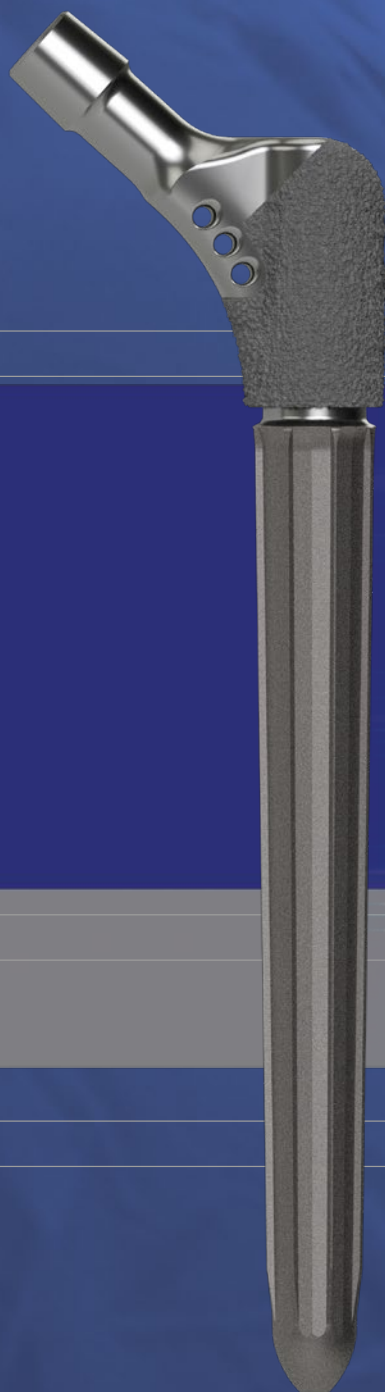


▲-Vizion®

FEMORAL REVISION SYSTEM

SMART MODULAR THINKING



Surgical Technique

Joint

Spine

Sports Med

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1. INTRODUCTION

This document describes the recommended surgical technique for the M-Vizion Femoral Revision System.



The M-Vizion is a cementless modular stem made of Ti-Al-Nb alloy and composed of a proximal and a distal component. The proximal body is coated with Mectagrip, an innovative coating which provides high friction and scratch-fit feel.

The proximal body is available in two versions: without hole and three-hole. The three-hole version enables the usage of cables in order to fix the greater trochanter if the surgeon deems it necessary.



Carefully read the instructions for use and contact your local Medacta representative should you have any questions concerning product compatibility.

1.1 INDICATIONS OF USE

The M-Vizion Femoral Revision System is designed for use in total or partial hip arthroplasty to provide increased patient mobility and reduced pain by replacing the damaged hip joint, in primary or revision surgery.

Total hip arthroplasty is indicated in the following cases:

- Severely painful and/or disabled joint as a result of arthrosis, traumatic arthritis, rheumatoid polyarthritis, or congenital hip dysplasia
- Avascular necrosis of the femoral head
- Acute traumatic fracture of the femoral head or neck
- Failure of previous hip surgery: joint reconstruction, internal fixation, arthrodesis, partial hip arthroplasty, hip resurfacing replacement or total hip arthroplasty.

Partial hip arthroplasty is indicated in the following cases:

- Acute traumatic fracture of the femoral head or neck
- Non-union of femoral neck fracture
- Avascular necrosis of the femoral head
- Primary pathology involving the femoral head but with a non deformed acetabulum

1.2 CONTRAINDICATIONS

Total or partial hip arthroplasty is contraindicated in the following cases:

- Acute, systemic or chronic infection
- Skeletal immaturity
- Severe muscular, neurological, vascular deficiency or other pathologies of the affected limb that may compromise the function of the implant
- Bone condition that may compromise the stability of the implant

Mental or neuromuscular disorders may create an unacceptable risk to the patient and can be a source of post-operative complications.

It is the surgeon's responsibility to ensure that the patient has no known allergy to the materials used.

1.3 PRE-OPERATIVE PLANNING

Careful preoperative planning is essential. It will help the surgeon to pre-select the implant sizes in order to recreate the patient's joint biomechanics as closely as possible.

In addition, using the set of X-ray templates (with the same magnification of the patient's X-ray), it will be possible to determine:

- The implant components size
- The prosthetic centre of rotation
- The level of the neck cut (in case of primary surgery)
- The head size

WARNING

The final implant will be selected intra-operatively, because of possible discrepancies between actual conditions and templating.

1.4 SURGICAL APPROACH

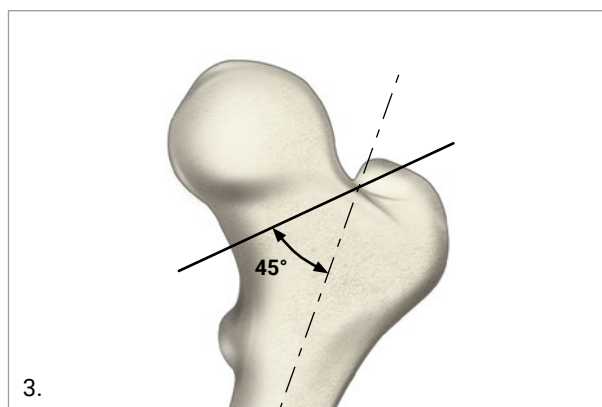
The choice of surgical approach is up to the surgeon. The instrumentation has been developed for a conventional approach.

2. FEMORAL NECK OSTEOTOMY/PRIMARY STEM REMOVAL

In primary surgery cases, the level of the neck cut is determined during pre-operative planning using the X-ray templates.

The recommended femoral neck osteotomy angle is 45° to the diaphyseal axis of the femur. The resection is performed with an oscillating saw, taking care to maintain the 45° angle. The femoral head is removed using an extractor.

In revision surgery cases, proceed with existing implant removal. For both cemented and cementless stems, specific extraction instruments are available to aid the removal of any pre-existing implant and debris.



3. ACCESSING THE FEMORAL CANAL

To gain access to the medullary canal, the thigh is held in the position that provides the best exposure of the diaphyseal axis, depending on the selected approach.

In primary surgery cases, to avoid undersizing and varus positions of the stem, a box chisel is applied opposite the digital fossa of the femoral neck.

Guide the chisel with a slight anteversion. This removes a block of cancellous bone.

TRICK

To ensure that the stem is at the correct depth within the femur, make sure that the reamer axis is aligned with the femoral axis. If necessary remove some bone from the proximal region before fully inserting the reamer to allow it to find the correct alignment.

The angled chisel (reference 01.15.10.0224) is available as option.



4. DISTAL REAMING

To prepare the femoral canal, use the distal reamers up to the size determined during pre-operative planning of the distal component or until cortical contact is achieved. Distal reamers are available in 1 mm increments from 12 mm to 28 mm. Distal reamers are common for all the stem length 140 -180 -220 mm, except for stem length 140 mm with diameters from Ø 12 to Ø 15 that require the short distal reamer. See the table below.

Ream the femur by hand using the dedicated T-handle until the reamer advances to the desired mark. This often corresponds to the height of the greater trochanter tip.

Ensure that a proper depth of reaming is achieved:

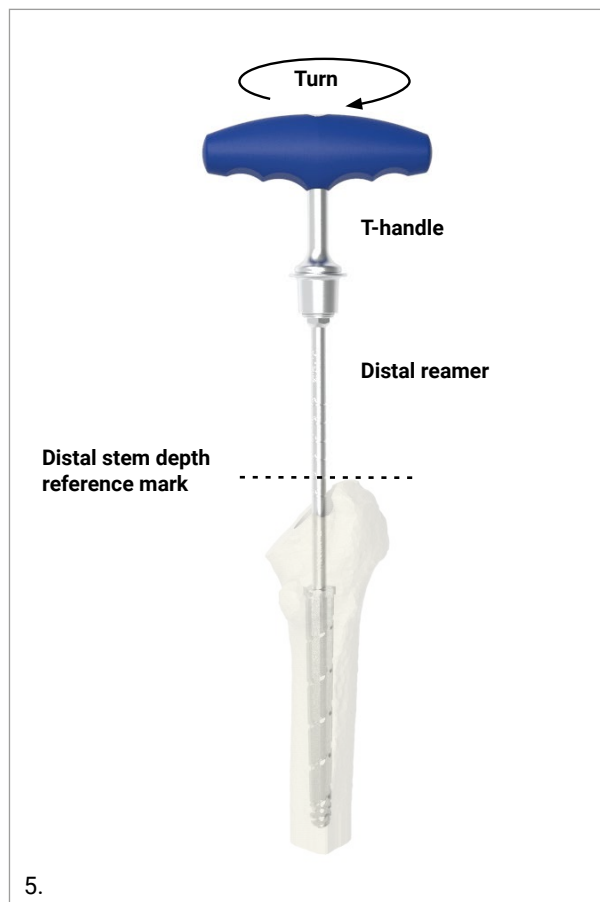
- Ream until "squeaking" or "chatter" is heard
- Use fluoroscopy or X-Ray if needed
- Check for cortical bone on the reamer

CAUTION

The use of distal reamers should be carefully weighed depending on bone quality. In revision surgery cases with compromised bone quality, be careful not to further weaken the bone tissue.

NOTE: The final implant is slightly oversized compared to the reamers in order to give some press-fit to achieve primary stability.

NOTE: Marks on the distal reamer identify the height of the proximal body. These marks will also correspond to the centre of the head when a 'M' size is used.



| DISTAL STEM DIAMETER Ø (mm) | DISTAL STEM LENGTH | | |
|--------------------------------|---------------------|--------------------|--------------------|
| | L 140 mm | L 180 mm | L 220 mm |
| 12 | Short distal reamer | Long distal reamer | Long distal reamer |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | Long distal reamer | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |
| 26 | | | |
| 27 | | | |
| 28 | | | |

5. DISTAL STEM TRIALING

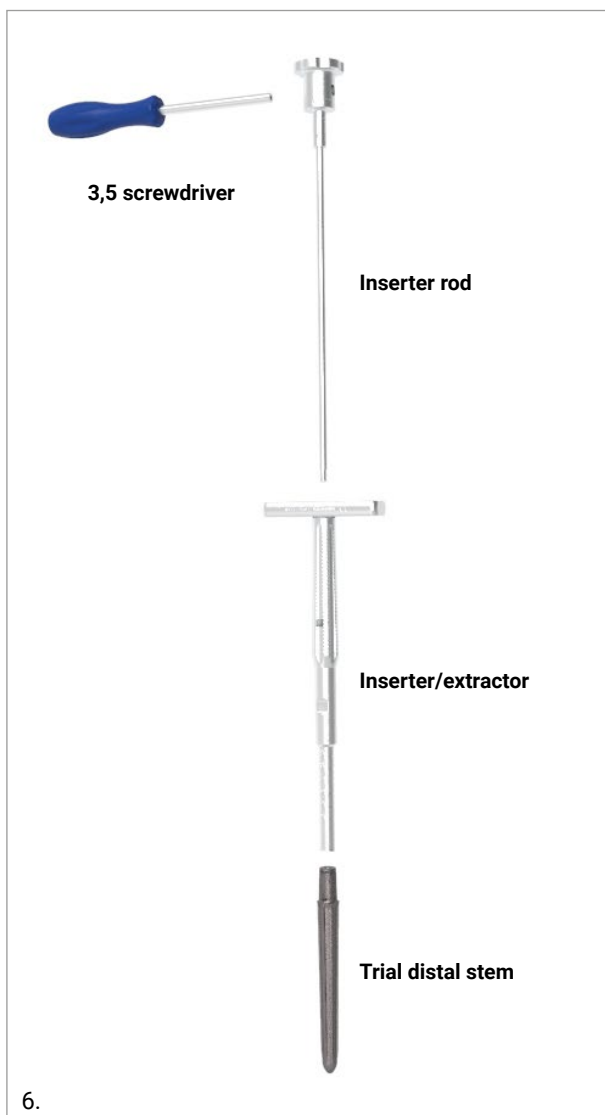
Once distal reaming is complete, select the trial distal stem of the same diameter as the final reamer.

