MATHYS
European Orthopaedics

For healthcare professional use only. The illustrated image does not represent a connection between the use of the medical device described, nor its performance.

Surgical technique

balanSys BICONDYLAR

Combination 4in1
SMarT instruments

***Preservation** in motion*

Building on our heritage
Moving technology forward
Step by step with our clinical partners
Towards a goal of preserving mobility

***Preservation** in motion*

As a Swiss company, Mathys is committed to this guiding principle and pursues a product portfolio with the goal of further developing traditional philosophies with respect to materials or design in order to address existing clinical challenges. This is reflected in our imagery: traditional Swiss activities in conjunction with continuously evolving sporting equipment.

Table of contents

Remark
Please make yourself familiar with the handling of the instruments, the product-related surgical technique and the warnings, the safety notes as well as the recommendations of the instruction leaflet before using an implant manufactured by Mathys Ltd Bettlach. Make use of the Mathys user training and proceed according to the recommended surgical technique.

Introduction

The balanSys BICONDYLAR system is a modular joint replacement system for knees.

A balanSys BICONDYLAR system consists of a cemented or non-cemented femoral component, a cemented symmetrical tibial tray and a tibial inlay. A cemented patellar component is optional. For femoral and tibial metal components a TiNbN coated option is available. The tibial inlay range includes one mobile bearing configuration (Rotating Platform (RP) and three different fixed bearing configurations (Cruciate Retaining (CR), Ultra Congruent (UC) and Posterior Stabilized (PS)).

For tibial inlays two materials can be chosen: Standard UHMWPE or vitamys, the vitamin E stabilized PE, which possess a high wear resistance and is well protected against oxidation. [1]

Since 1997, the balanSys BICONDYLAR system has proven its clinical worth with good clinical results. [2]
With the balanSys knee system, Mathys Ltd Bettlach offers a wide range of components that correspond with the patient's anatomical conditions and functional requirements of the knee joint.

The balanSys implants, instruments and surgical techniques are designed to meet the surgeons' demands on prostheses with respect to kinematics, ligament balancing, stability and long-term survival. [2]

The high quality instruments and implants are made for continuously excellent clinical results. Quality made in Switzerland.

The balanSys knee system was launched with a primarily soft tissue balancing technique, featuring a dedicated tensor instrument. A few years later, Mathys Ltd Bettlach introduced a primarily bone orientated technique. Both techniques have been very successful in the marketplace. With this surgical technique Mathys Ltd Bettlach will bridge both techniques, offering a unique combination for your patient's benefit.

1 Data on file Mathys Ltd Bettlach.

2 Superior long-term survival for fixed bearing compared with mobile bearing in ligament-balanced total knee arthroplasty. Heesterbeek, P.J.C., van Houten, A.H., Klenk, J.S. et al. Knee Surg Sports Traumatol Arthrosc, online 07 April 2017.

Indications and contraindications

Indications

- Painful and / or disabling joint disease of the knee resulting from osteoarthritis, avascular necrosis, inflammatory arthritis or post-traumatic arthritis
- Revision of previous knee replacement

Contraindications

- Local or general infection
- Any soft tissue, ligament, nerve or vessel insufficiency which may create an unacceptable risk of prosthesis instability, prosthesis fixation failure and/or complications in post-operative care
- Compromised bone stock due to bone loss or bone defects and/or insufficient bone substance, which cannot provide adequate support and/or fixation for the prosthesis
- Hypersensitivity to materials used
- Skeletal immaturity
- Genu recurvatum
- Insufficiency of the extensor mechanism
- Progressive neoplastic disease

For further information, please refer to the instructions for use or ask your Mathys representative.

Preoperative planning

Preoperative planning aims

- Identification and quantification of deformities and bone defects as well as the osteophytes
- Determination of the angle between the anatomical axis and the mechanical axis
- Preliminary size determination of the femoral and tibial prosthesis using planning templates

The preoperative planning includes

- Anteroposterior (AP) and lateral X-rays of the knee joint and tangential X-rays of the patella
- Full leg series
- Total leg planning template
- X-ray template

Aim of the intervention and surgical approach

- Intraoperative correction of axial deviations in the frontal plane of the leg along the mechanical axis, whereby the joint line should be at a right angle with this axis
- Reconstruction of the physiological axis ratios
- Prosthesis-related kinematics
  – physiological joint line
  – sufficient medial and lateral stability in extension and flexion
  – correctly centred and balanced patellofemoral joint
  – free movement: from maximal extension to maximal possible flexion

The choice of approach is dependent on the axial malposition (varus/valgus).

Patient preparation

The surgery is carried out on patients under general or spinal anaesthesia, while an adequate muscle relaxation is being required.

Postoperative pain is reduced without the use of a tourniquet. If it is necessary to apply a tourniquet, it should be placed on the proximal thigh and inflated with the knee in hyperflexion. That will keep the maximal portion of the quadriceps below the level of the tourniquet.

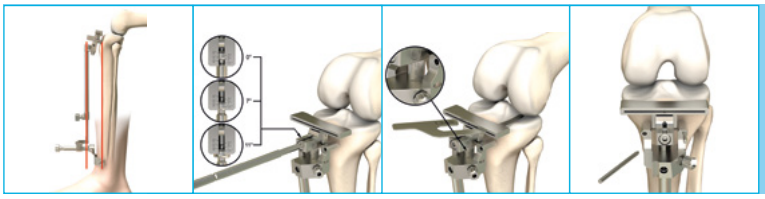
Place the patient in supine position.

Flex the knee into a 90° position.

Use a supporting roll on the table and a lateral support to facilitate extension and flexion of the leg.

Overview of the surgical technique

1. Tibial osteotomy



Application of the Tibial Reference System parallel to the anterior tibial cortex and alignment. Adjustment of the posterior slope. Determination of the joint line and fixation of the Tibial Reference System.

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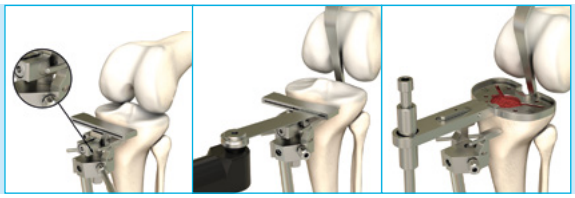

Adjustment of the resection depth.
Tibial osteotomy.
Determination of the tibial plateau size.

Remark
Place retractors to protect ligaments during tibial resection.

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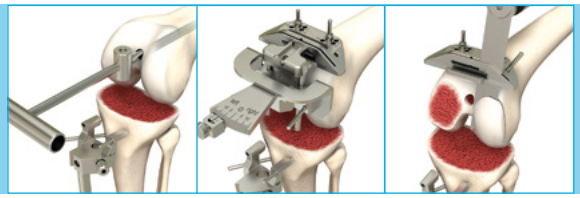
2. Femoral osteotomy



Opening of the intramedullary canal and insertion of the Intramedullary Rod. Fixation of the Distal Femoral Cutting Block.
Distal Osteotomy.

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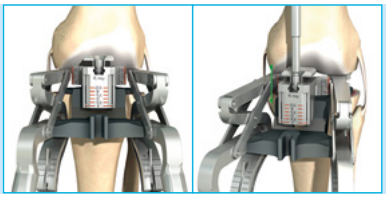

Insertion of the Tensor and application of 150–180 Newton in full extension.
Adjustment of the desired Inlay thickness.

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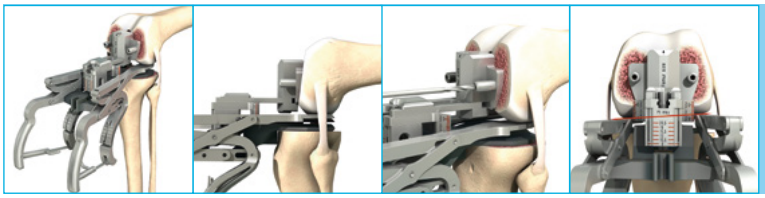

The knee must be flexed in 90°. Insertion of the Tensor and application of 80–100 Newton. Drilling of two holes for the 4in1 Cutting Block.

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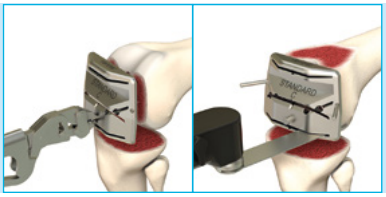

Insertion of the 4in1 Cutting Block. Control of the planned resection depth. Anterior and posterior femoral osteotomies with the chamfer cuts.

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Verification of flexion gap.

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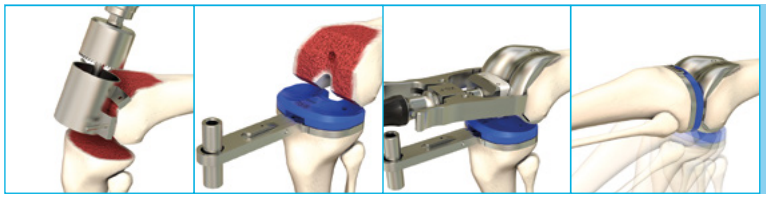
3.1 Preparation and implantation: balanSys CR, UC and RP



Preparation of trochlea groove. Insertion of Tibial Template and Trial PE Inlay. Insertion of Trial Femur. Trial reduction of the knee joint.

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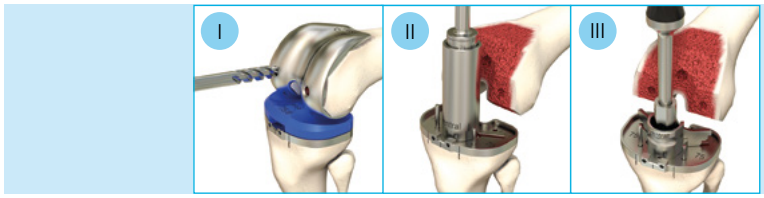

I. Preparation of the femoral anchor pins
II. Preparation of the tibial medullary space
III. Preparation of the fin

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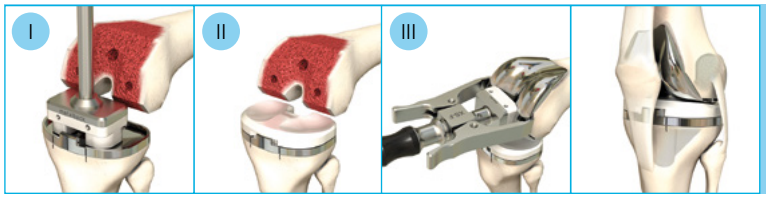

I. Insertion of balanSys Tibial Plateau
II. Insertion of the balanSys Inlay
III. Insertion of the balanSys Femur

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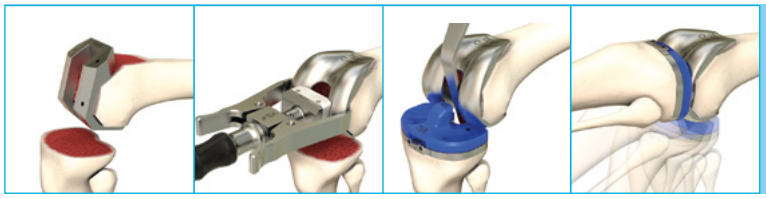
3.2 Preparation and implantation: balanSys PS



Preparation of femoral box. Insertion of the Trial Femur. Insertion of the Tibial Template and PE Trial Inlay. Trial reduction of the knee joint.

