



Made in Britain¹

SECURUS

REVISION STEM SYSTEM

OPERATIVE TECHNIQUE



SIMPLICITY



FURLONG
HIP SYSTEM

jri
Orthopaedics

An AK MEDICAL Company



Contents

Securus® Design Rationale	2
Contraindications	3
Pre-Operative Evaluation	4
Femoral Canal Preparation	5
Monobloc Prosthesis Preparation and Insertion	6
Modular Prosthesis Preparation and Insertion	9
Distal Targeting Jig Components	13
Distal Targeting - STEP Technique	23
Monobloc Technical Details	29
Modular Technical Details	30
Securus® Implant Chart	31
Securus® Instrumentation	33



Securus® Design Rationale

Revision hip surgery represents a significant challenge to the orthopaedic surgeon and can have a major impact on a hospital's orthopaedic budget. The Securus® Revision Stem System has been designed to help meet both the clinical and financial challenges.

The range of femoral prostheses and the instrumentation to implant these have been designed to provide a versatile, easy to use and cost effective solution appropriate for the majority of femoral stem revisions, trauma and complex primaries. A survey of surgeon opinion indicated that the requirements of an effective revision femoral stem system include:

- Ability to cope with a mismatch between metaphyseal and diaphyseal bone loss.
- Long stems to bypass deficient bone with anteroposterior bow to conform with femoral anatomy.
- An ability to achieve secure initial mechanical fixation followed as soon as possible by biological fixation.
- Easy to use, reliable and effective instrumentation with the number of trays kept to a minimum.

The Securus® Revision Stem System, based on the proven Furlong® H-A.C. coated stem design, with its full interchangeability between proximal bodies and distal stems, 6 trays of instrumentation, including distal targeting for locking screws, meets these requirements.



Contra-Indications

The device should not be implanted where there is active infection, insufficient bone stock to support the prosthesis or provide adequate fixation. Further contra-indications may be, but are not limited to the following conditions:

- Severe deformities
- Severe osteoporosis
- Tumours
- Systematic and metabolic disorders
- Obesity
- Drug addiction

Important Information:

Where there is loss of proximal bone stock, or poor proximal bone quality, bone grafting or other adjunctive proximal fixation / support is required for implant stability for; Size 11 and 12 monobloc stems, 11mm and 12mm diameter 250mm length modular stems and 13mm diameter 300mm length modular stems. The lack of, or reduced, proximal fixation or support, in conjunction with the need for long neck lengths and high offsets to re-establish correct tissue tensioning, is contraindicated for all stem sizes and types. It is important that the prosthesis is not distally fixed without proximal support.

It is essential that the stems are assembled correctly as specified in this operative technique and that the locking bolt is tightened to the correct torque value. It is also essential that the cap sealing off the screw connection is securely tightened correctly and that care is taken during placement.

When using distal screw fixation, it is imperative that the screws do not bear axial load. The screws are intended to provide torsional rigidity for fracture cases and not to support axial load. If the latter does occur they may be liable to fracture. They must be used with caution for distal stems less than 13mm diameter.

Care should be taken not to over-tighten bone screws. Ensure the appropriate selection of bone screw length and location to avoid damage to soft tissues.

As the manufacturer, JRI Orthopaedics Ltd. can take no responsibility for damage, breakage or other adverse effects caused as a result of the failure of any person to follow these instructions or any other relevant JRI instructions. The Surgeon is responsible for ensuring optimum implantation of the prosthetic device using JRI Orthopaedics Ltd. instrumentation.



Pre-Operative Evaluation

Correct surgical procedures and technique are the responsibility of the medical professional. The following guidelines are for information purposes only; each surgeon must evaluate the appropriateness of the procedure, prior to the use of the system, based on individual medical training and experience.

Pre-operative planning, including X-ray templating, is strongly recommended for leg length and offset assessment and to provide guidance for accurate bone preparation and appropriate implant selection. A bi-lateral AP X-ray of the proximal femur and pelvis will aid in leg length and offset assessment and management. Acetate radiographic templates for the Securus femoral revision system are available in 15% magnification.

Place the appropriate two-piece femoral template on the radiograph. Ensure that the distal length of the prosthesis will sufficiently bypass compromised bone - this is generally two-to-three canal diameters below the tip of the existing implant or femoral defect.

Templating for the Securus® Revision Stem System is available on all commonly used 2D software and in acetate. 3D templating is also available using ZedHip 3D (LEXI Europe GbmH)¹.

Caution:

Pre-operative templating is intended for estimating purposes only. Final component size is determined intra-operatively.



Femoral Canal Preparation



Position the patient in the true lateral position. Remove existing implants, preserving as much bone stock as possible.

Care should be taken to ensure all remnants of previous implants and bone cement are removed from the femoral canal. Select Femoral Revision Tray 1 for intramedullary reamers. Using the straight reamers, the proximal femur is reamed down to the isthmus sequentially in 1mm increments. The first reamer used should be 3-4mm smaller than the anticipated definitive implant stem size. Cortical chatter as the reamer enters the diaphysis indicates the correct reamer size has been reached.

The bow of the femoral component starts 130mm distal to the shoulder of the proximal body. Therefore, straight reaming is only necessary to this point. The depth is referenced against the anticipated final position of the definitive prosthesis (Fig. 1).

Cannulated flexible reamers should now be used to ream out the diaphysis. These can be found in the bottom section of tray 1. Introduce the guide wire through the isthmus into the distal femoral intramedullary canal. Flexible reamers are used to ream through the isthmus into the distal intramedullary canal. The first reamer used should be at least 3mm smaller than the anticipated distal stem diameter. Sequential reaming is carried out increasing in 0.5mm increments(Fig. 2).

Reaming with the flexible reamers to 1.5-2.0mm above the anticipated distal stem diameter is recommended to accommodate the anteroposterior bow of the stem. Tactile and audible feedback will also indicate the correct sizing of the reamer. Cortical chatter indicates reaming of the cortical bone; it is at this point that reaming should cease.

Femoral canal preparation is common to both monobloc and modular devices, depending upon the size of the prosthesis required, turn to page 6 for monobloc preparation and insertion or page 9 for modular preparation and insertion.



Prosthesis Preparation & Insertion - Monobloc



Fig. 3

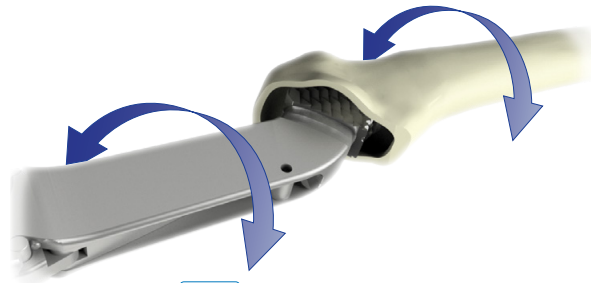


Fig. 4

Assessment of the metaphyseal cavity is now conducted, paying particular attention to the bone quality and observing any windows in the femoral cortex. Weakened or compromised bone may indicate the necessity for distal locking. Begin rasping the proximal femur with the smallest monobloc rasp, which corresponds to the size 11 monobloc stem. To accommodate the size 11 stem the femur must have been reamed with the flexible reamers to at least 12.5mm. Check that this is the case before beginning to rasp proximally.

Securely attach the rasp to the handle. Cautiously impact the rasp in and out. To facilitate proper implant sizing it is important to keep the rasp handle as lateral as possible (Fig. 3).

Note: The version of the definitive implant is determined by the rasp. Therefore, it is important to introduce the rasp into the femur with the desired degree of anteversion derived from the preoperative planning, considering there is 10° anteversion built into the proximal body of the stem with reference to the long axis of the distal stem. For implant technical details turn to page 29 (monobloc prosthesis only).

Once the rasp has been fully seated in the femur to the level desired for the definitive implant, gently twist the rasp handle: if the rasp is able to move within the femoral canal, rasp up to the next size. The correct size has been reached when gently twisting the rasp handle causes the femur to move with the rasp (Fig. 4).

The monobloc prostheses are available in Standard and High Offset, in left and right. Select the trial with the offset indicated by the preoperative plan, the size of the trial selected corresponds to the size of the last monobloc rasp used.



Prosthesis Preparation & Insertion - Monobloc



Fig. 5



Fig. 6

Screw the introducer handle from tray 4 securely onto the monobloc trial.

Note: the introducer handle for the monobloc trial and definitive implant has a different fitting than the modular trial and definitive implant introducer handle.

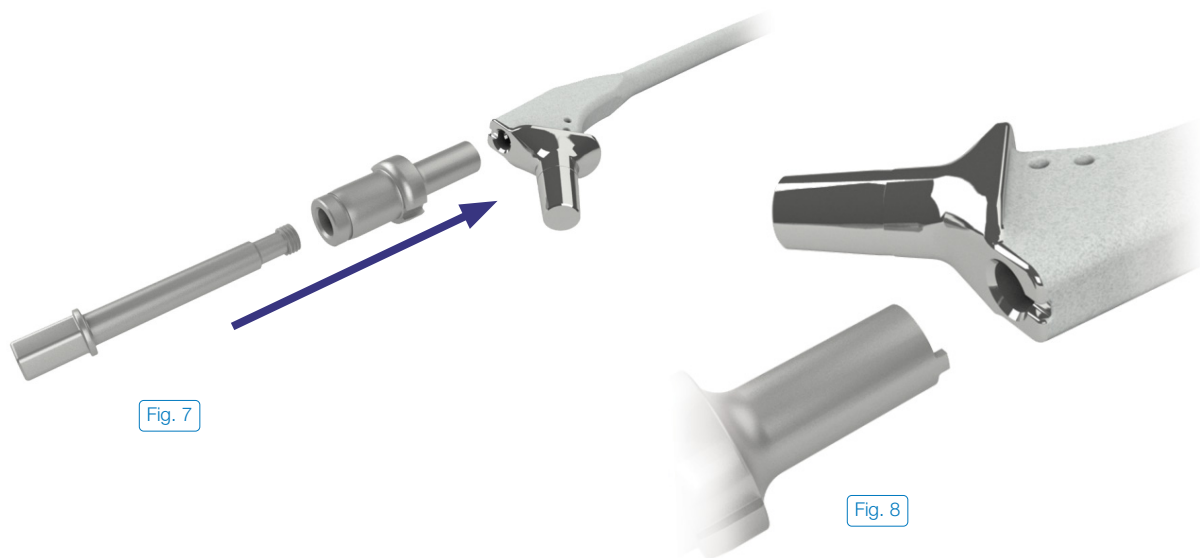
Using the introducer handle push the trial prosthesis into the femur. Particular care should be taken at this point to ensure that the distal stem follows the path of the femoral canal and that the trial prosthesis is not forced into position. A mallet should only be used with gentle taps on the strike plate of the introducer over the last three to four centimeters of insertion of the trial prosthesis (Fig. 5).

Select the appropriate definitive monobloc prosthesis corresponding to the trial prosthesis used (Fig. 6).

If distal locking is not required, the introducer handle used for the trial insertion, can be used to impact the definitive prosthesis. The prosthesis should be pushed into the femur, with a mallet being used to tap on the strike plate of the introducer handle over the final three to four centimetres of insertion.

A sterile packed end cap is screwed into the proximal body. A final trial reduction is performed. The appropriate femoral head as determined by the trial reduction is introduced onto the spigot.

This completes the procedure.



If distal locking is required follow the steps outlined below.