Introduce the inserter rod into the inserter/extractor. Screw the assembly to the trial distal stem. Tighten the inserter rod using the short screwdriver. Using the short screwdriver, give the locking head an additional turn.

NOTE: When the marked line on the threaded rod is visible inside the window, all the components are correctly assembled. Please see fig. 6.

OPTION

Assemble the instruments on the back table, keeping a vertical position as shown in the images.



NOTE: The trial stem has four fins and the distal stem has eight.

Insert the trial distal stem into the prepared femoral canal to the depth mark that matches the ream depth of the final reamer previously used. The depth marks on the inserter/extractor indicate the height of the chosen proximal component size.

Check that the distal stem is stable both axially and in rotation.

Once the trial distal stem has been positioned at the desired level, the depth of the inserter/extractor can be recognized in reference to the tip of the greater trochanter, when the patient anatomy is appropriate. The depth marks on the inserter/extractor indicate the height of the proximal body to be used.

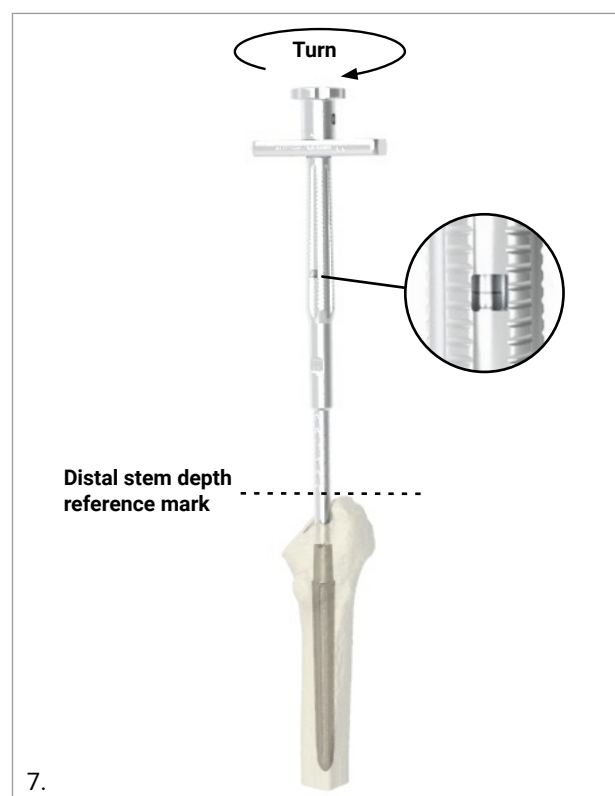
Unscrew the inserter rod and remove the distal stem inserter/extractor.

TRICK

Use the short screwdriver to ease the removal of the inserter rod.

OPTION

The trialing of the distal stem can be performed with the final implant as well. Implant the final distal stem as described in this chapter for the distal trial stem.



OPTION

Whenever necessary, connect the Extractor Body to the inserter rod using the screw and use the gliding cylinder to extract the trial distal stem.



The extractor body is available as a standard option in the Medacta Stem Removal System (ref. 01.34S.402).

6. PROXIMAL REAMING

Assemble the threaded rod to the distal stem.

CAUTION

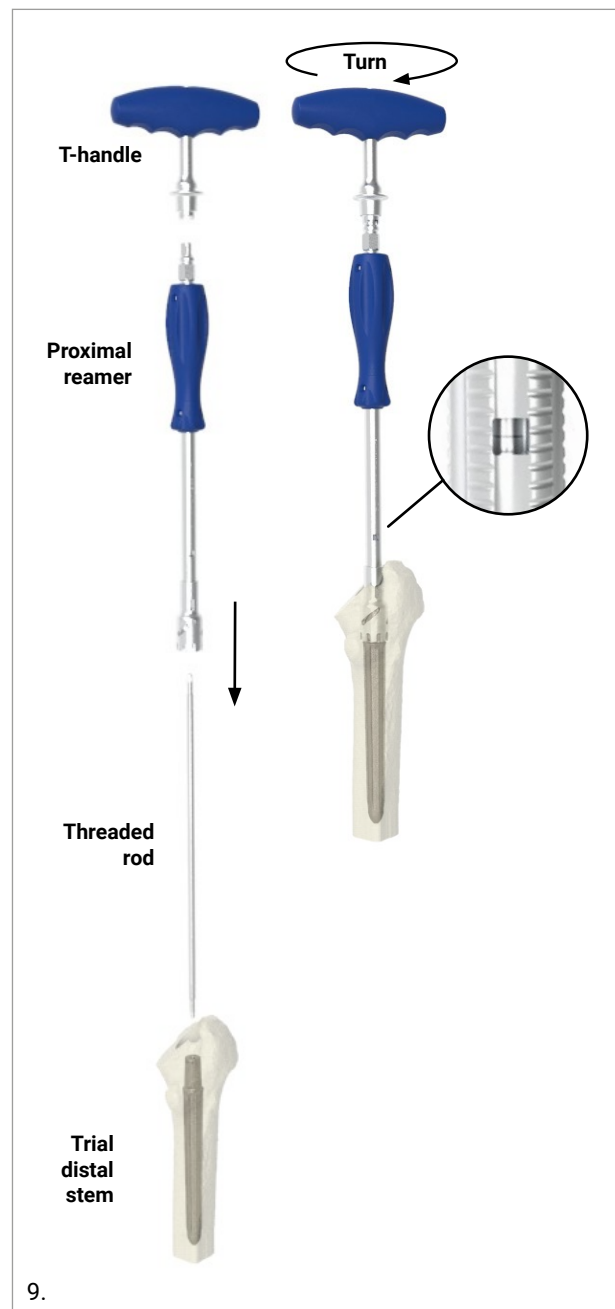
Be careful not to bend the threaded rod.

Slide the proximal reamer over the threaded rod and proceed along the femoral axis until the reamer is fully seated.

Ream the proximal femur with the proximal reamer of the selected diameter by hands using the dedicated T-handle.

Once the reaming is complete, remove the proximal reamer leaving the threaded rod in place, attached to the distal stem.

NOTE: When the marked line on the threaded rod is visible inside the window of the proximal reamer, all the components are correctly assembled.



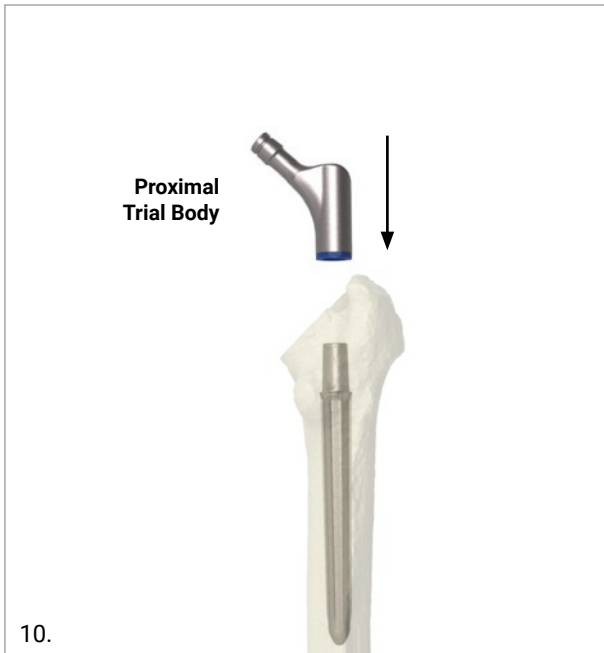
7. PROXIMAL BODY TRIALING

Once proximal reaming is complete, ensure that the taper junction of the trial distal stem is clean and dry. Select the trial proximal body of the chosen height and appropriate offset.

Couple the trial proximal body to the distal stem. Adjust the anteversion of the proximal body to the desired position.

TRICK

The proximal trial body with the plastic sleeve allows the coupling also with the final distal stem implant without damaging the taper.



In order to fix the proximal body to the distal stem, use the screwdriver to insert the trial locking screw, which is shorter than the actual implant and its surface has no coating.

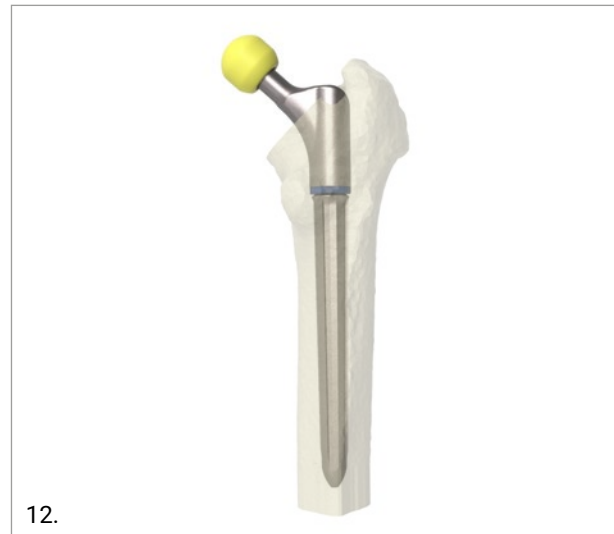


8. TRIAL REDUCTION

Trial heads of different diameters and heights are available to perform the trial reductions. A trial head is fitted to the trial neck by pushing it onto the taper.

After placement of the trial or final acetabular component, the trial reduction is performed with the help of the head impactor.