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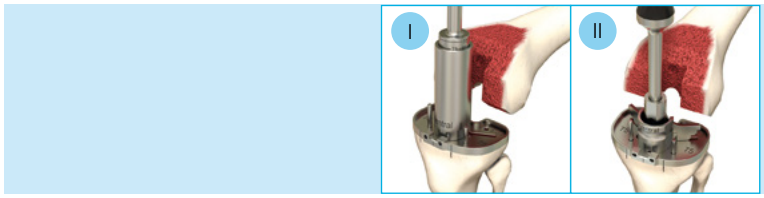

I. Preparation of the tibial medullary space
II. Preparation of the fin

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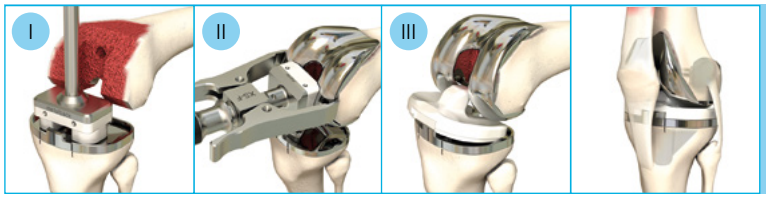

I. Insertion of the balanSys PS Tibial Plateau
II. Insertion of the balanSys PS Femur
III. Insertion of the balanSys PS Inlay

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Remark

1.27 mm sawblades are compatible with balanSys instruments. For sawblades distributed by Mathys refer to the brochure 336.030.032 «Sterile Sawblades».

Surgical technique

1. Tibial osteotomy

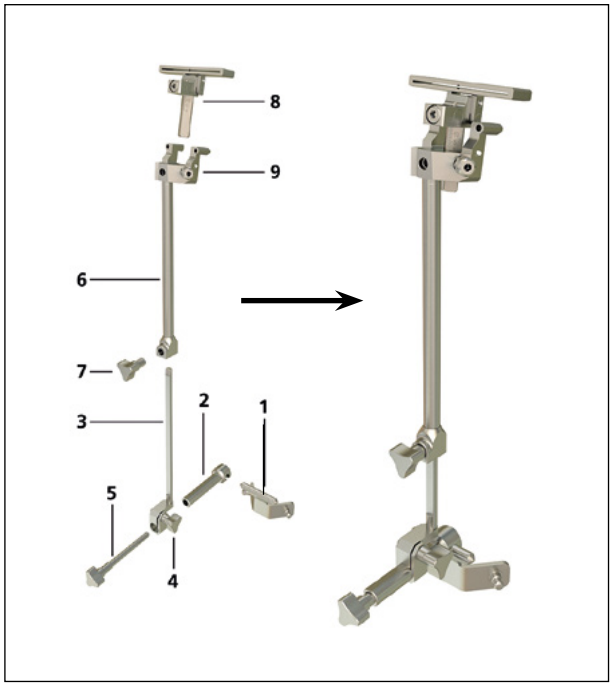


Fig. 1

Assembly of the Extramedullary Tibial Alignment Reference System (Fig. 1)

Move the Ankle Holder (1) onto the Distal Connector (2). Move the Distal Target Device (3) onto the Distal Connector (2) and fix the Ankle Holder with the Tibial Locking Bolt (5). Leave the Connecting Screw (4) slightly open. Join the Distal Target Device (3) with the Proximal Target Device (6) and affix it with the Connecting Screw (7). Insert the Tibial Cutting Guide (8) onto the Proximal Targeting Device (6). Set the Tibial Cutting Guide to zero and tighten the screw (9) with the Hexagonal Screwdriver.

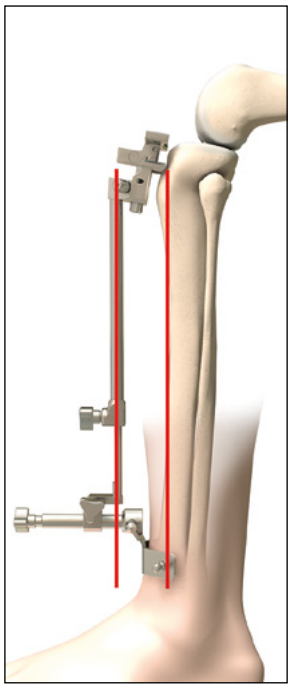


Fig. 2 Application of the Tibial Reference System

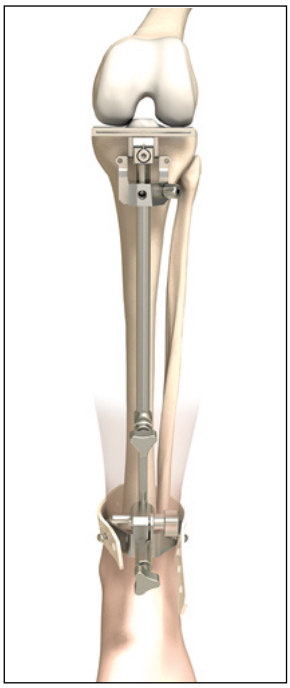


Fig. 3 Alignment of the Tibial Reference System

Positioning of the extramedullary Tibial Alignment Reference System

The Tibial Reference System is placed parallel to the anterior tibial cortex (Fig. 2). Align the Tibial Reference System distally with the second metatarsophalangeal bone and fix it with the Silicone Band (Fig. 3). For correct rotation alignment, the centre of the Tibial Cutting Guide must be aligned to the transition of the medial to the middle third of the tibial tuberosity. Alternatively, the Tibial Cutting Guide can be aligned parallel to the line between the posterior edges of the medial and lateral tibial plateau.

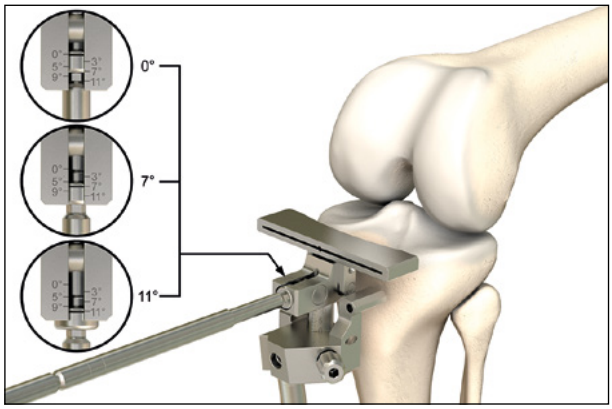


Fig. 4 Adjustment of the dorsal slope

Setting of the posterior slope

Use the Hexagonal Screwdriver to set the posterior slope, according to the anatomy (tactile plate parallel to the best preserved tibial joint surface) (Fig. 4).

Remark

The authors recommend a posterior slope of 7° for a cruciate retaining implant and up to 5° for a PCL substituting implant.

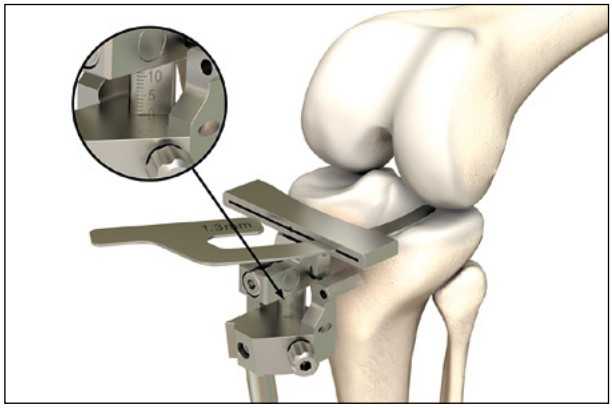


Fig. 5 Setting the original joint line

Determine the original joint line at the level of the best preserved tibial joint surface with the Reference Plate or the Tibial Stylus (Fig. 5).

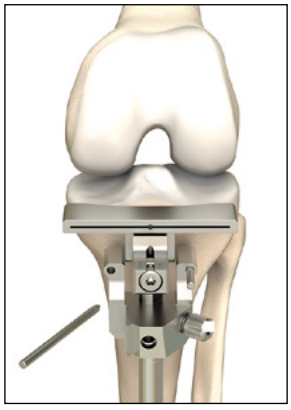


Fig. 6 Fixation of the Tibial Reference System

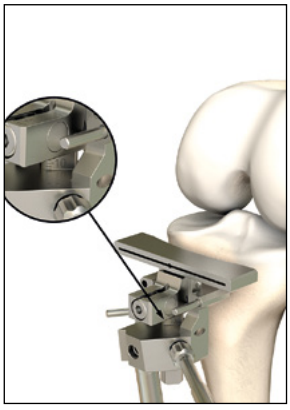


Fig. 7 Adjustment of the resection depth

Fixation of the Tibial Reference System

Affix the Tibial Reference System proximally with at least two Pins in the specified holes (oblique and straight) (Fig. 6). The holes are pre-drilled with the 3.2 mm drill.

Tibial osteotomy

Move the Tibial Cutting Guide 6–8 mm distally with the help of the Hexagonal Screwdriver (Fig. 7).

Check the adjusted osteotomy level with the Reference Plate.

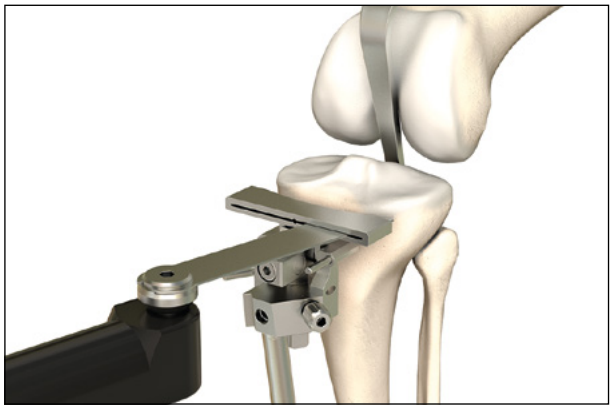


Fig. 8 Execution of the tibial osteotomy

Execution of the tibial osteotomy (Fig. 8) and removal of the posterior meniscus remnant.