The monobloc fastening bolt is introduced through the monobloc connector, left or right, dependant on which leg is being operated on (Fig. 7).

The complete assembly is attached to the prosthesis by pushing the protruding peg on the monobloc connector into the groove in the proximal lateral shoulder of the prosthesis (Fig. 8). The monobloc fastening bolt is now screwed fully home into the threaded hole in the shoulder of the prosthesis. It should be fully tightened using the wrench so there is no play.

Please turn to page 13 for setup of the distal targeting jig, preparation of the locking holes and insertion of the locking screws.



Prosthesis Preparation & Insertion - Modular

Start with smallest rasp



Fig. 9

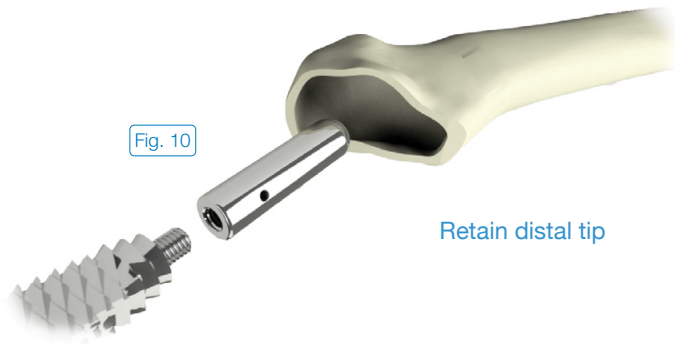


Fig. 10

Retain distal tip

Please refer to page 5 for femoral canal preparation.

Assessment of the metaphyseal cavity is now conducted, paying particular attention to the bone quality and observe any windows in the femoral cortex. Weakened or compromised bone will indicate the necessity for distal locking. Begin rasping the proximal femur with the smallest rasp.

If a modular stem is to be used select either a Standard or an Extended Lateral Shoulder (ELS) modular rasp depending on the preoperative plan and assessment of the metaphyseal cavity. Start with the smallest modular rasp proximal body, size A, the distal stem requires an over ream of 1.5 to 2mm to facilitate insertion. Therefore, the distal tip is selected dependant upon the final flexible reamer used. Screw the distal tip on to the proximal rasp (Fig. 9).

Securely attach the rasp to the rasp handle and cautiously impact the rasp in and out. To facilitate proper implant sizing it is important to keep the rasp handle as lateral as possible within the greater trochanter.

Note: The version of the definitive implants are determined by the position of the rasp. Therefore, it is important to position the rasp into the desired position derived from the preoperative planning.

Once the rasp has been fully seated in the femur to the level desired for the definitive implant, gently twist the rasp handle: if the rasp is able to move within the femoral canal, rasp up to the next size.

Retain the distal tip and screw it onto the next rasp size and repeat the previous steps (Fig. 10).

Continue this process until the rasp is secure within the femur, movement of the femur when twisting the rasp handle indicates the correct size.

Proximal body based
on final rasp size

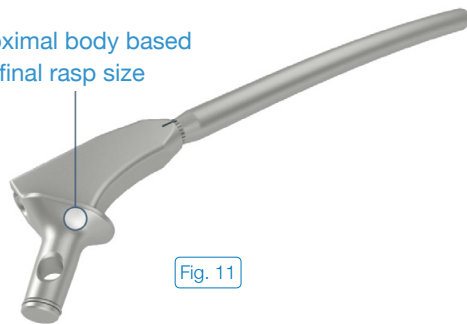


Fig. 11

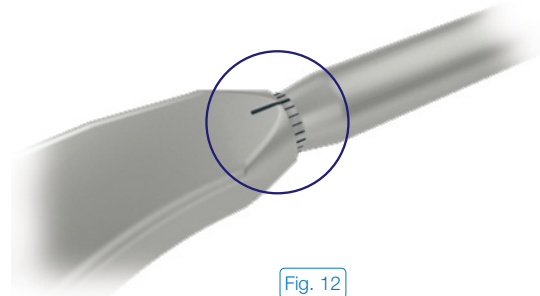


Fig. 12

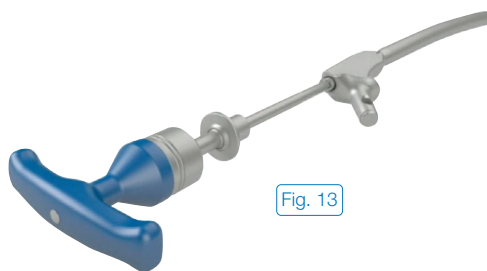


Fig. 13

The trial distal stem is selected based upon the stem length required (250mm, 300mm or 350mm) and the diameter required, which should be 1.5mm-2.0mm less than the final flexible reamer used.

The proximal bodies are available in Standard and High Offset. Select the proximal body trial with the offset indicated by the preoperative plan.

The size of the proximal body trial selected should correspond to the size of the last proximal body rasp size used. Slide the proximal trial body over the distal stem trial ensuring that the anteroposterior bow of the stem is correctly orientated (Fig. 11).

Lining up the indicator line on the proximal body with the bold line on the distal stem orientates the components in neutral version (Fig. 12).

Insert the locking bolt from the trial tray, through the hole in the shoulder of the proximal body trial into the distal stem, hand tighten the bolt until it bites slightly, then loosen it off by turning the handle back one half turn. This will allow the proximal body trial to turn freely on the distal stem trial, to adjust version, but will keep the two trial components securely attached to one another (Fig. 13).

The proximal body trial can be moved around freely on the distal stem trial.

TIP: Should the proximal body get stuck onto the distal stem, tap the body lightly with the wrench. The vibrations should release the two components.



Prosthesis Preparation & Insertion - Modular

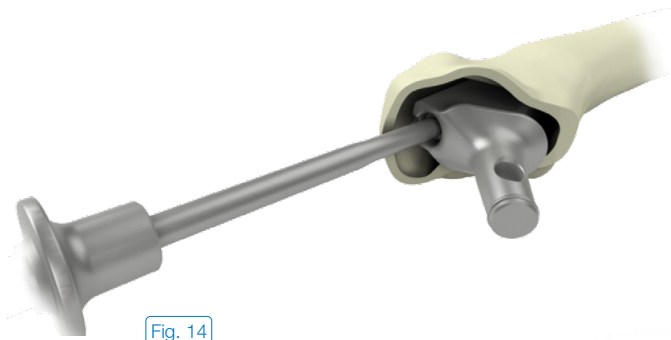


Fig. 14

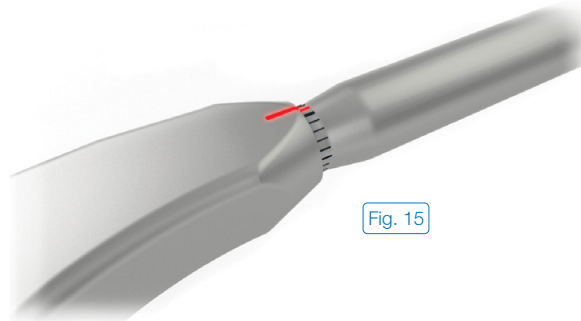


Fig. 15

Screw the introducer handle from tray 3 securely onto the proximal body trial.

Using the introducer handle push the assembled trial prosthesis into the femur. Particular care should be taken at this point to ensure that the distal stem follows the path of the femoral canal and that the trial prosthesis is not forced into position.

A mallet should only be used with gentle taps on the strike plate of the introducer over the last three to four centimetres of insertion of the trial prosthesis.

Once the trial prosthesis is seated to the desired level in the femur, detach the introducer handle and fully tighten the trial locking bolt using the torque limiting handle (fully torqueing is not required) (Fig.14).

Select a trial head of the appropriate diameter and perform a trial reduction.

Once a trial reduction has been performed, remove the trial head and then remove the trial prosthesis using the slap hammer (located within femoral revision tray 4), which engages in the hole in the spigot of the proximal body trial.

Observe which line on the trial stem corresponds to the indicator line on the proximal body. Recreating this alignment with the definitive implants will provide the same degree of anteversion (Fig.15).

Keep the assembled trial for reference.

DO NOT DISASSEMBLE UNTIL THE END OF THE CASE

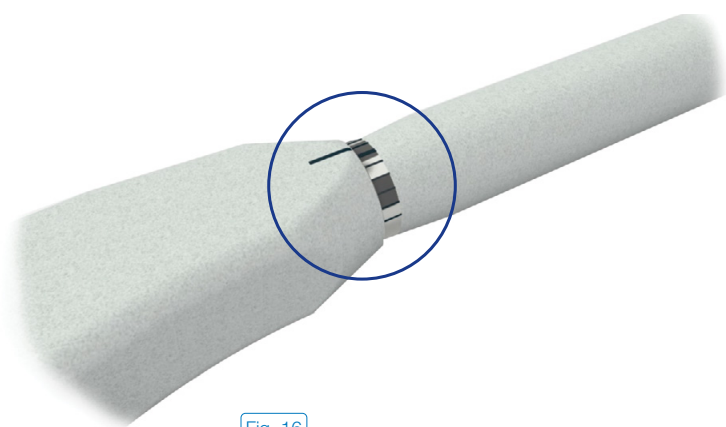


Fig. 16



Fig. 17

Select the appropriate definitive proximal body and distal stem corresponding to the trial prosthesis used.

If distal targeting is required turn to page 13.

If distal locking is not required fasten the sterile packed locking bolt through the proximal body into the distal stem, correctly align the markers as corresponding to the trial prosthesis (Fig.16) and hand tighten the modular locking bolt.

Screw the introducer handle from tray 3 securely onto the proximal body. The prosthesis should be pushed into the femur, with a mallet being used to tap on the strike plate of the introducer handle over the final three to four centimetres of insertion.

The torque counterforce handle is placed over the spigot. This handle counterforces the tightening action of the torque limiting handle to prevent rotational stress which may cause fragile femurs to fracture (Fig.17).

A 'click' noise from the torque limiting handle indicates it has been fully tightened.

