick sawblade. The saw is guided using the cutting slots of the patella resection clamp (340-006) (5).



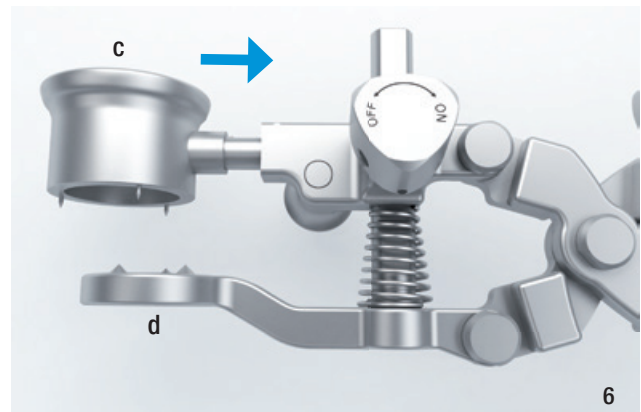
Option: Reaming

Reaming Preparation

The patella reaming guide (340-025 to 340-034) (c) of the appropriate size is inserted into the patella holding forceps (340-005) (d) (6).

INFORMATION:

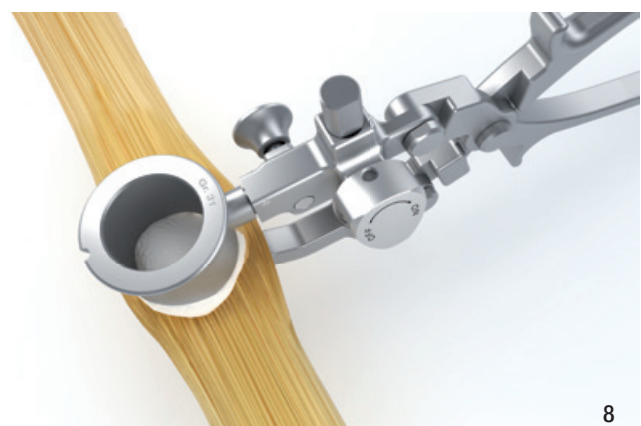
Press the button on the side to insert and remove the guide.



A ratchet can be activated on the patella holding forceps (340-005) with the retaining screw (e). By turning the screw to "ON" the forceps is held shut. By turning the screw to "OFF", the ratchet is re-leased (7).



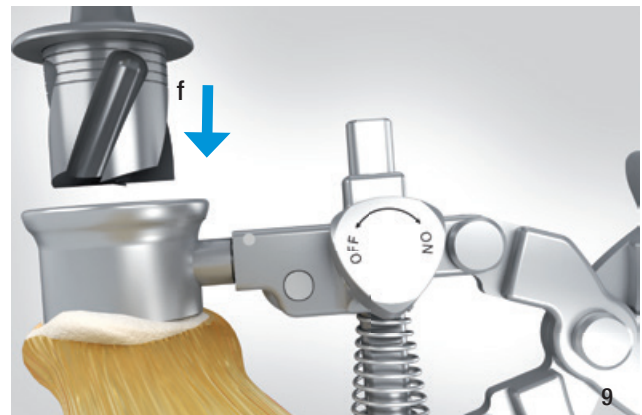
Following removal of the peripheral osteophytes, the patella is clamped with the patella holding forceps (340-005), aiming at the most central position possible (8). Good fixation is achieved when the spikes on the guide grip into the bone.



Reaming

The patella reamer is selected (f) to match the implant size which was previously determined and the corresponding reaming guide (9).

The patella reamer (340-125B to 340-134B) has a Hudson drill **B** connection for direct fixation with corresponding power tool connection. It is compatible with other machine systems by using an adapter for snap lock chuck.



The patella surface is prepared using the patella reamer (f). Reaming depth is verified by means of the mechanical stop on the reamer. In addition, there are marking grooves at 2 mm intervals. The maximum reaming depth is reached when the reamer collar makes contact with the reaming guide (10).



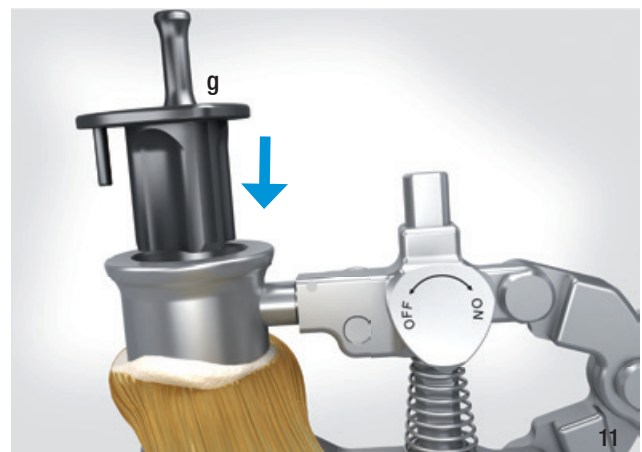
Fixation Hole Drilling

If the sawblade resection option is selected, the patella is to be fixed with the patella holding forceps (340-005) as follows:

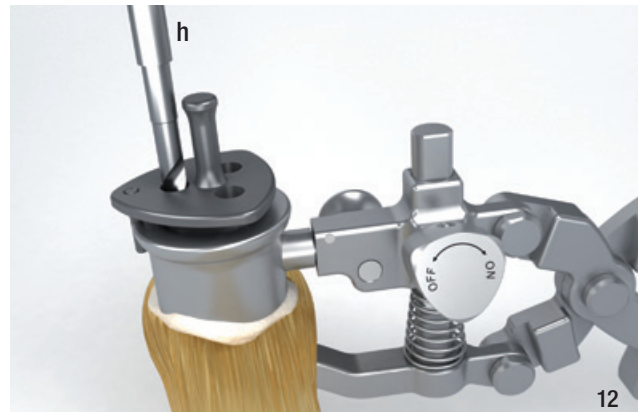
- Insert the patella reaming guide into the patella holding clamp,
- ratchet function “ON”,
- clamp the patella firmly.

Following description is for options „resection“ as well as „reaming“.

Insert the patella drill guide (340-225 to 340-234) (g) for the anchoring three holes which corresponds to the chosen implant size into the patella reaming guide (340-025 to 340-034) (11).

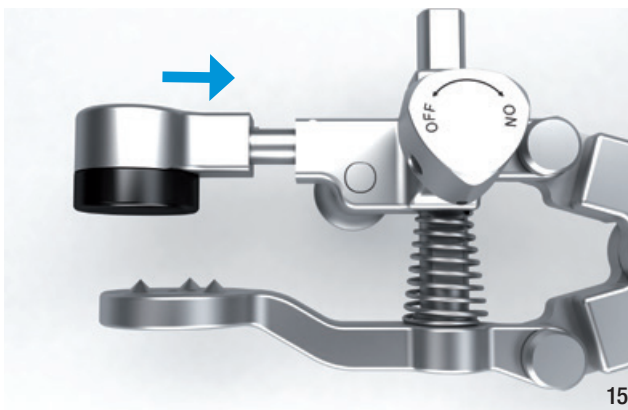
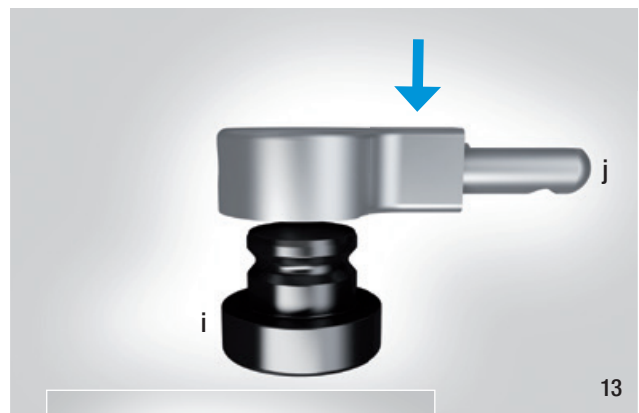


In doing so, ensure that the guide pin on the drill guide lies in the opening made for it in the reaming guide. Using the Ø 6.3 mm patella drill (340-306B) (h) three holes guided by the drill guide are drilled. The patella drill is inserted until stop (12).



Patella Implantation

The patella reaming guide is removed from the patella holding forceps (340-005). The patella pusher insert (340-009) (i) is pressed into the patella pusher attachment (340-007) (j) (13+14) and the pusher inserter is then inserted into the patella holding forceps (340-005) (15). Appropriate patella tracking can be assessed using patella trial prostheses (340-325 to 340-334).



Following extensive rinsing and removal of all impeding soft tissue, the bone cement is applied to the back of the implant, and the patella component is placed by hand and pressed on using the patella holding forceps (340-005) with the patella pusher insert (340-009) (16).



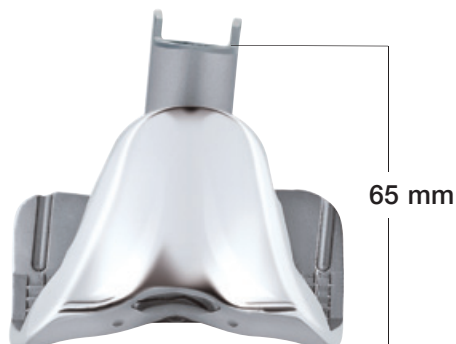
CAUTION:

Prepare the bone cement according to the manufacturer's instructions.

Ensure that excess bone cement is completely removed and that no loose particles of bone cement remain in the joint.

Joint Components Endo-Model SL for Rotating and Pure Hinge Knee

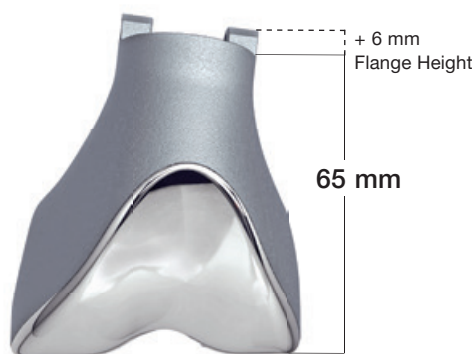
All size-specific implants for the Endo-Model SL only allow a combination of the same size



Femoral Components, cemented, intracondylar

MAT EndoDur (CoCrMo), UHMWPE

REF	Size	Side	M/L Width (W) mm	A/P Depth (D) mm
16-2821/21	small (S)	right	63	57
16-2821/22	small (S)	left	63	57
16-2823/21	medium (M)	right	69	62
16-2823/22	medium (M)	left	69	62
16-2825/21	large (L)	right	72.5	65
16-2825/22	large (L)	left	72.5	65

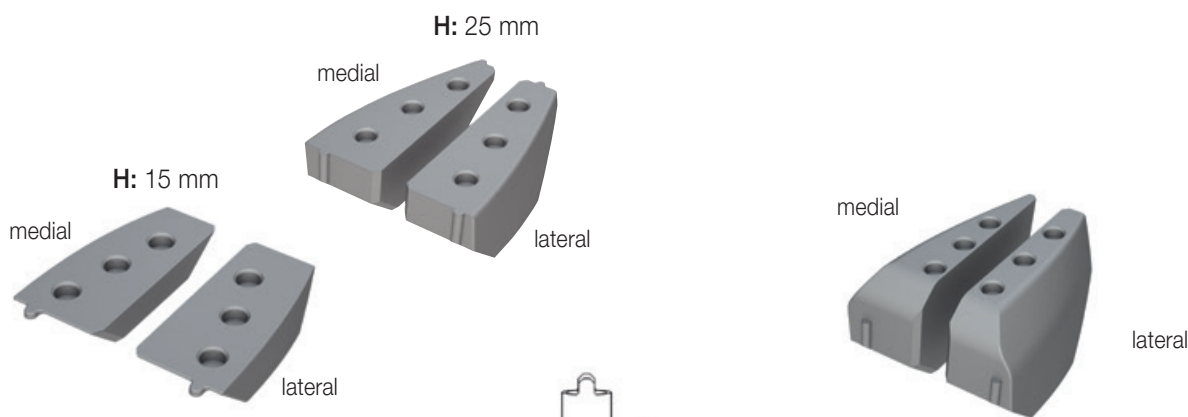


Distal Femoral Replacement Components, uncemented

MAT EndoDur (CoCrMo), EndoDur-S (CoCrMo), UHMWPE

REF	Size	Side	M/L Width (W) mm	A/P Depth (D) mm
16-2853/31	small (S)	right	60	57
16-2853/32	small (S)	left	60	57
16-2855/31	medium (M)	right	65	62
16-2855/32	medium (M)	left	65	62
16-2857/31	large (L)	right	75	65
16-2857/32	large (L)	left	75	65