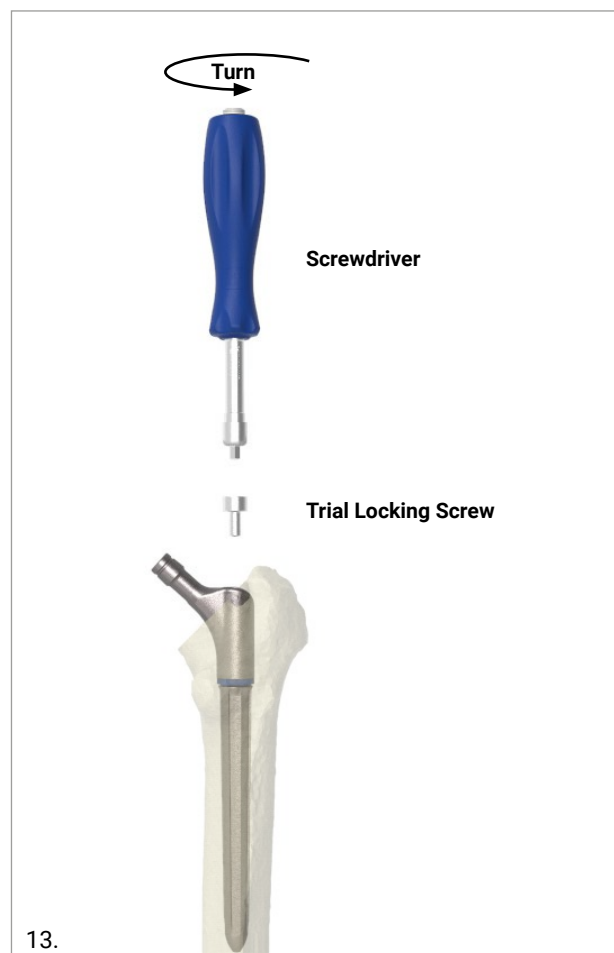
Simply pull the trial head to remove it.



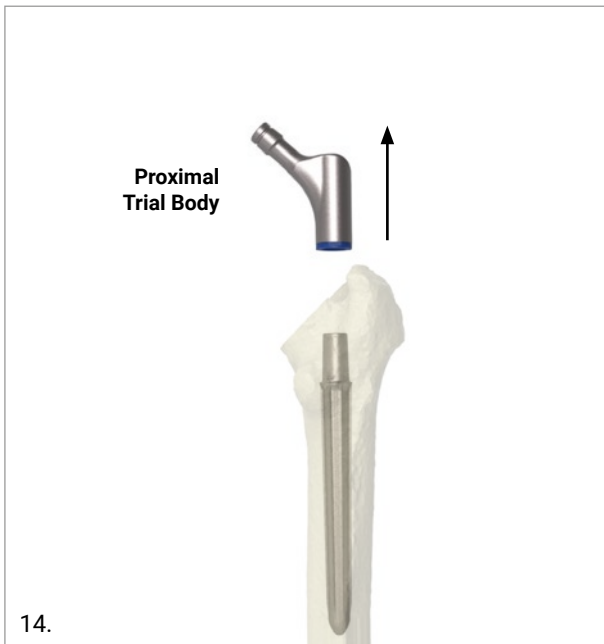
9. PROXIMAL TRIAL COMPONENT REPOSITIONING

After checking and testing mobility, joint stability and lower limb length, trial components can be repositioned and exchanged, if needed.

Use the screwdriver to remove the trial locking screw and consequently disassemble the trial proximal body.

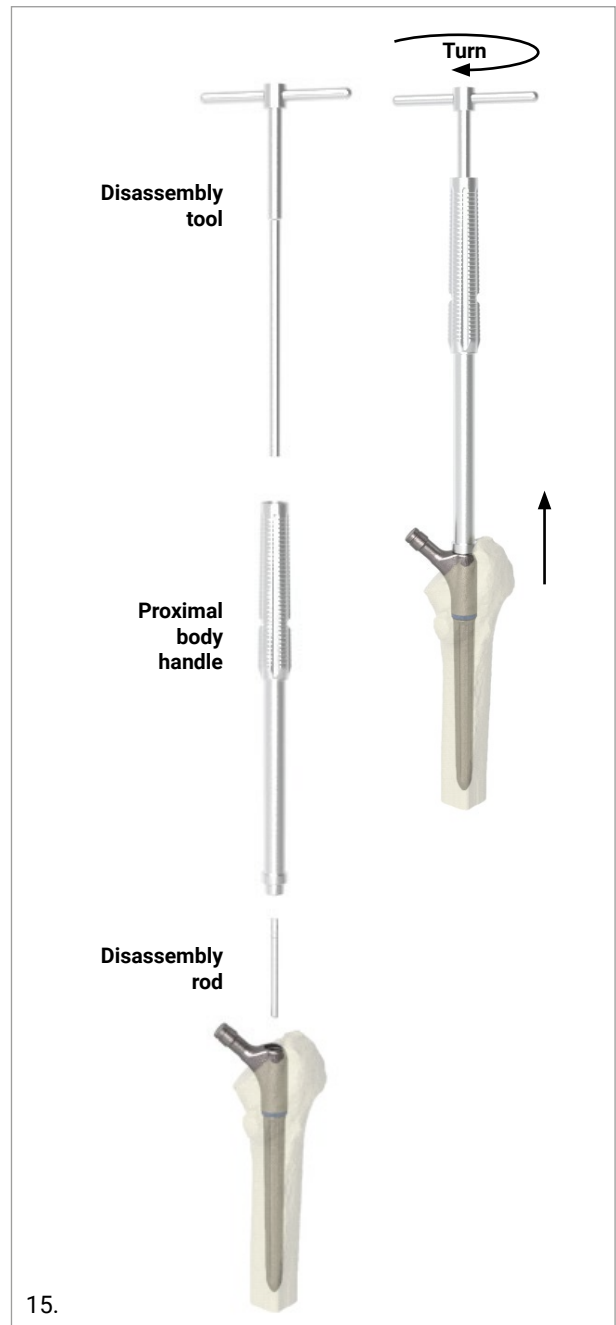


Remove the trial proximal body by hand.



OPTION

If the proximal body is stuck to the distal stem, please screw the proximal body handle in the proximal body. Insert the disassembly tool into the proximal body handle and turn it clockwise. While turning, the disassembly tool pushes against the disassembly rod and disengages the trial proximal body from the trial distal stem.



It is now possible to repeat the trial using another proximal trial body.

CAUTION

Please check the femoral preparation particularly in the calcar region. If needed a curette/rongeur/chisel may be of assistance to finish the calcar preparation.

10. REMOVAL OF TRIAL COMPONENTS

When the trial reduction is satisfactory, remove the trial components.

Use the screwdriver to unscrew the trial locking screw and consequently disassemble the trial proximal body. Remove the trial proximal body by hands.

In order to remove the trial distal body, please slide the inserter rod through the inserter/extractor. Couple both components to the trial distal stem. Use the 3.5 screwdriver to complete the assembly by tightening the inserter rod.

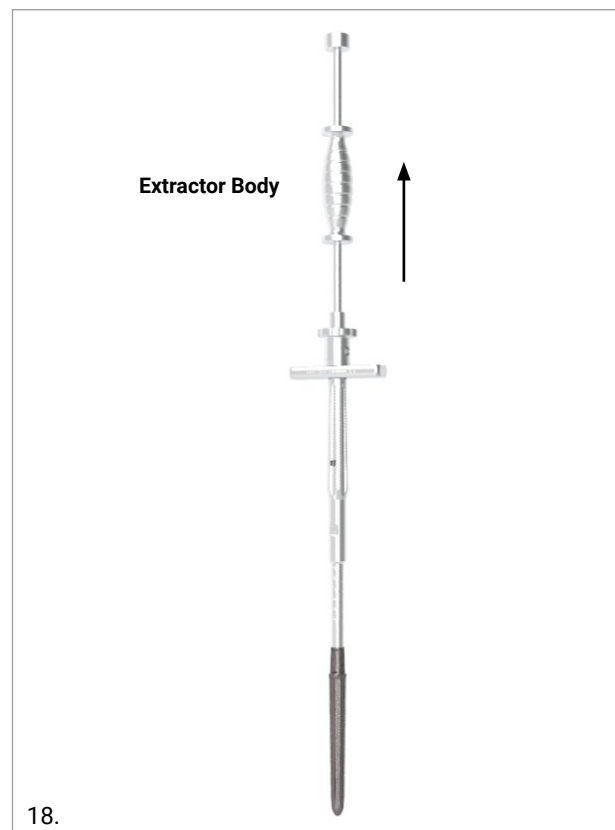


Remove the trial distal stem hitting the anvil of the inserter/extractor.



OPTION

Whenever necessary, connect the Extractor Body to the inserter rod using the screw and use the gliding cylinder to extract the trial distal stem.



11. FINAL IMPLANTS

The final implantation procedure can be carried out in vivo or with the back table device. The choice of the procedure is up to the surgeon.

11.1 FINAL IMPLANTS (IN VIVO)

Insert the final distal implant component following the same steps described for the trial stem.

WARNING

Visually inspect the stem to make sure that no small scratches, indentations or surface damage have occurred, as this may be detrimental to the mechanical performance of the stem and may result in long term fracture of the device.

CAUTION

Before assembling the distal/proximal component take any possible precaution to allow a good mechanical connection at the taper junction: clean and dry as carefully as the conditions permit. A damaged surface or the presence of particulate debris between the two surfaces may compromise the longevity of the implant. Dry the taper carefully and inspect the smooth taper junction for any visible damage, and if deemed necessary please replace the implants.

Connect the proximal body handle to the selected proximal body and slide the assembly over the threaded rod.

WARNING

Take care not to damage the taper's micro-thread while placing the final implant.

Adjust the anteversion of the proximal body to the desired position and tap lightly on the proximal body handle in the axial direction to couple the proximal body to the spigot of the distal stem.