Remark
Place retractors to protect ligaments during tibial resection.

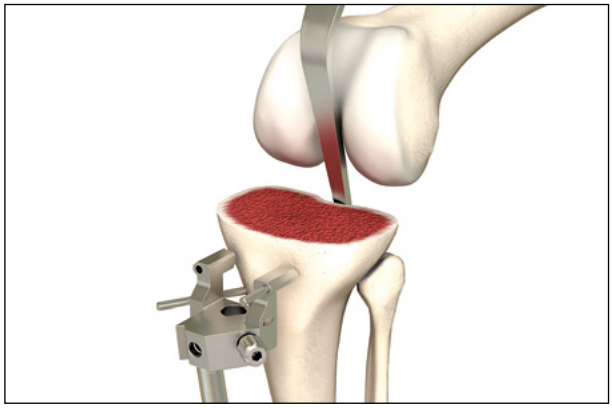


Fig. 9

Remove the Tibial Cutting Guide (Fig. 9).

Remark
If the Tibial Reference System is removed, a Pin should be left in place for future reference in case an additional tibial osteotomy is required.

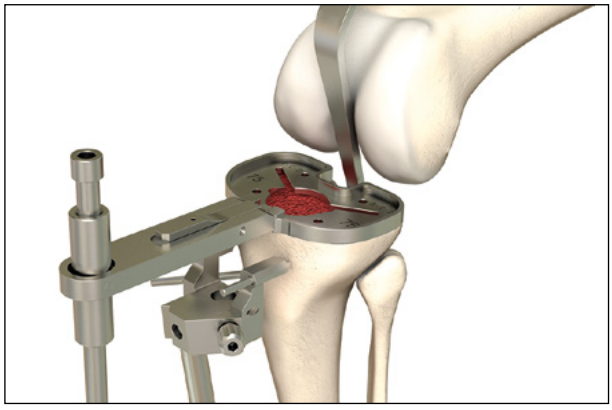


Fig. 10 Determining the tibial prosthesis size

Determining the size of the tibial implant
Determine the tibial prosthesis size with the Tibial Template, taking the rotational alignment into account (Fig. 10). The aim is to provide maximum coverage of the osteotomy surface. Use the Setting Rod to check the axis and the slope of the cutting plane.

In addition to the extramedullary aligned tibial osteotomy, intramedullary alignment is also possible (see Appendix 1).

Surgical technique

2. Femoral osteotomy

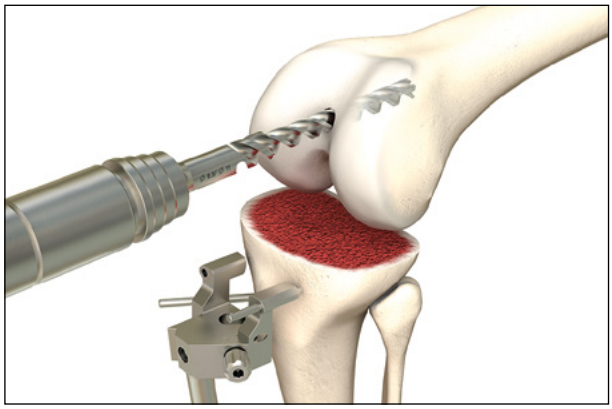


Fig. 11 Opening of the medullary canal

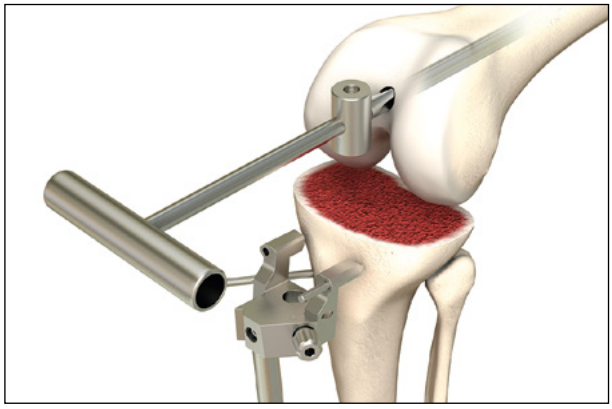


Fig. 12 Insertion of the Intramedullary Rod

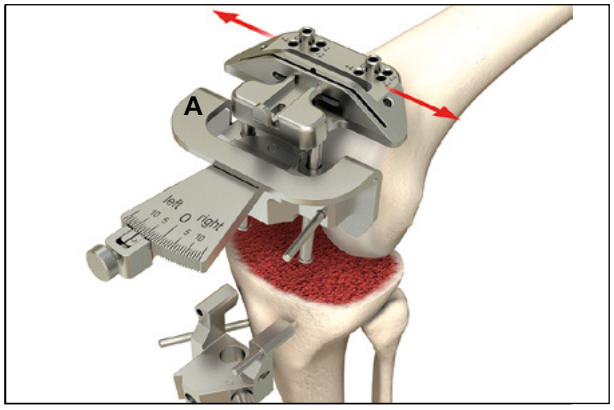


Fig. 13

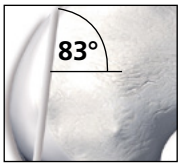


Fig. 13a

2.1 Distal femoral osteotomy

Intramedullary alignment of the femoral osteotomy

Open the medullary canal (Fig. 11) with the 8.5 mm drill and insert the Intramedullary Rod (lengths: 190, 240 and 290 mm) with the aid of the T-Handle (Fig. 12). Any existing osteophytes must be removed first.

Positioning of the Angle Guide and fixation of the Distal Cutting Block

Adjust the preoperatively determined angle between the mechanical and anatomical femoral axis with the aid of the Angle Guide. Assemble the Angle Guide with the Adapter for the Angle Guide (A) and the Distal Cutting Block. Fit the Angle Guide onto the cam of the Intramedullary Rod.

The Angle Guide must abut distally to at least one condyle (Fig. 13).

Remark

Due to the fact that the initial distal cut will be performed with an angle of 83° in respect to the Intramedullary Rod, it is important to aligne the Angle Guide parallel to the epicondylar axis (Fig. 13a).

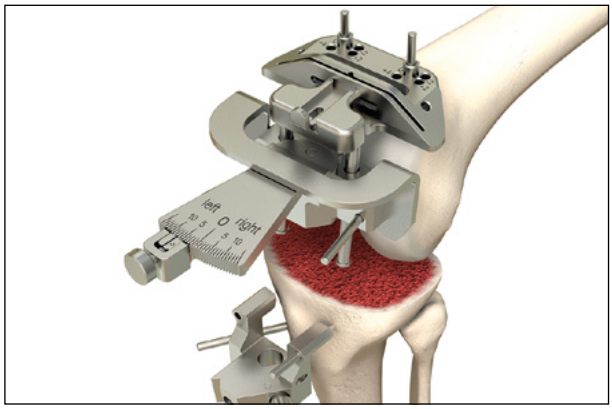


Fig. 14 Positioning of 2 Pins

Fixation of the Angle Guide with one or two Pins (Fig. 13). Based on the anatomical conditions, the Distal Cutting Block can be shifted mediolaterally (Fig. 13). The Distal Cutting Block must rest against the anterior cortex.
Pre-drilling of the 2 holes for the Distal Cutting Block. Take the zero marking into account in this process. Insertion of 2 Pins into the pre-drilled holes (Fig. 14).

Removal of the Angle Guide and the Intramedullary Rod.

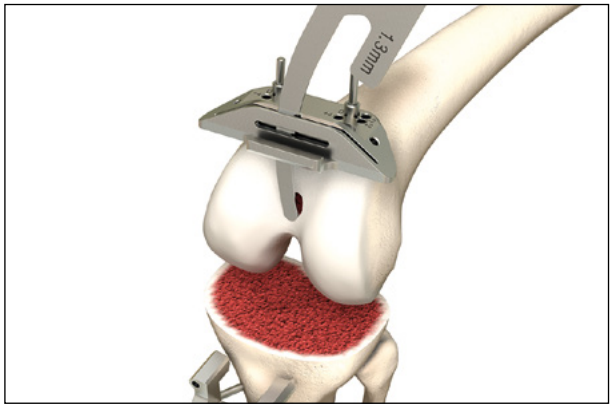


Fig. 15 Checking of the planned distal resection plane

Check the planned distal resection plane with the Reference Plate. If necessary, shift the Cutting Block by +/-2 mm if the resection plane is not optimal.

The Cutting Block can be additionally fixed with oblique Pins.

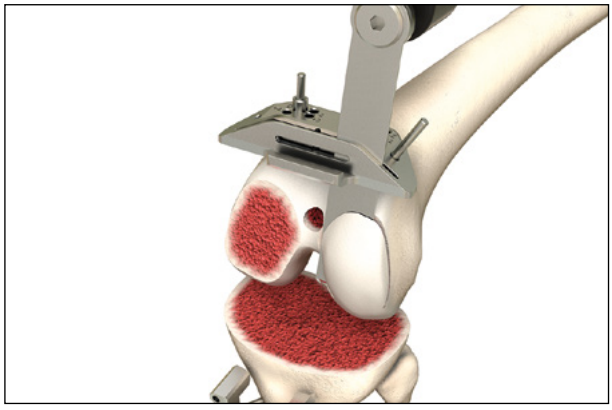


Fig. 16 Execution of the distal femoral osteotomy

Execution of the distal femoral osteotomy (Fig. 16).

Remark
It is recommended by the authors to execute the distal femoral osteotomy in maximal flexion in order not to touch the tibial surface with the sawblade.

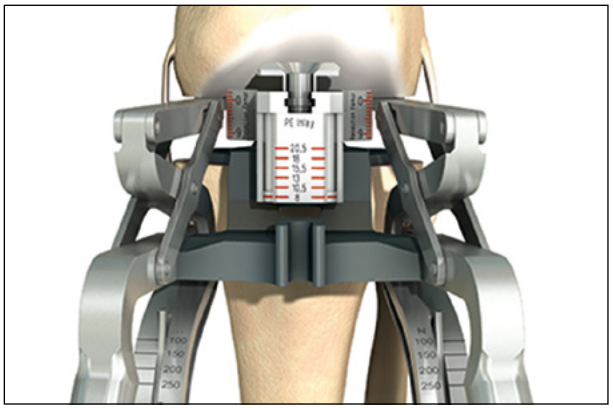


Fig. 17

Insert the Tensor and apply **150 – 180 Newton** in full extension (Fig. 17). The distal femoral osteotomy must be parallel to the tibial osteotomy. Perform ligament releases if necessary and check again with Tensor.