Joint Components Endo-Model SL for Rotating and Pure Hinge Knee



Femoral Segments

for femoral components, uncemented (bone side), to replace distal condyles

MAT Tilastan-S (Ti6Al4V)

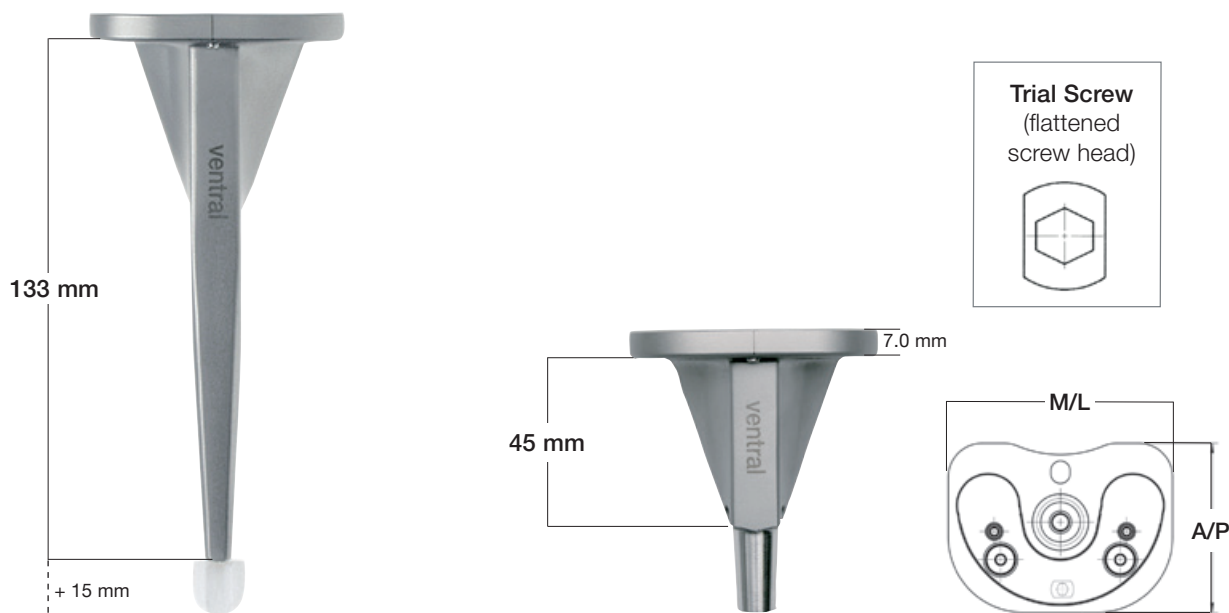
REF	h mm	Height (H) mm	Size	Side
15-8570/01	8	15	small (S)	right medial
15-8570/02	9	15	medium (M)	right medial
15-8570/03	7	15	large (L)	right medial
15-8570/11	8	15	small (S)	right lateral
15-8570/12	9	15	medium (M)	right lateral
15-8570/13	7	15	large (L)	right lateral
15-8571/01	8	15	small (S)	left medial
15-8571/02	9	15	medium (M)	left medial
15-8571/03	7	15	large (L)	left medial
15-8571/11	8	15	small (S)	left lateral
15-8571/12	9	15	medium (M)	left lateral
15-8571/13	7	15	large (L)	left lateral
15-8517/01	18	25	small (S)	right medial
15-8517/02	19	25	medium (M)	right medial
15-8517/03	17	25	large (L)	right medial
15-8517/11	18	25	small (S)	right lateral
15-8517/12	19	25	medium (M)	right lateral
15-8517/13	17	25	large (L)	right lateral
15-8518/01	18	25	small (S)	left medial
15-8518/02	19	25	medium (M)	left medial
15-8518/03	17	25	large (L)	left medial
15-8518/11	18	25	small (S)	left lateral
15-8518/12	19	25	medium (M)	left lateral
15-8518/13	17	25	large (L)	left lateral

Femoral Segments, full, uncemented (bone side), for femoral components, to replace distal condyles

MAT Tilastan-S (Ti6Al4V)

REF	Size	Side
15-8572/01	small (S)	right medial
15-8572/02	medium (M)	right medial
15-8572/03	large (L)	right medial
15-8572/11	small (S)	right lateral
15-8572/12	medium (M)	right lateral
15-8572/13	arge (L)	right lateral
15-8573/01	small (S)	left medial
15-8573/02	medium (M)	left medial
15-8573/03	large (L)	left medial
15-8573/11	small (S)	left lateral
15-8573/12	medium (M)	left lateral
15-8573/13	arge (L)	left lateral

Joint Components Endo-Model SL for Rotating and Pure Hinge Knee



Tibial Components, cemented, standard

MAT EndoDur (CoCrMo), EndoDur-S (CoCrMo), Tilastan-S (Ti6Al4V)

REF	Size	M/L Width (W) mm	A/P Depth (D) mm
16-2817/02	small (S)	60	45
16-2817/05	medium (M)	65	45
16-2817/07	large (L)	75	48

Tibial Components, cemented, modular

MAT EndoDur (CoCrMo), EndoDur-S (CoCrMo), Tilastan-S (Ti6Al4V)

REF	Size	M/L Width (W) mm	A/P Depth (D) mm
16-2817/32	small (S)	60	45
16-2817/35	medium (M)	65	45
16-2817/37	large (L)	75	48

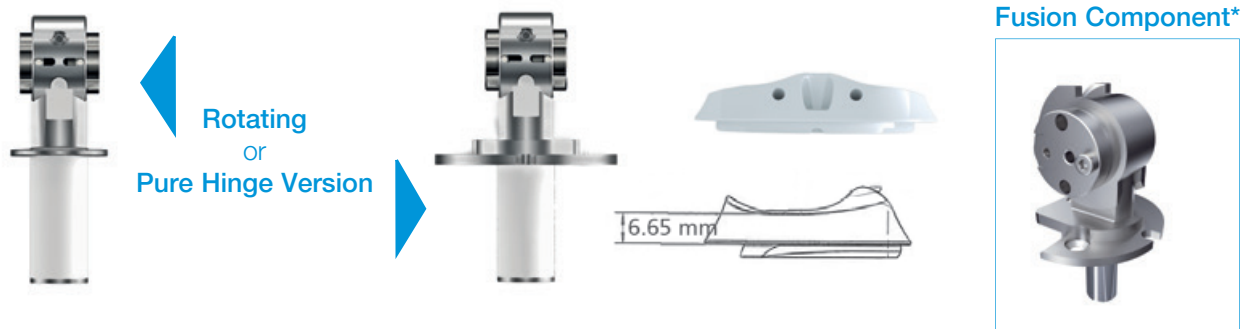


Proximal Tibial Replacement Components, uncemented, modular

MAT Tilastan-S (Ti6Al4V), EndoDur-S (CoCrMo)

REF	Size	M/L Width (W) mm	A/P Depth (D) mm
16-2849/22	small (S)	60	45
16-2849/25	medium (M)	65	45
16-2849/27	large (L)	75	48

Joint Components Endo-Model SL for Rotating and Pure Hinge Knee



Connection Components, incl. Tibial Plateau (UHMWPE)

REF	Rotating Hinge MAT EndoDur-S (CoCrMo) UHMWPE, CoNiCrMo	REF	Pure Hinge MAT EndoDur (CoCrMo), EndoDur-S (CoCrMo), UHMWPE, CoNiCrMo	Arthrodesis Fusion Version*
16-2840/02	small (S)	16-2841/02	small (S)	Knee fusion option for in-situ femoral and tibial components.
16-2840/05	medium (M)	16-2841/05	medium (M)	
16-2840/07	large (L)	16-2841/07	large (L)	

* only available as custom-made implant

Replacement Sets

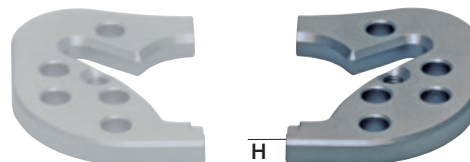
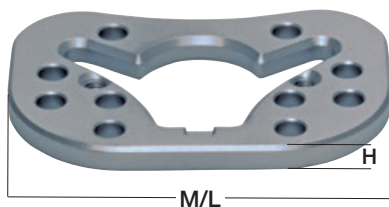
Replacement Set: Bearing Boxes

MAT UHMWPE

REF	Side	Size
16-2011/21	right	small
16-2011/22	left	small
16-2013/21	right	medium
16-2013/22	left	medium
16-2015/21	right	large
16-2015/22	left	large



Proximal Tibial Spacers for Endo-Model SL Rotating and Pure Hinge Knee



Proximal Tibial Spacers, full, neutral, uncemented, for right and left knees, incl. 2 countersunk screws, hex 2.5 mm

MAT Tilastan-S (Ti6Al4V)

REF	Size	Height (H) mm	M/L Width (W) mm
16-2910/05	small (S)	5	60
16-2910/10	small (S)	10	60
16-2910/15	small (S)	15	60
16-2920/05	medium (M)	5	65
16-2920/10	medium (M)	10	65
16-2920/15	medium (M)	15	65
16-2930/05	large (L)	5	75
16-2930/10	large (L)	10	75
16-2930/15	large (L)	15	75

Note:
Proximal tibial spacers may not be combined!

Proximal Tibial Spacers, half, medial/lateral, uncemented, for right and left knees, incl. 1 countersunk screw, hex 2.5 mm

MAT Tilastan-S (Ti6Al4V)

REF	Size	Height (H) mm
16-2950/05	small (S)	5
16-2950/10	small (S)	10
16-2950/15	small (S)	15
16-2960/05	medium (M)	5
16-2960/10	medium (M)	10
16-2960/15	medium (M)	15
16-2970/05	large (L)	5
16-2970/10	large (L)	10
16-2970/15	large (L)	15

Note:
Proximal tibial spacers may not be combined with each other!

Modular Stems with male taper

Modular Stems*, uncemented, conical, male taper

MAT Tilastan-S (Ti6Al4V)



Uncemented					
Length L = 100 mm REF	Ø mm	Length L = 130 mm REF	Ø mm	Length L = 160 mm REF	Ø mm
15-8524/50	12/09	15-8523/50	12/08	15-8522/50	12/07
15-8524/51	13/10	15-8523/51	13/09	15-8522/51	13/08
15-8524/52	14/11	15-8523/52	14/10	15-8522/52	14/09
15-8524/53	15/12	15-8523/53	15/11	15-8522/53	15/10
15-8524/54	16/13	15-8523/54	16/12	15-8522/54	16/11
15-8524/55	17/14	15-8523/55	17/13	15-8522/55	17/12
15-8524/56	18/15	15-8523/56	18/14	15-8522/56	18/13
15-8524/57	19/16	15-8523/57	19/15	15-8522/57	19/14
15-8524/58	20/17	15-8523/58	20/16	15-8522/58	20/15
15-8524/59	21/18	15-8523/59	21/17	15-8522/59	21/16
15-8524/60	22/19	15-8523/60	22/18	15-8522/60	22/17
15-8524/61	23/20	15-8523/61	23/19	15-8522/61	23/18
15-8524/62	24/21	15-8523/62	24/20	15-8522/62	24/19

Modular Stems*, cemented, conical, male taper

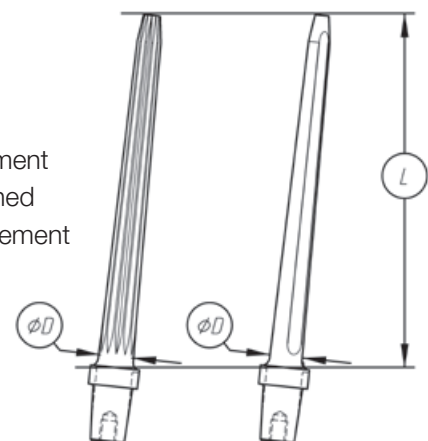
MAT EndoDur - S (CoCrMo)



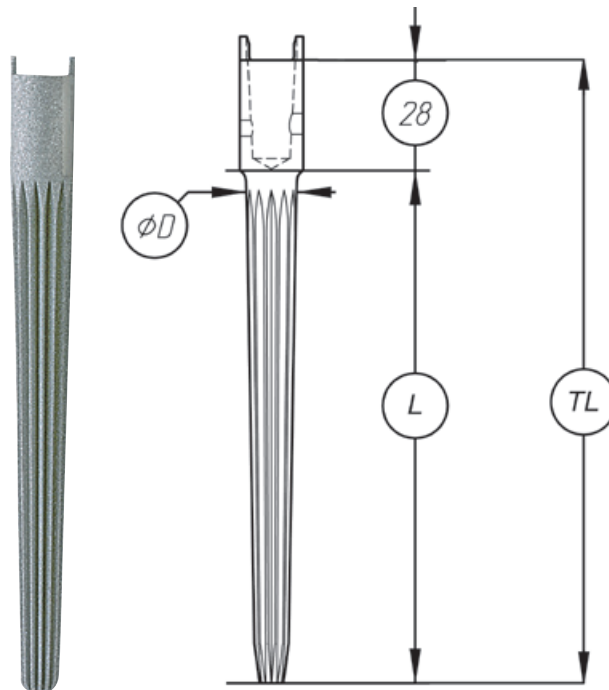
Cemented					
Length L = 100 mm REF	Ø mm	Length L = 130 mm REF	Ø mm	Length L = 160 mm REF	Ø mm
15-8524/40	12/09	15-8523/40	12/08	15-8522/40	12/07
15-8524/42	14/11	15-8523/42	14/10	15-8522/42	14/09
15-8524/44	16/13	15-8523/44	16/12	15-8522/44	16/11