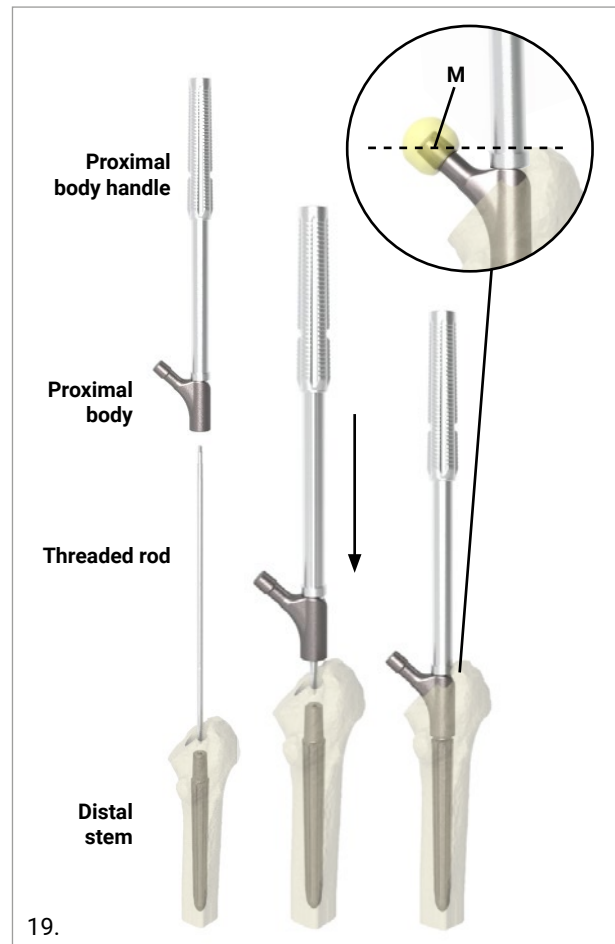
TRICK

The laser marked line on the proximal body handle can be used as reference during the final implant insertion. It corresponds to the Medium head center and if the patient anatomy is appropriate it can be aligned with the tip of the greater trochanter when seated in its final position.

CAUTION

If the marked line is positioned higher than the tip of the greater trochanter, please check the femoral preparation particularly in the calcar region. If needed a curette/ rongeur/chisel may be of assistance to finish the calcar preparation.

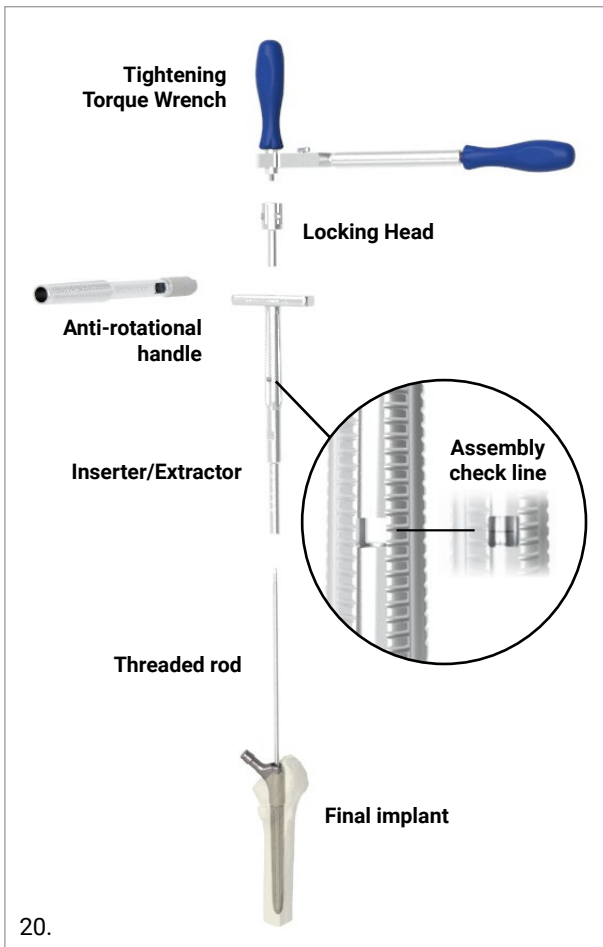
Unscrew and remove the proximal body handle.



Once the distal and the proximal components are assembled, proceed engaging the taper junction.

NOTE: Check that the distal stem is stable (both axially and in rotation) and verify the desired anteversion of the proximal body.

Fully screw the threaded rod on the assembly.



20.

TRICK

Avoid overtighten the threaded rod in order to ease the disassembling after engaging the taper junction.

Insert the inserter/extractor on the threaded rod. Complete the assembly with the locking head.

NOTE: When the marked line on the threaded rod is visible inside the window of the inserter/extractor, all the components are correctly assembled.

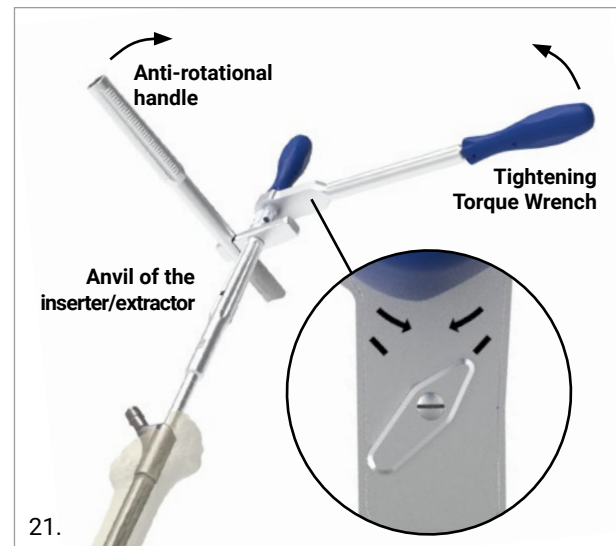
NOTE: The depth marked lines on the inserter/extractor should not be considered at this time.

Crank the locking head using the short screwdriver. The locking head should be in contact with the “T” part of the stem inserter/extractor.

Insert the Tightening Torque Wrench on the top of the locking head.

To engage the tapers of the distal and proximal body implants, tighten using the Tightening Torque Wrench. Position the knob according to fig. 20.

The anti-rotation handle must be coupled medially to the anvil and used as a fulcrum, to avoid force transmission to the bone. The Tightening Torque Wrench is moved until a ‘click’ is heard in order to reach the torque limit. At this stage, the correct coupling of the distal stem and proximal body is achieved.

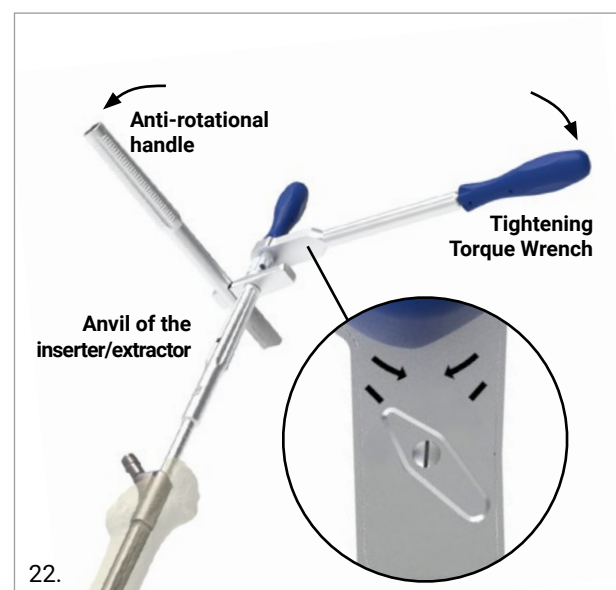


21.

After engaging the final implant taper remove the instrument assembly.

WARNING

During disassembly of the locking head, always use the Tightening Torque Wrench. In order to avoid force transmission to the bone, position the knob according to fig. 21.

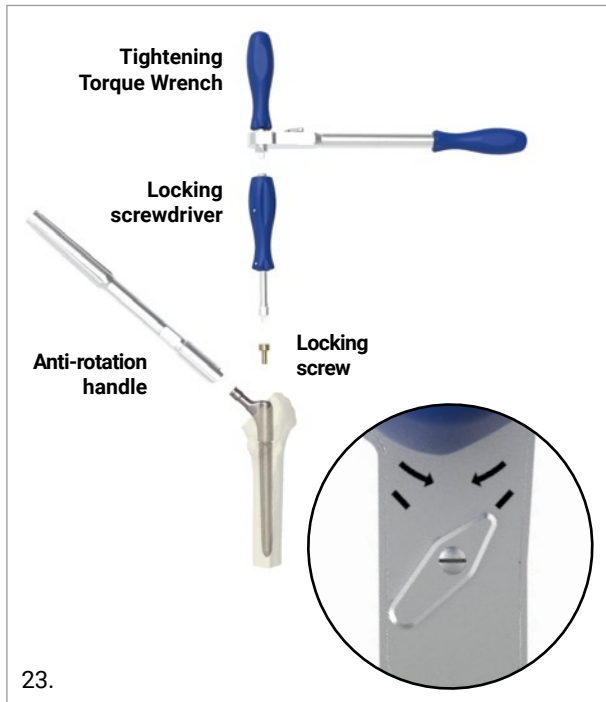


22.

11.2 FINAL SCREW INSERTION AND FINAL REDUCTION (IN VIVO)

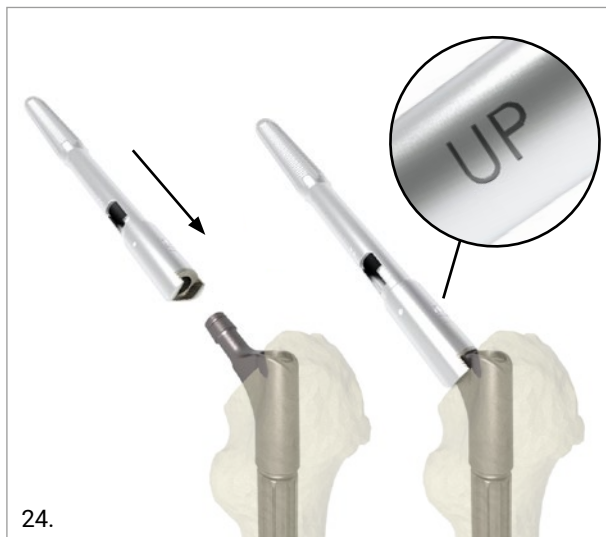
To finalize the taper fixation, insert the locking screw to the top of the proximal body.

Insert the Tightening Torque Wrench on the top of the locking screwdriver. Position the knob according to fig. 22.



CAUTION

The anti-rotation handle has to be positioned as shown in the picture below. The "UP" marking must be on the same side of the Locking Screw. The plastic sleeve of the anti-rotation handle protects the taper from any damage.

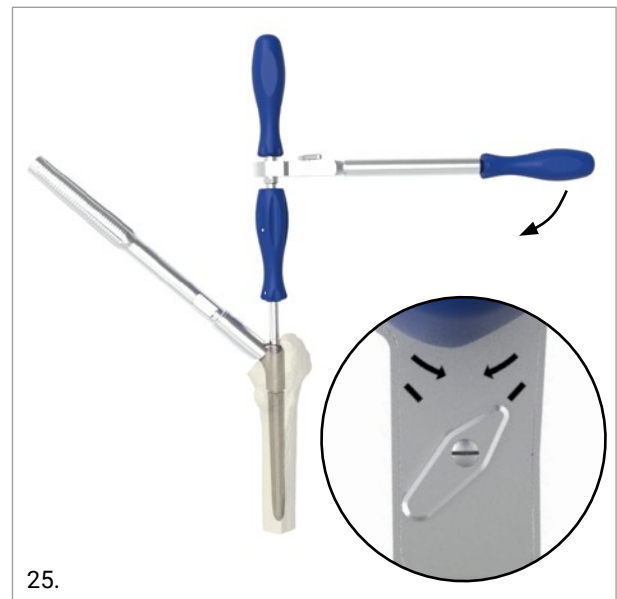


Tighten the locking screw using the 5 mm locking screwdriver until a "click" is heard from the torque wrench.

