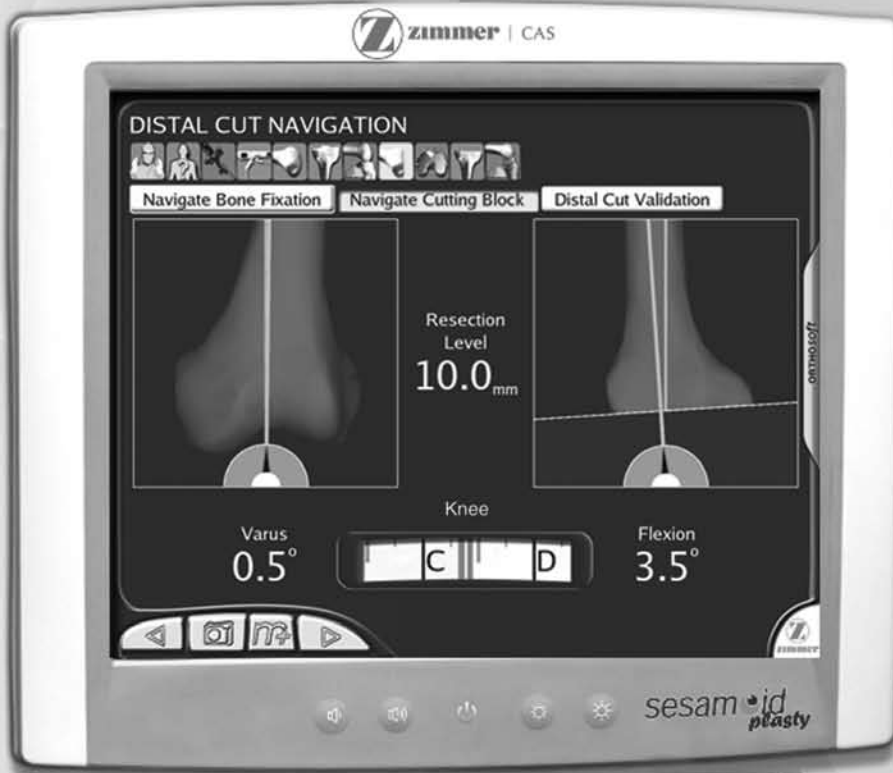




Zimmer® CAS ORTHOsoft® Knee 2.2 Universal Distal First Cut

Surgical Technique



Simple Solutions for Precise Total Knee Replacements

ORTHOsoft Knee 2.2 Universal Surgical Technique

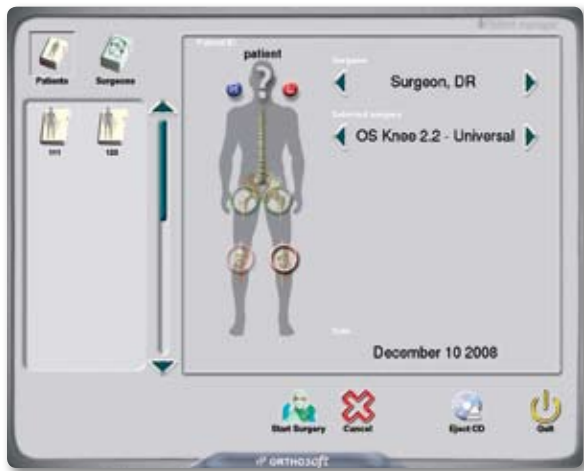
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OR Setup

Powering-Up the System Sesamoid® System/Sesamoid® Plasty

- Unroll the power cable and connect it to a power outlet.
- Turn on the momentary power switch at the bottom rear of the *Sesamoid*® Computer.
- After the camera warm-up is complete (approximately 20 minutes), you will be ready to launch an application.



Starting the Application

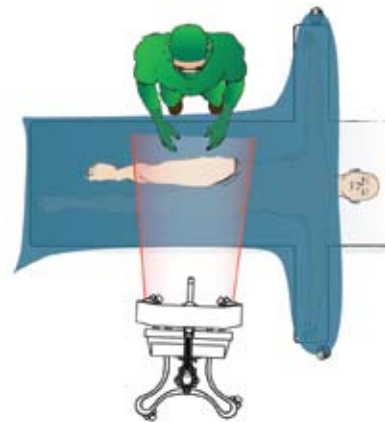
- Click on **Start**, then **Patient Manager** from the Toolchest Menu on the screen.
- When the Patient Manager module is launched and you are using the software for the first time, access the Surgeon Browser by clicking the **Surgeons** button in the upper left portion of the screen. Click on **Create New Surgeon**, then enter the surgeon name, hospital, city, and country.
- To create a new patient file, access the Patient Browser by clicking the **Patients** button in the upper left portion of the screen.

Click on **Create New Patient**, and then enter a patient ID number. Additional relevant information can be entered in the Info1 and Info2 fields (not required). Once the process is completed, click on the Save button.

- Click on the appropriate circle to select the right or left knee. Then click on the surgery type (OS Knee 2.2 - Universal).
- Click on the **Start Surgery** button to launch the application.

Optimal OR Setup

- The OR setup must be determined according to the side of the operated knee (specific to the appropriate right or left knee.).
- The ideal position of the *Sesamoid*® stand is on the medial side of the operated leg (opposite side), directly in front of the surgeon. The camera should be at a minimum distance of 1.4m (55 inches) from the sterile field.



Note:

The camera can also be positioned on the same side of the operated leg. For this OR setup, the opposite Offset 2 Pins Tibial Reference needs to be used, eg, the left tibial tracker reference needs to be used if the operated knee is a right knee, and the *Navitracker*™ marker size 4 needs to be put on the opposite side of the Validation Tool Body, eg, left side for a right knee so that both the trackers can face the camera.

Distal Cut First – Technique Summary

Pre-incision Steps



Step 1

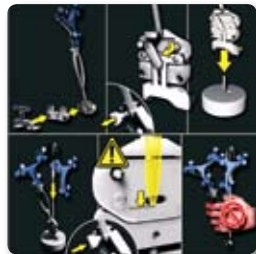
Define Surgeon Profile

(General, Preferences, Workflow, Femur, Tibia, Targets).



Step 2

Verify Patient Information



Step 3

Calibrate Registration Pointer



Step 4 (If Applicable)

Calibrate Universal Holding Platform

References



Step 5

Install References

Install the references on the femur and tibia.

Femoral Landmarks



Step 6

Digitize Femoral Head

Digitize the COR of the femoral head, moving the leg in a conical pattern. Do not move the pelvis of the patient or the camera during this step.



Step 7

Digitize Mechanical Entry Point

Digitize mechanical entry point of the femur, using the Pointer.



Step 8 (Optional)

Digitize Anterior Cortex

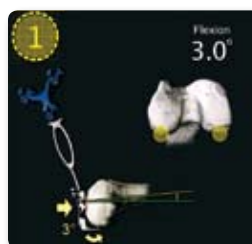
Digitize three points on the anterior cortex, using the Registration Pointer.



Step 9 (Optional)

Digitize Distal Condyles

Digitize the distal condyles using the Validation Tool or the Pointer Technique.



Step 10

Digitize Posterior Condyles

Digitize the posterior condyles using the Validation Tool Body assembled with the Posterior and Distal Condyles Digitizer.

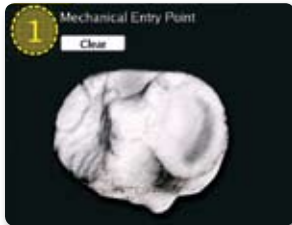


Step 11

Digitize Additional Femoral Landmarks (Optional)

Distal Cut First – Technique Summary (cont.)

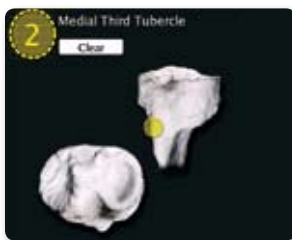
Tibial Landmarks



Step 12

Digitize Mechanical Entry Point

Digitize the mechanical entry point of the tibia, using the Registration Pointer.



Step 13

Digitize Tubercle-PCL

Digitize the medial third tubercle and the PCL entry point, using the Registration Pointer.



Step 14 (Optional)

Digitize Tibial Plateau

Digitize two points on the medial and the lateral tibial plateau (one each), using the Registration Pointer.