* These modular stems can be combined with:

- Coupling Component for proximal femur replacement
- Neck Segment, massive, or stem segment attached to it to assemble an extended distal femur replacement
- Coupling for diaphyseal spacer
- Proximal Tibial Replacement Component



Modular Stems with female taper

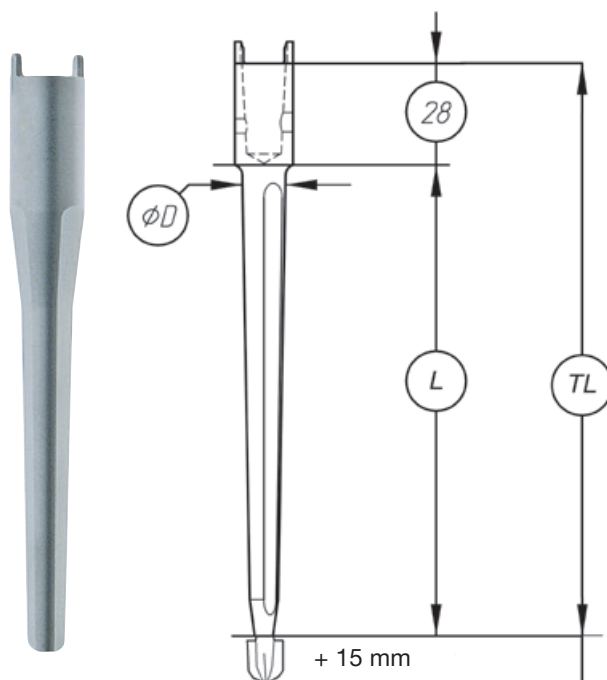


Modular Stems, uncemented, conical, female taper

MAT Tilastan-S (Ti6Al4V)

Uncemented					
Length L = 100 mm Total Length TL = 128 mm REF	\emptyset mm	Length L = 130 mm Total Length TL = 158 mm REF	\emptyset mm	Length L = 160 mm Total Length TL = 188 mm REF	\emptyset mm
15-8517/50	12/09	15-8516/50	12/08	15-8515/50	12/07
15-8517/51	13/10	15-8516/51	13/09	15-8515/51	13/08
15-8517/52	14/11	15-8516/52	14/10	15-8515/52	14/09
15-8517/53	15/12	15-8516/53	15/11	15-8515/53	15/10
15-8517/54	16/13	15-8516/54	16/12	15-8515/54	16/11
15-8517/55	17/14	15-8516/55	17/13	15-8515/55	17/12
15-8517/56	18/15	15-8516/56	18/14	15-8515/56	18/13

Modular Stems with female taper



Modular Stems*, cemented, conical, female taper

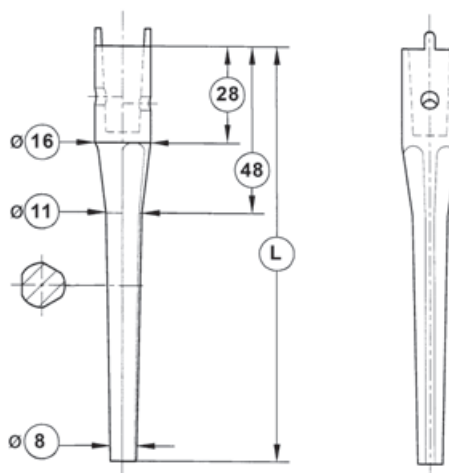
MAT EndoDur-S (CoCrMo)

Cemented					
Length L = 100 mm Total Length TL = 128 mm REF	\emptyset mm	Length L = 130 mm Total Length TL = 158 mm REF	\emptyset mm	Length L = 160 mm Total Length TL = 188 mm REF	\emptyset mm
15-8527/40	12/09	15-8526/40	12/08	15-8525/40	12/07
15-8527/42	14/11	15-8526/42	14/10	15-8525/42	14/09
15-8527/44	16/13	15-8526/44	16/12	15-8525/44	16/11

Modular Stems, short

MAT EndoDur-S (CoCrMo)

Cemented	
REF	Length (L) mm
15-2950/01	50
15-2950/02	80



Centralizers

Centralizers, cemented, height (H) = 15 mm

MAT UHMWPE

REF	Ø mm
15-2975/12	12
15-2975/14	14
15-2975/16	16



Ø 12 mm



Ø 14 mm



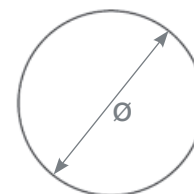
Ø 16 mm

Patella Components

Patella Components, 3-pegs, cemented

MAT UHMWPE

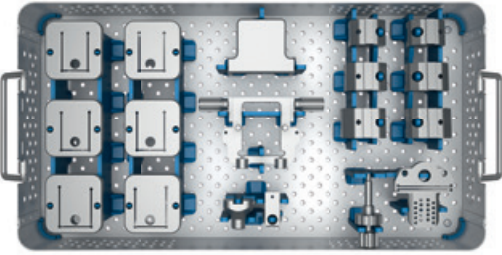
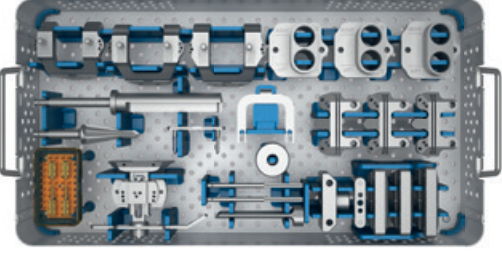
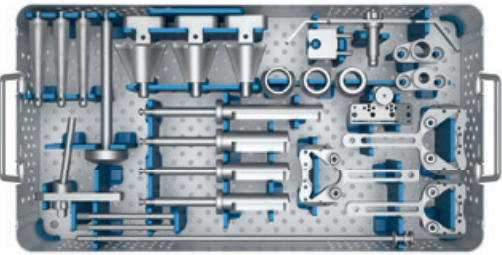
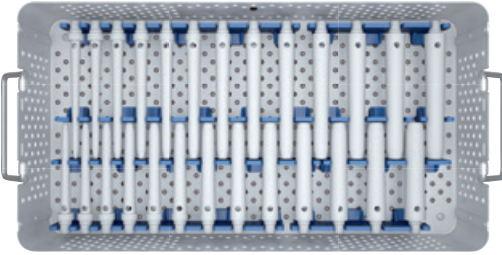
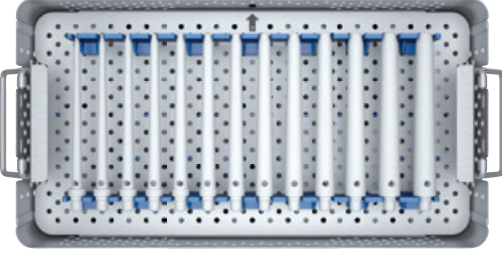
REF	Size	Ø mm	Height (H) mm
318-401/25	1	25	7
318-401/28	2	28	8
318-401/31	3	31	9
318-401/34	4	34	10

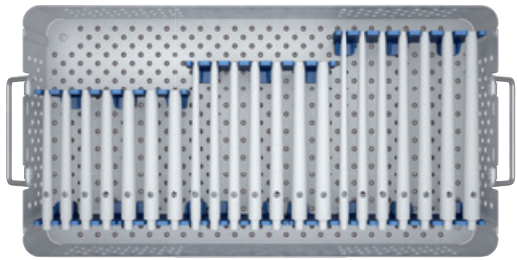
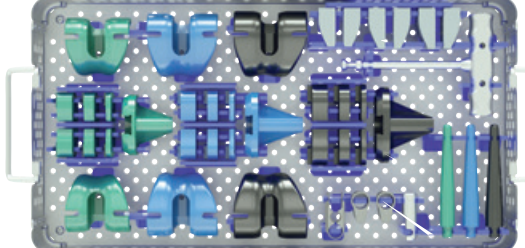
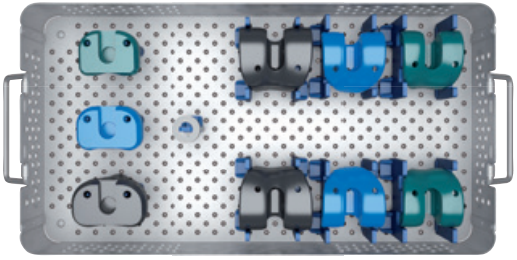
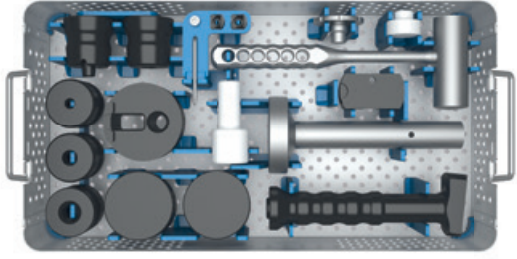


Overview Instrument Sets

for ENDO-MODEL SL

<p>15-8710/02</p>	<p>Instrument Set</p>	<p>Tapered Reamers: 100 mm</p>
<p>consisting of: 15-8711/02</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm</p> <p>Tray with detailed instruments, see page 43</p>	
<p>15-8720/02</p>	<p>Instrument Set</p>	<p>Tapered Reamers: 130 mm</p>
<p>consisting of: 15-8721/02</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm</p> <p>Tray with detailed instruments, see page 44</p>	
<p>15-8730/02</p>	<p>Instrument Set</p>	<p>Tapered Reamers: 160 mm</p>
<p>consisting of: 15-8731/02</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm</p> <p>Tray with detailed instruments, see page 45</p>	
<p>15-8740/02</p>	<p>Instrument Set</p>	<p>General Instruments I</p>
<p>consisting of: 15-8741/02</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm</p> <p>Tray with detailed instruments, see page 46</p>	

<p>15-8760/02</p>	<p>Instrument Set</p>	<p>Femur I</p>
<p>consisting of: 15-8761/02</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm</p> <p>Tray with detailed instruments, see page 47</p>	
<p>15-8770/02</p>	<p>Instrument Set</p>	<p>Femur II</p>
<p>consisting of: 15-8771/02</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm</p> <p>Tray with detailed instruments, see page 48</p>	
<p>15-8780/02</p>	<p>Instrument Set</p>	<p>Tibia</p>
<p>consisting of: 15-8781/02</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm</p> <p>Tray with detailed instruments, see page 49</p>	
<p>15-8790/02</p>	<p>Instrument Set (1)</p>	<p>Trial Stems: Femur, 100 mm, 130 mm</p>
<p>consisting of: 15-8791/02</p>	<p>Instrument Tray, Stainless Steel, empty, lower L = 478 mm, W = 253 mm, H = 106 mm</p> <p>Tray with detailed instruments, see page 50</p>	
<p>15-8790/02</p>	<p>Instrument Set (2)</p>	<p>Trial Stems: Femur, 160 mm</p>
<p>consisting of: 15-8791/02</p>	<p>Instrument Tray, Stainless Steel, empty, upper L = 478 mm, W = 253 mm, H = 106 mm</p> <p>Tray with detailed instruments, see page 51</p>	