This sound indicates that the torque limit has been reached and that the screw has been correctly tightened.

CAUTION

While tightening, position the anti-rotation handle on the proximal body taper as shown in the picture and use it as a counter-torque device, in order to avoid force transmission to the bone.



OPTION

If needed, the long Locking screwdriver can be used as an alternative to the short locking screwdriver shown in the picture.



If needed, the locking screw can be removed.

WARNING

To remove the locking screw, assemble the Tightening Torque Wrench. Position the knob according to fig. 26. In order to avoid force transmission to the bone, position the anti-rotation handle as shown in the picture and use it as a counter-torque device.



27.

WARNING

The locking screw already tightened must not be used again.

A further trial reduction can be performed with the trial heads to determine the final head size.

CAUTION

Metal head sizes XL (for Ø 28 mm and Ø 32 mm) and XXL (for Ø 28 mm, Ø 32 mm and Ø 36 mm) have a collar which may decrease the Range of motion compared to shorter sizes. Always perform trial reduction with the chosen head.

The proximal body taper must be thoroughly cleaned before placing the prosthetic head. Place the final head of the chosen size in position and fix it using the head impactor.

WARNING

Always impact the final head with the plastic head impactor provided for this purpose.

NOTE: For further details about ceramic femoral heads, please refer to the instructions for use for ceramic femoral heads.

Reduce the hip.

11.3 FINAL IMPLANTS (WITH THE BACK TABLE DEVICE)

According to the surgeon preference, the final implantation can be also assembled with the back table device.

WARNING

Take care not to damage the taper's micro-thread while placing the final implant.

WARNING

Visually inspect the stem to make sure that no small scratches, indentations or surface damage have occurred, as this may be detrimental to the mechanical performance of the stem and may result in long term fracture of the device.

CAUTION

Before assembling the distal/proximal component and (smooth) taper engagement, thoroughly clean the taper junction with physiological saline. Dry the taper carefully and inspect the smooth taper junction for any visible damage, replace the implant if so.

Position the back table device into the dedicated space inside the tray.

According to the selected distal component sizes, choose the proper tablet size.

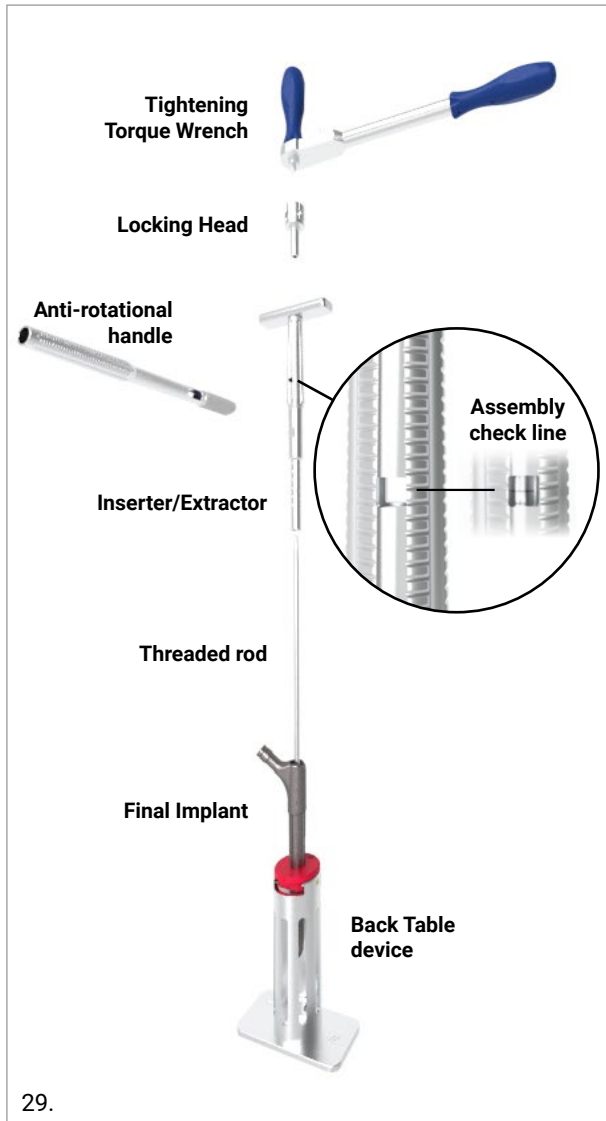
Insert the proper tablet into the support and then insert the distal body. Carry out the assembly manually of the distal stem and the proximal body.



28.

Once the distal and the proximal components are assembled, proceed engaging the taper junction.

Fully screw the threaded rod on the assembly.



29.

TRICK

Avoid overtighten the threaded rod in order to ease the disassembling after engaging the taper junction.

Insert the inserter/extractor on the threaded rod. Complete the assembly with the locking head.

NOTE: When the marked line on the threaded rod is visible inside the window of the inserter/extractor, all the components are correctly assembled.

Crank the locking head using the short screwdriver. The locking head should be in contact with the "T" part of the stem inserter/extractor.

Insert the Tightening Torque Wrench on the top of the locking head.

To engage the tapers of the distal and proximal body implants, tighten using the Tightening Torque Wrench. Position the knob and the anti-rotation handle according to fig. 29. The anti-rotation handle must be coupled medially to the anvil and used as a fulcrum. The Tightening Torque Wrench is moved until a 'click' is heard in order to reach the torque limit.

At this stage, the correct coupling of the distal stem and proximal body is achieved.



30.

After engaging the final implant taper remove the instrument assembly.

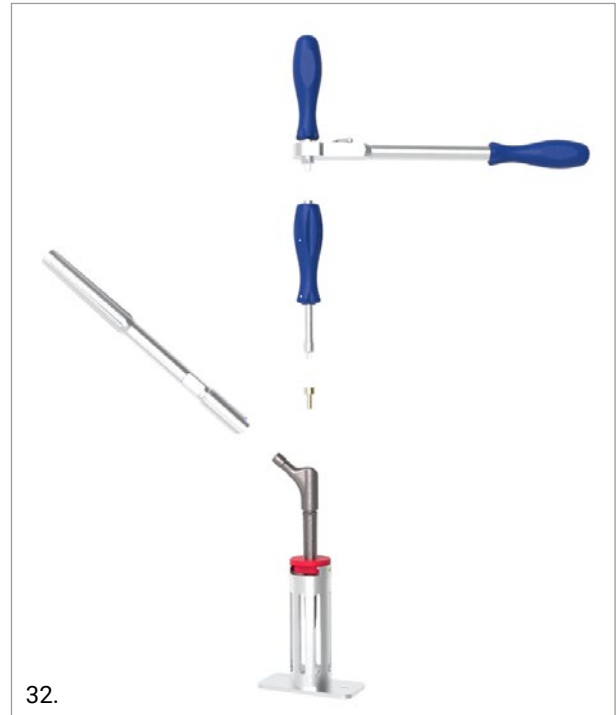
During disassembly of the locking head, always use the Tightening Torque Wrench. Position the knob according to fig. 30 and move the assembly in the opposite direction as done for the engagement of the implants.



11.4 FINAL SCREW INSERTION AND FINAL REDUCTION (WITH THE BACK TABLE DEVICE)

To lock the distal stem and proximal body implants, insert the locking screw to the top of the proximal body.

Insert the Tightening Torque Wrench on the top of the locking screwdriver.



CAUTION

The anti-rotation handle has to be positioned as shown in the picture below. The "UP" marking has to be on the same side of the Locking Screw. The plastic sleeve of the anti-rotation handle protects the taper from any damage.



Tighten the locking screw using the 5 mm locking screwdriver until a "click" is heard from the torque wrench.

This sound indicates that the torque limit has been reached and that the screw has been correctly tightened.

While tightening, position the anti-rotation handle on the proximal body taper as shown in the picture and use it as a counter-torque device.



OPTION

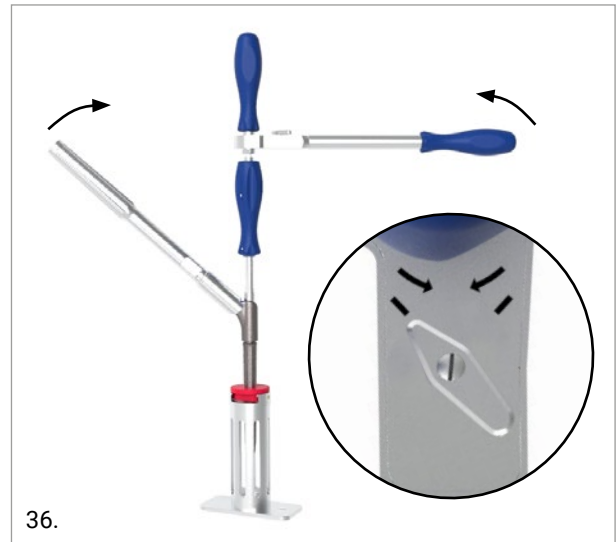
If needed, the long locking screwdriver (shown in the picture below) can be used as alternative to the short locking screwdriver.



If needed, the locking screw can be removed.

WARNING

To remove the locking screw, assemble the Tightening Torque Wrench; position the knob and the anti-rotation handle according to fig. 35. Use the anti-rotation handle as a counter-torque device.



WARNING

The locking screw already tightened must not be used again.

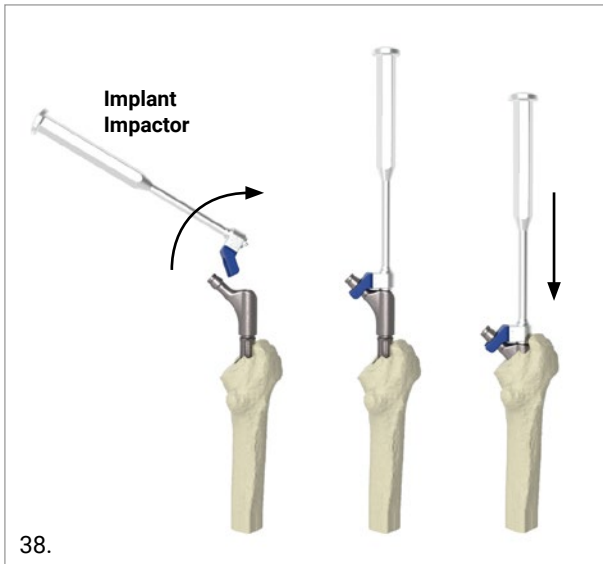
OPTION

If the assembled implant is stuck in the back table device, please use the extractor screw device as shown in picture. Use the 3.5 screwdriver if extra counter torque is needed.