Step 15

Digitize Ankle Points

Digitize two points on the medial and the lateral malleolus (one each), using the Registration Pointer.



Step 16 (Optional)

Digitize Additional Tibial Landmarks (Optional)

Navigation



Step 17

Evaluate Initial Range of Motion

Navigation (cont.)



Step 18

Navigate Distal Cutting Block

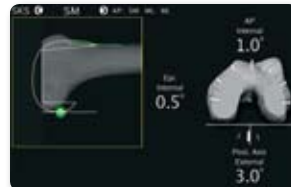
Navigate the cutting block using the CAS Femoral Cut Alignment Guide technique or the standard *Natural-Knee*® II instrumentation technique.



Step 19

Validate Distal Cut

Validate the cut using the Universal Validation Tool Body.



Step 20 (Optional)

Navigate the Femoral Rotation and Sizing

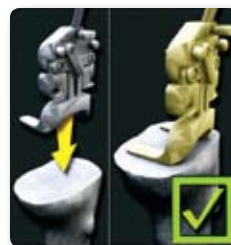
Navigate the rotation using the Offset Paddle in the 4-in-1 block or the Validation Tool Body with a Drill Guide.



Step 21

Navigate Tibial Cutting Block

Navigate the tibial cut using the Offset Paddle and the conventional extramedullary tibial jig.



Step 22

Validate Tibial Cut

Validate the cut using the Universal Validation Tool Body assembled with the Posterior and Distal Condyles Digitizer.



Step 23

Evaluate Final Range of Motion

Verify the final alignment.



Step 24 (Optional)

Balance Soft Tissues (Optional)

Pre-incision Steps

Step 1: Define Surgeon Profile



The system uses the concept of profiles to store the particular surgical preferences. Once a profile is created, it can be used to perform a surgery without specifying the surgical preferences again.

General Preferences



Implant

This preference allows the surgeon to select the implant used in the total knee replacement surgery.

The **Universal** choice can be selected to navigate only the distal or anterior cuts, femoral axial rotation and the proximal tibia cuts without requiring any implant information.

Pointer Type

This preference allows the surgeon to select the type of Registration Pointer that will be used for navigation. The US CAS registration pointer (104.034) is the pointer manufactured by Zimmer CAS.

Show 30°, 60° in ROM

This preference allows the surgeon to include the 30° and 60° ROM data in the Range of Motion panel.

Navigate CAS Tensor

This preference allows the surgeon to navigate the desired implant axial rotation and the A/P position, to select the proper implant size, and to obtain equal flexion/extension gap spaces with the help of the CAS Tensor.

Positioning Instrument

This preference allows the surgeon to select either of two instruments to navigate the varus/valgus, the flexion/extension, or the tibial slope of any distal or tibial cutting guide.

1. The Universal Holding Platform (calibration is required)
2. The Offset Paddle (no calibration is required)

Note: To simplify this surgical technique, we will refer only to the **Offset Paddle** in the surgical steps below.

Offset Paddle Blade Type

This preference allows the surgeon to select the appropriate Offset Paddle tip thickness. If the cutting blocks have saw-guide slots, the surgeon must choose the blade tip in accordance with the thickness of the saw used for the tibial and femoral cuts. If a 1.27mm or thicker saw blade is used, the 1.27mm Offset Paddle (108.116) should be used. If the saw is used on a guide surface instead of a slot, **No Cutting Slot** must be selected.

Workflow



First Cut

This preference tells the software if it should follow a distal-cut-first or an anterior-cut-first sequence.

Surgical Flow

This preference allows the surgeon to start by the tibial cut or the femoral cut.

Perform Initial ROM

This preference allows the surgeon to include in the surgical flow a Range of Motion panel after the landmarks acquisition (see Step 15).

Enable Femoral Rotation Panel (Distal Cut First)

This option enables the Femur Rotation Navigation panel that is used to set the desired implant axial rotation and A/P position, and selection of the proper implant size (see Step 18).

Gap Balancing Technique

This option allows the selection of the preferred ligament balancing technique. The supported techniques are Insall Gap and Soft Tissue Balancing. To activate the Insall preference, the Surgical Flow preference must be set to **Tibia First**.

Enable Varus/Valgus Panel (Anterior Cut First)

This option is available only for the anterior-cut-first sequence. It enables the Varus/Valgus Adjustment panel that is used to preset the desired implant varus/valgus angle.

Activate Pointer Remote Control Mode

(For the users of the Navigate Bone Fixation subpanel, keep the default selection of this option to No)

This option allows the following controls:

1. Snapshots can be taken by pointing to the ceiling with the pointer in front of the camera.
2. Some landmarks can be redigitized by touching them with the pointer tip. After the landmark is digitized, the system will go to the initial task. The landmarks that allow the redigitization are: the mechanical axis of the femur and of the tibia; the epicondyle (touch the medial epicondyle to enter in the panel); the anterior cortex; the distal condyles; the tubercle-PCL (touch the medial third tubercle to enter in the panel), and; the ankle points (touch the medial malleolus to enter in the panel).

Femur Preferences



Compute Resection Level

This preference enables navigation of the resection level that requires the acquisition of the femoral distal condyles.

Distal Condyles Acquisition Method

This preference allows the surgeon to select the preferred method for digitization of the distal femoral condyles. The application supports two methods which are the: Multiple Points Acquisition and Digitization with the Universal Validation Tool.

Compute Anterior Posterior (A/P) Axis and Epicondylar (EPI) Axis of Rotation

These preferences trigger the application to display the femoral rotation angle with respect to the Whiteside's line or the epicondylar axis of the femur as digitized by the user. If enabled, the A/P axis or EPI axis and the respective rotation angles will be displayed in the Femur Rotation Navigation panel.

Compute M/L Size

This option enables computation of the M/L sizing. The suggested M/L size of the implant will be displayed in the Femur Rotation panel and Anterior Cut panel.

Tibia Preferences



Compute Resection Level

This preference enables the navigation of the resection level that requires acquisition of the two points on the tibial plateau.

Show Natural Varus/Valgus

This preference triggers the calculation of the natural tibial varus/valgus angle. If enabled, the natural varus/valgus angle will be displayed in the Tibial Cut Navigation panel.

Show Rotational Angles

This preference enables display of the axial rotation angles in the Tibia Navigation panel.

Compute Posterior Plateau Rotation

This preference triggers the calculation of the rotation angle with respect to the points acquired on the medial and lateral posterior plateau of the tibia. If enabled, the posterior plateau rotation angle will be displayed in the Tibia Cut Navigation panel.

Targets



Distal Resection Level

This preference is used to set the targeted resection level for the distal femoral cut.

Implant Distal Cut Angle

This preference is available only when the “Universal” Implant is navigated in the Anterior Cut First sequence. This option is required to preset the implant distal cut angle.

Tibial Posterior Slope

This preference is used to set the targeted posterior slope of the posterior tibial cut in the Tibia Navigation panel.

Tibial Resection Level

This preference is used to set the targeted resection level for the posterior tibial cut.

Step 2: Verify Patient Information



The patient information that was previously entered in the Patient Manager is summarized in the Patient Information panel.

Step 3: Calibrate Registration Pointer



1. Firmly tighten the long tip onto the CAS Registration Pointer Handle.
2. Insert the CAS Registration Pointer (104.034) in the CAS Universal Validation Tool Body (108.050).
3. Make sure that the tip of the pointer is in contact with the base of the pointer hole. Fasten the Registration Pointer with the Wing Screw M5X10 (111.006).
4. Position the trackers towards the camera in the optimal camera volume.