Remark
The extension gap should be equal, both medially and laterally.

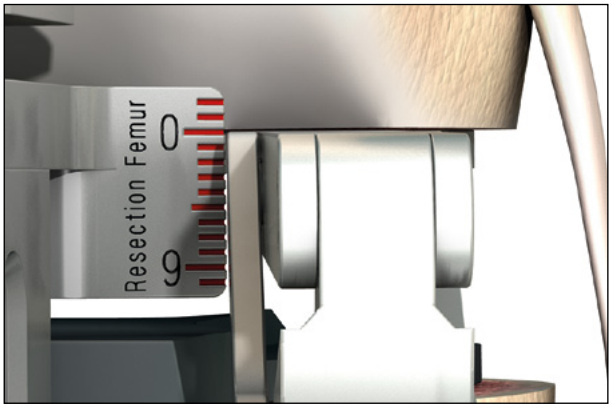


Fig. 18

The scale of the resection level should be 0 mm when the knee is well balanced in extension (Fig. 18).

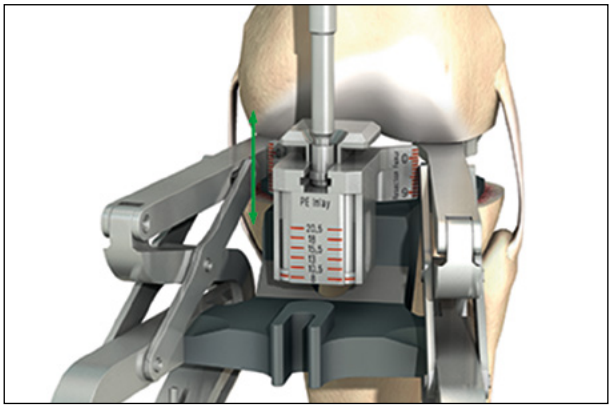


Fig. 19 Adjusting the Inlay

- If the resection level is reading < 0 mm adjust the Inlay thickness with the set screw (Fig. 19)
- If the resection level is reading > 0 mm then a corresponding amount of bone should be re-cut from the proximal tibia

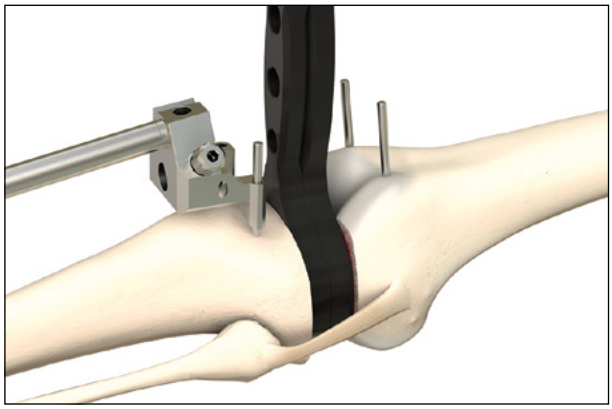


Fig. 20 Inspection of the extension gap

Optional step to check the extension gap
Verification of the extension gap by inserting the Spacer Block with the appropriate Spacer Block Insert (Fig. 20).

Fig. 21

Check the mechanical axis (Fig. 21), medial and lateral stability as well as extension ability. If conditions are too tight, a re-osteotomy can be performed at the distal femur or on the tibia.

Removal of the Spacer Block and the Pins.

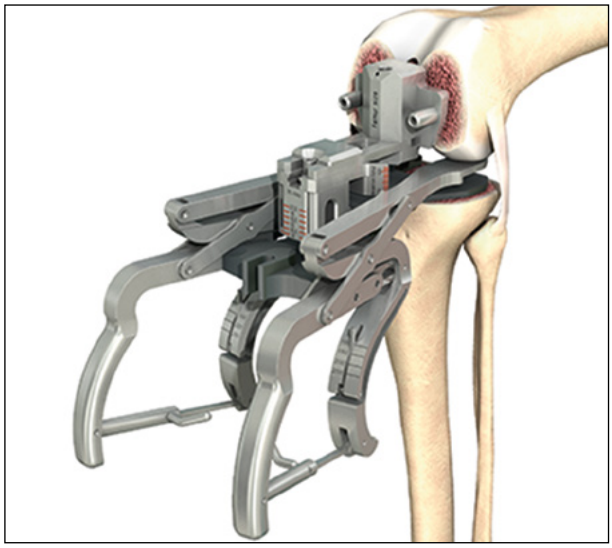


Fig. 22

2.2 Anterior and posterior femoral osteotomies with the chamfer cuts

Insert the Spacer with the preassembled Drill Guide into the Tensor.

Remark
Maintain the identical PE thickness on the scale as used for verifying the distal osteotomy with the Spacer Block and/or Tensor earlier.

Place the Drill Guide for the 4in1 Cutting Block on the distal femoral resection. Flex the knee to 90° and insert the calibrated Tensor into the joint (Fig. 22).

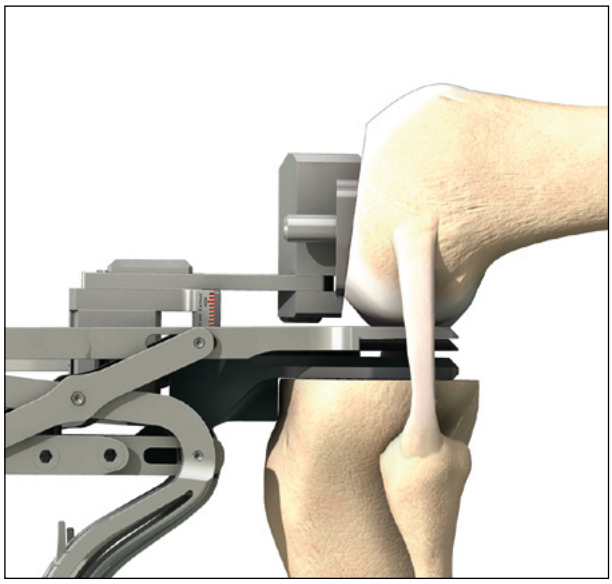


Fig. 23

Modify the flexion until the Drill Guide lies flat against the surface of the distal femoral osteotomy (Fig. 23).

Use **80–100 Newton** to symmetrically stretch the joint cavity.

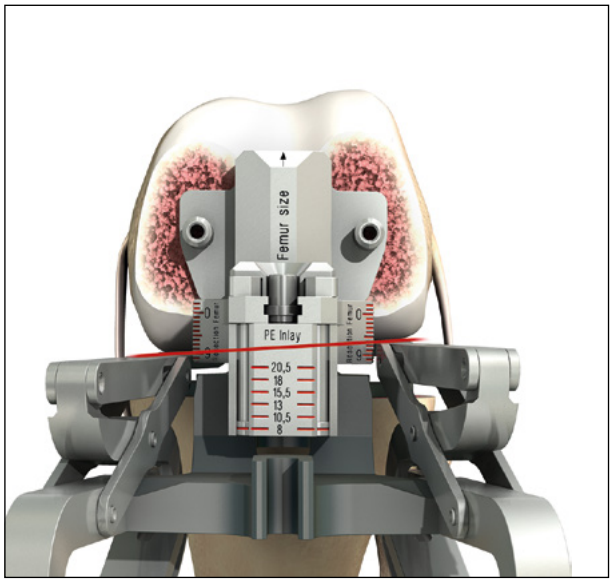


Fig. 24

The external rotation of the femoral component should be 2 – 5°.

Use the difference between the medial and lateral condyles to measure the external rotation. The difference in millimetres corresponds to the rotation in degrees (red line in Fig. 24). As a rule, resect < 9 mm laterally, and > 9 mm medially.

Please note:

- In case of larger deviations (e. g. in a dysplastic lateral femoral condlyle), confirm the rotation with the trans-epicondylar axis
- If the external rotation is < 2°, release the lateral ligamentous structures, and remove the dorsal osteophytes and femorolateral adhesions.
- If the external rotation is > 5°, release the medial ligament structures and remove the femoral medial osteophytes and adhesions from dorsal.

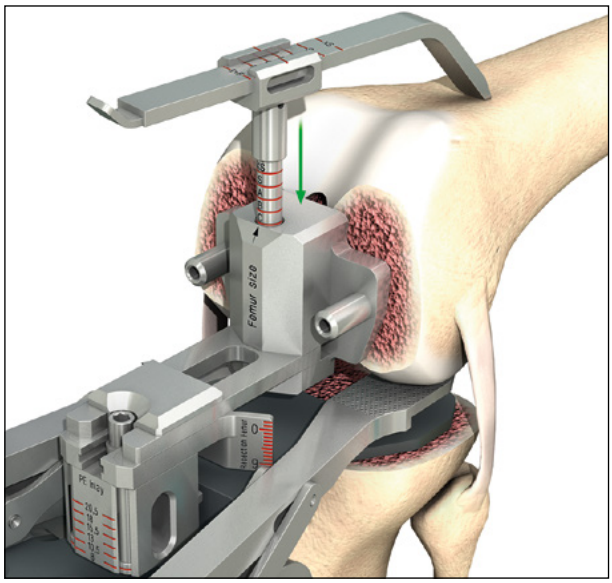


Fig. 25

Insert the Femoral Stylus to determine the size of the femoral prosthesis (Fig. 25).

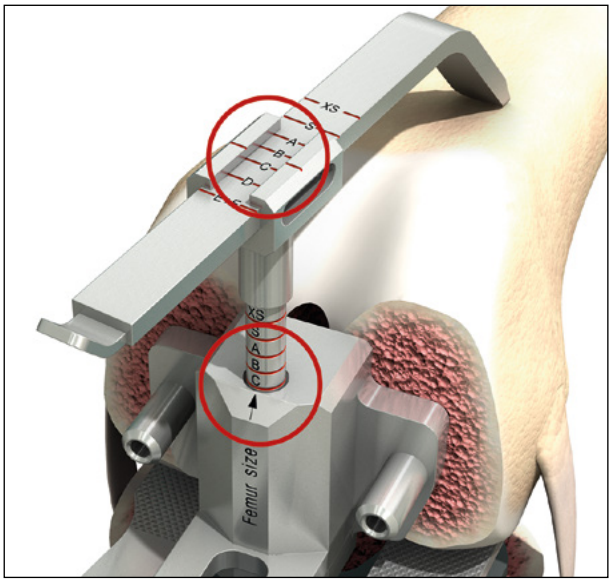


Fig. 26

The femur size is determined with the aid of the Femoral Stylus, which is placed on the elevation of the femoral metaphysis (Fig. 26).
The size of the femur is determined by the distal scale and the anterior femoral stylus:

1. Read the marking of the distal scale
2. Adjust the size of the anterior Femoral Stylus to the size of the distal scale
3. Both must match

Remark

The size of the femur must correspond to the predetermined size of the tibia (Appendix 4).