Once all components are assembled, implant the M-Vizion stem into the femur manually.

The implant impactor is designed to place the stem in the desired anteversion.



A further trial reduction can be performed with the trial heads to determine the final head size.

CAUTION

Metal head sizes XL (for Ø 28 mm and Ø 32 mm) and XXL (for Ø 28 mm, Ø 32 mm and Ø 36 mm) have a collar which may decrease the Range of motion compared to shorter sizes. Always perform trial reduction with the chosen head.

The proximal body taper must be thoroughly cleaned before placing the prosthetic head.

Place the final head of the chosen size in position and fix it using the head impactor.

WARNING

Always impact the final head with the plastic head impactor provided for this purpose.

NOTE: For further details about ceramic femoral heads, please refer to the instructions for use for ceramic femoral heads.

Reduce the hip.

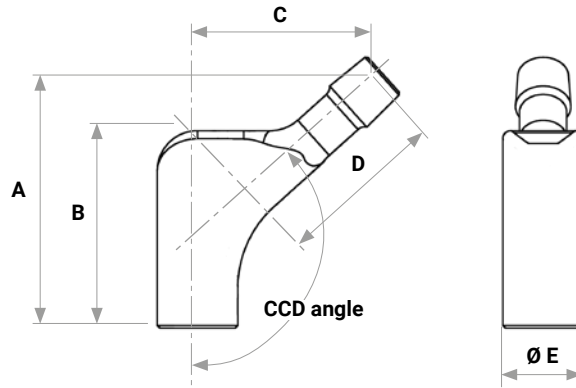
OPTION

Alternatively to the implant impactor, it can be used the proximal body handle with the anvil tightened on the top. This option is not suitable for proximal bodies with length L40.



12. IMPLANTS NOMENCLATURE

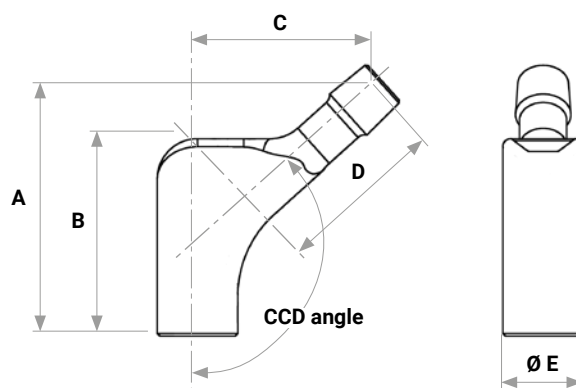
PROXIMAL BODY^{II}



| REFERENCE | DESCRIPTION | CCD ANGLE | A (mm) | B SHOULDER LENGTH (mm) | C NECK OFFSET (mm) | D NECK LENGTH (mm) | Ø E (mm) |
|-----------|-----------------------------------|-----------|--------|------------------------|--------------------|--------------------|----------|
| 01.22.001 | Proximal Body Ø 20 mm L 40 mm STD | 132° | 50 | 39 | 37 | 35,4 | 20 |
| 01.22.002 | Proximal Body Ø 20 mm L 50 mm STD | 132° | 60 | 49 | 37 | 35,4 | 20 |
| 01.22.003 | Proximal Body Ø 20 mm L 60 mm STD | 132° | 70 | 59 | 37 | 35,4 | 20 |
| 01.22.004 | Proximal Body Ø 20 mm L 70 mm STD | 132° | 80 | 69 | 37 | 35,4 | 20 |
| 01.22.005 | Proximal Body Ø 20 mm L 80 mm STD | 132° | 90 | 79 | 37 | 35,4 | 20 |
| 01.22.006 | Proximal Body Ø 20 mm L 90 mm STD | 132° | 100 | 89 | 37 | 35,4 | 20 |
| 01.22.007 | Proximal Body Ø 20 mm L 40 mm LAT | 132° | 50 | 39 | 43 | 39,65 | 20 |
| 01.22.008 | Proximal Body Ø 20 mm L 50 mm LAT | 132° | 60 | 49 | 43 | 39,65 | 20 |
| 01.22.009 | Proximal Body Ø 20 mm L 60 mm LAT | 132° | 70 | 59 | 43 | 39,65 | 20 |
| 01.22.010 | Proximal Body Ø 20 mm L 70 mm LAT | 132° | 80 | 69 | 43 | 39,65 | 20 |
| 01.22.011 | Proximal Body Ø 20 mm L 80 mm LAT | 132° | 90 | 79 | 43 | 39,65 | 20 |
| 01.22.012 | Proximal Body Ø 20 mm L 90 mm LAT | 132° | 100 | 89 | 43 | 39,65 | 20 |
| 01.22.021 | Proximal Body Ø 24 mm L 40 mm STD | 132° | 50 | 39 | 37 | 35,4 | 24 |
| 01.22.022 | Proximal Body Ø 24 mm L 50 mm STD | 132° | 60 | 49 | 37 | 35,4 | 24 |
| 01.22.023 | Proximal Body Ø 24 mm L 60 mm STD | 132° | 70 | 59 | 37 | 35,4 | 24 |
| 01.22.024 | Proximal Body Ø 24 mm L 70 mm STD | 132° | 80 | 69 | 37 | 35,4 | 24 |
| 01.22.025 | Proximal Body Ø 24 mm L 80 mm STD | 132° | 90 | 79 | 37 | 35,4 | 24 |
| 01.22.026 | Proximal Body Ø 24 mm L 90 mm STD | 132° | 100 | 89 | 37 | 35,4 | 24 |
| 01.22.027 | Proximal Body Ø 24 mm L 40 mm LAT | 132° | 50 | 39 | 43 | 39,65 | 24 |
| 01.22.028 | Proximal Body Ø 24 mm L 50 mm LAT | 132° | 60 | 49 | 43 | 39,65 | 24 |
| 01.22.029 | Proximal Body Ø 24 mm L 60 mm LAT | 132° | 70 | 59 | 43 | 39,65 | 24 |
| 01.22.030 | Proximal Body Ø 24 mm L 70 mm LAT | 132° | 80 | 69 | 43 | 39,65 | 24 |
| 01.22.031 | Proximal Body Ø 24 mm L 80 mm LAT | 132° | 90 | 79 | 43 | 39,65 | 24 |
| 01.22.032 | Proximal Body Ø 24 mm L 90 mm LAT | 132° | 100 | 89 | 43 | 39,65 | 24 |

^{II}A locking screw is always packed together with the proximal body

PROXIMAL BODY^{II}

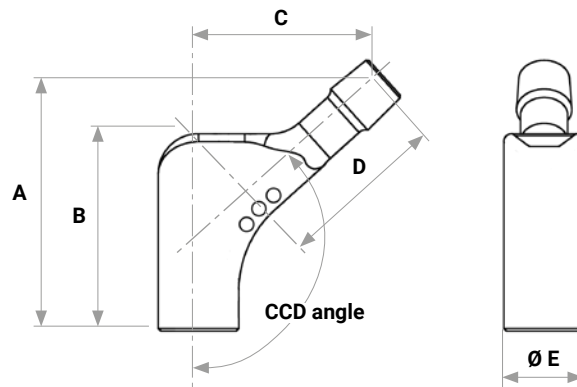


| REFERENCE | DESCRIPTION | CCD ANGLE | A (mm) | B SHOULDER LENGTH (mm) | C NECK OFFSET (mm) | D NECK LENGTH (mm) | Ø E (mm) |
|------------------------|-----------------------------------|-----------|--------|------------------------|--------------------|--------------------|----------|
| 01.22.041 ^I | Proximal Body Ø 28 mm L 40 mm STD | 132° | 50 | 39 | 37 | 35,4 | 28 |
| 01.22.042 ^I | Proximal Body Ø 28 mm L 50 mm STD | 132° | 60 | 49 | 37 | 35,4 | 28 |
| 01.22.043 ^I | Proximal Body Ø 28 mm L 60 mm STD | 132° | 70 | 59 | 37 | 35,4 | 28 |
| 01.22.044 ^I | Proximal Body Ø 28 mm L 70 mm STD | 132° | 80 | 69 | 37 | 35,4 | 28 |
| 01.22.045 ^I | Proximal Body Ø 28 mm L 80 mm STD | 132° | 90 | 79 | 37 | 35,4 | 28 |
| 01.22.046 ^I | Proximal Body Ø 28 mm L 90 mm STD | 132° | 100 | 89 | 37 | 35,4 | 28 |
| 01.22.047 ^I | Proximal Body Ø 28 mm L 40 mm LAT | 132° | 50 | 39 | 43 | 39,65 | 28 |
| 01.22.048 ^I | Proximal Body Ø 28 mm L 50 mm LAT | 132° | 60 | 49 | 43 | 39,65 | 28 |
| 01.22.049 ^I | Proximal Body Ø 28 mm L 60 mm LAT | 132° | 70 | 59 | 43 | 39,65 | 28 |
| 01.22.050 ^I | Proximal Body Ø 28 mm L 70 mm LAT | 132° | 80 | 69 | 43 | 39,65 | 28 |
| 01.22.051 ^I | Proximal Body Ø 28 mm L 80 mm LAT | 132° | 90 | 79 | 43 | 39,65 | 28 |
| 01.22.052 ^I | Proximal Body Ø 28 mm L 90 mm LAT | 132° | 100 | 89 | 43 | 39,65 | 28 |
| 01.22.061 ^I | Proximal Body Ø 32 mm L 40 mm STD | 132° | 50 | 39 | 37 | 35,4 | 32 |
| 01.22.062 ^I | Proximal Body Ø 32 mm L 50 mm STD | 132° | 60 | 49 | 37 | 35,4 | 32 |
| 01.22.063 ^I | Proximal Body Ø 32 mm L 60 mm STD | 132° | 70 | 59 | 37 | 35,4 | 32 |
| 01.22.064 ^I | Proximal Body Ø 32 mm L 70 mm STD | 132° | 80 | 69 | 37 | 35,4 | 32 |
| 01.22.065 ^I | Proximal Body Ø 32 mm L 80 mm STD | 132° | 90 | 79 | 37 | 35,4 | 32 |
| 01.22.066 ^I | Proximal Body Ø 32 mm L 90 mm STD | 132° | 100 | 89 | 37 | 35,4 | 32 |
| 01.22.067 ^I | Proximal Body Ø 32 mm L 40 mm LAT | 132° | 50 | 39 | 43 | 39,65 | 32 |
| 01.22.068 ^I | Proximal Body Ø 32 mm L 50 mm LAT | 132° | 60 | 49 | 43 | 39,65 | 32 |
| 01.22.069 ^I | Proximal Body Ø 32 mm L 60 mm LAT | 132° | 70 | 59 | 43 | 39,65 | 32 |
| 01.22.070 ^I | Proximal Body Ø 32 mm L 70 mm LAT | 132° | 80 | 69 | 43 | 39,65 | 32 |
| 01.22.071 ^I | Proximal Body Ø 32 mm L 80 mm LAT | 132° | 90 | 79 | 43 | 39,65 | 32 |
| 01.22.072 ^I | Proximal Body Ø 32 mm L 90 mm LAT | 132° | 100 | 89 | 43 | 39,65 | 32 |