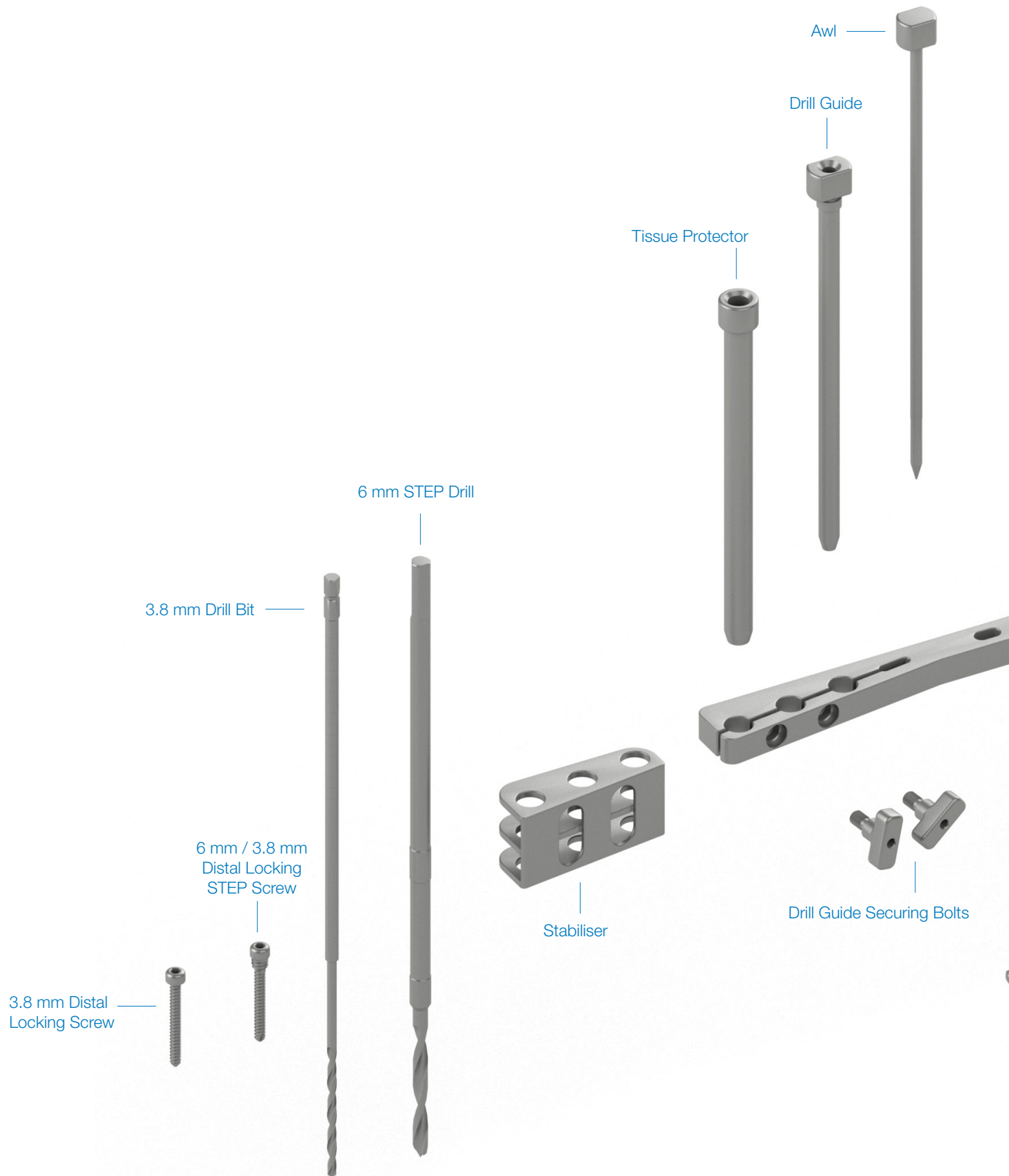
A sterile packed end cap is screwed into the proximal body.

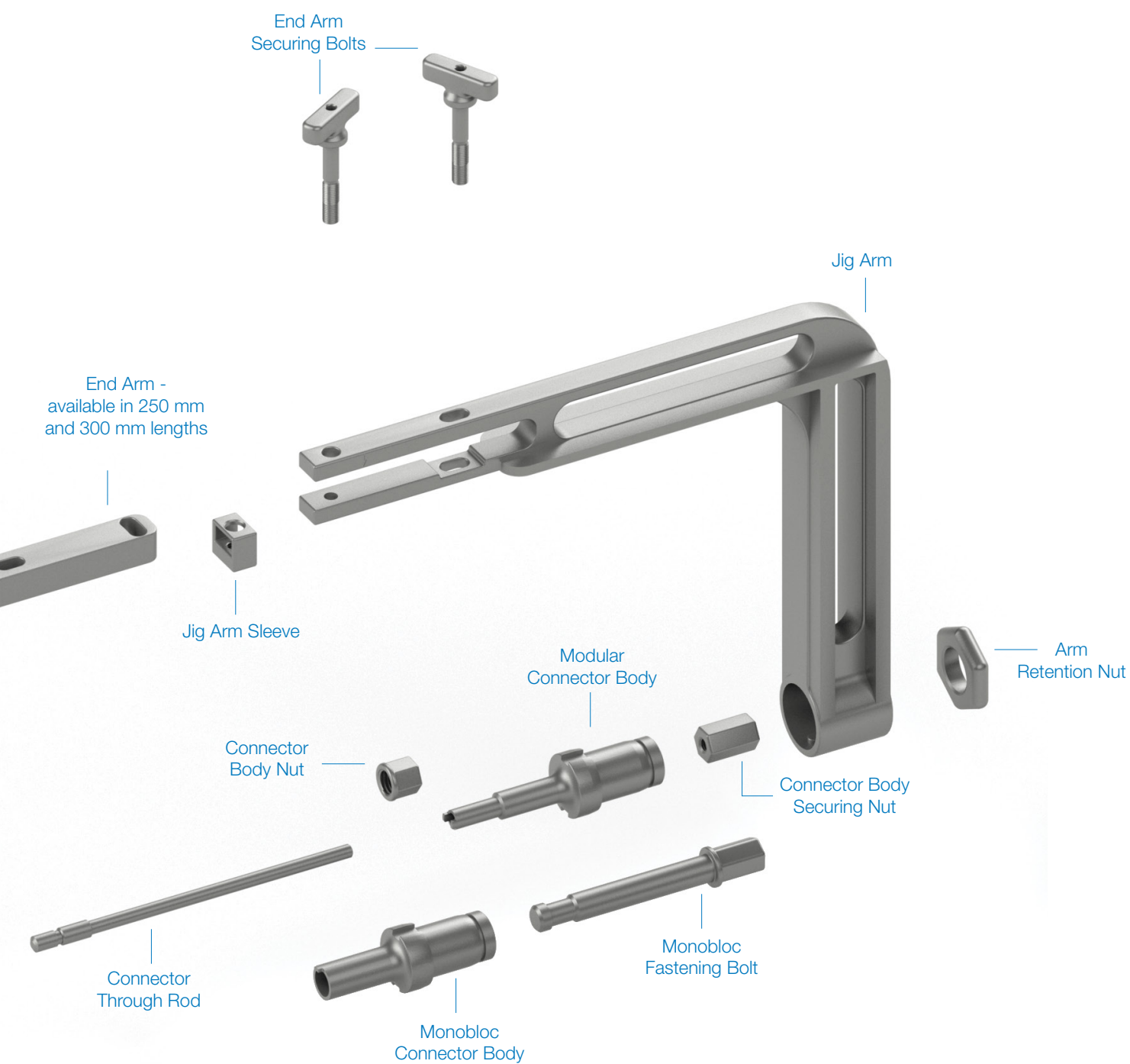
A final trial reduction is performed. The appropriate femoral head as determined by the trial reduction is introduced onto the spigot.

This completes the procedure.