Step 4: Calibrate Universal Holding Platform (If Applicable)

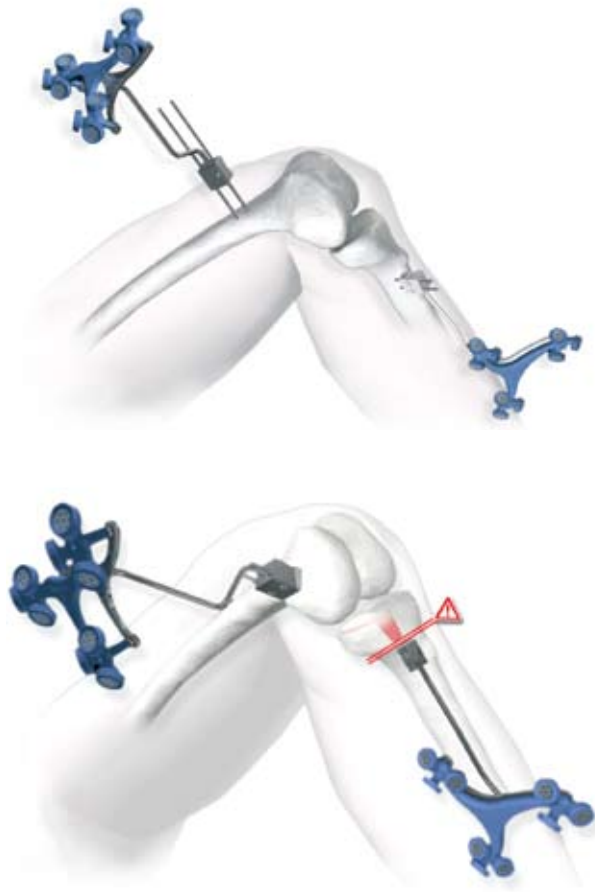
This step is necessary only if you are using the Universal Holding Platform as a positioning instrument instead of the CAS Offset Paddle.



1. Attach *Navitracker* markers sizes 2 and 9 to the Universal Holding Platform.
2. Insert the Universal Holding Platform into the Universal Validation Tool Body. Make sure it is fully entered into the slot.
3. Position the trackers towards the camera in the optimal camera volume.

References

Step 5: Install References



The femoral and tibial references are designed to be used with CAS Fix Pin Fluted 3.2mm (116.015). Set the pins bicortically in the bone (without completely drilling through the second cortex) to ensure maximum stability. The placement of the references is important to minimize the manipulation of the optical camera during the surgery. The trackers should be facing the camera to remain visible throughout the procedure.

Femoral References

On the femur, insert the pins percutaneously through the vastus medialis, or within the incision, close to the medial femoral epicondyle. If the CAS 2 Pins Reference Femur Tracker (110.025) is positioned close to the medial epicondyle, the reference must be placed with at least 45° of internal rotation to avoid issues with the field of view.

Tibial References

On the tibia, insert the pins into the medial surface of the tibia. Place the CAS Offset 2 Pins References Left/Right Tibia (110.037/100.038) directly within the incision using the short version of the CAS Fix Pin Fluted 3.2mm (116.018). The Offset Tibial References can also be positioned percutaneously.

Warning:

Be alert to the risk of causing damage to the saphenous artery, femoral artery, or femoral vein while installing the femoral reference.

Caution:

Make sure there is no interference between the pins on the tibia and the tibial implant or instruments.

Caution:

When using an intramedullary rod, place the pins in the distal part of the femur to avoid interference with the intramedullary rod.

Caution:

Always ensure that the *Navitracker™* markers are firmly seated.

Caution:

Bone references must be firmly attached, and must not move at any time during the surgery. If a bone reference moves, the landmarks associated with that reference (femoral or tibial) must be redigitized.

Femoral Landmarks

Step 6: Femoral Head



To determine the center of the femoral head, move the leg in a conical pattern, digitizing 14 distinct positions of the femoral tracker. The pelvis and the optical camera must remain stable during the entire process to obtain a good level of accuracy and for the digitization to be accepted.

Step 8: Digitize Anterior Cortex Points (Optional)



Digitize three points on the anterior cortex, along a line spanning where you would normally let the stylus from an A/P sizer fall to evaluate implant size.

Step 7: Digitize Femoral Mechanical Entry Point

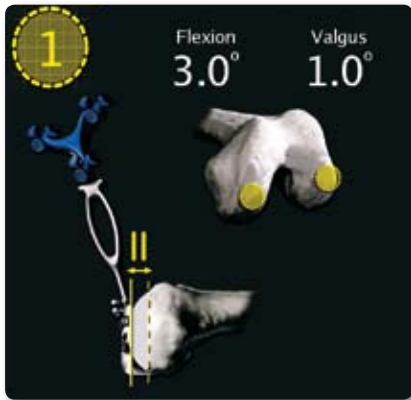


The entry point of the mechanical axis is defined as the deepest point of the intercondylar notch (Oswald MH, et al. 1993). Together with the femoral head, the entry point forms the femoral mechanical axis that is used as the main axis of the femoral coordinate system.

Step 9: Digitize Distal Condyles (Optional)

These points are used to compute the distal resection level.

Validation Tool Acquisition Method



To acquire the points, position the Universal Validation Tool Body (108.050) assembled with the CAS Posterior and Distal Condyles Digitizer (108.077) so the edge of the instrument is in contact with the reference, ie, healthy, distal condyle. Adjust the flexion/extension and varus/valgus angles of the instrument to the target angles of the distal femoral cut and stabilize the instrument. Per most common techniques, aim for 3° of Flexion and 0° degrees of varus/valgus. If the instrument is outside of the acceptable range, the points will not be acquired.

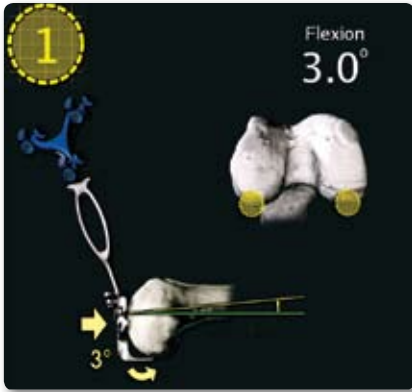
OR

Multiple Points Acquisition Method



Acquire three discrete points on the medial distal condyle and three discrete points on the lateral distal condyle with the Registration Pointer. Distribute these points in an arc moving anterior to posterior.

Step 10: Digitize Posterior Condyles



Digitize the most posterior points of the femoral condyles using the Universal Validation Tool Body assembled with the CAS Posterior and Distal Condyles Digitizer. Depending on the curvature of the distal femur, slight flexion (approximately 3°) should be set before digitization. Check that the Posterior and Distal Condyles Digitizer is in contact with both posterior condyles.

M/L



Digitize two points on the medial and lateral edges of the distal femoral condyles (one each). This provides M/L sizing of the femoral component.

Step 11: Digitize Additional Femoral Landmarks (Optional)



EPI Axis

Digitize two points on the medial and lateral epicondyles (one each). Those points can be used for femoral rotation alignment.

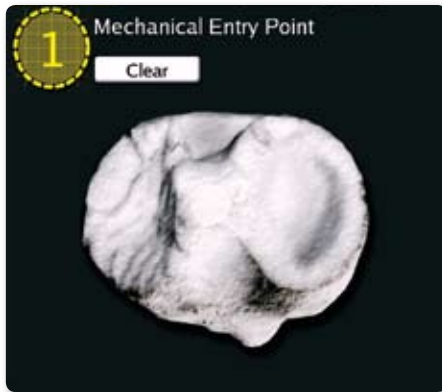
A/P Axis



Digitize one point directly above the femoral notch, and a second point in the deepest section of the trochlear groove. These points can be used for femoral rotation alignment.

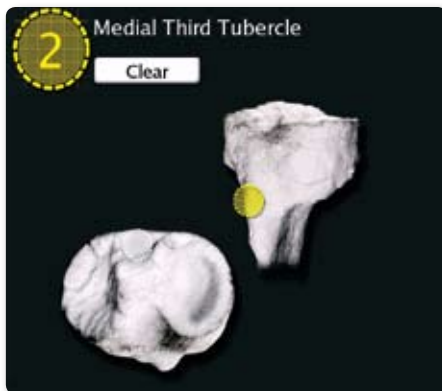
Tibial Landmarks

Step 12: Digitize Tibial Mechanical Entry Point



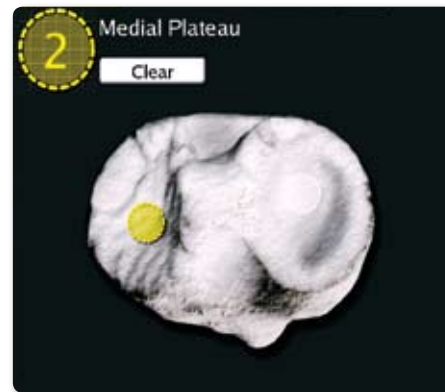
The entry point is identified as the entrance point of the medullary canal. This point should be centered along the M/L axis. A/P positioning should fall between the middle and one-third of the anterior tibial plateau.