The sizing rings will give you an estimated femur size (Fig. 26). We recommend choosing the larger femur size.

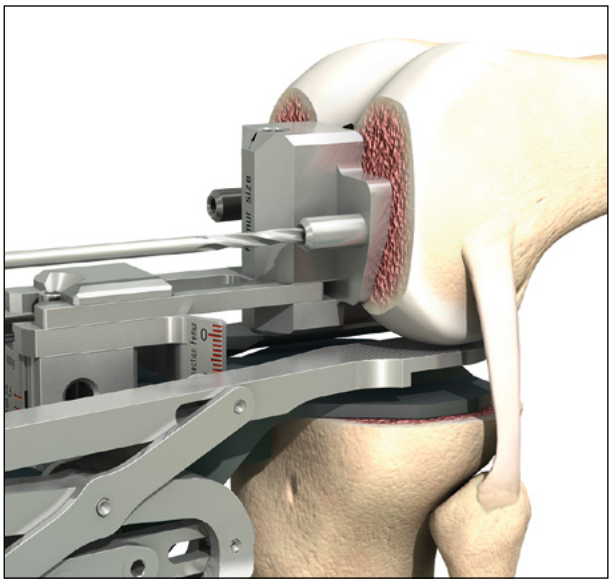


Fig. 27

Verify the spreading force – it should still be **80 to 100 Newton** – and drill the two holes for the 4in1 Cutting Block (Fig. 27).

Remove all the instruments.

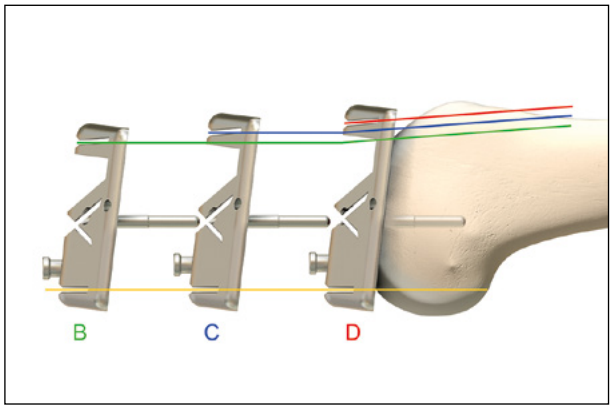


Fig. 28 Adjusting of the femoral size by changing the Cutting Block

Remark

*The balanSys Femur components **differ 3 mm in AP dimension** from one size to the other. The distance between the posterior cut and the pin fixation is exactly the same throughout the entire range of Cutting Blocks, thus leaving the flexion gap constant between sizes (Fig. 28).*

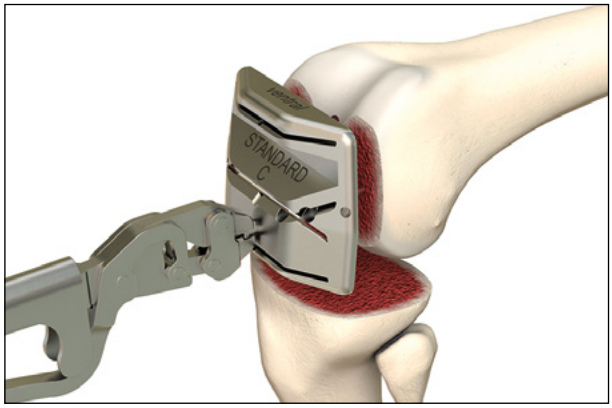


Fig. 29 Insertion of the 4in1 Cutting Block

Execution of the anterior and posterior femoral osteotomies with the chamfer cuts

Place the selected 4in1 Cutting Block in the two pre-drilled holes with the aid of the Pliers until it abuts flat on the distal osteotomy surface (Fig. 29).

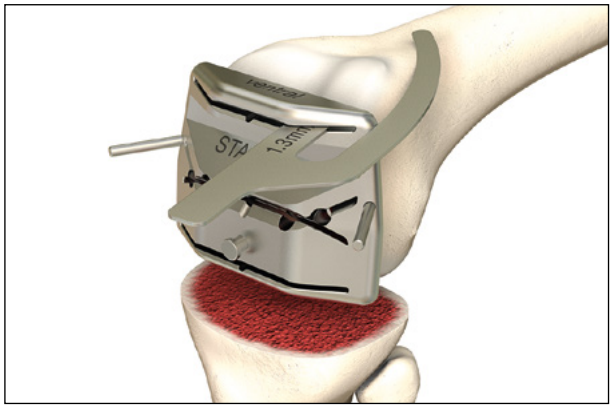


Fig. 30

Check the planned resection plane with the Reference Plate (Fig. 30). Mediolateral fixation of the 4in1 Cutting Block with two Pins for stabilization.

Remark

The 4in1 Cutting Block can be shifted 1.5 mm anterior and 1.5 mm posterior. Pre-drill the corresponding holes through the 4in1 Cutting Block. Remove the 4in1 Cutting Block with the aid of the Pliers and place it in the new pre-drilled holes until it abuts flat on the distal osteotomy surface.

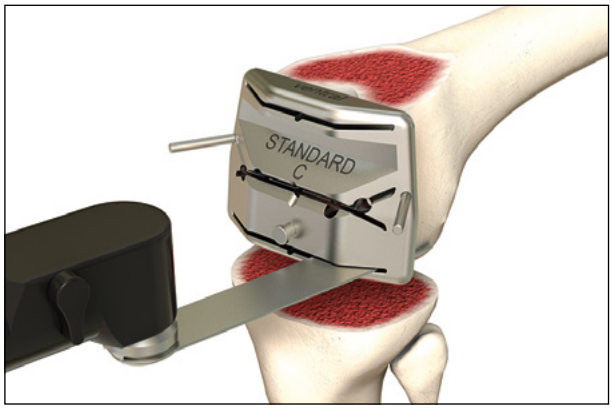


Fig. 31 Execution of the osteotomies

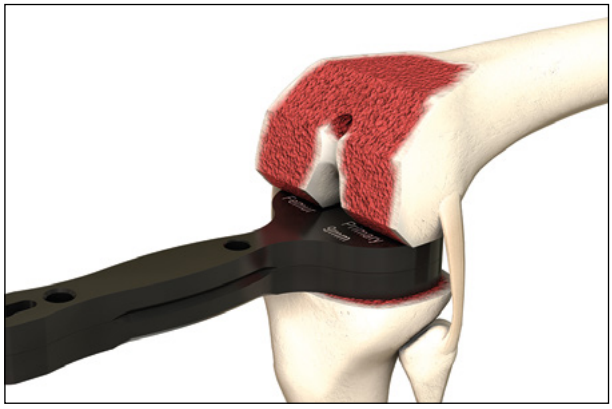


Fig. 32

Execution of the osteotomies (Fig. 31) in the following order:
1. Anterior osteotomy
2. Posterior osteotomy
3. Chamfer cuts

Remark
The posterior osteotomies should be performed with the knee at 90° flexion, as this avoids touching the tibial surface with the saw blade and it moves the posterior soft tissues away from the posterior condyles.

Removal of the 4in1 Cutting Block with the aid of the Pliers.

Removal of all marginal bones and osteophytes, particularly in the region of the posterior condyles.

Inspection of the flexion gap
- Insertion of the Spacer Block into the flexion gap with the Spacer Block Insert, previously defined in extension (Fig. 32)
- Evaluation of ligament stability, both medial and lateral

Surgical technique

3. Preparation and implantation

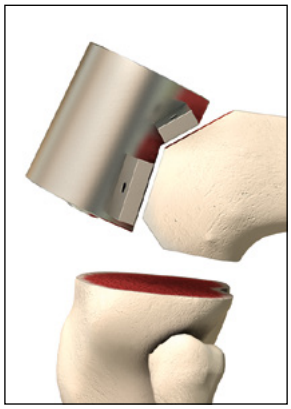


Fig. 33 Positioning of the Trochlea Bushing

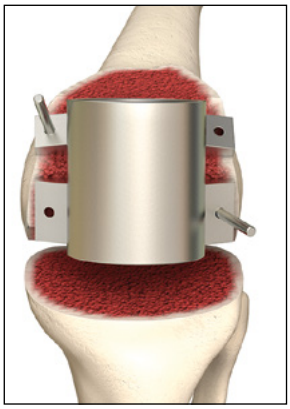


Fig. 34 Fixation of the Trochlea Bushing

3.1 balanSys CR, UC and RP

Femoral preparation
The Trochlea Bushing is placed onto the femur (Fig. 33) and affixed with at least two Pins diagonally (Fig. 34).

Remark
The authors recommend placing the Trochlea Bushing slightly lateral for optimized patella tracking.

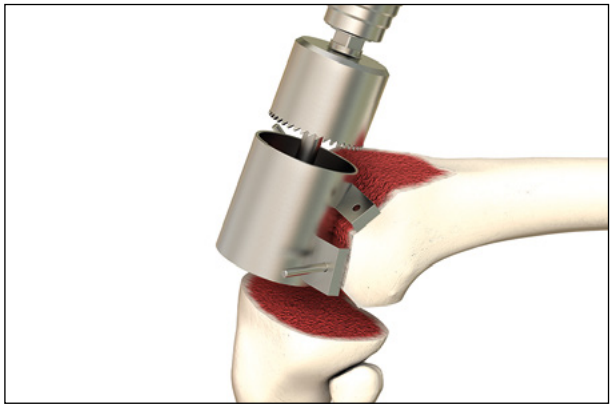


Fig. 35

The trochlea is chamfered by pushing the Trochlear Reamer to the stop (Fig. 35).

Remove all instruments.