^I On demand

^{II} A locking screw is always packed together with the proximal body

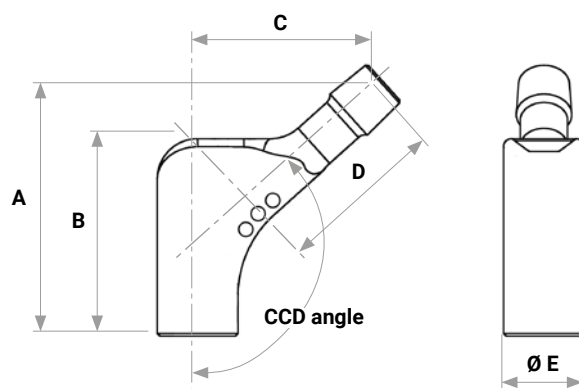
PROXIMAL BODY WITH HOLES¹¹



| REFERENCE | DESCRIPTION | CCD ANGLE | A (mm) | B SHOULDER LENGTH (mm) | C NECK OFFSET (mm) | D NECK LENGTH (mm) | Ø E (mm) |
|-----------|--|-----------|--------|------------------------|--------------------|--------------------|----------|
| 01.22.401 | Proximal Body Ø 20 mm L 40 mm STD with holes | 132° | 50 | 39 | 37 | 35,4 | 20 |
| 01.22.402 | Proximal Body Ø 20 mm L 50 mm STD with holes | 132° | 60 | 49 | 37 | 35,4 | 20 |
| 01.22.403 | Proximal Body Ø 20 mm L 60 mm STD with holes | 132° | 70 | 59 | 37 | 35,4 | 20 |
| 01.22.404 | Proximal Body Ø 20 mm L 70 mm STD with holes | 132° | 80 | 69 | 37 | 35,4 | 20 |
| 01.22.405 | Proximal Body Ø 20 mm L 80 mm STD with holes | 132° | 90 | 79 | 37 | 35,4 | 20 |
| 01.22.406 | Proximal Body Ø 20 mm L 90 mm STD with holes | 132° | 100 | 89 | 37 | 35,4 | 20 |
| 01.22.407 | Proximal Body Ø 20 mm L 40 mm LAT with holes | 132° | 50 | 39 | 43 | 39,65 | 20 |
| 01.22.408 | Proximal Body Ø 20 mm L 50 mm LAT with holes | 132° | 60 | 49 | 43 | 39,65 | 20 |
| 01.22.409 | Proximal Body Ø 20 mm L 60 mm LAT with holes | 132° | 70 | 59 | 43 | 39,65 | 20 |
| 01.22.410 | Proximal Body Ø 20 mm L 70 mm LAT with holes | 132° | 80 | 69 | 43 | 39,65 | 20 |
| 01.22.411 | Proximal Body Ø 20 mm L 80 mm LAT with holes | 132° | 90 | 79 | 43 | 39,65 | 20 |
| 01.22.412 | Proximal Body Ø 20 mm L 90 mm LAT with holes | 132° | 100 | 89 | 43 | 39,65 | 20 |
| 01.22.421 | Proximal Body Ø 24 mm L 40 mm STD with holes | 132° | 50 | 39 | 37 | 35,4 | 24 |
| 01.22.422 | Proximal Body Ø 24 mm L 50 mm STD with holes | 132° | 60 | 49 | 37 | 35,4 | 24 |
| 01.22.423 | Proximal Body Ø 24 mm L 60 mm STD with holes | 132° | 70 | 59 | 37 | 35,4 | 24 |
| 01.22.424 | Proximal Body Ø 24 mm L 70 mm STD with holes | 132° | 80 | 69 | 37 | 35,4 | 24 |
| 01.22.425 | Proximal Body Ø 24 mm L 80 mm STD with holes | 132° | 90 | 79 | 37 | 35,4 | 24 |
| 01.22.426 | Proximal Body Ø 24 mm L 90 mm STD with holes | 132° | 100 | 89 | 37 | 35,4 | 24 |
| 01.22.427 | Proximal Body Ø 24 mm L 40 mm LAT with holes | 132° | 50 | 39 | 43 | 39,65 | 24 |
| 01.22.428 | Proximal Body Ø 24 mm L 50 mm LAT with holes | 132° | 60 | 49 | 43 | 39,65 | 24 |
| 01.22.429 | Proximal Body Ø 24 mm L 60 mm LAT with holes | 132° | 70 | 59 | 43 | 39,65 | 24 |
| 01.22.430 | Proximal Body Ø 24 mm L 70 mm LAT with holes | 132° | 80 | 69 | 43 | 39,65 | 24 |
| 01.22.431 | Proximal Body Ø 24 mm L 80 mm LAT with holes | 132° | 90 | 79 | 43 | 39,65 | 24 |
| 01.22.432 | Proximal Body Ø 24 mm L 90 mm LAT with holes | 132° | 100 | 89 | 43 | 39,65 | 24 |

¹¹A locking screw is always packed together with the proximal body

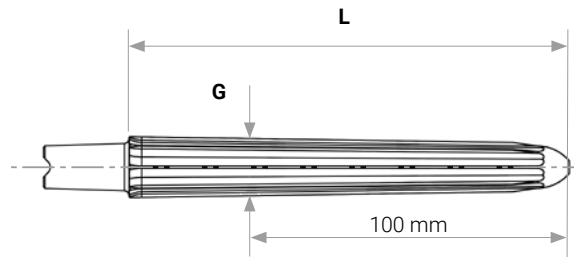
PROXIMAL BODY WITH HOLES^{II}



| REFERENCE | DESCRIPTION | CCD ANGLE | A (mm) | B SHOULDER LENGTH (mm) | C NECK OFFSET (mm) | D NECK LENGTH (mm) | Ø E (mm) |
|-----------|--|-----------|--------|------------------------|--------------------|--------------------|----------|
| 01.22.441 | Proximal Body Ø 28 mm L 40 mm STD with holes | 132° | 50 | 39 | 37 | 35,4 | 28 |
| 01.22.442 | Proximal Body Ø 28 mm L 50 mm STD with holes | 132° | 60 | 49 | 37 | 35,4 | 28 |
| 01.22.443 | Proximal Body Ø 28 mm L 60 mm STD with holes | 132° | 70 | 59 | 37 | 35,4 | 28 |
| 01.22.444 | Proximal Body Ø 28 mm L 70 mm STD with holes | 132° | 80 | 69 | 37 | 35,4 | 28 |
| 01.22.445 | Proximal Body Ø 28 mm L 80 mm STD with holes | 132° | 90 | 79 | 37 | 35,4 | 28 |
| 01.22.446 | Proximal Body Ø 28 mm L 90 mm STD with holes | 132° | 100 | 89 | 37 | 35,4 | 28 |
| 01.22.447 | Proximal Body Ø 28 mm L 40 mm LAT with holes | 132° | 50 | 39 | 43 | 39,65 | 28 |
| 01.22.448 | Proximal Body Ø 28 mm L 50 mm LAT with holes | 132° | 60 | 49 | 43 | 39,65 | 28 |
| 01.22.449 | Proximal Body Ø 28 mm L 60 mm LAT with holes | 132° | 70 | 59 | 43 | 39,65 | 28 |
| 01.22.450 | Proximal Body Ø 28 mm L 70 mm LAT with holes | 132° | 80 | 69 | 43 | 39,65 | 28 |
| 01.22.451 | Proximal Body Ø 28 mm L 80 mm LAT with holes | 132° | 90 | 79 | 43 | 39,65 | 28 |
| 01.22.452 | Proximal Body Ø 28 mm L 90 mm LAT with holes | 132° | 100 | 89 | 43 | 39,65 | 28 |
| 01.22.461 | Proximal Body Ø 32 mm L 40 mm STD with holes | 132° | 50 | 39 | 37 | 35,4 | 32 |
| 01.22.462 | Proximal Body Ø 32 mm L 50 mm STD with holes | 132° | 60 | 49 | 37 | 35,4 | 32 |
| 01.22.463 | Proximal Body Ø 32 mm L 60 mm STD with holes | 132° | 70 | 59 | 37 | 35,4 | 32 |
| 01.22.464 | Proximal Body Ø 32 mm L 70 mm STD with holes | 132° | 80 | 69 | 37 | 35,4 | 32 |
| 01.22.465 | Proximal Body Ø 32 mm L 80 mm STD with holes | 132° | 90 | 79 | 37 | 35,4 | 32 |
| 01.22.466 | Proximal Body Ø 32 mm L 90 mm STD with holes | 132° | 100 | 89 | 37 | 35,4 | 32 |
| 01.22.467 | Proximal Body Ø 32 mm L 40 mm LAT with holes | 132° | 50 | 39 | 43 | 39,65 | 32 |
| 01.22.468 | Proximal Body Ø 32 mm L 50 mm LAT with holes | 132° | 60 | 49 | 43 | 39,65 | 32 |
| 01.22.469 | Proximal Body Ø 32 mm L 60 mm LAT with holes | 132° | 70 | 59 | 43 | 39,65 | 32 |
| 01.22.470 | Proximal Body Ø 32 mm L 70 mm LAT with holes | 132° | 80 | 69 | 43 | 39,65 | 32 |
| 01.22.471 | Proximal Body Ø 32 mm L 80 mm LAT with holes | 132° | 90 | 79 | 43 | 39,65 | 32 |
| 01.22.472 | Proximal Body Ø 32 mm L 90 mm LAT with holes | 132° | 100 | 89 | 43 | 39,65 | 32 |