Step 13: Digitize Tubercle – PCL



The neutral rotation is defined by a point in the middle of the PCL insertion area on the tibial plateau and one on the medial third of the tibial tuberosity. This axis should lie perpendicular to the posterior edges of the proximal tibia.

Step 14: Digitize Tibial Plateau (Optional)



The resection level displayed in the Tibia Navigation panel is computed with two points digitized on the healthy areas of the medial and lateral tibial plateau (one each).

Caution:

Care must be taken not to penetrate through the cartilage with the pointer tip.

Step 15: Digitize Ankle Points



To recreate the mechanical axis of the tibia, digitize two points on the medial and lateral malleoli (one each).

Step 16: Digitize Additional Tibial Landmarks (Optional)

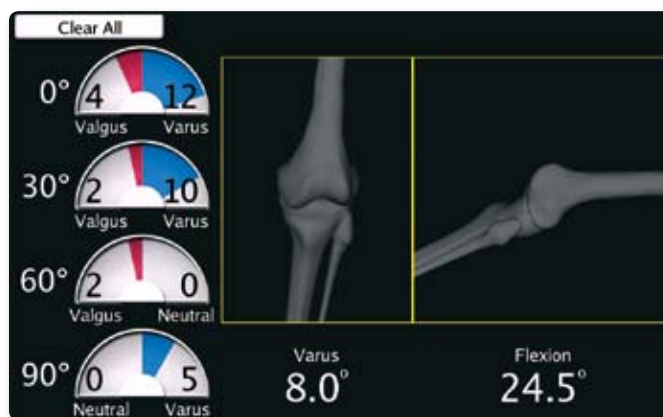
Posterior Plateau



Digitize two points on the posterior limit of both the medial and lateral plateaus (one each). These can be used to determine the posterior plane rotation angle.

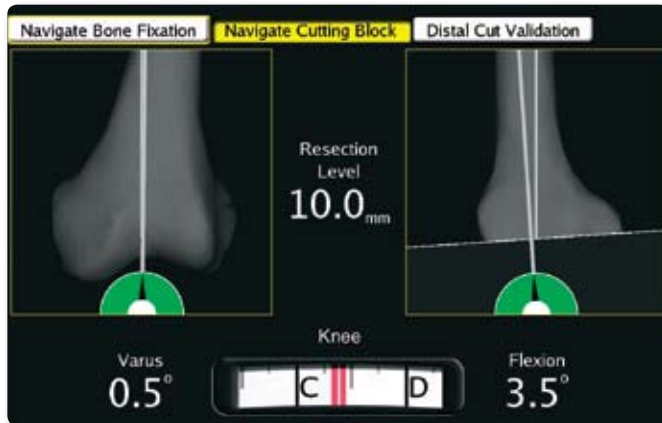
Navigation

Step 17: Evaluate Initial Range of Motion



Use the Initial ROM panel to evaluate the initial flexion contracture and the varus/valgus deformity. The amount of varus/valgus can be also assessed at 0°, 30°, 60°, and 90° of flexion. The maximum varus/valgus angle values will be recorded in the indicators.

Step 18: Navigate Distal Cutting Block

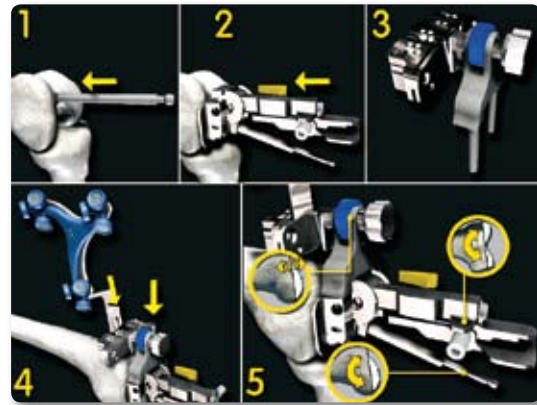


Two techniques can be used to navigate the distal cutting block: the CAS Femoral Cut Alignment Guide technique, or the standard *Natural-Knee II* instrumentation technique.

Note on sizing: If the distal condyles have been digitized (Resection Level was set to **yes** in the surgeon profile), the suggested size of the implant will be displayed in a white window at the bottom of the distal cut navigation screen. To optimize the femoral implant size, slight flexion can be added or removed to achieve a perfect fit.



Femoral Cut Alignment Guide Technique



1. After breaking the cortex using a cortex breaker, insert the Distal Cut First Spike (108.106) with the Extraction Adaptor (108.107) by approximately 5-10mm at the entry point of the medullary canal, making sure the arm is anterior. It is recommended to position the spike in approximately 5° of extension.
2. Slide the Femoral Cut Alignment Guide (108.087) onto the spike.
3. Tighten the CAS Mini Cutting Block 1.27mm (108.083) to the Distal Cutting Guide Platform (108.089) using the CAS Cutting Block Screw (108.089.06).
4. Slide the Distal Cutting Guide Platform in the Femoral Cut Alignment Guide and the Offset Paddle in the Mini Cutting Block.
5. Use the Quick Connect T-handle (4811-35) attached to the AO Locking Screw (108.087.11) under the Femoral Cut Alignment Guide to set flexion/extension, and press and slide the V/V fork to set the varus/valgus of the cut.

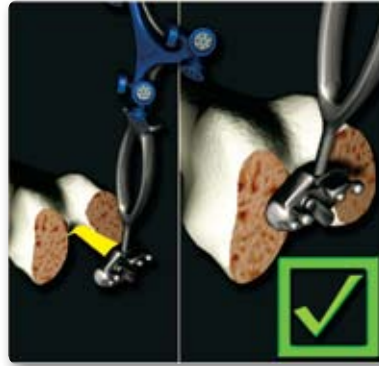
Fine tune the jig assembly position with the adjusting screw, and adjust the resection level of the cutting guide using the blue wheel.

Once the cutting block is properly positioned, secure its position on the femur with the drive pins. Detach the assembly from the Mini Cutting Block using the Cutting Block Screw and remove the spike using the Extraction Adaptor and a slaphammer. Perform the distal femoral resection with the help of the positioned distal cutting guide.

Standard Natural-Knee II Instrumentation Technique (eg, Natural-Knee II Family)



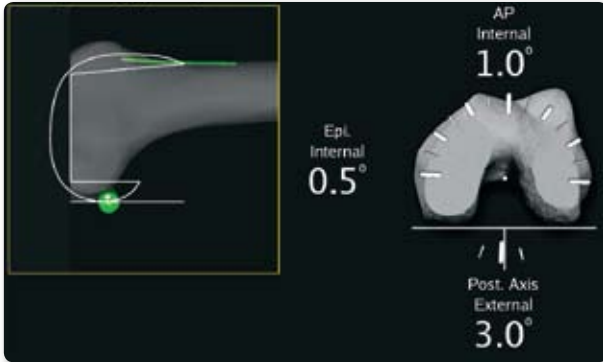
Step 19: Validate Distal Cut



Place the Universal Validation Tool Body on the distal femoral cut. Stabilize the instrument to acquire the varus/valgus, the flexion/extension and the resection level of the cut.

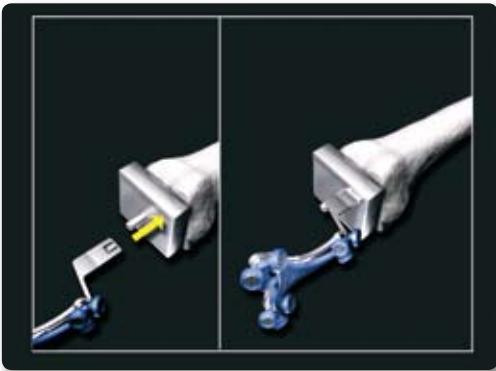
1. After breaking the cortex using a cortex breaker, insert the CAS Small Spike 7.9mm (108.108) by approximately 5-10mm at the entry point of the medullary canal. Make sure the spike can still move slightly in flexion and extension.
2. Slide the conventional *Natural-Knee II* Distal Femoral Alignment Guide with the *Natural-Knee II* Distal Cutting Block attached to it on the CAS Small Spike 7.9mm.
3. Place the CAS Magnetic Paddle (108.117) directly on the cutting guide (see picture above), or place the CAS *Natural-Knee II* Saw Capture on the distal cutting block and slide the CAS Universal Offset Paddle 1.0mm (108.115) in the Saw Capture.
3. Dial the medial or lateral adjustable screw of the conventional *Natural-Knee II* Distal Femoral Alignment Guide to adjust the varus/valgus. Use the CAS Small Spike 7.9mm as a joystick to set the flexion/extension.
4. Once the cutting block is properly positioned, secure its position on the femur with the drive pins.
5. Detach the assembly from the *Natural-Knee II* Distal Cutting Block and remove the Small Spike using a slaphammer.
6. Exchange the CAS Saw Capture for the conventional one before performing the distal cut (If applicable).