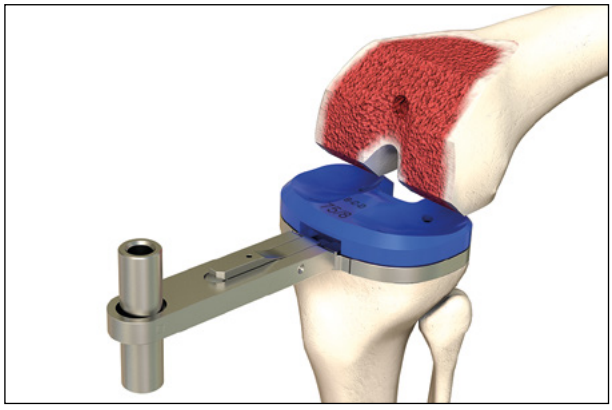


Fig. 36 Insertion of the Tibial Trial Prosthesis

Insertion of the determined Tibial Template and PE Trial Inlay (Fig. 36).

Remark
It must be ensured that the chosen template provides the desired tibial coverage and takes the chosen femur size into account.

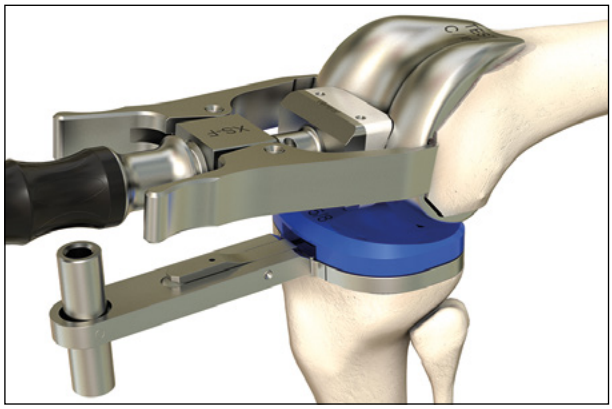


Fig. 37 Insertion of the Trial Femur

Insertion of the Trial Femur (Fig. 37) with the aid of the Femoral Holder and fixation with the Femoral Impactor (Fig. 38).

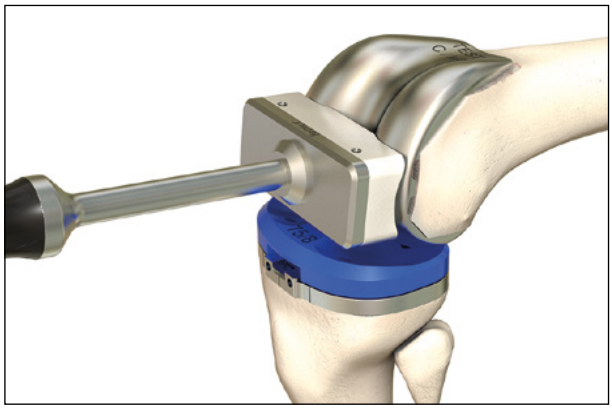


Fig. 38 Placement with the Femoral Impactor

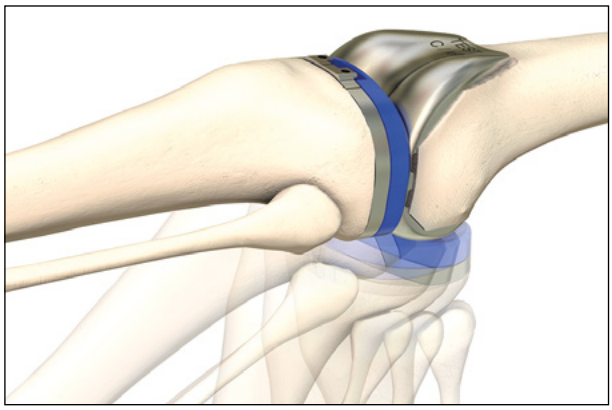


Fig. 39 Full movement test of the knee joint

Repositioning of the extension apparatus.

Remark

If the patella is replaced, it is recommended by the authors to perform the patellar osteotomy and to position the patellar trial component before the knee is tested.

With all the provisional components in place, the knee is tested with respect to maximal range of motion, stability, kinematics and mobility (Fig. 39).

Anterior marking of the position of the Tibial Template with the electrosurgical knife on the tibia.

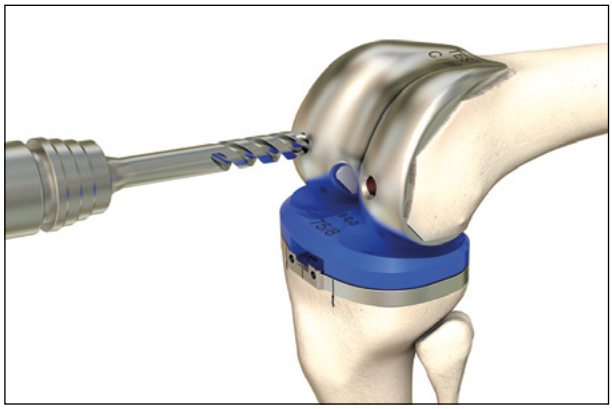


Fig. 40 Drilling for the femoral anchor pins

Drilling of the two holes for the femoral anchor pins (Fig. 40).

Removal of the Trial Femur and PE Trial Inlay.

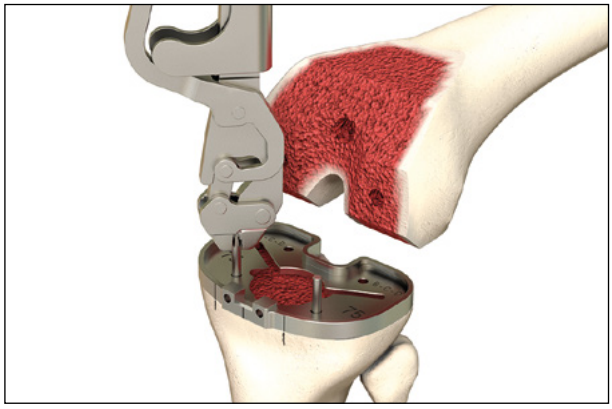


Fig. 41 Fixation of the Tibial Template

Tibial preparation
Fixation of the Tibial Template with two Pins (Fig. 41) matching the marking on the tibial head.

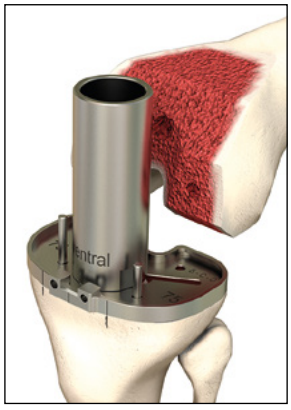


Fig. 42a

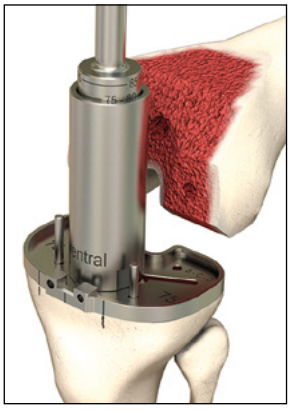


Fig. 42b

The Tibial Reamer must be connected to a power drill. Position the Reamer guide onto the Tibial Template. The three pegs need to be positioned in the openings of the Tibial Template. Note the marking **«ventral»**. Lock the Reamer Guide to the Tibial Template by turning the Reamer slightly clockwise until stop. In this position, the reamer Guide-Tibal Template assembly is locked (Fig. 42a). Drill out the tibial medullary space (Fig. 42b).

The depth must correspond to the appropriate length of the anchorage stem of the predetermined balanSys PS Tibial Plateau. Size markings are etched onto the Reamer.

Removal of the Reamer Guide.

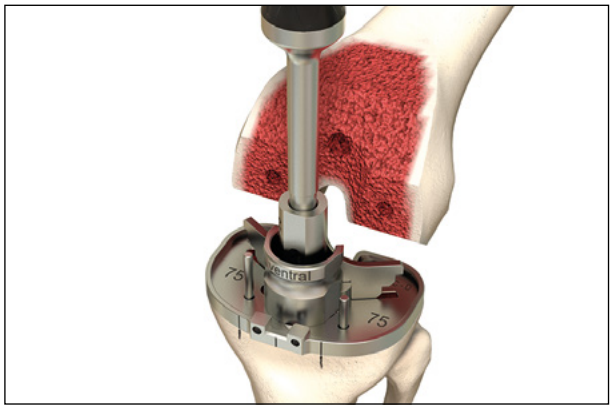


Fig. 43 Impaction of the Anchoring Bolt

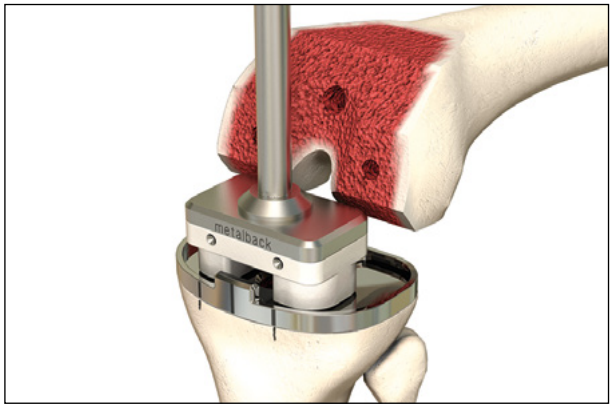


Fig. 44

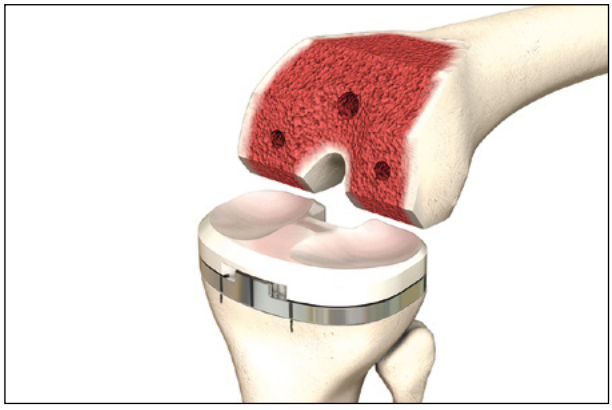


Fig. 45

Assembling of the Fin Chisel with the Handle.

Position the Chisel Centring Guide onto the Tibial Template. The three pegs need to be positioned in the openings of the Tibial Template. Note the marking **«ventral»**. Lock the Chisel Centring Guide to the Tibial Template by turning it slightly clockwise until stop. In this position, the Chisel Centring Guide-Tibal Template assembly is locked. Impact the Fin Chisel assembly with care to prevent fracture on the tibia (Fig. 43).

During introduction of the Fin Chisel care has to be taken to protect the lateral collateral ligament and the popliteal tendon when using a surgical technique with a medial approach.

Impacting until the instrument bottoms out on the Tibial Template. The depths of the fins are defined by the size of the Tibial Template.