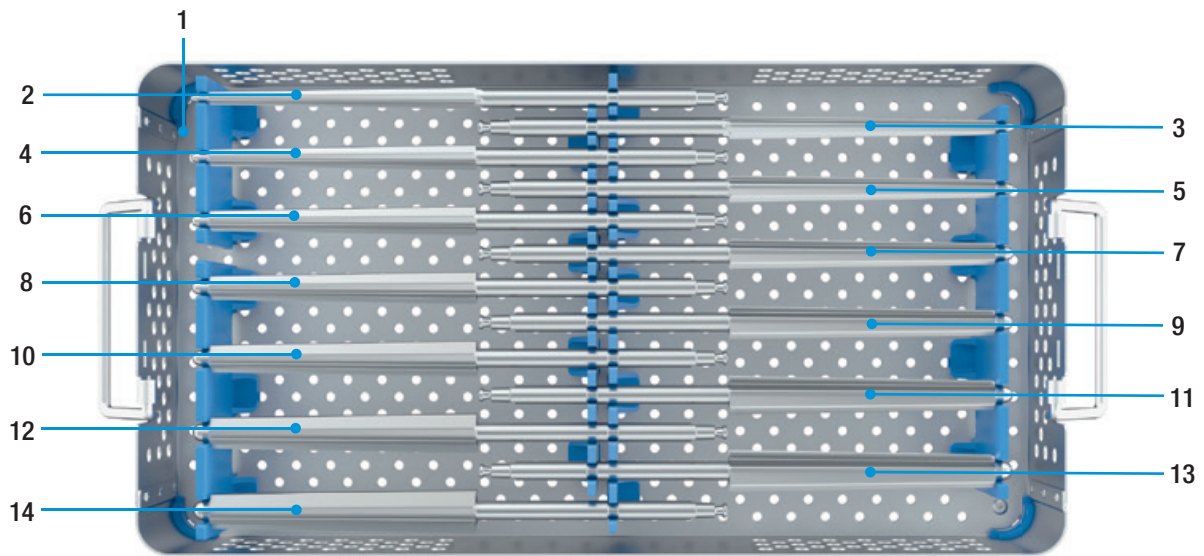
<p>15-8810/02</p>	<p>Instrument Set</p>	<p>Trial Stems: Tibia, 100 mm, 130 mm, 160 mm</p>
<p>consisting of: 15-8811/02</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm</p> <p>Tray with detailed instruments, see page 52</p>	
<p>15-8820/03</p>	<p>Instrument Set</p>	<p>Trial Prostheses: Femur/Tibia, intracondylar</p>
<p>consisting of: 15-8821/03</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm</p> <p>Tray with detailed instruments, see page 53</p>	
<p>15-8840/03</p>	<p>Instrument Set</p>	<p>Trial Prostheses: Distal Femur and Proximal Tibial Replacement</p>
<p>consisting of: 15-8841/02</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm</p> <p>Tray with detailed instruments, see page 54</p>	
<p>16-0100/02</p>	<p>Instrument Set</p>	<p>Assembly</p>
<p>consisting of: 16-0100/03</p>	<p>Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 86 mm</p> <p>Tray with detailed instruments, see page 55</p>	

15-8710/02 Instrument Set – Tapered Reamers: 100 mm



1	15-8711/02	Instrument Tray , Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm	
		Tapered Reamers : L = 100 mm, Stainless Steel, conical, Hudson fitting (B)	
2	16-5100/12	Ø 12 mm	L = 100 mm
3	16-5100/13	Ø 13 mm	L = 100 mm
4	16-5100/14	Ø 14 mm	L = 100 mm
5	16-5100/15	Ø 15 mm	L = 100 mm
6	16-5100/16	Ø 16 mm	L = 100 mm
7	16-5100/17	Ø 17 mm	L = 100 mm
8	16-5100/18	Ø 18 mm	L = 100 mm
9	16-5100/19	Ø 19 mm	L = 100 mm
10	16-5100/20	Ø 20 mm	L = 100 mm
11	16-5100/21	Ø 21 mm	L = 100 mm
12	16-5100/22	Ø 22 mm	L = 100 mm
13	16-5100/23	Ø 23 mm	L = 100 mm
14	16-5100/24	Ø 24 mm	L = 100 mm

15-8720/02 Instrument Set – Tapered Reamers: 130 mm



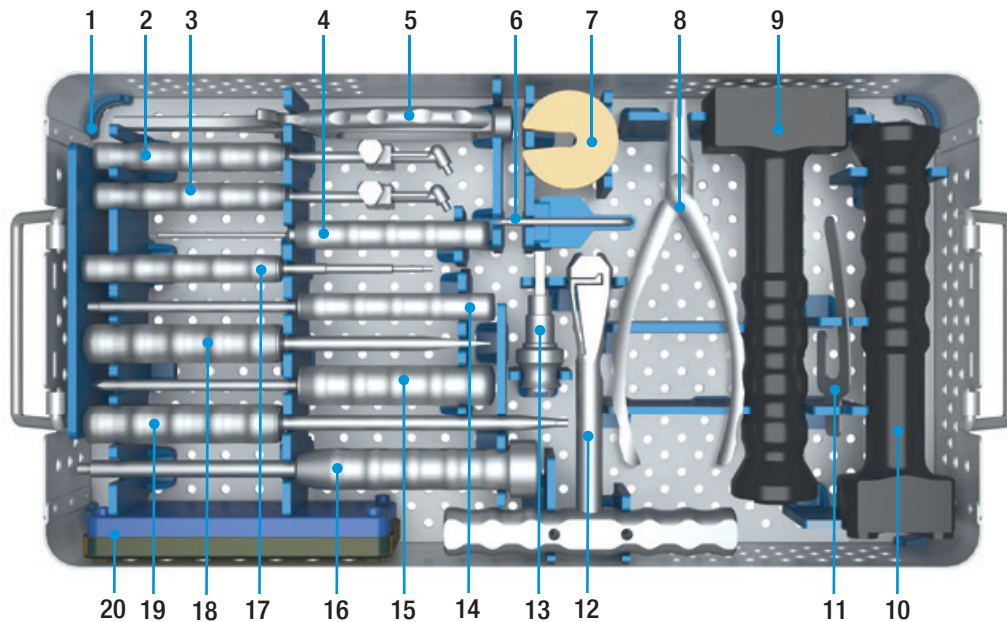
1	15-8721/02	Instrument Tray , Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm	
		Tapered Reamers: L = 130 mm, Stainless Steel, conical, Hudson fitting (B)	
2	16-5130/12	Ø 12 mm	L = 130 mm
3	16-5130/13	Ø 13 mm	L = 130 mm
4	16-5130/14	Ø 14 mm	L = 130 mm
5	16-5130/15	Ø 15 mm	L = 130 mm
6	16-5130/16	Ø 16 mm	L = 130 mm
7	16-5130/17	Ø 17 mm	L = 130 mm
8	16-5130/18	Ø 18 mm	L = 130 mm
9	16-5130/19	Ø 19 mm	L = 130 mm
10	16-5130/20	Ø 20 mm	L = 130 mm
11	16-5130/21	Ø 21 mm	L = 130 mm
12	16-5130/22	Ø 22 mm	L = 130 mm
13	16-5130/23	Ø 23 mm	L = 130 mm
14	16-5130/24	Ø 24 mm	L = 130 mm

15-8730/02 Instrument Set – Tapered Reamers: 160 mm



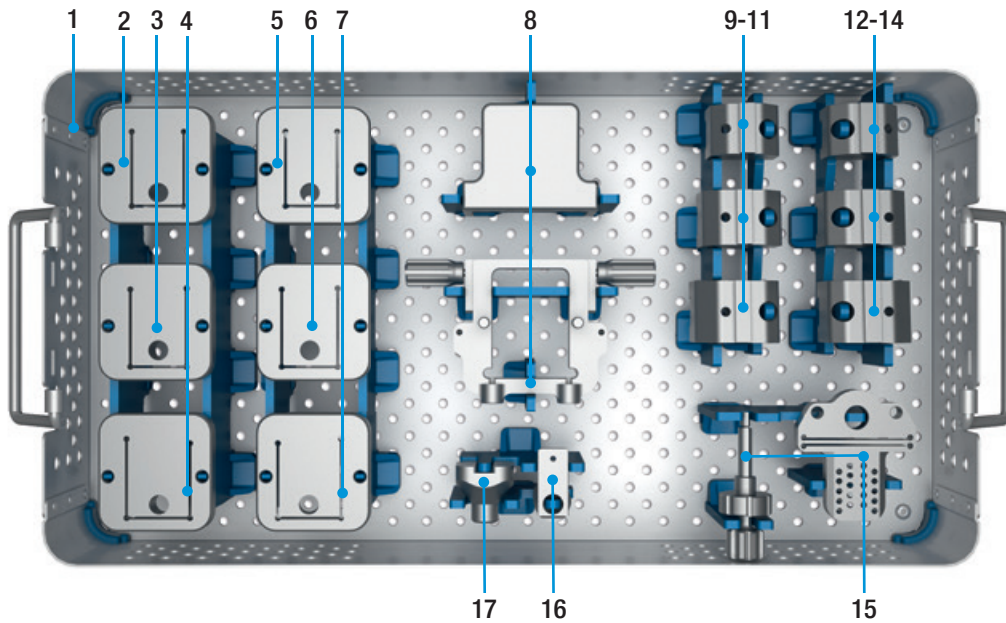
1	15-8731/02	Instrument Tray , Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm	
		Tapered Reamers: L = 160 mm, Stainless Steel, conical, Hudson fitting (B)	
2	16-5160/12	Ø 12 mm	L = 160 mm
3	16-5160/13	Ø 13 mm	L = 160 mm
4	16-5160/14	Ø 14 mm	L = 160 mm
5	16-5160/15	Ø 15 mm	L = 160 mm
6	16-5160/16	Ø 16 mm	L = 160 mm
7	16-5160/17	Ø 17 mm	L = 160 mm
8	16-5160/18	Ø 18 mm	L = 160 mm
9	16-5160/19	Ø 19 mm	L = 160 mm
10	16-5160/20	Ø 20 mm	L = 160 mm
11	16-5160/21	Ø 21 mm	L = 160 mm
12	16-5160/22	Ø 22 mm	L = 160 mm
13	16-5160/23	Ø 23 mm	L = 160 mm
14	16-5160/24	Ø 24 mm	L = 160 mm

15-8740/02 Instrument Set – General Instruments I



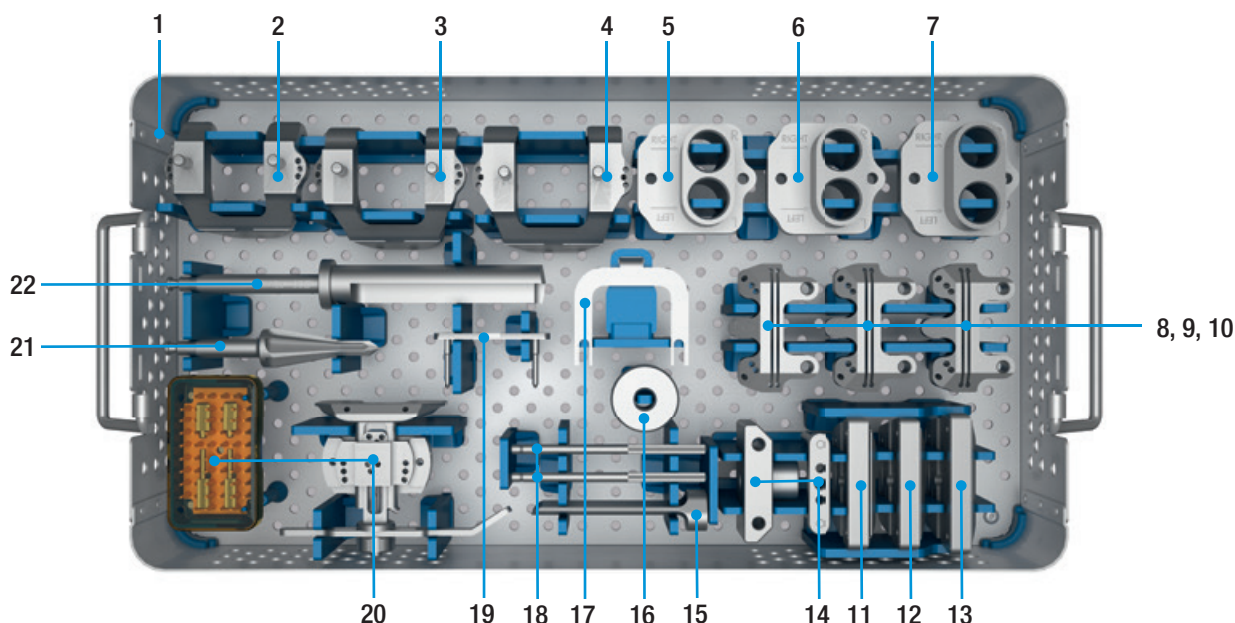
1	15-8741/02	Instrument Tray , Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm
2	15-8035/02	Insertion Positioner , with metal handle, Stainless Steel, for PE plateaus Endo-Model S, M and L
3	15-8035/03	Insertion Positioner , with metal handle, Stainless Steel, for PE plateaus Endo-Model XS and SL
4	15-2546	Hex Screwdriver , torque limiting, Stainless Steel, L = 205 mm, hex 2.0 mm
5	317-586	Inserter/Extraction Forceps , for fixation pin with Ø 3 mm, Stainless Steel, L = 210 mm
6	16-0116/01	Hex Screwdriver , conical, Stainless Steel, hex 2.5 mm
7	16-3203/00	Impaction Plate , PP, for tapered reamers
8	16-0020/02	Connecting/Disconnecting Forceps , slim, Stainless Steel, L = 175 mm
9	317-646/01	Grooved Driver , PP, for femoral components, L = 210 mm
10	16-0018/02	Grooved Driver , PP, for Endo-Model SL tibial component, L = 210 mm
11	317-607/50	Cutting Template , Stainless Steel
12	15-6053/00	T-Handle , Stainless Steel, Hudson fitting (B)
13	16-3283/01	Adapter , Stainless Steel, Hudson female/Jacobs male fitting <u>Adapter fitting optional (not included in instrument set):</u>
	16-3284/00	Hudson female/AO male
	16-3285/00	Hudson female/Harris male
14	16-0017/01	Separate Rod M5 , with metal handle, Stainless Steel, L = 200 mm
15	317-658/01	Bone Awl , with trocar point, Stainless Steel, L = 215 mm
16	15-8516/45	Driver/Extractor , with metal handle, Stainless Steel, L = 240 mm
17	10-5373/01	Hex Screwdriver , with metal handle, Stainless Steel, hex 2.5 mm, L = 180 mm
18	322-145/01	Screwdriver , Stainless Steel, blade width 8.0 mm, L = 210 mm
19	64-8008/02	Hex Screwdriver , with metal handle, Stainless Steel, hex 3.5 mm, L = 250 mm
	317-585/65	Wire Pins , for cutting guides, Stainless Steel, Ø 3 mm, L = 65 mm (4 ea. included)
20	317-585/95	Wire Pins , for cutting guides, Stainless Steel, Ø 3 mm, L = 95 mm (4 ea. included)
	319-602/30	Sterilizing Box , consists of base, silicon mat and lid, medium, PPSU, L = 160 mm, W = 71 mm, H = 27.5 mm