Step 20: Navigate Femoral Rotation – Using the CAS Offset Paddle (eg, NexGen® family) (Optional)



The main purpose of this panel is to help select the proper implant size, and set the A/P position and the axial rotation of the implant. The three points digitized on the anterior cortex are represented by a green line. The posterior condyles are shown as green circles linked by a white line.

Using the CAS Offset Paddle (eg, NexGen family)



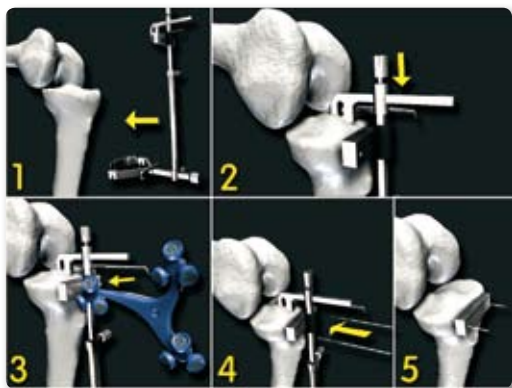
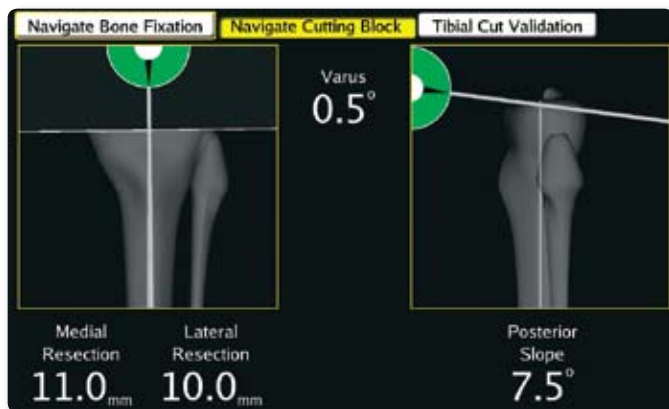
To adjust the A/P position of the 4-in-1 cutting block, slide the Offset Paddle all the way in the anterior cutting slot. To avoid notching, position the block so that the top horizontal line (implant flange surface) is positioned above the anterior cortex line. Select the size of the implant so that the bottom horizontal line is aligned as much as possible with the green marker (posterior condyles). If the size suggested on the Femoral Rotation panel is in between two sizes, most anterior referencing techniques recommend choosing the smaller implant size to avoid overstuffing the joint.

Using the Validation Tool with a Drill Guide (eg, Natural-Knee II family)

For certain implant lines based on posterior referencing systems (eg, *Natural-Knee II*), rotation can be set with the CAS Universal Validation Tool Body (108.050) and implant-specific lughole drill guides. Assemble the lughole drill guide on the Universal Validation Tool Body along with the Short Posterior Condyles Digitizer (108.056) and use it to set the rotation during the femoral navigation phase.

Position the assembly on the distal cut. The posterior plane (bottom white line) should pass through the center of the green circle (posterior condyles). The proper implant size must be selected so the anterior cut plane is on or over the digitized anterior cortex line (green) to avoid notching. If the size suggested on the femoral rotation panel is in between two sizes, most posterior referencing techniques recommend choosing the larger implant size to avoid anterior cortex notching.

Step 21: Navigate Tibial Cutting Block



1. Place the standard extramedullary jig on the tibia.
2. Fix the jig on the tibial plateau.
3. Slide the Offset Paddle and use the extramedullary instruments to adjust varus/valgus, posterior slope, and the resection level.
4. Insert pins through the cutting guide to the bone.
5. Remove the extramedullary jig to perform the tibial cut.

Note:

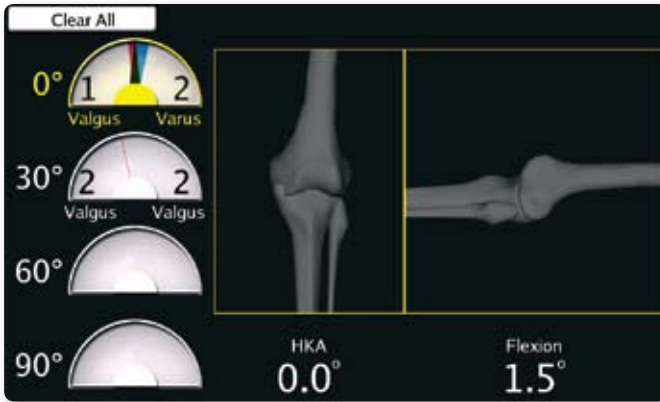
When using a tibial cutting block with no cutting slot, eg, *Natural-Knee II* family, position the CAS *Natural-Knee II* Saw Capture (108.058) on the cutting block before assembling the jig. Slide the Offset Paddle 1.0mm in the Saw Capture and use the extramedullary instruments to adjust varus/valgus, posterior slope, and the resection level. Insert pins through the cutting guide to the bone. Remove the extramedullary jig and exchange the CAS Saw Capture for the conventional one before performing the tibial cut.

Step 22: Validate Tibial Cut



1. Place the Universal Validation Tool Body assembled with the Posterior and Distal Condyles Digitizer on the tibial cut.
2. Stabilize the instrument to acquire the varus/valgus, flexion/extension and resection level of the cut.

Step 23: Evaluate Final Range Of Motion

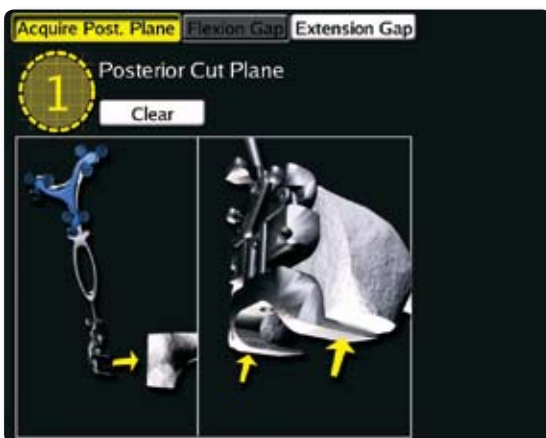


Use the Range Of Motion (ROM) panel to evaluate the final flexion contracture and the varus/valgus alignment. The amount of varus/valgus can be assessed at 0°, 30°, 60°, and 90° of flexion. The maximum varus/valgus angle values will be recorded in the indicators.

Step 24: Balance Soft Tissues (Optional)

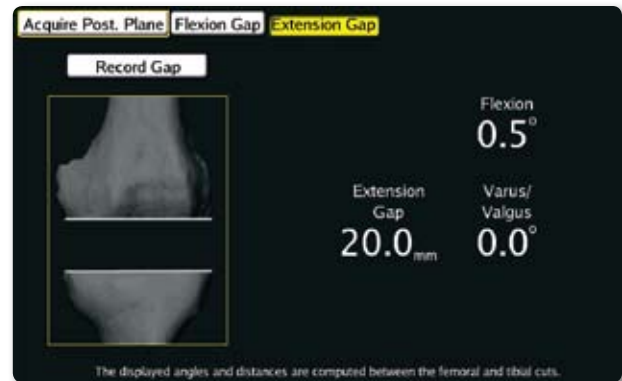
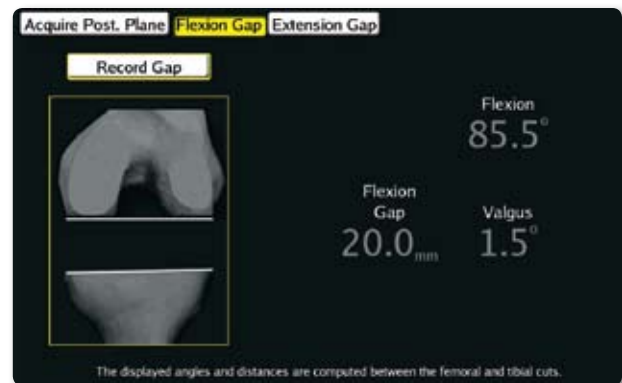
This panel is used to evaluate and perform the correct amount of the soft tissue release when the femoral and tibial cuts are completed. To obtain a defined stress, use spacer blocks or a CAS tensor. To enable this panel the Gap Balancing Technique preference must be set to **Soft Tissue**. The panel will then appear in the sequence just before the final ROM.