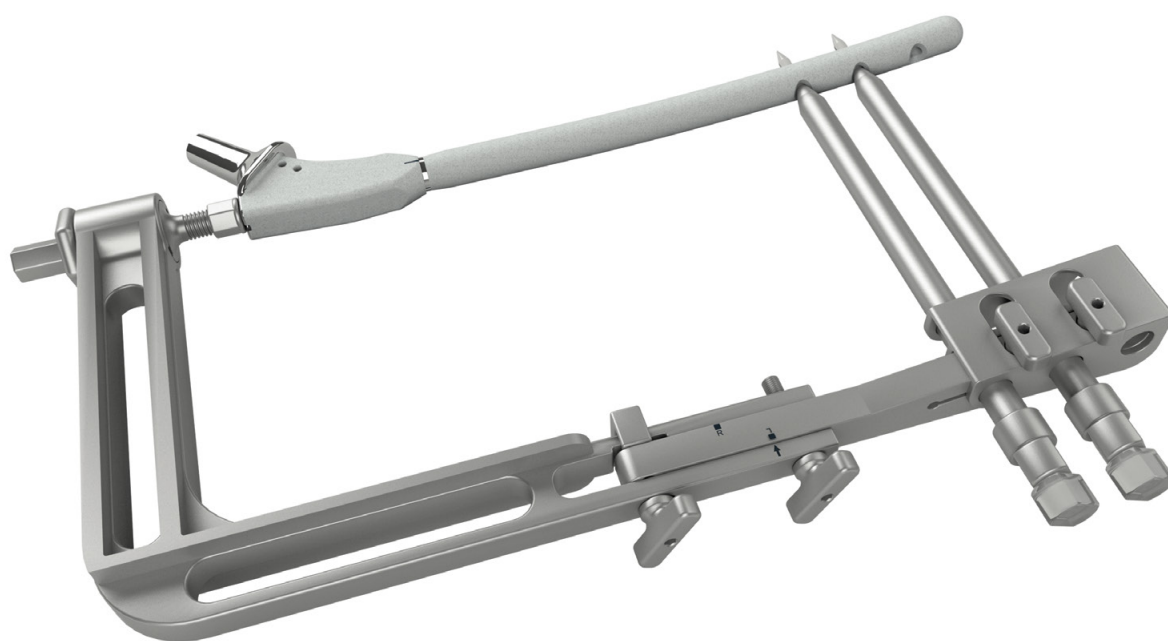
Distal Targeting Jig Components



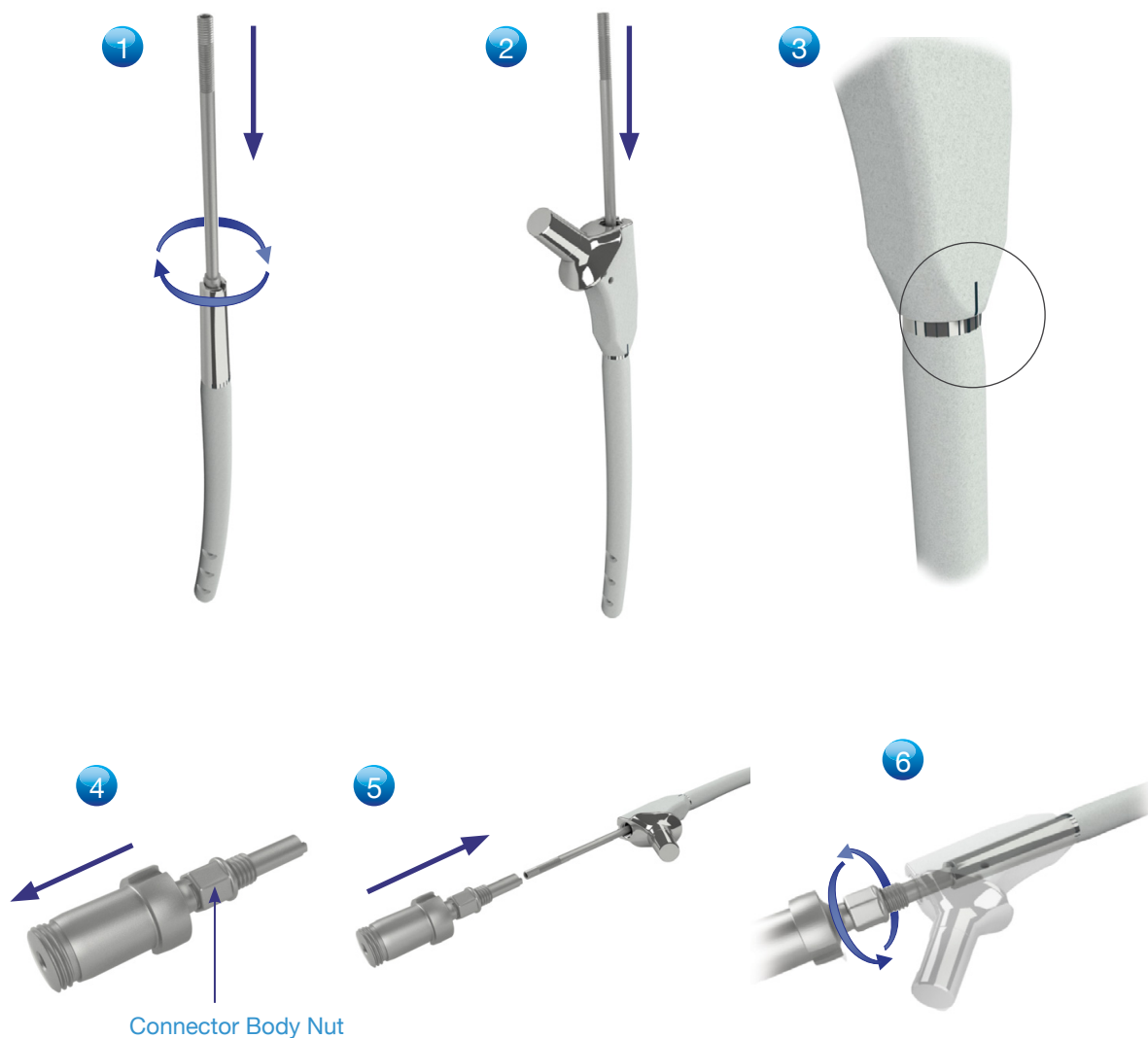




Distal Targeting



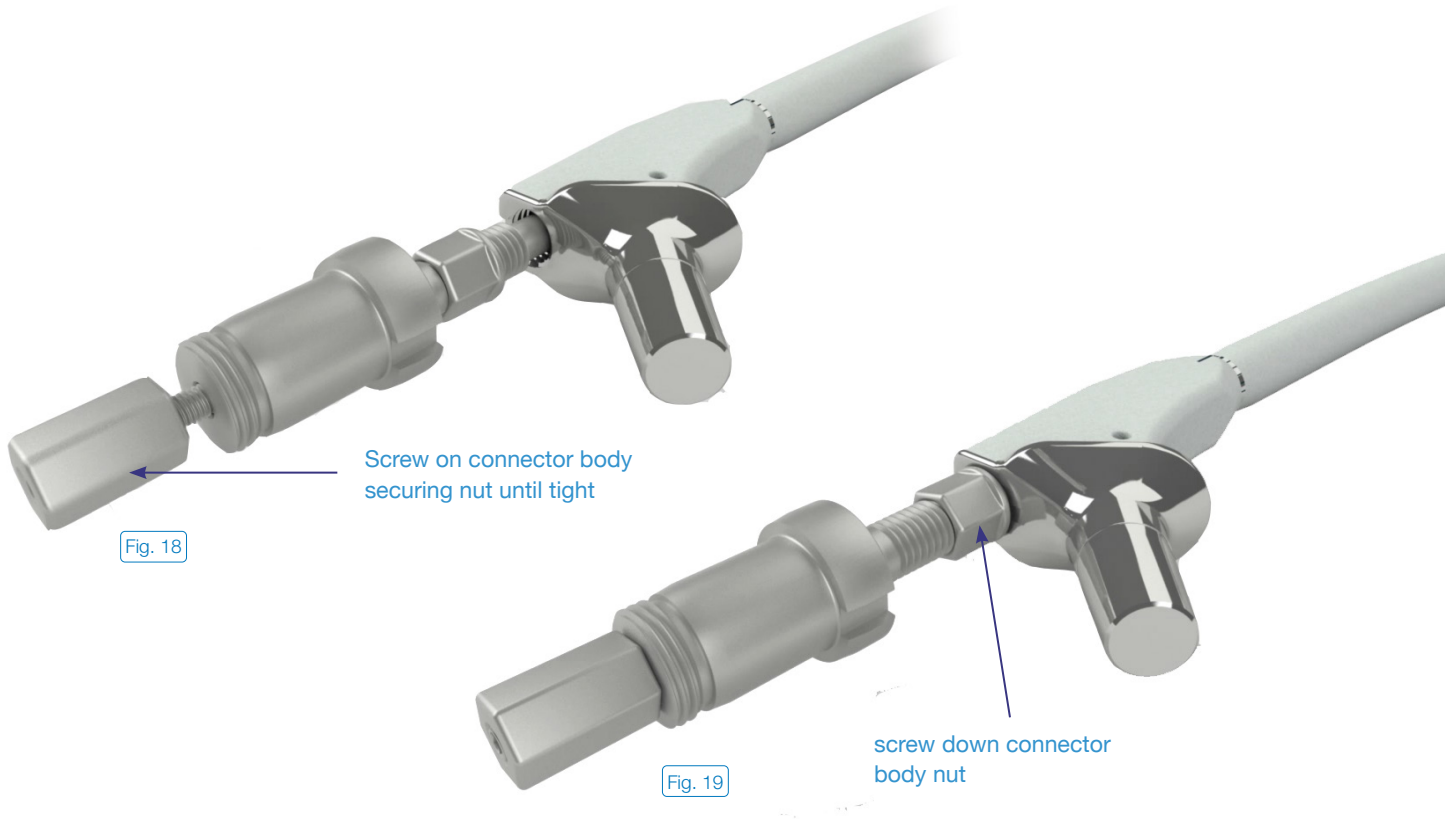
The orientation of the images are for illustrative purposes only, in order to demonstrate the correct assembly.



1. Screw the connector through rod into the proximal end of the distal stem.
2. Slide the proximal body over the connector through rod onto the distal stem.
3. Align the indicator line on the proximal body with the line on the distal stem as indicated by the trial prosthesis.
4. Screw the connector body nut onto the modular connector body.
5. Slide the connector body over the through rod.
6. Twist the connector body into the distal stem until the protruding pegs slot into the grooves in the proximal end of the distal stem.



Distal Targeting



Screw on connector body securing nut and tighten with wrench (Fig. 18).

Ensuring the proximal body indicator line and distal stem indicator line correspond to the trial prosthesis, the connector body nut is rotated clockwise. This action locks the two components firmly together (Fig. 19).

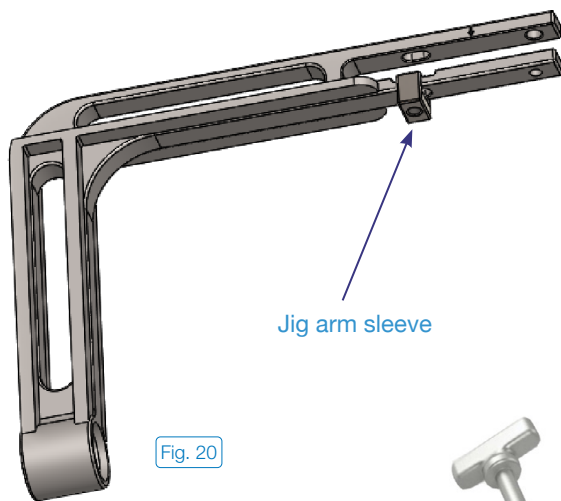


Fig. 20

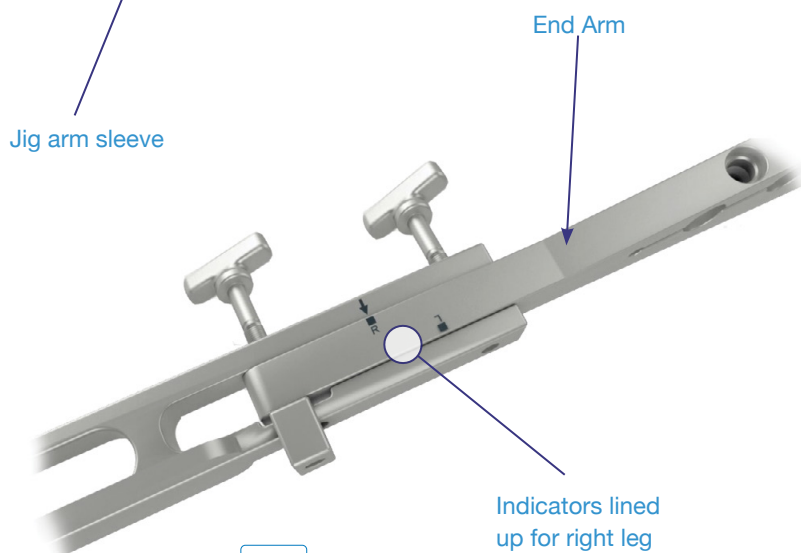


Fig. 21

The distal targeting jig requires pre assembly before use, the correct alignment and location of the distal holes are pre-set away from the patient before the definitive implant is inserted into the femur.

Dependant upon the length of the distal stem required, select the appropriate end arm; 250mm length has two screw holes, 300mm length (modular configuration only) has three screw holes. 350mm length distal stems cannot be used with a distal targeting jig.

Slide the jig arm sleeve onto the jig arm and locate it into the recess; (Fig. 20) position the end arm onto the jig arm, take note of the indicators which refer to the left and right, the arrow should line up with L for left and R for right (Fig. 21). Fasten the securing bolts to retain the end arm but make sure you **DO NOT TIGHTEN THE BOLTS FULLY**. The end arm should be left loose, allowing it to move freely.

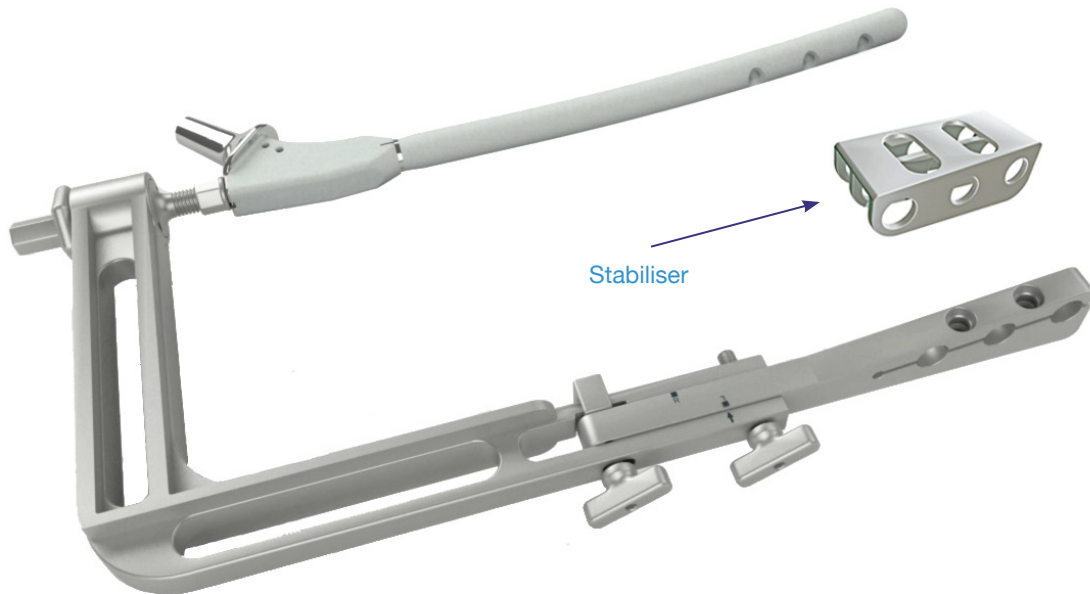


Fig. 22

The pre-assembled jig is now attached to the stem by sliding it over the connector body, this is locked in place by tightening the arm retention nut using the wrench.

The stabiliser is used to reduce potential play when lining up the tissue protectors, this is achieved by placing the relevant stabiliser onto the end arm (Fig. 22). The stabiliser with two holes is used for the 250mm stem and the three holed stabiliser is used for the 300mm stem. The stabiliser is then slid onto the end arm, ensuring the holes in the stabiliser match the corresponding holes in the end arm, the drill guide securing bolts are now passed through the stabiliser and screwed into the end arm.