Removal of all remaining instruments.

Thorough cleaning of the osteotomy surfaces is required (e. g. with a pulse lavage).

Final implantation

The cement should be in the early dough phase when applied. Follow the instructions for the specific bone cement.

For secure fixation of the Tibial Plateau in the bone, it is necessary that the tibial backside be fully cemented in the dough phase of the cement. The stem and fins may be cemented or not.

Failure to fully cement and pressurize the Tibial Plateau may lead to early loosening of the prosthesis. Furthermore, cementing in advanced stages of polymerization can lead to early loosening of the prosthesis.

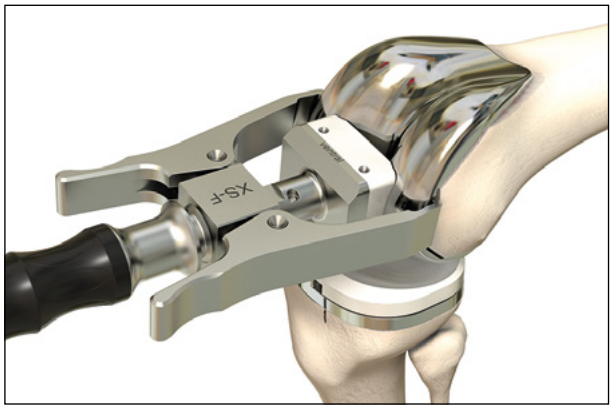


Fig. 46

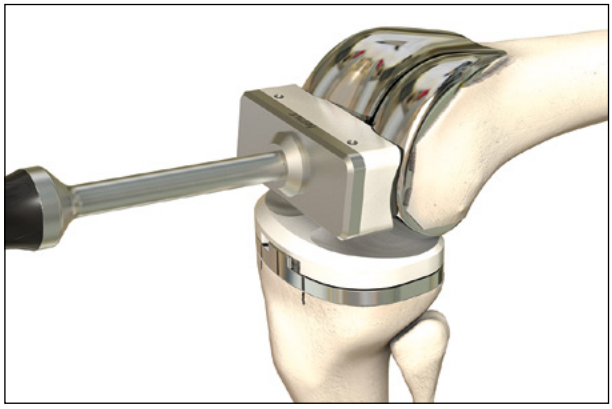


Fig. 47

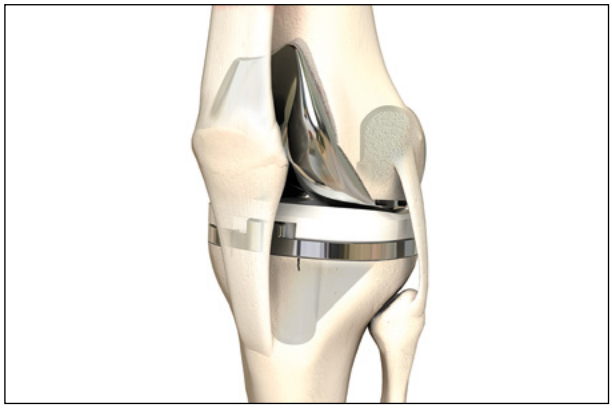


Fig. 48

Remark

Careful application of cement should be considered to avoid excess cement on the posterior parts of the femur and femoral component. Cement that extrudes posteriorly is difficult to remove.

Insertion of the balanSys Tibial Plateau with the aid of the Tibial Impactor (Fig. 44).

Insertion of the balanSys Inlay (Fig. 45).

Insertion of the balanSys Femur (cemented or uncemented) with the aid of the Femoral Holder (Fig. 46) and final impaction with the Femoral Impactor (Fig. 47).

The leg should be in extension during hardening of the bone cement (Fig. 48).

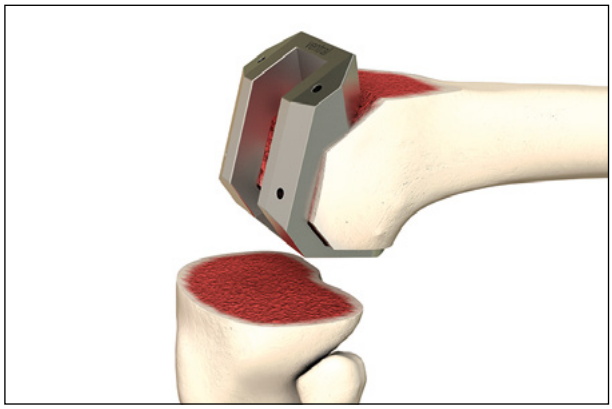


Fig. 49 Positioning of the Femur Box Cutting Guide

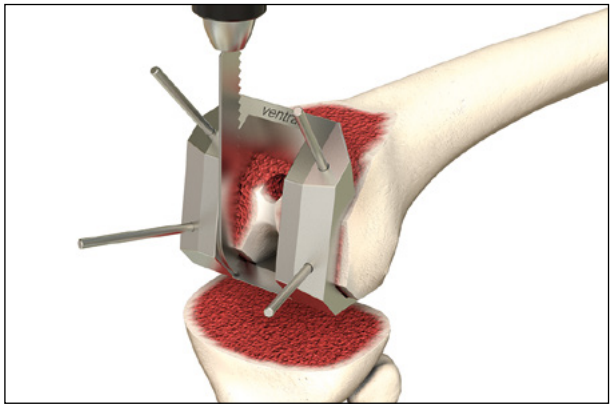


Fig. 50

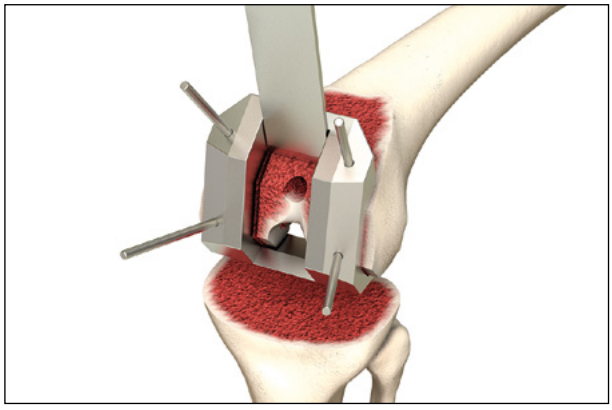


Fig. 50a

3.2 balanSys PS

Femoral preparation

The appropriate size of the Femur Box Cutting Guide is placed onto the femur. It must rest flush onto the resected surfaces of the posterior and distal femur (Fig. 49).

Remark

The authors recommend placing the Femur Box Cutting Guide slightly lateral for optimized patella tracking.

The guide will contact the resected bone surfaces and must be secured to the femur with four Pins diagonally. The most posterior Pins have to be introduced first.

A reciprocating saw should be used and guided along the walls of the open box to cut the medial and lateral sides and the base of the intercondylar notch (Fig. 50).

The base of the intercondylar notch can optionally be cut out with the balanSys Chisel (Fig. 50a).

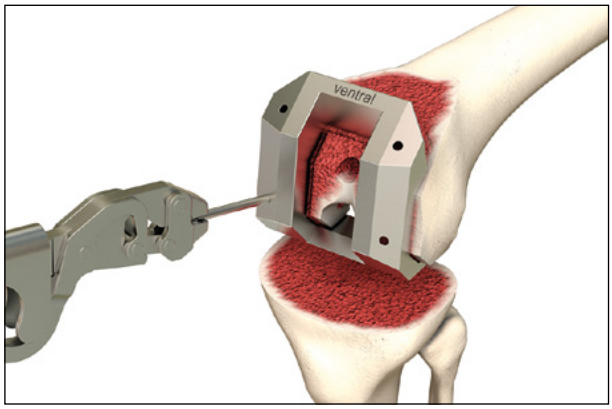


Fig. 51 Removal of Pins with Pliers

After the cuts, the Femur Box Cutting Guide and the Pins are removed (Fig. 51) in the following order:
1. Pins
2. Cutting guide
3. Resected bone block

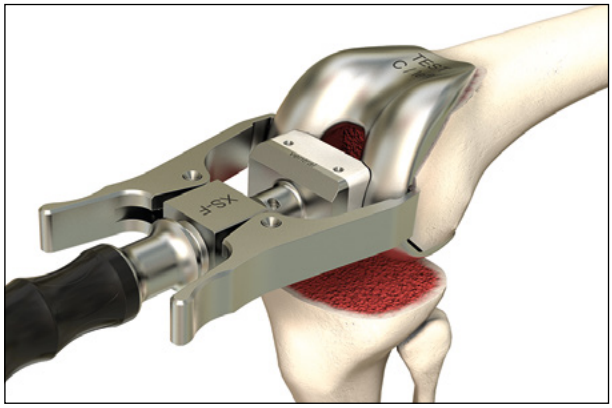


Fig. 52 Insertion of the Trial Femur

Determination of final implant position
Insertion of the Trial Femur with the Femoral Holder (Fig. 52).

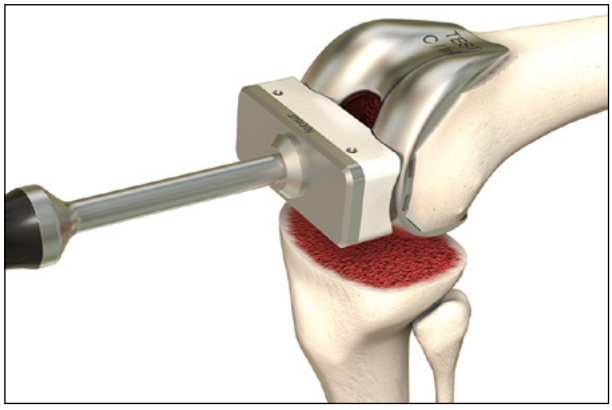


Fig. 53 Fixation with the Femoral Impactor

Final fixation must be performed with the Femoral Impactor (Fig. 53).