Acquire the Posterior Plane



To acquire the posterior plane, flex the knee and place the Universal Validation Tool Body assembled with the Posterior and CAS Short Posterior Condyles Digitizer on the surface of the posterior cut. Make sure that the condyles digitizer is in full contact with the surface of the posterior femoral cut.

Soft Tissue Balancing in Flexion/Extension



1. Begin with the knee in flexion.
2. Use the spacer blocks or spreader device between the femur and tibia.
3. The Gap Space and Cuts Alignment values are displayed in the panel.
4. Position the Registration Pointer in the area of the knee joint to record the gap value.
5. Place the knee in extension. Perform the laxity test and ligament adjustment, if necessary, to achieve equal flexion/extension gap spacing.

Exit the Application

- Click on the **Menu** button
- Click on **Quit Application**
- Answer Yes to the question **Are you sure you want to quit the application?**



Archive Patient Files

- Access the Patient Browser by clicking the **Patients** button in the upper left portion of the display;
- Select the patient to be archived;
- Press on the **Select Patient for Archiving** button on the lower left side of the screen;
- Repeat this process with all patient files to be archived;
- Alternatively, all patient files can be archived in a single step using the **Select All for Archiving** button. To remove a patient from the list of files to be archived, press on the **Deselect from Archive List** button. Each patient to remove must be deselected individually;
- Once all patient files to archive have been identified, press on the **Burn CD** button in the lower right-hand part of the screen;
- The computer CD tray will automatically eject when the burning process is finished.

Snapshot Viewer

- Access the Patient Browser by clicking the **Patients** button in the upper left portion of the display;
- Select the Patient for which the snapshots has to be viewed;
- Select the anatomy part (right/left hip/knee circle);
- If more than one surgery has been done, select the surgery with the **Procedure** selector at the bottom of the body;
- Press on the **View Snapshots** button. This button is only displayed if snapshots were taken during the selected surgery.
- Press on the thumbnails to select the snapshot to view. To browse through the thumbnails, use the left and right arrows beneath the viewer.
- To close the snapshot viewer, press on the Patient Manager main background.

Exit the Patient Manager

- Press on the **Quit** button on the bottom right corner of the screen.
- Answer **Ok** to the question: **Are you sure you want to quit the Patient Manager?**

Shut Down the System

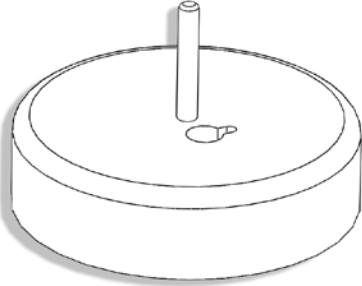
- From the Menu box, select **Tools**.
- Select **Shut Down** from the drop-down list
- Answer **Yes** to the question: **You are about to shut down, proceed?**



View the Surgery Report

- Insert the CD with the patient files in a computer
- Open the folder **PATIENTS2\PATIENT_NAME\PROCEDURES\DATE_OF_SURGERY**
- Open with a Web Browser the Report.html

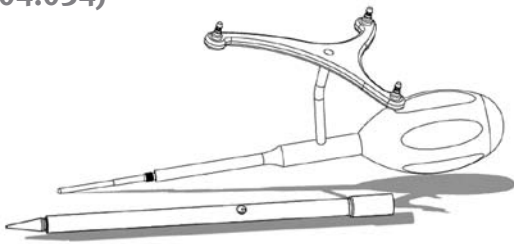
**CAS Calibration Star Holder - 20-8000-010-01
(100.026)**



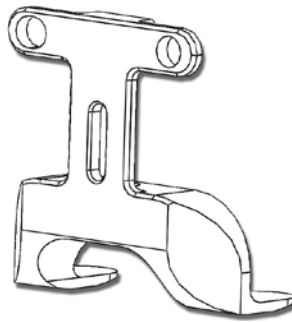
**CAS Universal Validation Tool Body -
20-8000-010-06 (108.050)**



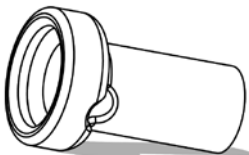
**CAS Registration Pointer - 20-8000-070-01
(104.034)**



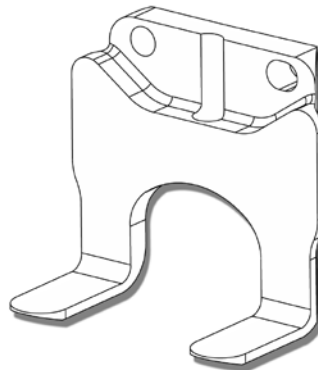
**CAS Short Posterior Condyles Digitizer -
20-8000-010-09 (108.056)**



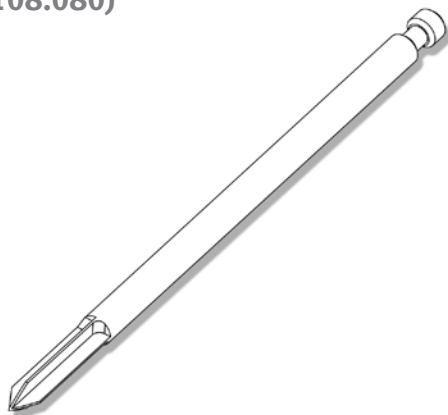
CAS COR Digitizer - 20-8000-020-04 (104.040)



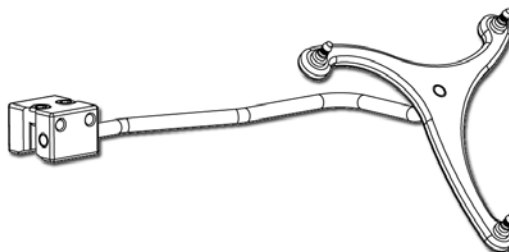
**CAS Posterior & Distal Condyles Digitizer
20-8000-010-17 (108.077)**



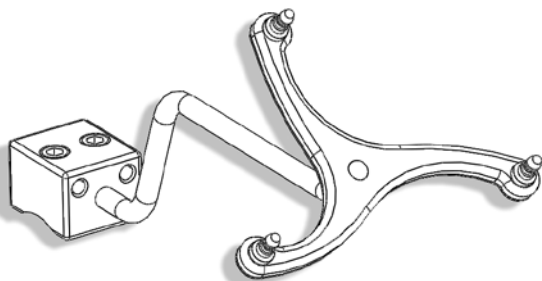
**CAS Spike 7.9mm - 20-8000-010-18
(108.080)**



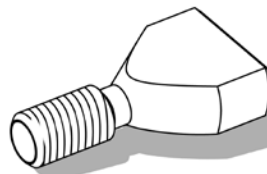
**CAS Offset 2 Pins Ref. Left Tibia SZ6 -
20-8000-010-36 (110.038)**



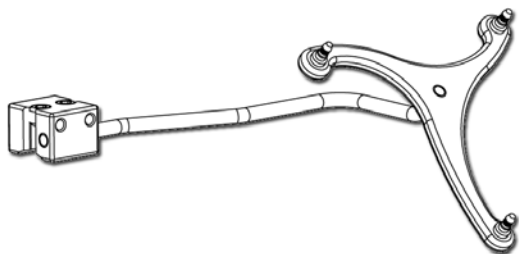
**CAS 2 Pins Reference Femur -
TS3 20-8000-010-33 (110.025)**



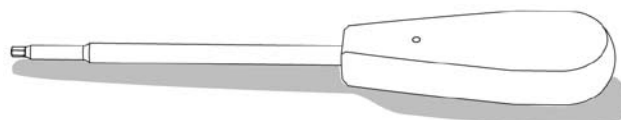
**CAS Wing Screw M5X10
20-8000-010-37 (111.006)**