15-8760/02 Instrument Set – Femur I



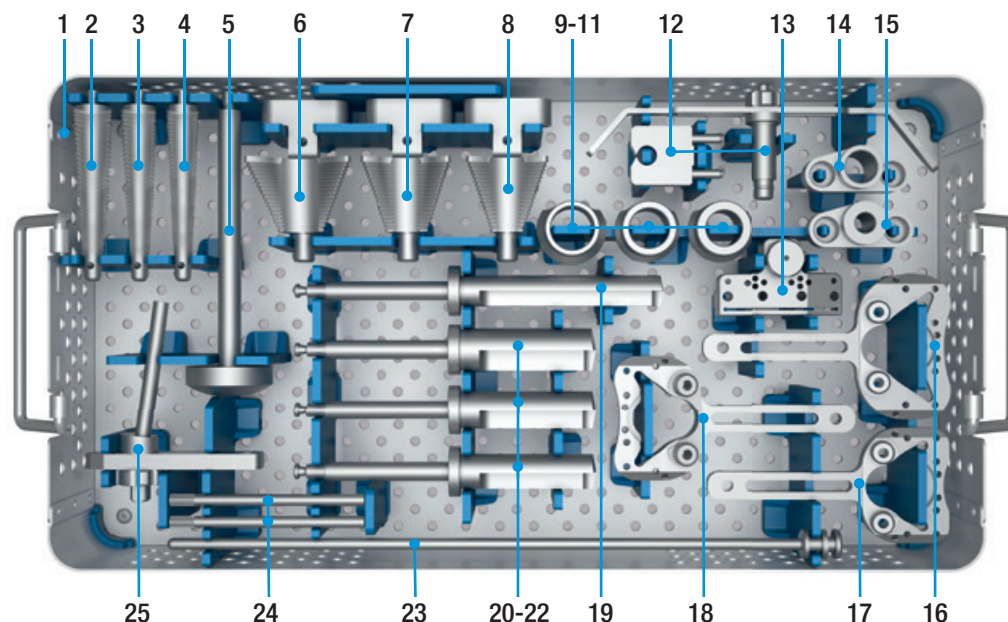
1	15-8761/02	Instrument Tray , Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm
		Saw Attachments , Stainless Steel, for Endo-Model SL femoral components
2	16-3221/01	small S right
3	16-3223/01	medium M right
4	16-3225/01	large L right
5	16-3221/02	small S left
6	16-3223/02	medium M left
7	16-3225/02	large L left
8	16-3278/00	Revision Alignment Gauge , distal, Stainless Steel, for Endo-Model SL femoral components (2 parts)
		Femoral Trial Box , Stainless Steel, for Endo-Model SL femoral components
9	16-3261/01	small S right
10	16-3263/01	medium M right
11	16-3265/01	large L right
12	16-3261/02	small S left
13	16-3263/02	medium M left
14	16-3265/02	large L left
15	16-3277/00	Revision Cutting Block , distal, Stainless Steel, for Endo-Model SL femoral components (2 parts)
16	16-3282/00	Alignment Instrument , Stainless Steel, for femoral trial box
17	16-3271/00	Adapter , Stainless Steel, for femoral trial box

15-8770/02 Instrument Set – Femur II



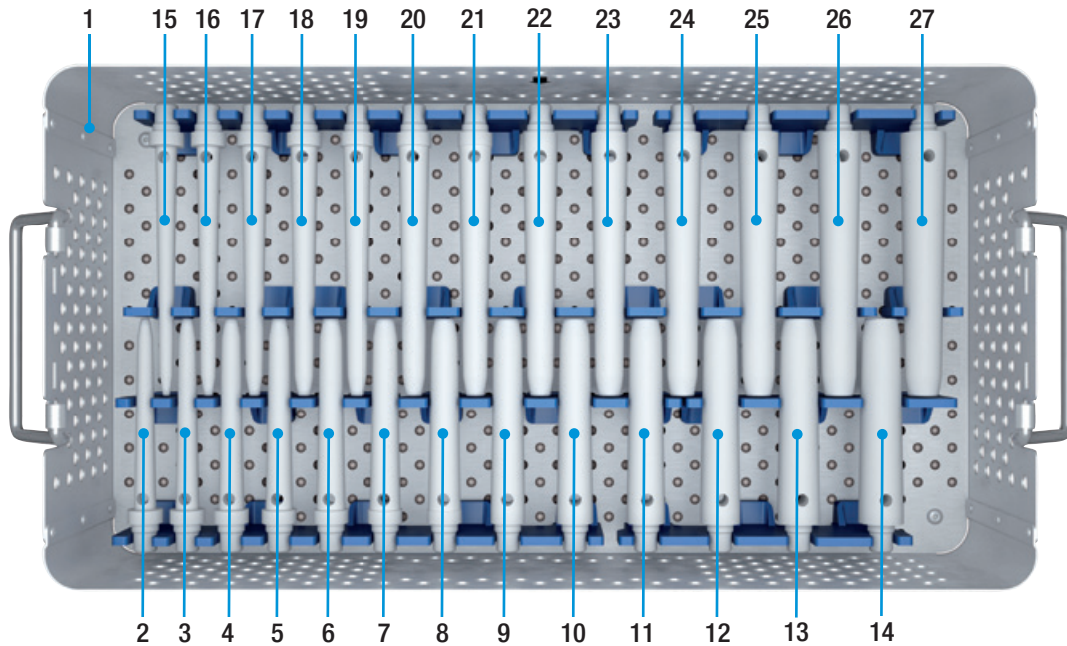
1	15-8771/02	Instrument Tray , Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm
		Condyle Caps , Femur, slotted, Stainless Steel
2	16-3241/02	size 2 right/left S
3	16-3241/03	size 3 right/left M
4	16-3241/04	size 4 right/left L
		Drill Caps , Femur, Stainless Steel, Ø 20 mm
5	16-3213/02	size 2 right/left S
6	16-3213/03	size 3 right/left M
7	16-3213/04	size 4 right/left L
		Cutting Blocks , Femur, Stainless Steel, for distal cut
8	16-3228/02	size 2 S
9	16-3228/03	size 3 M
10	16-3228/04	size 4 L
		Cutting Blocks , Femur, Stainless Steel, for chamfer cuts
11	16-3250/02	size 2 S
12	16-3250/03	size 3 M
13	16-3250/04	size 4 L
14	16-3275/00	Alignment Instrument , Stainless Steel, for valgus angulation (2 parts)
15	317-802/32	Chisel , Stainless Steel, L = 80 mm, for patella glide
16	16-3281/00	Center Sleeve , Femur, Stainless Steel, for drill cap
17	16-3279/00	Holding Clamp , Stainless Steel
18	317-802/58	Alignment Rod , Stainless Steel, for epicondyles, L = 100 mm (2 ea. included)
19	317-802/36	Dove Tail Adapter , size 2-5, Stainless Steel, neutral, for femoral cutting blocks
20	16-3276/00	Alignment Instrument , Stainless Steel, for determination of external rotation (5 parts)
	319-601/30	Sterilizing Box , consists of base, silicon mat and lid, small, PPSU, L = 79.5 mm, W = 46.5 mm, H = 20,5 mm, incl. screws, for insertion instrument 131-379/00
21	15-6037/00	Drill , conical, Stainless Steel, to open the femoral and tibial canal, Hudson fitting (B)
22	16-3206/20	Drill , Femur, Stainless Steel, with stop, Ø 20 mm, Hudson fitting (B), for Endo-Model SL femoral components

15-8780/02 Instrument Set – Tibia



1	15-8781/02	Instrument Tray , Stainless Steel, empty, L= 478 mm, W= 253 mm, H= 76 mm
		Stem Compressors , Stainless Steel, for Endo-Model SL tibial components
2	16-3201/04	large L
3	16-3201/03	medium M
4	16-3201/02	small S
5	16-3197/00	Handle , Stainless Steel, for tibial compressor/femoral trial box
		Bone Compressors , Stainless Steel, for Endo-Model SL tibial components
6	16-3199/14	large L
7	16-3199/13	medium M
8	16-3199/12	small S
		Drill Guides , Tibia, Stainless Steel, for drill templates
9	16-3270/22	large L
10	16-3270/20	medium M
11	16-3270/18	small S
12	317-802/52	Stylus , Stainless Steel, for tibial saw guide, adjustable (2 parts)
13	16-3241/00	Tibial Saw Guide , Stainless Steel, for Endo-Model SL tibial components
14	16-3267/00	Drill Guide , Tibia, Stainless Steel, Ø 16 mm, for ventral cut
15	16-3266/00	Alignment Gauge , Tibia, Stainless Steel, for drill templates
		Drill Templates , Stainless Steel, for Endo-Model SL tibial components
16	16-3198/14	large L
17	16-3198/12	small S
18	16-3198/13	medium M
19	16-3207/16	Drill , Tibia, with stop, Stainless Steel, Ø 16 mm, for ventral cut, for Endo-Model SL tibial components
		Drill , Tibia, with stop, Stainless Steel, for Endo-Model SL tibial components
20	16-3208/22	large L Ø 22 mm
21	16-3208/20	medium M Ø 20 mm
22	16-3208/18	klein S Ø 18 mm
23	16-3242/00	Alignment Rod , Tibia, Stainless Steel
24	16-3211/00	Guide Rod , Tibia, Stainless Steel, for drill template (2 ea. included)
25	16-3212/08	Connector , Stainless Steel, 8°, for tapered reamer/tibial saw guide

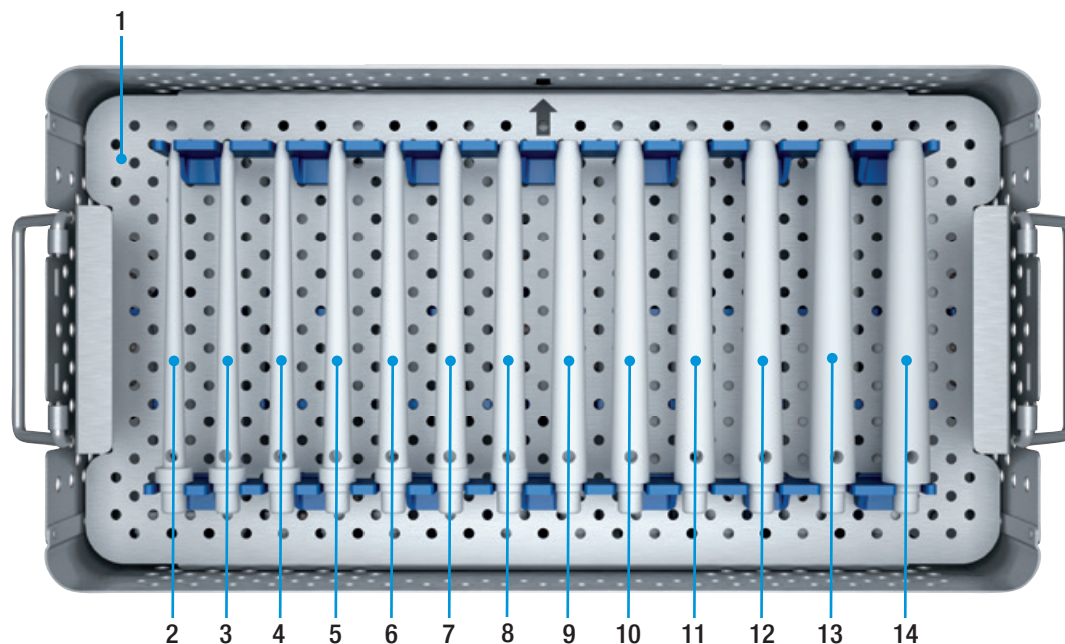
15-8790/02 Instrument Set (1) – Trial Stems: Femur, 100 mm, 130 mm