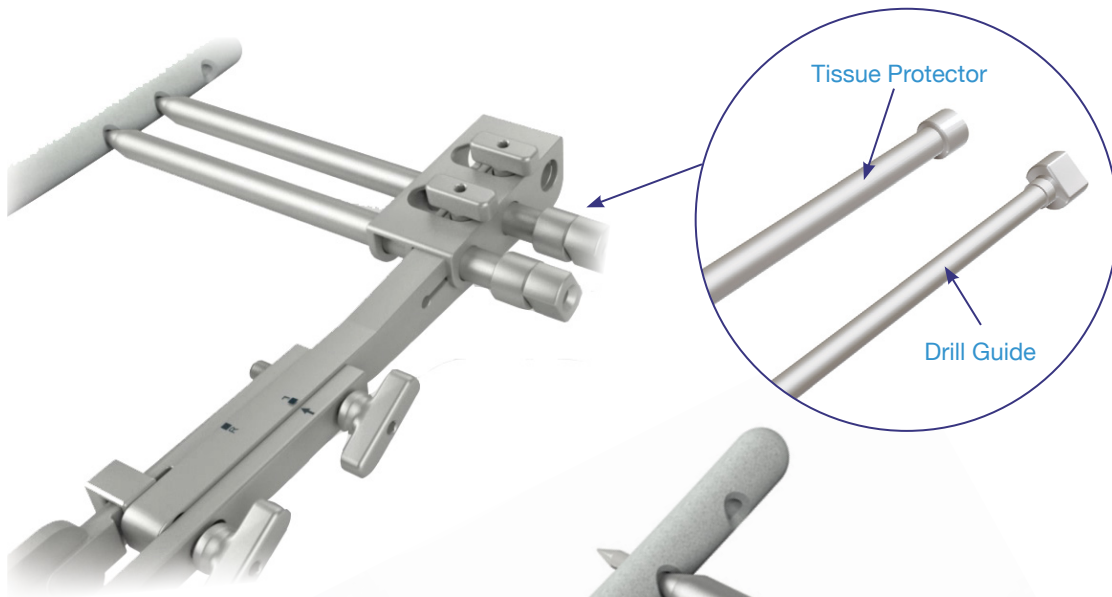


Fig. 23

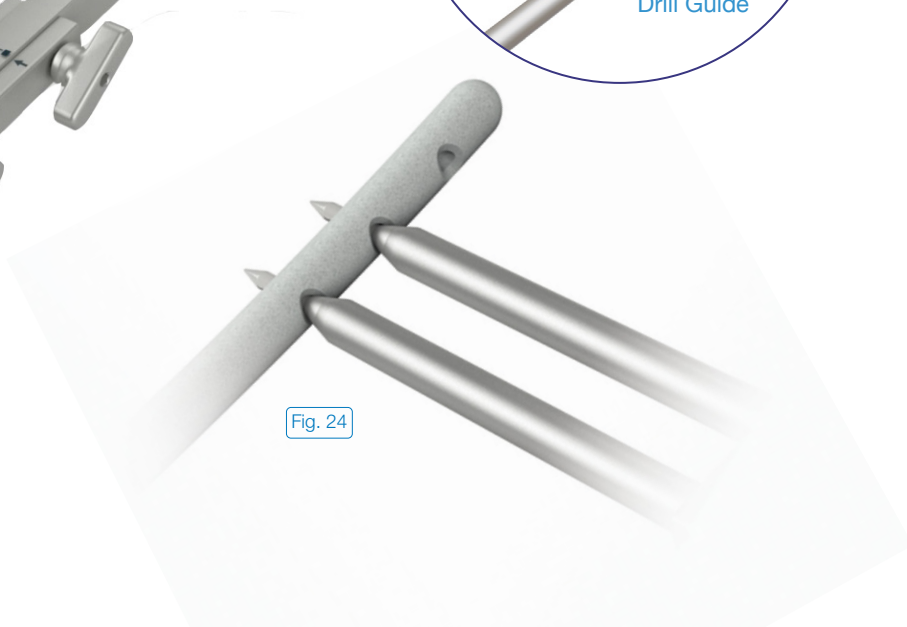


Fig. 24

Slide the drill guides into the tissue protectors and screw tight. Starting at the proximal end, locate the two tissue protectors through the end arm, ensuring that the chamfered tips of the drill guides align directly with the correct distal holes in the stem (Fig. 23).

The awls can now slide through the drill guides and the distal locking holes. The jig arm will self centre allowing the locking bolts to be tightened (Fig. 24).

DO NOT FORCE THE JIG ARM OUT OF POSITION.



Distal Targeting

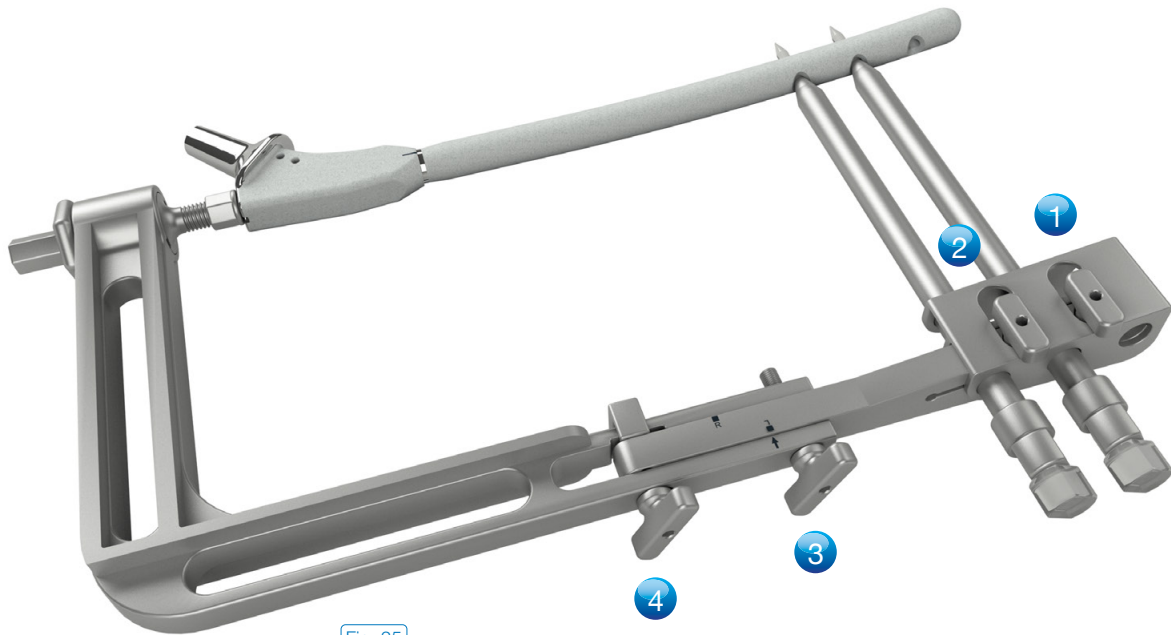


Fig. 25

Fig. 25 shows the distal targeting jig fully constructed. Starting distally, tighten the tissue protector securing bolts 1 and 2 using the screwdriver.

Moving proximally, ensure that the end arm is not being forced out of position, tighten the end arm securing bolts 3 and 4.

Check that the awls slide through the distal holes freely, if the awls catch the stem, undo the end arm securing bolts 3 and 4 and repeat the above procedure.

The distal targeting jig is now locked into its precise position. By pre-setting the jig away from the patient, the margin for error is significantly reduced.

Unscrew the tissue protector securing bolts 1 and 2 and remove the tissue protector/drill guide/awl assembly. The arm retention nut is removed, allowing the arm to be placed safely to one side.

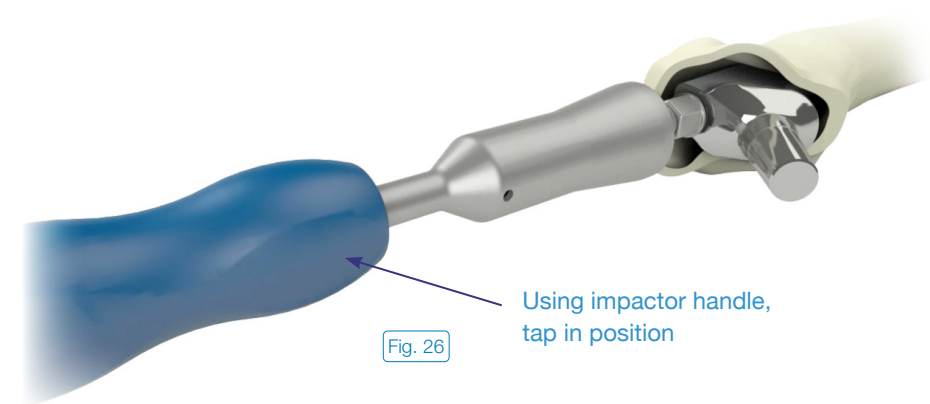
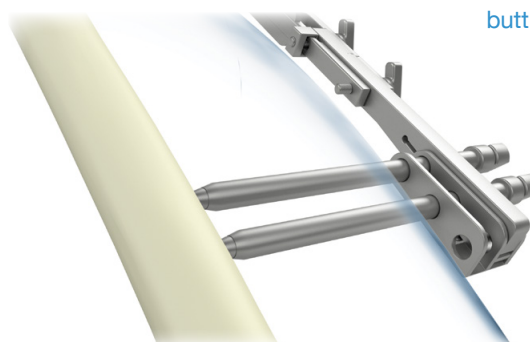


Fig. 26

Using impactor handle,
tap in position



Drill guide must
butt up to bone

Fig. 27

The definitive implant is now inserted using the impaction handle in tray 5. The prosthesis should be pushed into the femur, with a mallet being used to tap on the strike plate of the impactor handle over the final three to four centimetres of insertion (Fig. 26).

Tip: Should the impactor handle get stuck on the connector body, use one of the locking bolts in the modular trial tray and screw it through one of the holes on the impactor handle, this will prise the two apart.

Re-attach the jig arm onto the connector body securely by fully tightening the arm retention nut with the wrench. The skin is incised at the appropriate locations. The tissue protector/drill guide assembly is pushed through the incision so that the tip of the drill guide directly contacts the lateral cortex (Fig. 27).

Caution: When introducing the tissue protector/drill guide assemblies do not put any undue force on the jig arm.

The tissue protector securing bolts are now fully tightened using the screwdriver. It is essential to fully tighten these bolts to remove any amount of play within the jig.



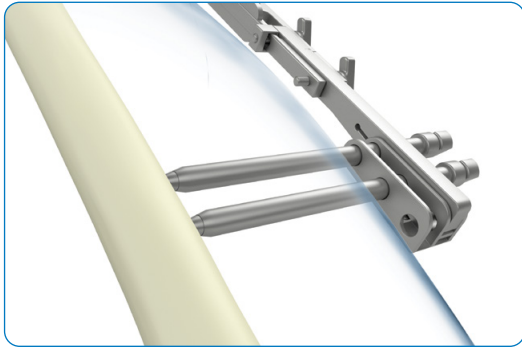
Implementation...

Accurate distal targeting,
reducing the need for
intra-operative imaging.