^{II} A locking screw is always packed together with the proximal body

DISTAL STEM

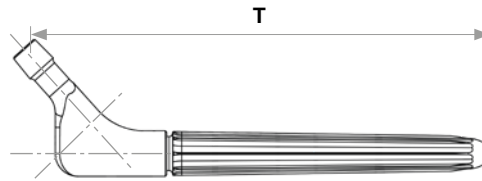


| REF. | DESCRIPTION | L (mm) | G (mm) |
|------------------------|------------------------------|--------|--------|
| 01.22.101 | Distal Stem Ø 12 mm L 140 mm | 140 | 12 |
| 01.22.102 | Distal Stem Ø 13 mm L 140 mm | 140 | 13 |
| 01.22.103 | Distal Stem Ø 14 mm L 140 mm | 140 | 14 |
| 01.22.104 | Distal Stem Ø 15 mm L 140 mm | 140 | 15 |
| 01.22.105 | Distal Stem Ø 16 mm L 140 mm | 140 | 16 |
| 01.22.106 | Distal Stem Ø 17 mm L 140 mm | 140 | 17 |
| 01.22.107 | Distal Stem Ø 18 mm L 140 mm | 140 | 18 |
| 01.22.108 | Distal Stem Ø 19 mm L 140 mm | 140 | 19 |
| 01.22.109 | Distal Stem Ø 20 mm L 140 mm | 140 | 20 |
| 01.22.110 | Distal Stem Ø 21 mm L 140 mm | 140 | 21 |
| 01.22.111 | Distal Stem Ø 22 mm L 140 mm | 140 | 22 |
| 01.22.112 ¹ | Distal Stem Ø 23 mm L 140 mm | 140 | 23 |
| 01.22.113 ¹ | Distal Stem Ø 24 mm L 140 mm | 140 | 24 |
| 01.22.114 ¹ | Distal Stem Ø 25 mm L 140 mm | 140 | 25 |
| 01.22.115 ¹ | Distal Stem Ø 26 mm L 140 mm | 140 | 26 |
| 01.22.116 ¹ | Distal Stem Ø 27 mm L 140 mm | 140 | 27 |
| 01.22.117 ¹ | Distal Stem Ø 28 mm L 140 mm | 140 | 28 |
| 01.22.131 | Distal Stem Ø 12 mm L 180 mm | 180 | 12 |
| 01.22.132 | Distal Stem Ø 13 mm L 180 mm | 180 | 13 |
| 01.22.133 | Distal Stem Ø 14 mm L 180 mm | 180 | 14 |
| 01.22.134 | Distal Stem Ø 15 mm L 180 mm | 180 | 15 |
| 01.22.135 | Distal Stem Ø 16 mm L 180 mm | 180 | 16 |
| 01.22.136 | Distal Stem Ø 17 mm L 180 mm | 180 | 17 |
| 01.22.137 | Distal Stem Ø 18 mm L 180 mm | 180 | 18 |
| 01.22.138 | Distal Stem Ø 19 mm L 180 mm | 180 | 19 |
| 01.22.139 | Distal Stem Ø 20 mm L 180 mm | 180 | 20 |
| 01.22.140 | Distal Stem Ø 21 mm L 180 mm | 180 | 21 |
| 01.22.141 | Distal Stem Ø 22 mm L 180 mm | 180 | 22 |
| 01.22.142 ¹ | Distal Stem Ø 23 mm L 180 mm | 180 | 23 |
| 01.22.143 ¹ | Distal Stem Ø 24 mm L 180 mm | 180 | 24 |
| 01.22.144 ¹ | Distal Stem Ø 25 mm L 180 mm | 180 | 25 |
| 01.22.145 ¹ | Distal Stem Ø 26 mm L 180 mm | 180 | 26 |
| 01.22.146 ¹ | Distal Stem Ø 27 mm L 180 mm | 180 | 27 |
| 01.22.147 ¹ | Distal Stem Ø 28 mm L 180 mm | 180 | 28 |

| REF. | DESCRIPTION | L (mm) | G (mm) |
|------------------------|------------------------------|--------|--------|
| 01.22.161 | Distal Stem Ø 12 mm L 220 mm | 220 | 12 |
| 01.22.162 | Distal Stem Ø 13 mm L 220 mm | 220 | 13 |
| 01.22.163 | Distal Stem Ø 14 mm L 220 mm | 220 | 14 |
| 01.22.164 | Distal Stem Ø 15 mm L 220 mm | 220 | 15 |
| 01.22.165 | Distal Stem Ø 16 mm L 220 mm | 220 | 16 |
| 01.22.166 | Distal Stem Ø 17 mm L 220 mm | 220 | 17 |
| 01.22.167 | Distal Stem Ø 18 mm L 220 mm | 220 | 18 |
| 01.22.168 | Distal Stem Ø 19 mm L 220 mm | 220 | 19 |
| 01.22.169 | Distal Stem Ø 20 mm L 220 mm | 220 | 20 |
| 01.22.170 | Distal Stem Ø 21 mm L 220 mm | 220 | 21 |
| 01.22.171 | Distal Stem Ø 22 mm L 220 mm | 220 | 22 |
| 01.22.172 ¹ | Distal Stem Ø 23 mm L 220 mm | 220 | 23 |
| 01.22.173 ¹ | Distal Stem Ø 24 mm L 220 mm | 220 | 24 |
| 01.22.174 ¹ | Distal Stem Ø 25 mm L 220 mm | 220 | 25 |
| 01.22.175 ¹ | Distal Stem Ø 26 mm L 220 mm | 220 | 26 |
| 01.22.176 ¹ | Distal Stem Ø 27 mm L 220 mm | 220 | 27 |
| 01.22.177 ¹ | Distal Stem Ø 28 mm L 220 mm | 220 | 28 |

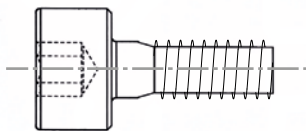
¹On demand

FINAL IMPLANT



| PROXIMAL BODY SIZE | T (mm) | | |
|-----------------------|----------|----------|----------|
| | L 140 mm | L 180 mm | L 220 mm |
| 40 STD | 192,6 | 232,6 | 272,6 |
| 50 STD | 202,6 | 242,6 | 282,6 |
| 60 STD | 212,6 | 252,6 | 292,6 |
| 70 STD | 222,6 | 262,6 | 302,6 |
| 80 STD | 232,6 | 272,6 | 312,6 |
| 90 STD | 242,6 | 282,6 | 322,6 |
| 40 LAT | 192,6 | 232,6 | 272,6 |
| 50 LAT | 202,6 | 242,6 | 282,6 |
| 60 LAT | 212,6 | 252,6 | 292,6 |
| 70 LAT | 222,6 | 262,6 | 302,6 |
| 80 LAT | 232,6 | 272,6 | 312,6 |
| 90 LAT | 242,6 | 282,6 | 322,6 |

LOCKING SCREW



| REFERENCE | DESCRIPTION |
|-----------|---------------|
| 01.22.201 | Locking screw |

NOTE: The locking screw is always packed together with the proximal body



FEMORAL HEADS

| DIAMETER | SIZE | STAINLESS STEEL | CoCr | CeramTec BIOLOX delta | CeramTec BIOLOX Option ^{II} | Mectacer BIOLOX delta |
|----------|------|-------------------------|------------------------|--------------------------------|--------------------------------------|-----------------------|
| Ø 22 mm | S | 01.25.130 ^I | 01.25.124 ^I | - | - | - |
| Ø 22 mm | M | 25055.2203 ^I | 01.25.123 ^I | - | - | - |
| Ø 28 mm | S | 25055.2801 | 01.25.011 | 38.49.7175.445.00 | 38.49.7176.935.81 | 01.29.201 |
| Ø 28 mm | M | 25055.2803 | 01.25.012 | 38.49.7175.455.00 | 38.49.7176.935.82 | 01.29.202 |
| Ø 28 mm | L | 25055.2805 | 01.25.013 | 38.49.7175.465.00 | 38.49.7176.935.85 | 01.29.203 |
| Ø 28 mm | XL | 25055.2807 | 01.25.014 | - | 38.49.7176.935.84 | - |
| Ø 28 mm | XXL | 25055.2810 ^I | 01.25.015 ^I | - | - | - |
| Ø 32 mm | S | 25055.3201 | 01.25.021 | 38.49.7175.665.00 | 38.49.7176.945.81 | 01.29.204 |
| Ø 32 mm | M | 25055.3203 | 01.25.022 | 38.49.7175.675.00 | 38.49.7176.945.82 | 01.29.205 |
| Ø 32 mm | L | 25055.3205 | 01.25.023 | 38.49.7175.685.00 | 38.49.7176.945.85 | 01.29.206 |
| Ø 32 mm | XL | 25055.3207 | 01.25.024 | 38.49.7181.345.00 | 38.49.7176.945.84 | 01.29.207 |
| Ø 32 mm | XXL | 25055.3210 ^I | 01.25.025 ^I | - | - | - |
| Ø 36 mm | S | - | 01.25.030 | 38.49.7179.275.00 | 38.49.7176.965.81 | 01.29.208 |
| Ø 36 mm | M | - | 01.25.031 | 38.49.7179.285.00 | 38.49.7176.965.82 | 01.29.209 |
| Ø 36 mm | L | - | 01.25.032 | 38.49.7179.295.00 | 38.49.7176.965.85 | 01.29.210 |
| Ø 36 mm | XL | - | 01.25.033 | 38.49.7175.925.00 | 38.49.7176.965.84 | 01.29.211 |
| Ø 36 mm | XXL | - | 01.25.034 ^I | - | - | - |
| Ø 40 mm | S | - | - | 38.49.7179.885.00 ^I | 38.49.7179.815.81 ^I | 01.29.212 |
| Ø 40 mm | M | - | - | 38.49.7179.895.00 ^I | 38.49.7179.815.82 ^I | 01.29.213 |
| Ø 40 mm | L | - | - | 38.49.7179.905.00 ^I | 38.49.7179.815.85 ^I | 01.29.214 |
| Ø 40 mm | XL | - | - | 38.49.7179.915.00 ^I | 38.49.7179.815.84 ^I | 01.29.215 |

^I On demand

^{II} Specific for revision cases

MECTACER BIOLOX OPTION SYSTEM^{II}

| HEAD DIAMETER (mm) | REFERENCE |
|--------------------|------------|
| Ø 28 | 01.29.230H |
| Ø 32 | 01.29.231H |
| Ø 36 | 01.29.232H |
| Ø 40 | 01.29.233H |

| SLEEVE SIZE | REFERENCE |
|-------------|------------|
| S | 01.29.240A |
| M | 01.29.241A |
| L | 01.29.242A |
| XL | 01.29.243A |

^{II} Specific for revision cases

Part numbers subject to change.

NOTE FOR STERILISATION

The instrumentation is not sterile upon delivery. It must be cleaned before use and sterilised in an autoclave in accordance with the regulations of the country, EU directives where applicable and following the instructions for use of the autoclave manufacturer. For detailed instructions please refer to the document "Recommendations for cleaning decontamination and sterilisation of Medacta International orthopaedic devices" available at www.medacta.com.



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rev. 06

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