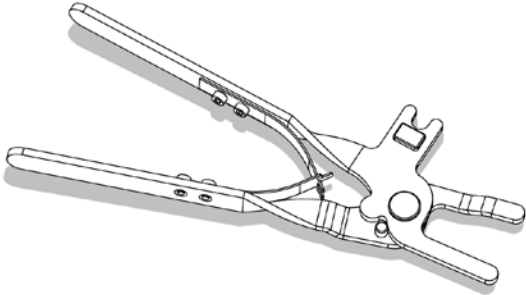
**CAS Offset 2 Pins Ref. Right Tibia SZ6 -
20-8000-010-35 (110.037)**



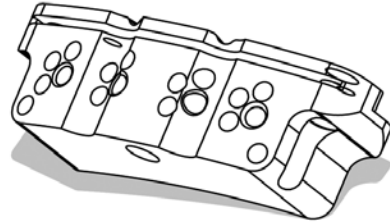
Hexagonal Screwdriver 3.5 mm 4812-45



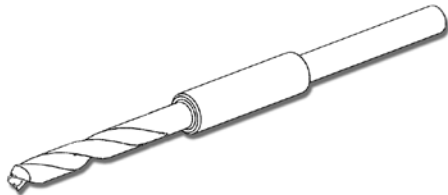
**CAS Navitracker™ Pliers -20-8000-070-05
(116.017)**



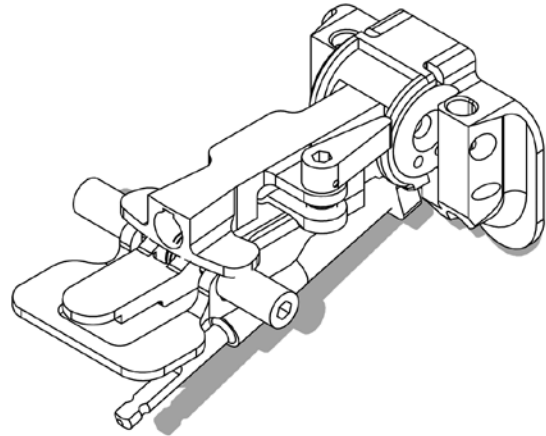
**CAS Mini Cutting Block 1.27mm -
20-8000-010-19 (108.083)**



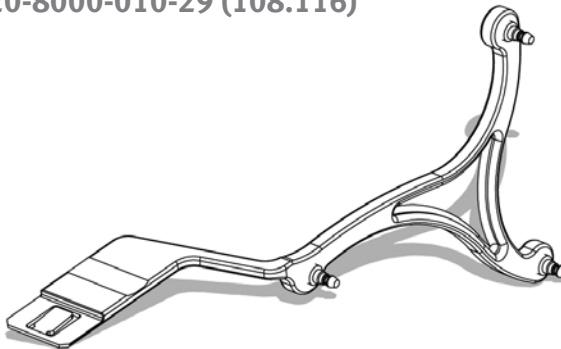
CAS Stop Drill 6mm - 20-8000-010-45 (117.002)



**CAS Femoral Cut Alignment Guide -
20-8000-010-22 (108.087)**



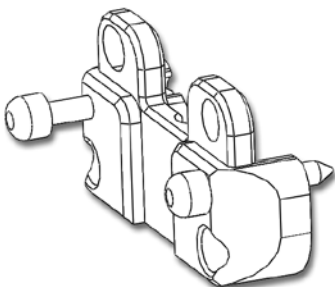
**CAS Universal Offset Paddle 1.27 mm -
20-8000-010-29 (108.116)**



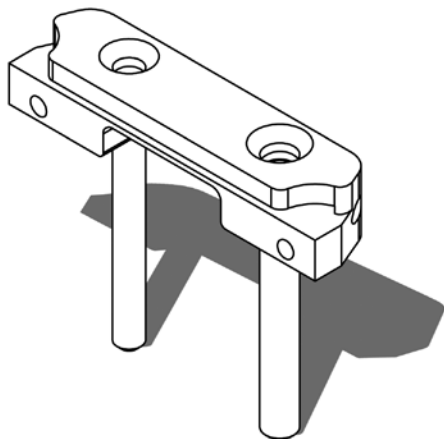
**CAS AO Locking Screw - 20-8000-010-49
(108.087.11)**



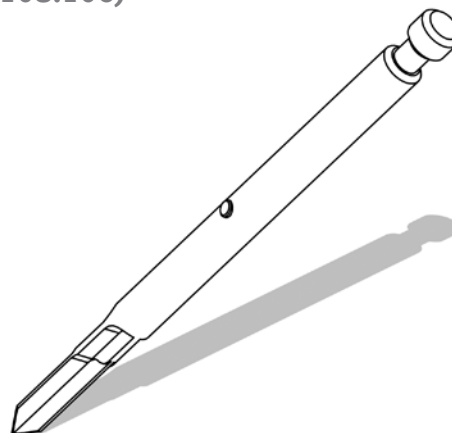
**CAS Natural-Knee II Drill Guide -
20-8000-010-07 (108.051)**



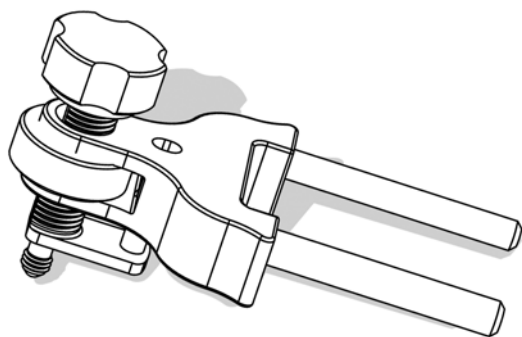
**CAS Anterior Cutting Block -
20-8000-010-23 (108.088)**



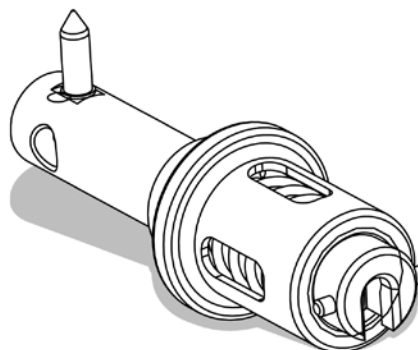
**CAS Distal Cut First Spike - 20-8000-010-25
(108.106)**



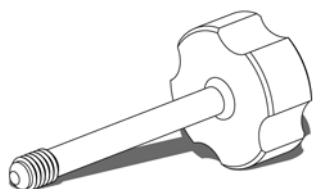
**CAS Distal Cutting Block Platform -
20-8000-010-24 (108.089)**



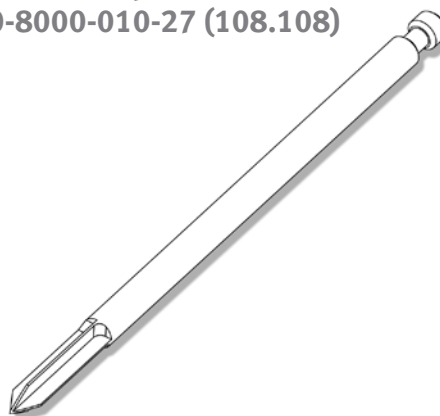
**CAS Extraction Adaptor - 20-8000-010-26
(108.107)**



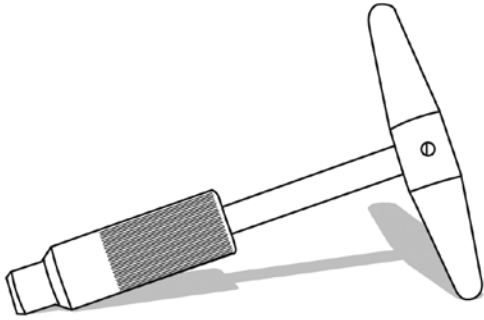
**CAS Cutting Block Screw -
20-8000-010-50 (108.089.06)**



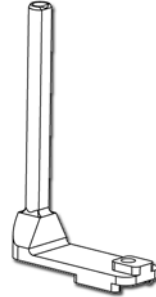
**CAS Small Spike 7.9 mm -
20-8000-010-27 (108.108)**