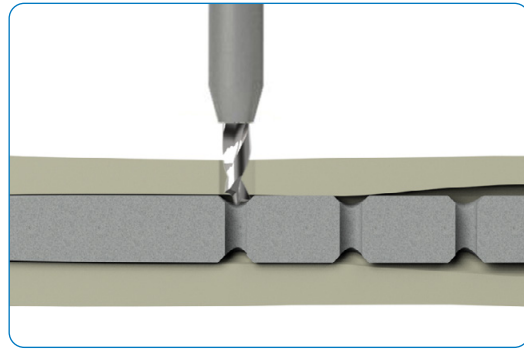
JRI's unique STEP technique increases targeting accuracy by "funnelling" the drill through the hole in the distal stem.



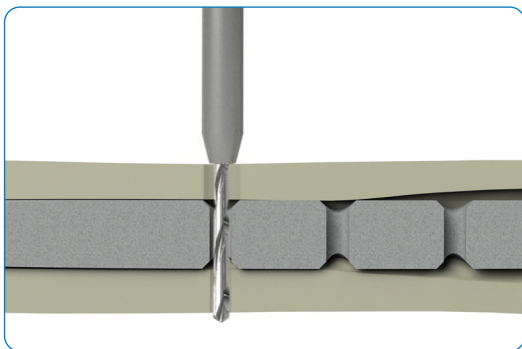
STEP Technique – Quick Guide



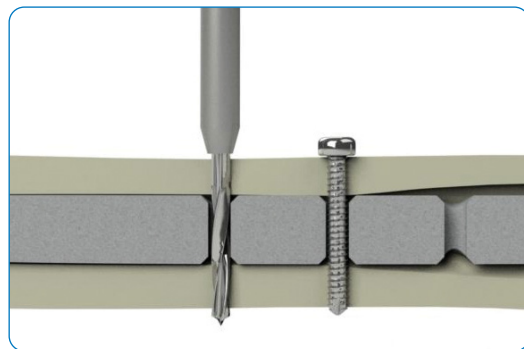
STEP 1 – insert definitive implant and attach pre-assembled jig



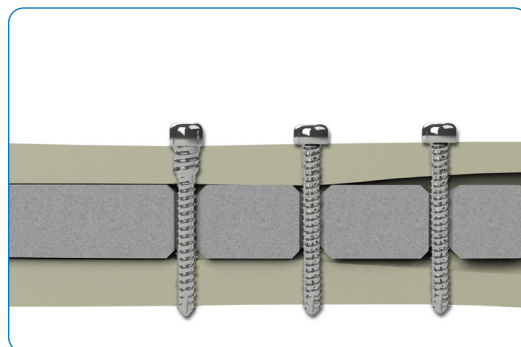
STEP 2 – introduce the 6mm STEP drill through the tissue protector corresponding to the most proximal of the locking holes and drill through the lateral cortex only.



STEP 3 – using the 3.8mm drill bit penetrate through the medial cortex and leave the drill in situ, thereby anchoring the jig in position.



STEP 4 – using the standard targeting technique drill the subsequent distal holes and secure with locking screws.



STEP 5 – remove the drill from the proximal hole and secure with a locking STEP screw.



Distal Targeting - STEP Technique

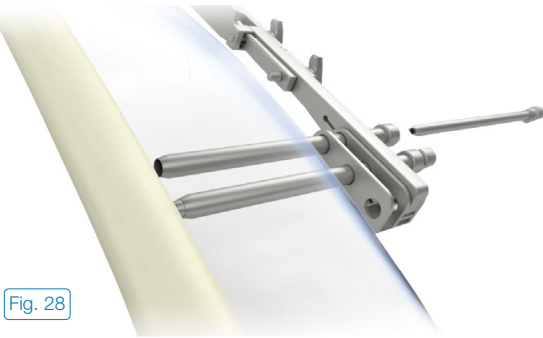


Fig. 28

First drill using
6mm STEP drill



Fig. 29

Only drill the lateral
cortical bone

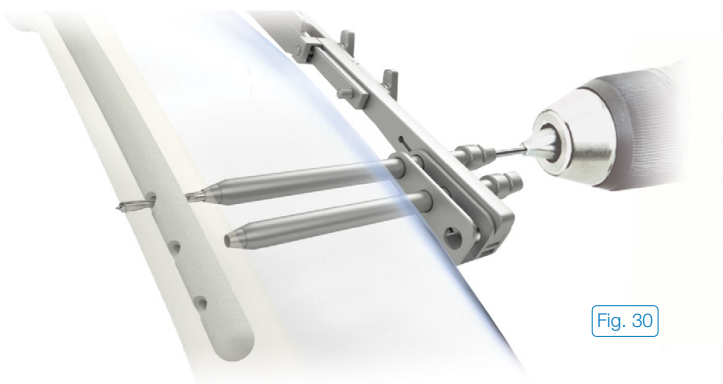
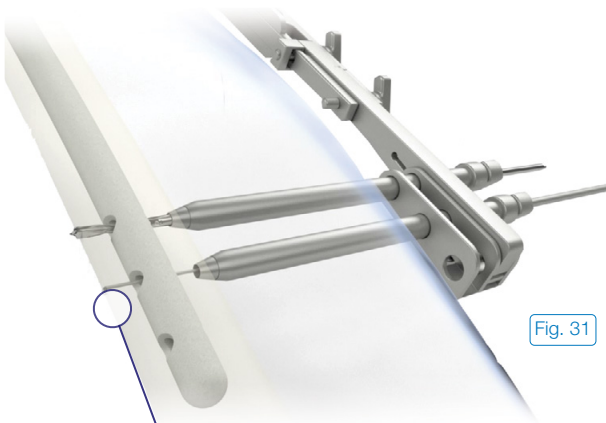


Fig. 30

Unscrew and remove the inner drill guide from the proximal tissue protector (Fig. 28), the 6mm STEP drill is used to drill the lateral cortex of the most proximal locking hole only. Ensure care is taken not to force the jig out of position, the drill should be spinning at full speed before making contact with the bone. Care should be taken that the drill only passes through the lateral cortex and does not touch the implant (Fig. 29).

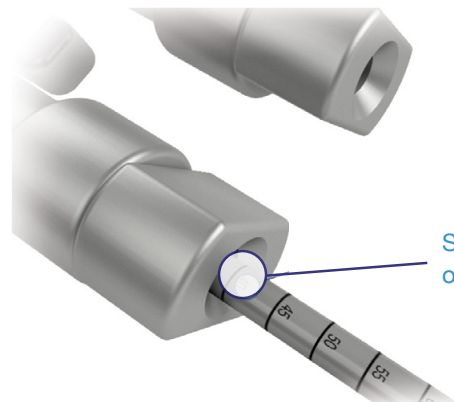
Once the cortex has been penetrated remove the drill and replace the drill guide, screw it into the tissue protector until tight. The sterile packed 3.8mm drill is introduced through the drill guide and into the pre-drilled 6mm hole, the drill should pass freely through the lateral cortex, the hole in the distal stem and touch the internal medial cortex (Fig. 30).

Tip: Depth marking on the drill bit will indicate whether this has been achieved. If when checking, the drill does not pass easily through the holes or hits the lateral femoral cortex: firstly, ensure the jig is not being put under any force which may pull the jig out of position. Secondly, move the jig arm from side to side gently until the drill passes through the holes as stated.



Depth gauge introduced until 'hooks' onto femur

Fig. 31



Screw length indicated on depth gauge

Fig. 32

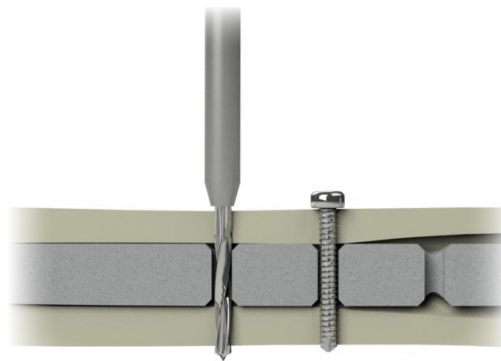


Fig. 33

Drill through the medial cortex.

IMPORTANT: this first drill is left in situ to provide improved stability.

Subsequent holes are drilled distally using an additional, sterile packed 3.8mm drill only. Using the depth gauge measure the hole depth (Fig. 31) The depth gauge has a 5mm compensation factor built in, therefore round the number down and select the screw corresponding to the depth gauge reading, e.g. if midway between a 40mm and 45mm reading, select the 40mm screw (Fig. 32).

The drill guide is now unscrewed leaving the tissue protector in place. The appropriate 4.5mm sterile packed, self-tapping screw is slid through the tissue protector and using the hex ratchet screwdriver, the screw is engaged in the drilled hole in the lateral cortex and fully tightened (Fig. 33).