1	15-8791/02	Instrument Tray, lower, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 106 mm	
		Femoral Trial Stems, PPSU, radiopaque, L = 100 mm, conical	
2	16-3101/12	Ø 12 mm	L = 100 mm
3	16-3101/13	Ø 13 mm	L = 100 mm
4	16-3101/14*	Ø 14 mm	L = 100 mm
5	16-3101/15	Ø 15 mm	L = 100 mm
6	16-3101/16*	Ø 16 mm	L = 100 mm
7	16-3101/17	Ø 17 mm	L = 100 mm
8	16-3101/18*	Ø 18 mm	L = 100 mm
9	16-3101/19	Ø 19 mm	L = 100 mm
10	16-3101/20	Ø 20 mm	L = 100 mm
11	16-3101/21	Ø 21 mm	L = 100 mm
12	16-3101/22	Ø 22 mm	L = 100 mm
13	16-3101/23	Ø 23 mm	L = 100 mm
14	16-3101/24	Ø 24 mm	L = 100 mm
		Trial Stems, PPSU, radiopaque, L = 130 mm, conical	
15	16-3131/12	Ø 12 mm	L = 130 mm
16	16-3131/13	Ø 13 mm	L = 130 mm
17	16-3131/14*	Ø 14 mm	L = 130 mm
18	16-3131/15	Ø 15 mm	L = 130 mm
19	16-3131/16*	Ø 16 mm	L = 130 mm
20	16-3131/17	Ø 17 mm	L = 130 mm
21	16-3131/18*	Ø 18 mm	L = 130 mm
22	16-3131/19	Ø 19 mm	L = 130 mm
23	16-3131/20	Ø 20 mm	L = 130 mm
24	16-3131/21	Ø 21 mm	L = 130 mm
25	16-3131/22	Ø 22 mm	L = 130 mm
26	16-3131/23	Ø 23 mm	L = 130 mm
27	16-3131/24	Ø 24 mm	L = 130 mm

* also for cemented modular stems 12, 14 und 16 mm

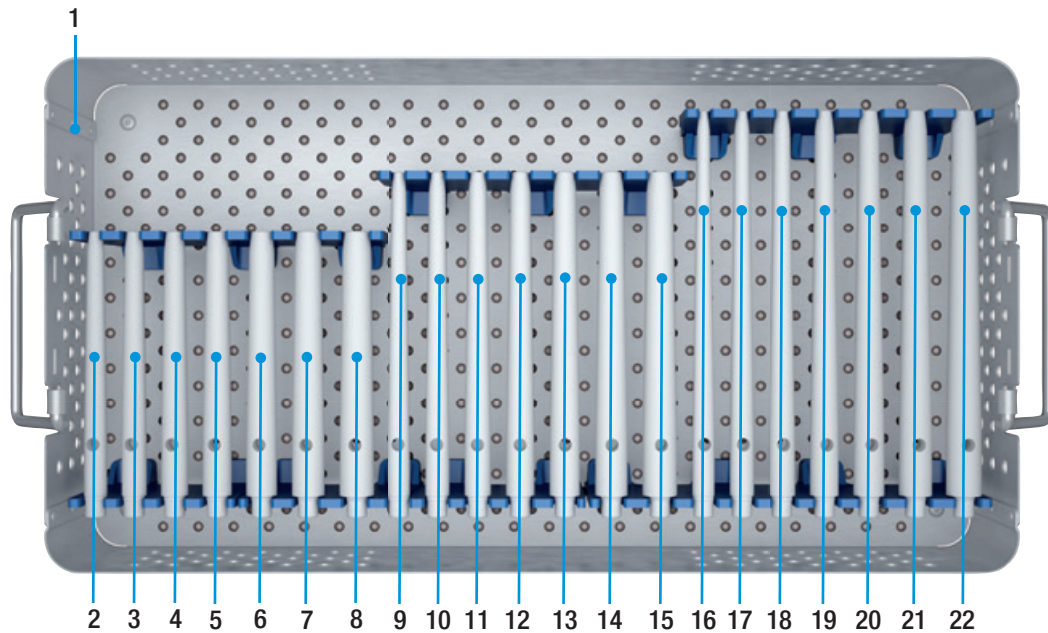
15-8790/02 Instrument Set (2) – Trial Stems: Femur, 160 mm



1	15-8791/02	Instrument Tray, upper, Stainless Steel, empty, L= 478 mm, W= 253 mm, H= 106 mm	
		Femoral Trial Stems, PPSU, radiopaque, L= 160 mm, conical	
2	16-3161/12	Ø 12 mm	L= 160 mm
3	16-3161/13	Ø 13 mm	L= 160 mm
4	16-3161/14*	Ø 14 mm	L= 160 mm
5	16-3161/15	Ø 15 mm	L= 160 mm
6	16-3161/16*	Ø 16 mm	L= 160 mm
7	16-3161/17	Ø 17 mm	L= 160 mm
8	16-3161/18*	Ø 18 mm	L= 160 mm
9	16-3161/19	Ø 19 mm	L= 160 mm
10	16-3161/20	Ø 20 mm	L= 160 mm
11	16-3161/21	Ø 21 mm	L= 160 mm
12	16-3161/22	Ø 22 mm	L= 160 mm
13	16-3161/23	Ø 23 mm	L= 160 mm
14	16-3161/24	Ø 24 mm	L= 160 mm

* also for cemented modular stems 12, 14 und 16 mm

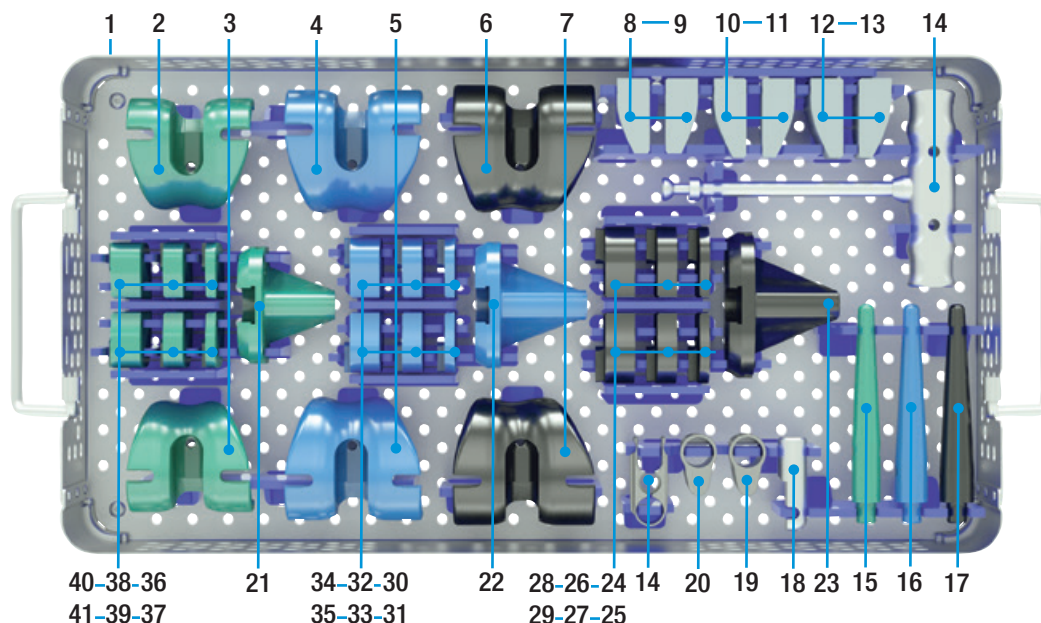
15-8810/02 Instrument Set – Trial Stems: Tibia, 100 mm, 130 mm, 160 mm



1	15-8811/02	Instrument Tray , Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm	
Tibial Trial Stems , PPSU, radiopaque, L = 100 mm, conical			
2	16-4101/12	Ø 12 mm	L = 100 mm
3	16-4101/13	Ø 13 mm	L = 100 mm
4	16-4101/14*	Ø 14 mm	L = 100 mm
5	16-4101/15	Ø 15 mm	L = 100 mm
6	16-4101/16*	Ø 16 mm	L = 100 mm
7	16-4101/17	Ø 17 mm	L = 100 mm
8	16-4101/18*	Ø 18 mm	L = 100 mm
Tibial Trial Stems , PPSU, radiopaque, L = 130 mm, conical			
9	16-4131/12	Ø 12 mm	L = 130 mm
10	16-4131/13	Ø 13 mm	L = 130 mm
11	16-4131/14*	Ø 14 mm	L = 130 mm
12	16-4131/15	Ø 15 mm	L = 130 mm
13	16-4131/16*	Ø 16 mm	L = 130 mm
14	16-4131/17	Ø 17 mm	L = 130 mm
15	16-4131/18*	Ø 18 mm	L = 130 mm
Tibial Trial Stems , PPSU, radiopaque, L = 160 mm, conical			
16	16-4161/12	Ø 12 mm	L = 160 mm
17	16-4161/13	Ø 13 mm	L = 160 mm
18	16-4161/14*	Ø 14 mm	L = 160 mm
19	16-4161/15	Ø 15 mm	L = 160 mm
20	16-4161/16*	Ø 16 mm	L = 160 mm
21	16-4161/17	Ø 17 mm	L = 160 mm
22	16-4161/18*	Ø 18 mm	L = 160 mm

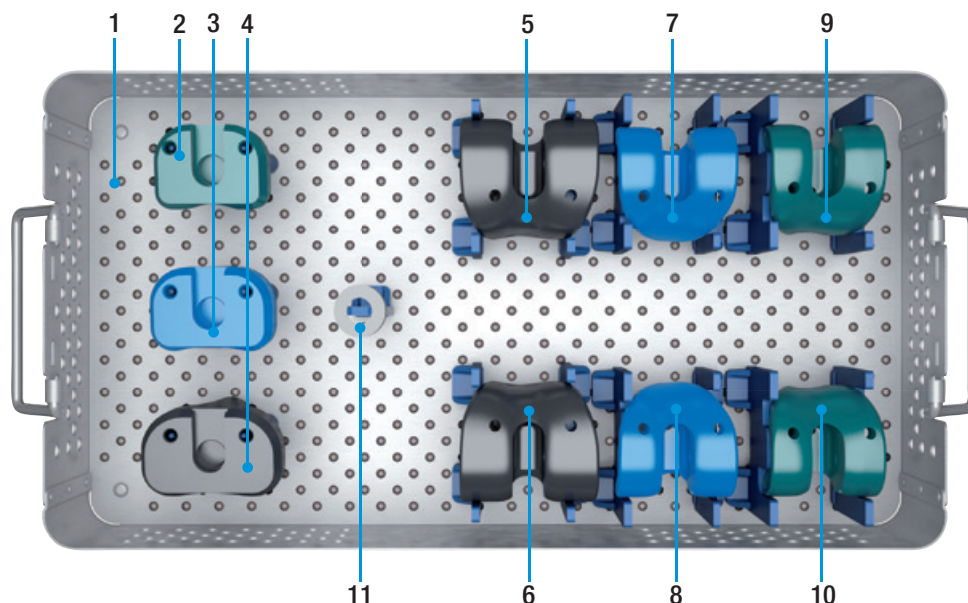
* also for cemented modular stems 12, 14 und 16 mm