T-handle Quick-connect - 4811-35



CAS A/P Positioning Base - 20-8000-010-12 (108.061)



CAS Gap Balancing Sub Kit - KT-8000-010-03 (150.238)

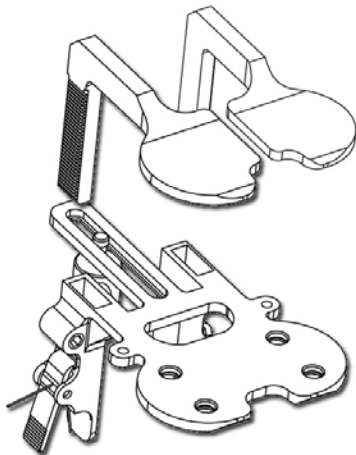
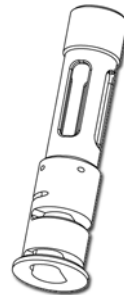
Subcomponents CAS Tensor Assembly composed of three main pieces:

CAS Adjustable Spacer - 20-8000-010-11 (108.060)

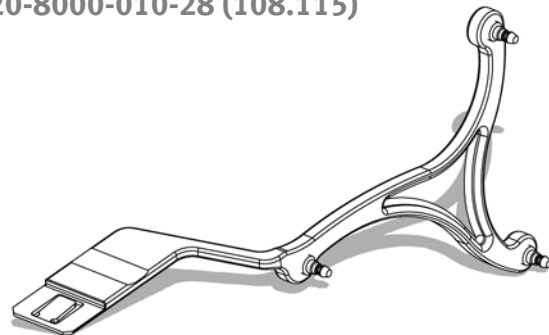
CAS Tensor Paddle Right - 20-8000-01047 (108.060.02)

CAS Tensor Paddle Left - 20-8000-010-48 (108.060.03)

CAS A/P Positioning Elevator - 20-8000-010-13 (108.062)



CAS Universal Offset Paddle 1.0mm- 20-8000-010-28 (108.115)





ORTHOsoft Knee 2.2. – CAS Universal Master Instrument Kit

Zimmer Cat. No.	Manuf. No.	Description	Qty
KT-8000-010-01	150.236	CAS UNIVERSAL MASTER INSTRUMENT KIT	
		Subcomponents	
20-8000-010-01	100.026	CAS Calibration Star Holder	1
20-8000-070-01	104.034	CAS Registration Pointer	1
20-8000-020-04	104.040	CAS COR Digitizer	1
20-8000-010-06	108.050	CAS Universal Validation Tool Body	1
20-8000-010-09	108.056	CAS Short Posterior Condyles Digitizer	1
20-8000-010-17	108.077	CAS Posterior and Distal Condyles Digitizer	1
20-8000-010-18	108.080	CAS Spike 7.9mm	1
20-8000-010-33	110.025	CAS 2 Pins Reference Femur -TS3	1
20-8000-010-35	110.037	CAS Offset 2 Pins Reference Right Tibia Size 6	1
20-8000-010-36	110.038	CAS Offset 2 Pins Reference Left Tibia Size 6	1
20-8000-010-37	111.006	CAS Wing Screw M5X10	1
20-8000-070-02	115.006	CAS Main Case	1
20-8000-070-03	115.007	CAS Lid	1
20-8000-010-38	115.023	CAS UTKR Lower Insert	1
20-8000-010-39	115.024	CAS UTKR Upper 1/2 Insert	1
20-8000-010-51	115.02502A	CAS Knee Universal Nameplate	1
4812-45	–	Hexagonal Screwdriver 3.5mm	1
20-8000-070-05	116.017	CAS <i>Navitracker</i> ™ Pliers	1
20-8000-010-45	117.002	CAS Stop Drill 6mm	1
20-8000-010-29	108.116	CAS Universal Offset Paddle 1.27mm	1

ORTHOsoft Knee 2.2 –Premium Kit

Zimmer Cat. No.	Manuf. No.	Description	Qty
KT-8000-010-02	150.237	CAS Knee Premium Instrument Sub-Kit	
		Subcomponents	
20-8000-010-19	108.083	CAS Mini Cutting Block 1.27mm	1
20-8000-010-22	108.087	CAS Femoral Cut Alignment Guide	1
20-8000-010-49	108.087.11	CAS AO Locking Screw	2
20-8000-010-23	108.088	CAS Anterior Cutting Block	1
20-8000-010-24	108.089	CAS Distal Cutting Block Platform	1
20-8000-010-50	108.089.	06 CAS Cutting Block Screw	1
20-8000-010-25	108.106	CAS Distal Cut First Spike	1
20-8000-010-26	108.107	CAS Extraction Adaptor	1
20-8000-010-27	108.108	CAS Small Spike 7.9mm	1
20-8000-070-02	115.006	CAS Main Case	1
20-8000-070-03	115.007	CAS Lid	1
20-8000-070-04	115.027	CAS SM Diamond Silicon Mat	1
4811-35	–	T-Handle Quick – Connect	1

ORTHOsoft Knee 2.2 – CAS Gap Balancing Sub-Kit

Zimmer Cat. No.	Manuf. No.	Description	Qty
KT-8000-010-03	150.238	CAS Gap Balancing Sub-Kit	
		Subcomponents	
20-8000-010-11	108.060	CAS Adjustable Spacer	1
20-8000-010-47	108.060.02	CAS Tensor Paddle Right	1
20-8000-010-48	108.060.03	CAS Tensor Paddle Left	1
20-8000-010-12	108.061	CAS A/P Positioning Base	1
20-8000-010-13	108.062	CAS A/P Positioning Elevator	1
20-8000-010-28	108.115	CAS Universal Offset Paddle 1.0mm	1
20-8000-010-40	115.028	CAS Small Lid for Tray	1
20-8000-010-41	115.029	CAS Small Tray for CAS Tensor	1



ORTHOsoft Knee 2.2 – Spare Parts

Zimmer Cat. No.	Manuf. No.	Description	Qty
20-8000-010-07	108.051	CAS <i>Natural-Knee</i> II Drill Guide	1
20-8000-010-14	108.063	CAS <i>Natural-Knee</i> II A/P Drill Guide	1
20-8000-010-15	108.065	CAS <i>NexGen</i> A/P Drill Guide	1
20-8000-010-10	108.058	CAS <i>Natural-Knee</i> II Saw Capture	1
20-8000-010-28	108.115	CAS Universal Offset Paddle 1.0mm	1
20-8000-010-30	108.117	CAS Universal Magnetic Offset Paddle	1

ORTHOsoft Knee 2.2 – Other parts

Zimmer Cat.	Manuf. No.	Description	Qty
20-8000-000-07	201.116	<i>NavitrackER™</i> Kit A – Knee	1
20-8000-000-01	116.015	CAS Fix Pin Fluted 3.2d x 150mm	1
20-8000-000-02	116.018	CAS Fix Pin Fluted 3.2d x 80mm	1
20-8000-000-04	116.021	CAS Fix Pin Fluted 3.2d x 150mm	12
20-8000-000-03	116.020	CAS Fix Pin Fluted 3.2d x 80mm	12
98-9000-001-03	–	CAS PPU Knee	1
00-9000-520-01	–	CAS PPU Surgery Knee Service	1

ORTHOsoft Knee 2.2 – Universal Positioning Block

Zimmer Cat. No.	Manuf. No.	Description	Qty
20-8000-010-02	108.039	CAS Universal Positioning Block - Holding Platform	1
20-8000-010-46	201.050	CAS Universal Positioning Block - Holding Platform Tracker	1
20-8000-010-04	108.041	CAS Universal Position Block Body	1
20-8000-010-03	108.040	CAS Bone Fixation Impactor	1
20-8000-010-05	108.046	CAS L Shaped Fixation	1
20-8000-010-08	108.053	CAS Offset Fixation	1
20-8000-010-34	110.026	CAS Standard Bone Reference – Tibia	1

Caution & Warnings

Caution

Federal (U.S.) law restricts this device to sale by or on the order of a physician.

Warnings

The technique and warnings presented in this guide are intended for trained users.

Note:

Refer to the full User Guide of the application *ORTHOsoft* Knee 2.2 - Universal for all cautions, warnings and detailed user information.

Contact your Zimmer representative or visit us at www.zimmer.com