Distal Targeting - STEP Technique



Fig. 34

'STEP' SCREW

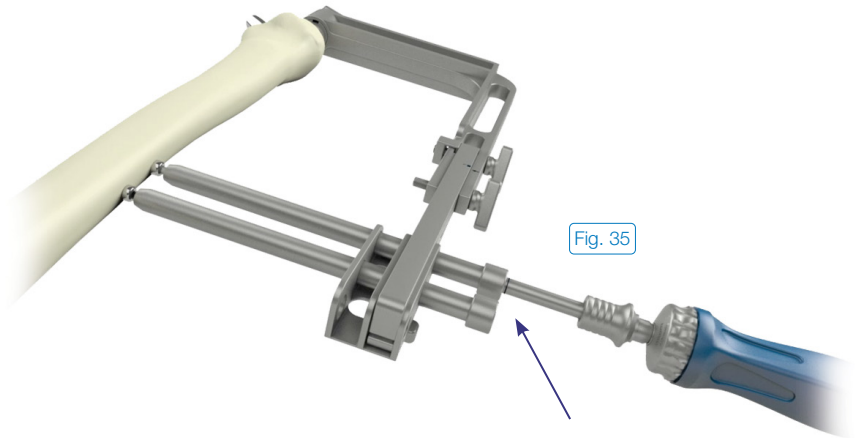


Fig. 35

Maximum depth marking

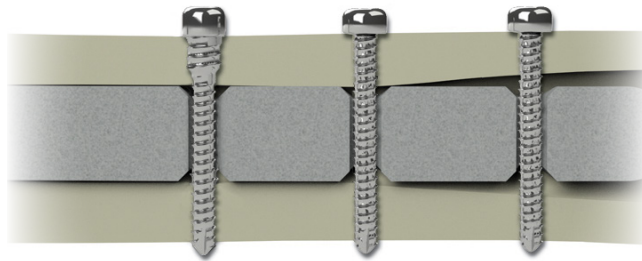


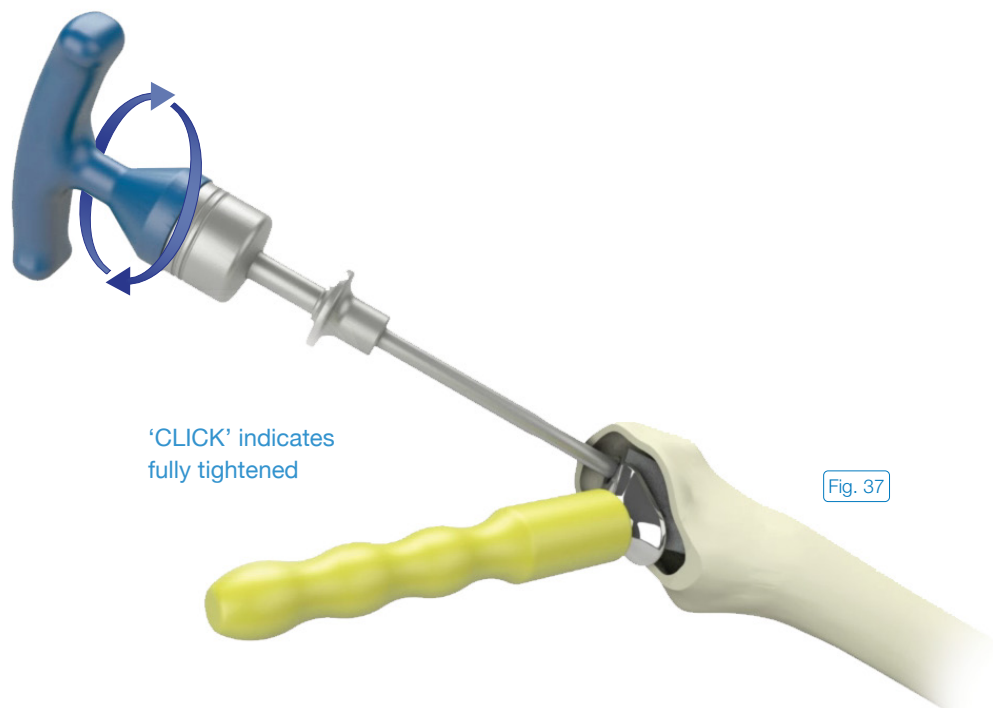
Fig. 36

Only when satisfactory positioning of the distal screws has been achieved remove the drill from the proximal hole and measure the screw length. The drill guide is now unscrewed leaving the tissue protector in place. The appropriate 4.5mm/6.7mm sterile packed self-tapping STEP screw is slid through the tissue protector and using the hex ratchet screwdriver, the screw is engaged in the drilled hole and fully tightened (Fig. 34).

A 'maximum' depth marking on the screwdriver indicates when the screw is fully seated. It is essential not to over tighten any of the cortical bone screws (Fig. 35).

Fig. 36 demonstrates the standard cortical bone screws in position in the two distal holes and the STEP screw in the proximal hole.

The tissue protectors are withdrawn and the whole jig assembly is removed, including the connector body and connector through rod.



The sterile packed locking bolt is inserted through the proximal body, into the distal stem and fully tightened using the torque limiting driver.

The torque counterforce handle is placed over the spigot. This handle counterforces the tightening action of the driver handle to prevent rotational stress which may cause fragile femurs to fracture. A 'click' noise from the driver handle indicates the locking bolt is fully tightened (Fig. 37).

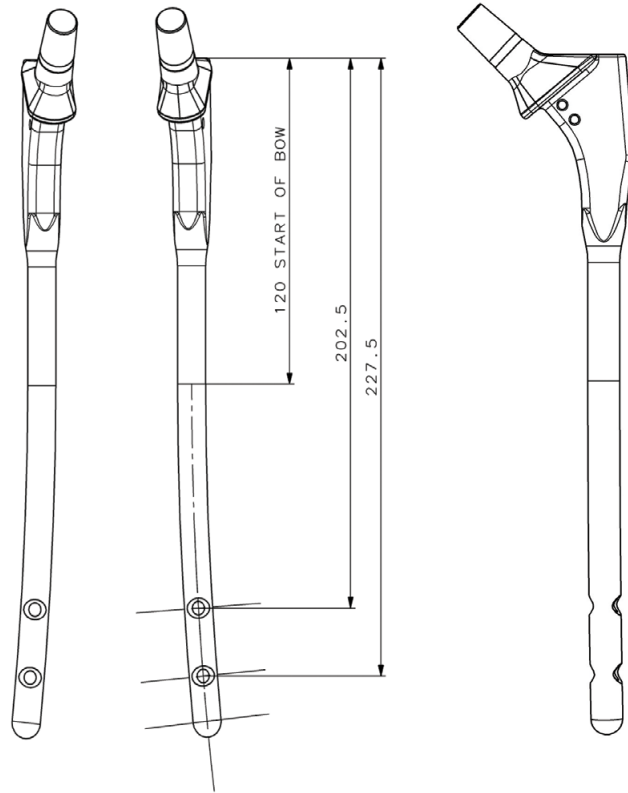
A sterile packed end cap is screwed into the proximal body to complete the procedure.

Note: The end caps are specific to either monobloc or modular stems.

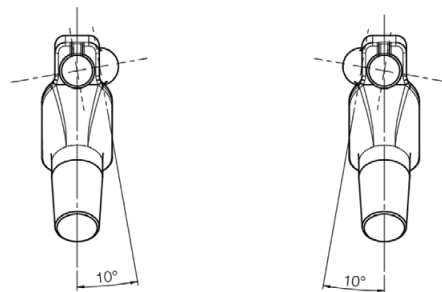
A final trial reduction is performed. The appropriate femoral head as determined by the trial reduction is introduced onto the spigot.



Monobloc Technical Details

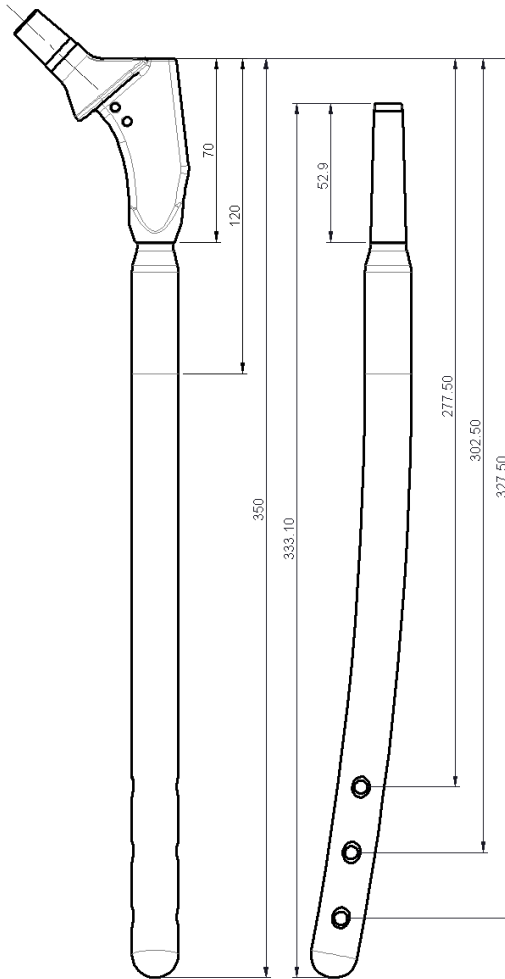


250mm stem

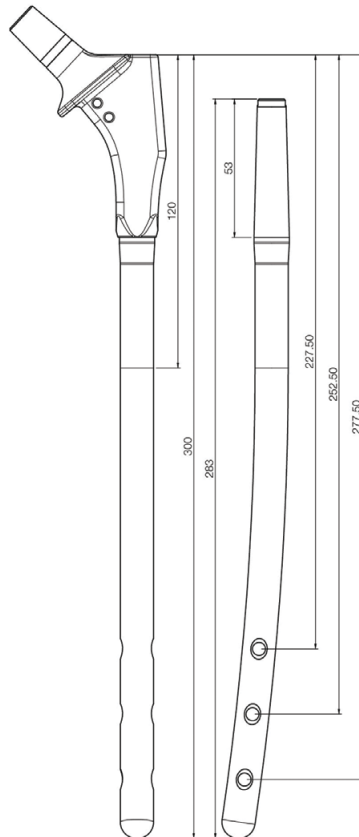


10° ANTEVERSION BUILT IN

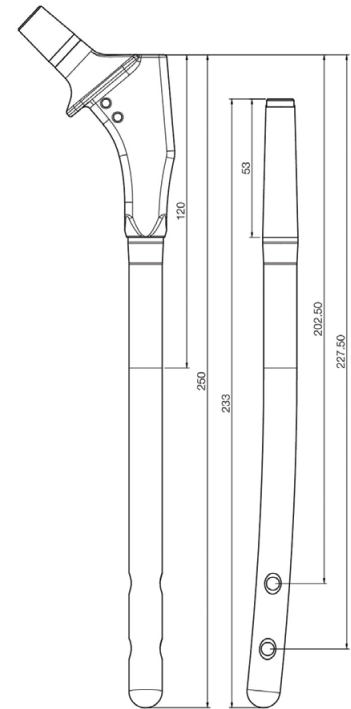
NOT TO SCALE



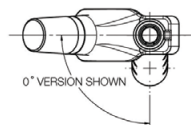
350mm stem



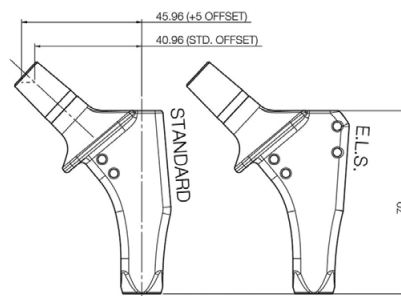
300mm stem



250mm stem



0° VERSION SHOWN



NOT TO SCALE



Securus® Implant Chart

Modular Revision Proximal Bodies

Securus® Modular H-A.C. Proximal Body, Standard Offset (41mm)	Implant
A	113-15-13
B	113-16-14
C	113-17-15
D	113-18-16
Securus® Modular H-A.C. Proximal Body, High Offset (46mm)	Implant
A	114-15-13
B	114-16-14
C	114-17-15
D	114-18-16

Modular Revision Stems

Securus® Modular H-A.C. Curved Femoral Stem 250mm	Implant
11	116-11-25
12	116-12-25
13	116-13-25
14	116-14-25
15	116-15-25
16	116-16-25
17	116-17-25
18	116-18-25
Securus® Modular H-A.C. Curved Femoral Stem 300mm	
13	116-13-30
14	116-14-30
15	116-15-30
16	116-16-30
17	116-17-30
18	116-18-30

Modular Revision Stems

Securus® Modular H-A.C. Curved Femoral Stem 350mm	Implant
13	116-13-35
14	116-14-35
15	116-15-35
16	116-16-35
17	116-17-35
18	116-18-35
Modular Locking Bolt	Implant
(one size)	110-00-00
Modular Body Cap	Implant
(one size)	110-00-01

Modular Revision ELS Proximal Bodies

Securus Modular H-A.C. ELS Proximal Body, Standard Offset (41mm)	Implant
A	118-15-13
B	118-16-14
C	118-17-15
D	118-18-16
Securus Modular H-A.C. ELS Proximal Body, High Offset (46mm)	Implant
A	119-15-13
B	119-16-14
C	119-17-15
D	119-18-16

Monobloc Revision Stems

Securus® Monobloc H-A.C. Curved Femoral Stem, 10° Anteversion, Standard Offset (41mm) 250mm	Implant
11 Left Leg	117-11-25
12 Left Leg	117-12-25
11 Right Leg	127-11-25
12 Right Leg	127-12-25
Securus® Monobloc H-A.C. Curved Femoral Stem, 10° Anteversion, High Offset (46mm) 250mm	Implant
11 Left Leg	117-11-26
12 Left Leg	117-12-26
11 Right Leg	127-11-26
12 Right Leg	127-12-26
Monobloc Body Cap	Implant
(one size)	110-00-02

Distal Locking Screws

30mm Length	110-00-30
35mm Length	110-00-35
40mm Length	110-00-40
45mm Length	110-00-45
50mm Length	110-00-50
55mm Length	110-00-55
60mm Length	110-00-60
65mm Length	110-00-65
70mm Length	110-00-70