15-8820/03 Instrument Set – Trial Prostheses: Femur/Tibia, intracondylar



1	15-8821/03	Instrument Tray , Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm			
Femoral Trial Prostheses , PPSU, intracondylar					
2	16-3181/12	left	small S	green	
3	16-3181/11	right	small S	green	
4	16-3183/12	left	medium M	blue	
5	16-3183/11	right	medium M	blue	
6	16-3185/12	left	large L	black	
7	16-3185/11	right	large L	black	
Femoral Trial Segments , PPSU, radiopaque					
8	16-4368/12	left	small S/medium M/large L	H = 15 mm	
9	16-4368/11	right	small S/medium M/large L	H = 15 mm	
10	16-4368/02	left	small S/medium M/large L	H = 25 mm	
11	16-4368/01	right	small S/medium M/large L	H = 25 mm	
12	16-4368/22	left	small S/medium M/large L	full	
13	16-4368/21	right	small S/medium M/large L	full	
14	15-6061/00	Extraction Instrument , Stainless Steel, for trial prostheses (2 parts)			
15	16-3170/12	Tibial Trial Stem , PPSU, radiopaque	small S	green	
16	16-3170/13	Tibial Trial Stem , PPSU, radiopaque	medium M	blue	
17	16-3170/14	Tibial Trial Stem , PPSU, radiopaque	large L	black	
18	16-4367/20	Trial Axis , for Rotating and Pure Hinge version			
19	16-4367/00	Trial Connection Component , Stainless Steel, for pure hinge knee			
20	16-4367/10	Trial Connection Component , Stainless Steel, for rotating hinge knee			
21	16-3175/12	Tibial Trial Prosthesis , intracondylar, PPSU	small S	green	
22	16-3175/13	Tibial Trial Prosthesis , intracondylar, PPSU	medium M	blue	
23	16-3175/14	Tibial Trial Prosthesis , intracondylar, PPSU	large L	black	
Tibial Trial Spacers , half, PPSU, radiopaque					
24	16-4361/03	right	large L	H = 5 mm	
25	16-4362/03	left	large L	H = 5 mm	
26	16-4363/03	right	large L	H = 10 mm	
27	16-4364/03	left	large L	H = 10 mm	
28	16-4365/03	right	large L	H = 15 mm	
29	16-4366/03	left	large L	H = 15 mm	
30	16-4361/02	right	medium M	H = 5 mm	
31	16-4362/02	left	medium M	H = 5 mm	
32	16-4363/02	right	medium M	H = 10 mm	
33	16-4364/02	left	medium M	H = 10 mm	
34	16-4365/02	right	medium M	H = 15 mm	
35	16-4366/02	left	medium M	H = 15 mm	
36	16-4361/01	right	small S	H = 5 mm	
37	16-4362/01	left	small S	H = 5 mm	
38	16-4363/01	right	small S	H = 10 mm	
39	16-4364/01	left	small S	H = 10 mm	
40	16-4365/01	right	small S	H = 15 mm	
41	16-4366/01	left	small S	H = 15 mm	

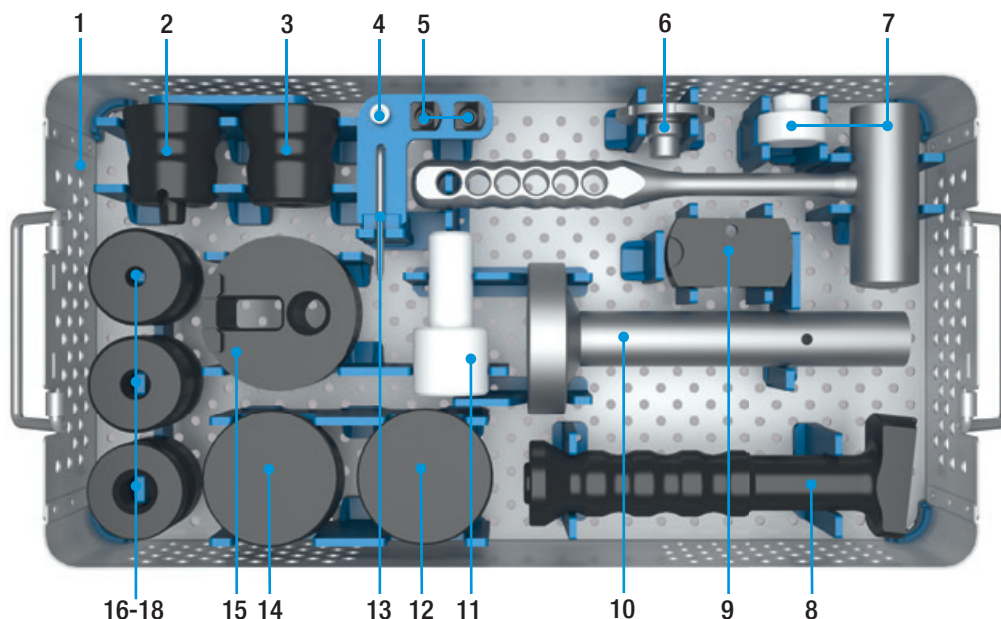
15-8840/03 Instrument Set – Trial Instruments: Distal Femur and Proximal Tibial Replacement



1	15-8841/02	Instrument Tray , Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 76 mm			
Tibial Trial Prostheses , PPSU, for proximal tibia replacement					
2	16-3180/12	small S	green		
3	16-3180/13	medium M	blue		
4	16-3180/14	large L	black		
Femoral Trial Prostheses , PPSU, radiopaque, for distal femur replacement, slim					
5	16-3195/21	large L	right	black	
6	16-3195/22	large L	left	black	
7	16-3193/21	medium M	right	blue	
8	16-3193/22	medium M	left	blue	
9	16-3191/21	small S	right	green	
10	16-3191/22	small S	left	green	
11	15-6094/00	Trial Support Ring , PPSU, Ø 28 mm, H = 10 mm			

Optional: radiopaque Trial Prostheses					
Femoral Trial Prostheses , intracondylar, PPSU, radiopaque					
16-3181/21	small S	right	green		
16-3181/22	small S	left	green		
16-3183/21	medium M	right	blue		
16-3183/22	medium M	left	blue		
16-3185/21	large L	right	black		
16-3185/22	large L	left	black		
Tibial Trial Prostheses , intracondylar, PPSU, radiopaque					
16-3175/22	small S	green			
16-3175/23	medium M	blue			
16-3175/24	large L	black			
Tibial Trial Prostheses , for proximal tibia replacement, PPSU, radiopaque					
16-3180/22	small S	green			
16-3180/23	medium M	blue			
16-3180/24	large L	black			

16-0100/02 Instrument Set – Assembly



1	16-0100/03	Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 86 mm
2	16-0111/02	Assembling Protector, PP, for female taper
3	16-0111/01	Assembling Protector, PP, for male taper
4	16-0114/04	Spare Part-Screw, Stainless Steel, for 16-0114/01 assembling protector femur
5	16-0114/02	Spare Part-Block, PP, for 16-0114/01 assembling protector femur (2 ea. included)
6	16-0113/01	Metal Core, Stainless Steel, for assembling protector, for modular stem (sizes 1 – 3)
7	16-0115/01	Mallet, non-resilient, Stainless Steel, PA, 800 g, complete
8	16-0114/01	Assembling Protector, Femur, PP, handle, complete
9	16-0114/03	Spare Part-Plate, PP, for 16-0114/01 assembling protector femur
10	16-0118/01	Assembling Table: Stainless Steel, upper part
11	16-0118/03	Assembling Table: PA, silencer
12	16-0110/02	Assembling Plate, PP, tibia, for Endo-Model SL
13	16-0116/02	Hex Screwdriver, Stainless Steel, hex 5.0 mm
14	16-0110/01	Assembling Plate, PP, femur
15	16-0110/03	Assembling Plate, PP, tibia, for Endo-Model
16	16-0112/01	Assembling Protectors, PP, size 1
17	16-0112/02	Assembling Protectors, PP, size 2
18	16-0112/03	Assembling Protectors, PP, size 3
	16-0118/02*	Assembling Table, Stainless Steel, lower part with fixed base plate

* Not included in Instrument Set 16-0100/02

Assembling Instruments

for MEGASYSTEM-C Tumor and Revision System



16-0118/01

Assembling Table, Stainless Steel, upper part



16-0118/02

Assembling Table, Stainless Steel, lower part,
with fixed base plate



16-0118/03

Assembling Table, PA, silencer



16-0110/01
Femur Assembling Plate, PP, femur



16-0110/02
Assembling Plate, PP, tibia,
 for Endo-Model SL

16-0110/03
Assembling Plate, PP, tibia,
 for Endo-Model



16-0111/01
Assembling Protector, PP, for male taper



16-0111/02
Assembling Protector, PP, for female taper



Assembling Protectors, PP

16-0112/01 size 1

16-0112/02 size 2

16-0112/03 size 3



16-0113/01
Metal Core, for assembling protector,
 Stainless Steel, for modular stem (sizes 1-3)



16-0114/01

Assembling Protector, femur, PP,
handle, complete



16-0114/02

Spare Part-Block, PP, for 16-0114/01 assembling protector femur
(2 ea. included)

Spare part included in 16-0114/01



16-0114/03

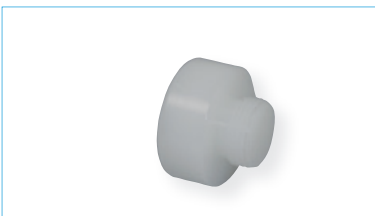
Spare Part-Plate, PP, for 16-0114/01 assembling protector femur

Spare part included in 16-0114/01



16-0115/01

Mallet, non-resilient, 800g, Stainless Steel,
PA, complete



16-0115/02

Spare-Part, PA, for 16-0115/01 mallet

Spare part included in 16-0115/01



16-0116/02

Hex Screwdriver, Stainless Steel,
hex 5.0 mm

Description of Use: Mounting the Assembling Table

The assembling table is mounted before the operation as illustrated below.

The upper part of the assembling table (16-0118/01) and the silencer (16-0118/03) are assembled in sterile condition. The lower part (16-0118/02) with fixed base plate may be kept non-sterile.



The silencer is screwed onto the lower part.



The upper part of the table is attached.

In use of the assembling table, place foot on fixed base plate to prevent the table from toppling over.

The table is dismantled in reverse order.

Description of Use: Connecting modular Stems to Modular Femoral and Tibial Components



The femur assembling plate (16-0110/01) is placed into the reception of the upper part of the assembling table (16-0118/01).



According to the chosen size of modular stem, the metal core (16-0113/01) is screwed into assembling protector for modular stem, size 1-3 (16-0112/01-03).



Prosthesis stem and femoral joint component are connected by hand (the taper surfaces must be clean and dry) and, observing



the 6° valgus alignment of the femoral implant, placed on the assembling plate so that the prosthesis stem is vertical. If not, the implant assembly must be rotated 180°.

As shown in the picture, the components are struck with two powerful blows of the non-resilient mallet (16-0115/01) in order to firmly engage the taper connection (the second blow is a safety measure). The metal face of the mallet must only be used.



When using modular tibial implants, the tibial assembling plate (16-0110/02 or 16-0110/03) is first placed into the reception of the upper part of the table.



Proceed according to the assembly of modular femoral implant. Before using the locking screws, the taper connections must be connected firmly as described, using the assembling instruments.

Description of Use: Connecting Stem Elements



The assembling protector for female taper (16-0111/02) is placed into the reception of the assembling table upper part.



Attaching the selected stem segment.



Attaching the stem segment to be connected and the assembling protector for male taper (16-0111/01).

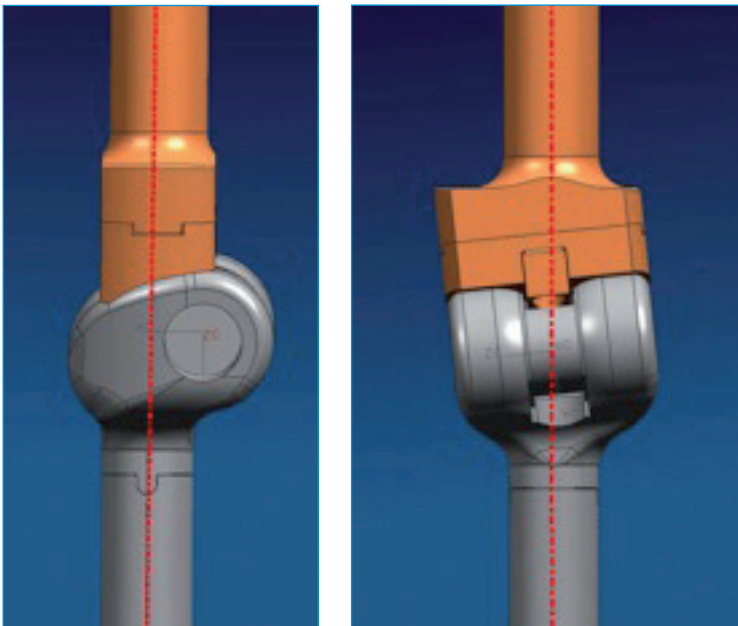


Assemble the stem segments with two blows of the non-resilient mallet, using the metal face of the mallet only.

Description of Use and Mounting of the Femur Assembling Protector

Use

The assembling protector femur (16-0114/01) is always used if the surgical procedure does not permit assembly of implant components outside the operating field (e.g. connecting femoral joint components to push-through stems). The instrument compensates for the valgus geometry of the knee implant and permits the engagement of the tapers in axial alignment in the transverse and sagittal plane.



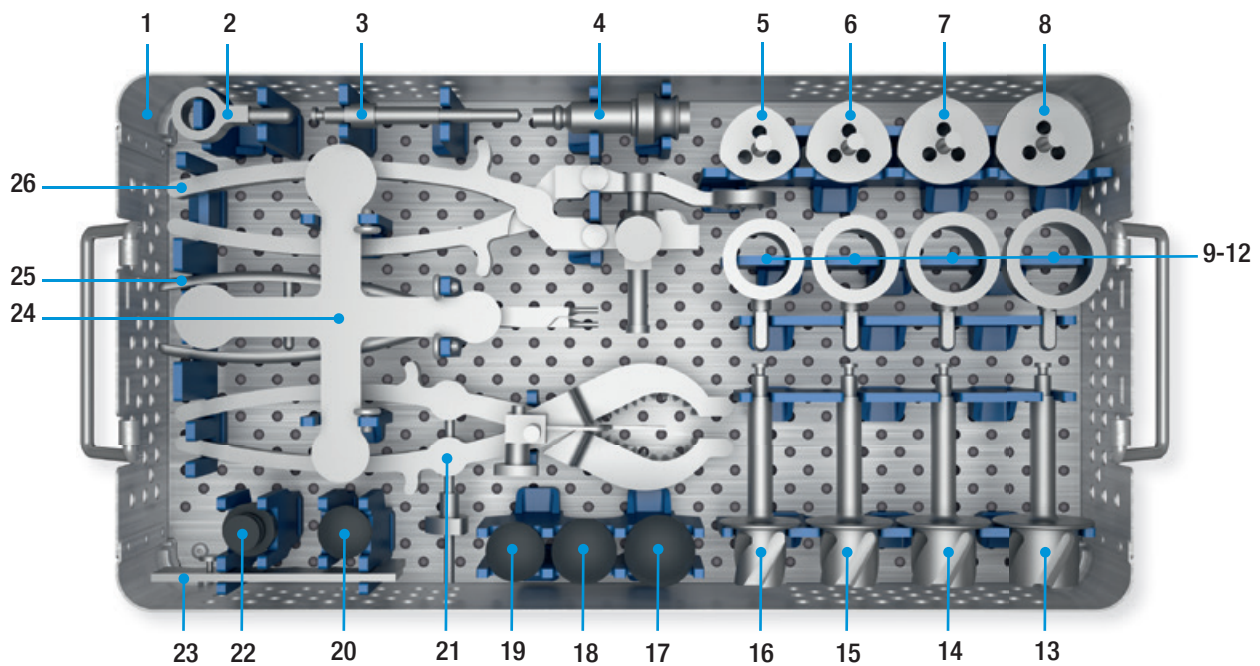
Its use enables taper engagement in axial alignment.

Assembly

The assembling protector femur is mounted as shown in below illustration. First the plate is connected to the handle so that, depending on the side being operated on, the letters “R” for the right side or the letters “L” for the left side are lined up. In the illustration the right side is chosen. Consecutively the block for assembling protector is secured using the hex screwdriver. The two arrows (of block and plate) must point toward each other.



340-200/01 Instrument Set, Patella Resurfacing, 3-pegs



1	340-015/01	Instrument Tray, Stainless Steel, empty, L = 478 mm, W = 253 mm, H = 100 mm
2	340-007	Patella Pusher Attachment, Stainless Steel
3	340-306B	Patella Drill, Stainless Steel, Ø 6.3 mm, Hudson fitting (B)
4	optional*	Adapter, optional
		Patella Drill Guides, Stainless Steel, for patella holding forceps
5	340-225	Size 1 Ø 25 mm
6	340-228	Size 2 Ø 28 mm
7	340-231	Size 3 Ø 31 mm
8	340-234	Size 4 Ø 34 mm
		Patella Reaming Guides, Stainless Steel, for patella holding forceps
9	340-025	Size 1 Ø 25 mm
10	340-028	Size 2 Ø 28 mm
11	340-031	Size 3 Ø 31 mm
12	340-034	Size 4 Ø 34 mm
		Patella Reamers, Stainless Steel, for patella reaming guides, Hudson fitting (B)
13	340-134B	Size 4 Ø 34 mm
14	340-131B	Size 3 Ø 31 mm
15	340-128B	Size 2 Ø 28 mm
16	340-125B	Size 1 Ø 25 mm
		Patella Trial Prostheses, Stainless Steel, for Patella Component 3-pegs
17	340-334	Size 4 Ø 34 mm
18	340-331	Size 3 Ø 31 mm
19	340-328	Size 2 Ø 28 mm
20	340-325	Size 1 Ø 25 mm
21	340-006	Patella Resection Clamp, Stainless Steel
22	340-009	Patella Pusher Inserter, PP, for patella pusher attachment
23	65-2000	Townley Femur Caliper, Stainless Steel, L = 115 mm, working L = 100 mm
24	340-010	Patella Sizing Template, Stainless Steel
25	15-2042	Inserting Forceps, Stainless Steel, L = 215 mm
26	340-005	Patella Holding Forceps, Stainless Steel

* Adapter optional: 16-3283/01, 16-3284/00, 16-3285/00


Additional Instruments

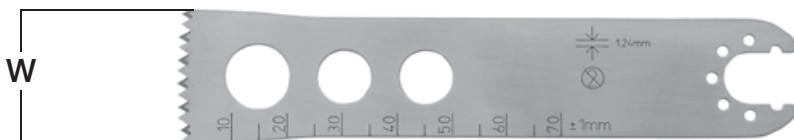
Adapter, Stainless Steel, Hudson Fitting (B)

Various adapters to enable compatibility with other equipment connections.







Hudson Fitting (B),
female, Basic tool
connection

REF	Fittings
16-3283/01	Jacobs Fitting, male 
16-3284/00	AO Fitting, male 
16-3285/00	Harris Fitting, male 



Sawblades, Stainless Steel,
without offset teeth, 1.24 mm thick

wide W = 25 mm	small W = 13 mm	Fittings
317-654/10	317-656/10	Synthes 
317-654/11	317-656/11	Aesculap combi 
317-654/13	317-656/13	Zimmer / Hall combi 
317-654/14	317-656/14	Stryker System 4 

Additional Instruments



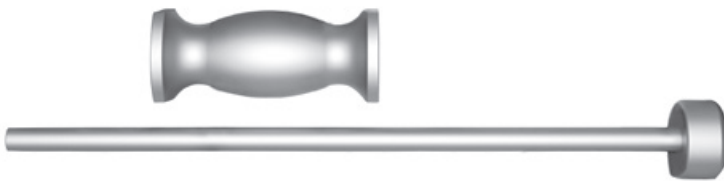
Revision Drill Guide, Stainless Steel, for rotating hinge and pure hinge version, to support the axis decoupling when changing the Endo-Model SL connection components

REF	complete
16-3295/00	consisting of 4 components: Retainer, Drill Rod, 2 Rods with handle



Extractor, Stainless Steel, for modular stems with female taper, taper 12/10 mm

REF	Length (mm)
15-0036/81	230



Guide Rod with Slap Hammer, Stainless Steel (optional for stem extraction: Guide Rod 317-661 in combination with Driver Extractor 15-8516/45 or 15-0036/81)

REF	Length (mm)
317-661	365



Hex Screwdriver, Stainless Steel, hex 2.5 mm, 90°

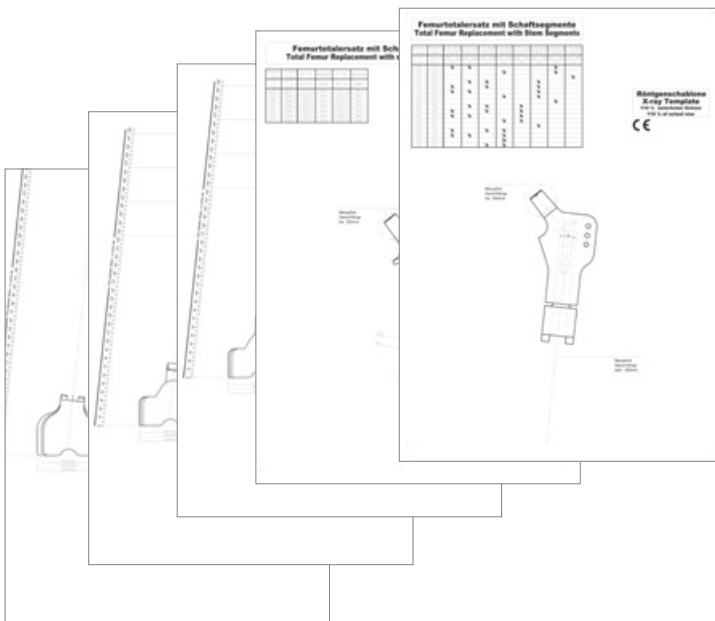
REF	Length (mm)
16-1230/00	139



Hex Screwdriver, with metal handle, Stainless Steel, hex 2.0 mm

REF	Length (mm)
64-1181/16	175

X-ray Templates



X-ray Templates,
110% of actual size, PVC transparent,
22 sheets

REF	
15-8516/62	MEGASYSTEM-C/ ENDO-MODEL SL

Additional Information:

Surface Modifications (available as custom-made prosthesis on request)

a) Uncemented Modular Stems PoroLink* optional with HX** coating.

- * PoroLink: grid blasted titanium surface Ra ~7µm
- ** HX: CaP = Calcium Phosphate coating

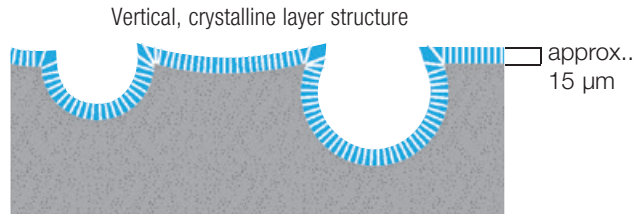


Fig.: PoroLink* with HX** coating. Schematic cross-section of coated surfaces.



b) Bone Replacement Components CoCrMo for metal hypersensitive patients, optional with LINK PorEx*** Technology.

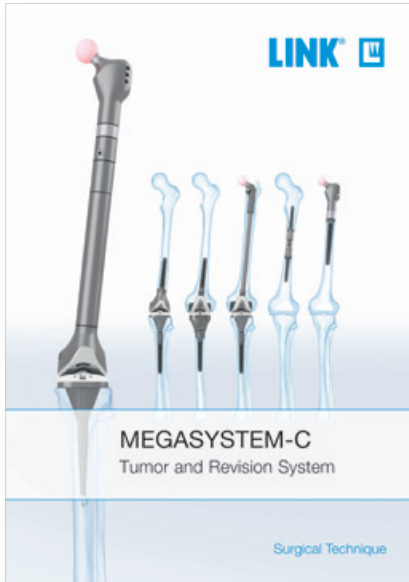
*** LINK PorEx: TiNbN = Titanium Niobium Nitride



c) Bone Replacement Components (no intramedullary stems) with PorAg****

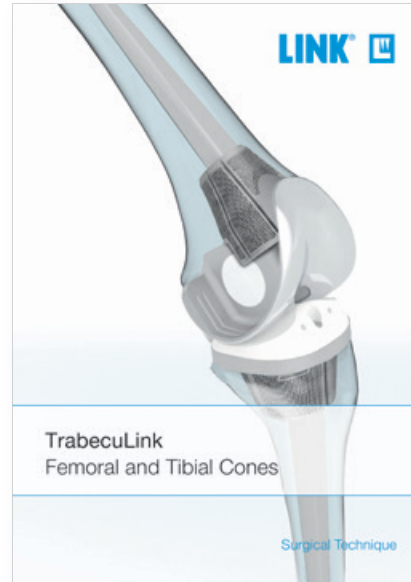
- **** PorAg: antimicrobial surface modification
- TiAgN/Ag = titanium silver nitride/silver surface modification

Further Information: Literature



**MEGASYSTEM-C
Tumor and Revision System**

- Surgical Technique



**TrabecuLink
Femoral and Tibial Cones**

- Surgical Technique



**LinkSpacer
PMMA/Gentamicin**



**Endo-Model
Knee Fusion Nail SK,**
• Surgical Technique

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Please note the following regarding the use of our implants:

Follow the instructions for use!

For detailed product information, including indications and contraindications, precautions and warnings, etc. please consult the product's Instructions for Use (IFU) prior to use.



eifu.link-ortho.com

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