Distal Locking STEP Screws

30mm Length	110-01-30
35mm Length	110-01-35
40mm Length	110-01-40
45mm Length	110-01-45
50mm Length	110-01-50
55mm Length	110-01-55

Disposable Items

3.8mm Calibrated Drill Bit	210-50-17
900mm Olive Tipped Guide Wire	210-01-02



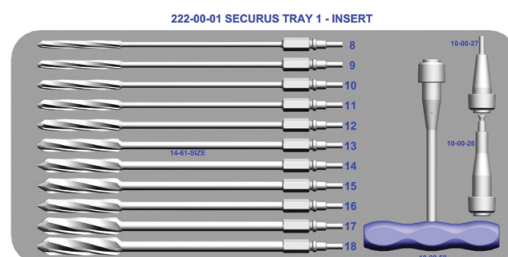
Securus® Revision Tray 1: 222-00-01

Base Tray

8 (Monobloc)	210-01-080
8.5 (Monobloc)	210-01-085
Reamer Head 9mm	210-02-090
Reamer Head 9.5mm	210-02-095
Reamer Head 10mm	210-02-100
Reamer Head 10.5mm	210-02-105
Reamer Head 11mm	210-02-110
Reamer Head 11.5mm	210-02-115
Reamer Head 12mm	210-02-120
Reamer Head 12.5mm	210-02-125
Reamer Head 13mm	210-02-130
Reamer Head 13.5mm	210-02-135
Reamer Head 14mm	210-02-140
Reamer Head 14.5mm	210-02-145
Reamer Head 15mm	210-02-150
Reamer Head 15.5mm	210-02-155
Reamer Head 16mm	210-02-160
Reamer Head 16.5mm	210-02-165
Reamer Head 17mm	210-02-170
Reamer Head 17.5mm	210-02-175
Reamer Head 18mm	210-02-180
Reamer Head 18.5mm	210-02-185
Reamer Head 19mm	210-02-190
Reamer Head 19.5mm	210-02-195
Flexible Driver Shaft	210-01-01

Insert Tray

T-Handle	10-00-50
Jacobs Adaptor	10-00-27
Hudson Adaptor	10-00-26
Straight Reamer 8mm	14-61-08
Straight Reamer 9mm	14-61-09
Straight Reamer 10mm	14-61-10
Straight Reamer 11mm	14-61-11
Straight Reamer 12mm	14-61-12
Straight Reamer 13mm	14-61-13
Straight Reamer 14mm	14-61-14
Straight Reamer 15mm	14-61-15
Straight Reamer 16mm	14-61-16
Straight Reamer 17mm	14-61-17
Straight Reamer 18mm	14-61-18





Securus® Revision Tray 2: 222-00-02

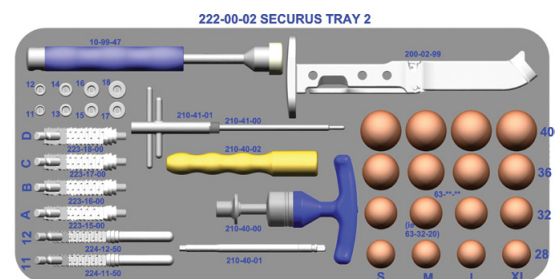
Torque Limiting Driver Handle	210-40-00
Torque Counterforce Handle	210-40-02
5mm Hex Driver Bit	210-40-01
Implant Distractor A	210-41-00
Implant Distractor B	210-41-01
Monobloc Rasp 11mm	224-11-50
Monobloc Rasp 12mm	224-12-50
Modular Rasp A	223-15-00
Modular Rasp B	223-16-00
Modular Rasp C	223-17-00
Modular Rasp D	223-18-00
Straight Rasp Handle	200-02-99
Head Impactor	10-99-47

Modular rasp Distal Tip

11mm	226-11-50
12mm	226-12-50
13mm	226-13-50
14mm	226-14-50
15mm	226-15-50
16mm	226-16-50
17mm	226-17-50
18mm	226-18-50

Trial Femoral head

28mm Short Neck	63-28-10
28mm Medium Neck	63-28-20
28mm Long Neck	63-28-30
28mm Extra Long Neck	63-28-40
32mm Short Neck	63-32-10
32mm Medium Neck	63-32-20
32mm Long Neck	63-32-30
32mm Extra Long Neck	63-32-40
36mm Short Neck	63-36-10
36mm Medium Neck	63-36-20
36mm Long Neck	63-36-30
36mm Extra Long Neck	63-36-40
40mm Short Neck	63-40-10
40mm Medium Neck	63-40-20
40mm Long Neck	63-40-30
40mm Extra Long Neck	63-40-40





Securus® Revision Tray 3: 222-00-03

Securus® Modular Trial Proximal Body Standard Offset (41mm)

Size A	213-15-13
Size B	213-16-14
Size C	213-17-15
Size D	213-18-16

Securus® Modular Trial Proximal Body High Offset (46mm)

Size A	214-15-13
Size B	214-16-14
Size C	214-17-15
Size D	214-18-16

Securus® Modular Trial Curved Femoral Stem 250mm

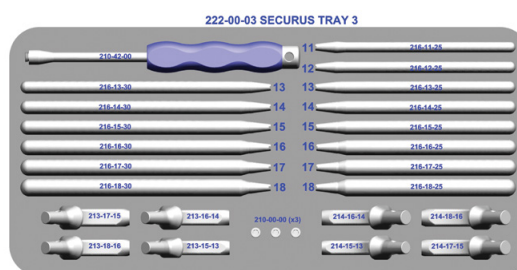
11	216-11-25
12	216-12-25
13	216-13-25
14	216-14-25
15	216-15-25
16	216-16-25
17	216-17-25
18	216-18-25

Securus® Modular Trial Curved Femoral Stem 300mm

13	216-13-30
14	216-14-30
15	216-15-30
16	216-16-30
17	216-17-30
18	216-18-30

Modular Trial Stem Impactor Handle	210-42-00
---------------------------------------	-----------

Trial Stem Securing Bolt	210-00-00
--------------------------	-----------





Securus® Revision Tray 4: 222-00-04

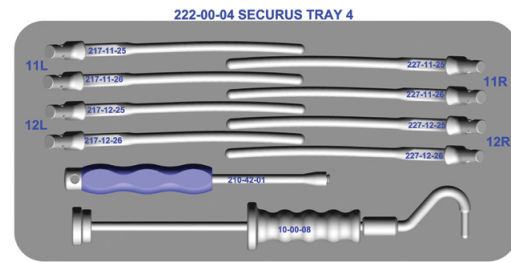
Securus® Monobloc Trial Stems Standard Offset (41mm)

11mm Left Hand	217-11-25
12mm Left Hand	217-12-25
11mm Right Hand	227-11-25
12mm Right Hand	227-12-25

Securus® Monobloc Trial Stems High Offset (46mm)

11mm Left Hand	217-11-26
12mm Left Hand	217-12-26
11mm Right Hand	227-11-26
12mm Right Hand	227-12-26

Monobloc Trial Stem Impactor	210-42-01
Slaphammer	10-00-08

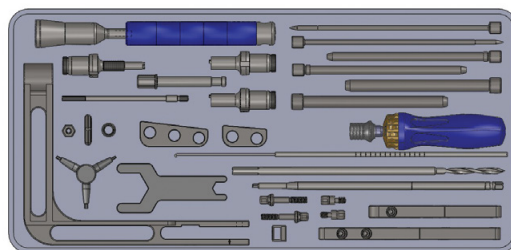




Securus® Revision Tray 5: 222-00-05

Ratchet Screwdriver	50-91-00
Jig Arm	210-50-01
Modular Connector Body	210-50-27
Connector Body Securing Nut	210-50-03
Connector Through Rod	210-50-28
Connector Body Nut	210-50-05
Arm Retention Nut	210-50-06
Jig Arm Sleeve	210-50-08
End Arm Securing Bolts	210-50-09
Drill Guide Securing Bolts	210-50-10
End Arm 300mm	210-50-12
End Arm 250mm	210-50-13
Tissue Protector	210-50-14
Drill Guide	210-50-15
AWL	210-50-16
Wrench	210-50-18
Jig Impactor Handle	210-50-19
Monobloc Connector Body LEFT	210-50-25
Monobloc Connector Body RIGHT	210-50-24
Monobloc Fastening Bolt	210-50-26
Allen Key	50-03-08
Depth Gauge	210-50-23
6mm STEP drill	210-50-31
Screwdriver Shaft	210-50-98
End Arm Stabiliser 300mm	210-50-29
End Arm Stabiliser 250mm	210-50-30

222-00-05 Securus Tray 5

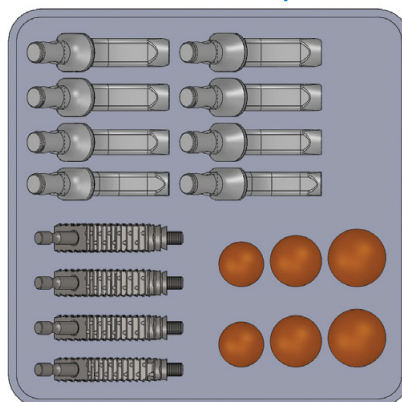




Securus® Revision Tray 6: 222-00-06

Description	
Securus® ELS Modular Trial Body Size A, Standard Offset	218-15-13
Securus® ELS Modular Trial Body Size B, Standard Offset	218-16-14
Securus® ELS Modular Trial Body Size C, Standard Offset	218-17-15
Securus® ELS Modular Trial Body Size D, Standard Offset	218-18-16
Securus® ELS Modular Trial Body Size A, +5 Offset	219-15-13
Securus® ELS Modular Trial Body Size B, +5 Offset	219-16-14
Securus® ELS Modular Trial Body Size C, +5 Offset	219-17-15
Securus® ELS Modular Trial Body Size D, +5 Offset	219-18-16
Rasp for Securus® Body Size A ELS	228-15-00
Rasp for Securus® Body Size B ELS	228-16-00
Rasp for Securus® Body Size C ELS	228-17-00
Rasp for Securus® Body Size D ELS	228-18-00
28 mm Trial Femoral Heads Extra Long +4 mm	63-28-50
28 mm Trial Femoral Heads Extra Long +8 mm	63-28-60
32 mm Trial Femoral Heads Extra Long +4 mm	63-32-50
32 mm Trial Femoral Heads Extra Long +8 mm	63-32-60
36 mm Trial Femoral Heads Extra Long +4 mm	63-36-50
36 mm Trial Femoral Heads Extra Long +8 mm	63-36-60

222-00-06 Securus Tray 6



References

¹The Securus Modular Revision Hip system is made in Britain. Other components and services within this document which are not sourced in Britain are: BIOLOX[®]*delta* Ceramic components & LEXI software.



LEXI Europe GmbH
Gruendlacher Straße 304
90765 Fuerth (Germany)
Tel.: +49 (0) 911 148 861 03 Fax: +49 (0) 911 148 861 03 0
Email: office@lexi-europe.com
www.lexi-europe.com



For further information and
training resources visit www.jri-ltd.com

Manufactured and Distributed by



JRI Orthopaedics Ltd.

18 Churchill Way, 35A Business Park, Chapeltown, Sheffield, UK S35 2PY
T: 0114 345 0000 F: 0114 345 0004 W: www.jri-ltd.com