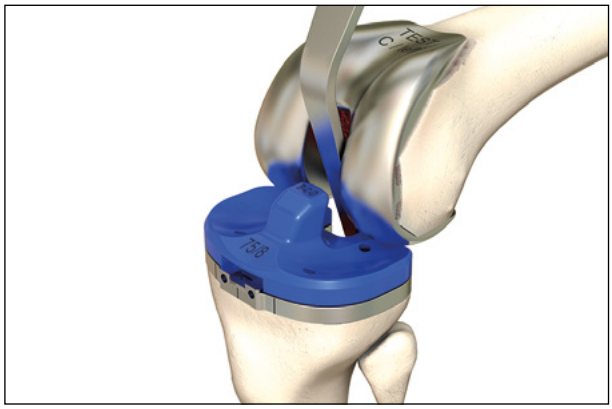


Fig. 54 Insertion of the Tibial Template and PE Trial Inlay

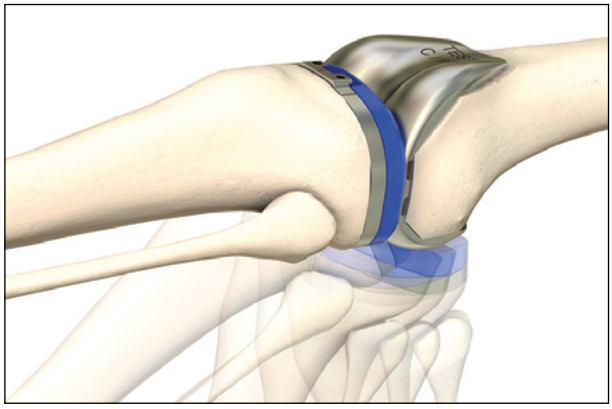


Fig. 55 Full movement test of the knee joint

Once the femur is impacted, the tibia has to be subluxed anteriorly with Hohmann retractors in order to position the Tibial Template and the PS PE Trial Inlay (Fig. 54).

Insertion of the Tibial Template and the PS PE Trial Inlay in the predetermined dimension and positioning onto the resected tibia.

Remark
It must be ensured that the chosen template provides the desired tibial coverage and takes the chosen femur size into account.

Repositioning of the extension apparatus.

Remark
If the patella is replaced, it is recommended by the authors to perform the patellar osteotomy and to position the patellar trial component before the knee is tested.

With all the provisional PS components in place, the knee is tested with respect to maximal range of motion, stability, kinematics and mobility (Fig. 55).

The tibial component tends to seat itself in the position where it best articulates with the femur. Any desired adjustments should be made before the final position is marked.

After final placement has been determined, a cautery is used to mark the location of the laser etch lines on the anterior periphery of the Tibial Template.

Removal of the PE Trial Inlay and the Trial Femur.

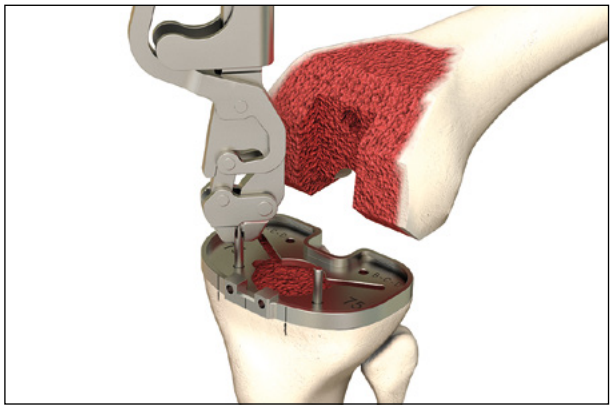


Fig. 56 Fixation with Pins

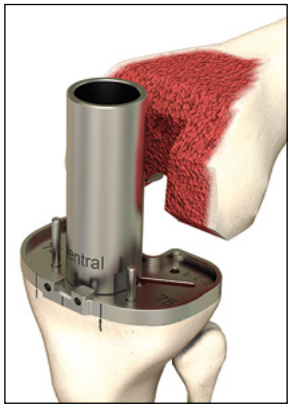


Fig. 57 Position of the Reamer Guide

Fig. 58 Drill out of the tibial medullary space

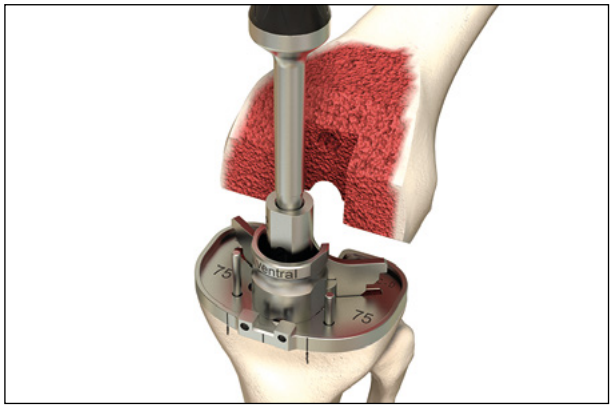


Fig. 59 Preparation of the fin

Tibial preparation

Re-positioning of the Tibial Template according to the marking of the cautery and fixation with two anterior Pins (Fig. 56).

The Tibial Reamer must be connected to a power drill.

Position the Reamer guide onto the Tibial Template. The three pegs need to be positioned in the openings of the Tibial Template. Note the marking **«ventral»**. Lock the Reamer Guide to the Tibial Template by turning the Reamer slightly clockwise until stop. In this position, the Reamer Guide-Tibal Template assembly is locked (Fig. 57). Drill out the tibial medullary space (Fig. 58).

The depth must correspond to the appropriate length of the anchorage stem of the predetermined balanSys PS Tibial Plateau. Size markings are etched onto the Reamer.

Removal of the Reamer Guide.

Assembling of the Fin Chisel with the Handle.

Position the Chisel Centring Guide onto the Tibial Template. The three pegs need to be positioned in the openings of the Tibial Template. Note the marking **«ventral»**. Lock the Chisel Centring Guide to the Tibial Template by turning it slightly clockwise until stop. In this position, the Chisel Centring Guide-Tibal Template assembly is locked. Impact the fin Chisel assembly with care to prevent fracture on the tibia (Fig. 59).

During introduction of the Fin Chisel care has to be taken to protect the lateral collateral ligament and the popliteal tendon when using a surgical technique with a medial approach.

Impacting until the instrument bottoms out on the Tibial Template. The depths of the fins are defined by the size of the Tibial Template.

Removal of all remaining instruments.

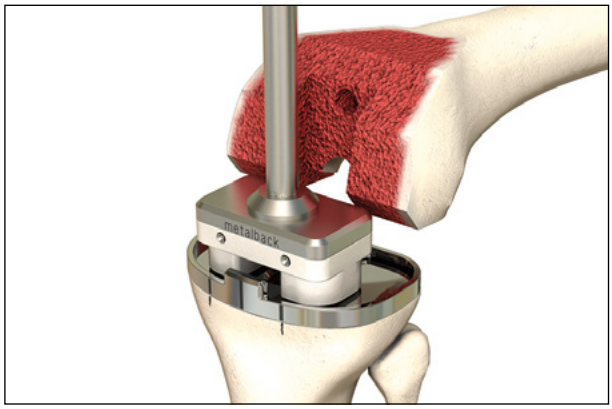


Fig. 60 Insert tibial component and impact it

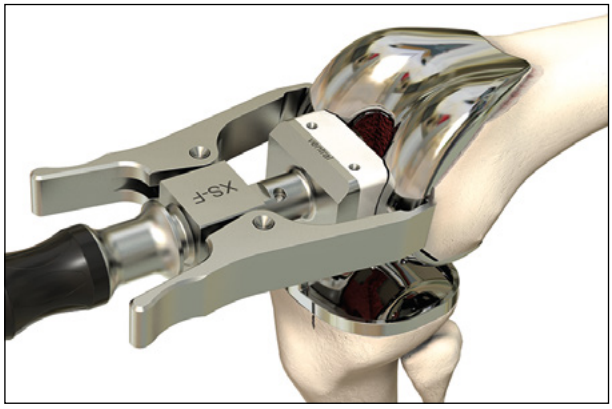


Fig. 61 Insertion of the femur

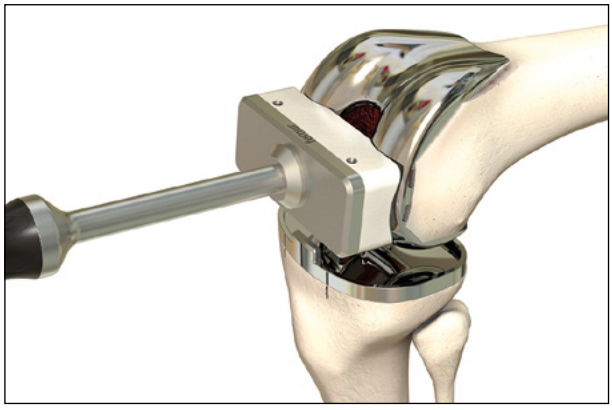


Fig. 62 Final impaction with the Femoral Impactor

Final implantation

After the implants have been chosen, one last check is recommended to ensure that the femoral, tibial, and inlay components match.

The cement should be in the early dough phase when applied. Follow the instructions for the specific bone cement.

For secure fixation of the Tibial Plateau in the bone, it is necessary that the tibial backside be fully cemented in the dough phase of the cement. The stem and fins may be cemented or not.

Failure to fully cement and pressurize the Tibial Plateau may lead to early loosening of the prosthesis. Furthermore, cementing in advanced stages of polymerization can lead to early loosening of the prosthesis.

Remark

Careful application of cement should be considered to avoid excess cement on the posterior parts of the femur and femoral component. Cement that extrudes posteriorly is difficult to remove.

For the final implantation, the knee should be in flexion.

Insert the balanSys PS Tibial Plateau and impact it with the aid of the Tibial Impactor (Fig. 60).

The balanSys PS Femur component is placed onto the femur with the aid of the Femoral Holder (Fig. 61). The femoral condyles of the balanSys PS Femur must be protected in order to prevent any scratching.

Final impaction with the Femoral Impactor (Fig. 62).

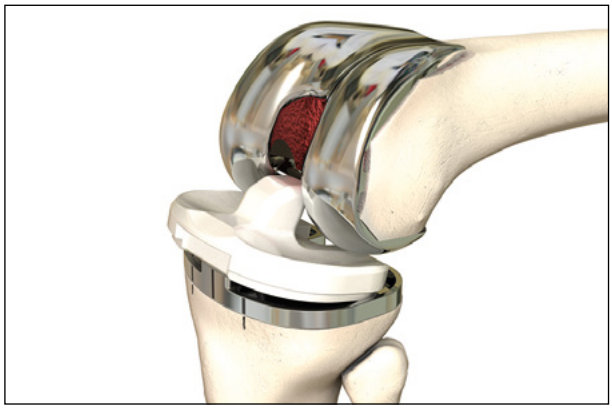


Fig. 63

Remark

Removal of excess cement. It is strongly recommended to give extra care to remove cement along the proximal portion of the femoral component and the femoral box. The surface of the tibial plateau must be cleaned.

Insertion of the balanSys PS Inlay (Fig. 63).

Fig. 64

The leg should be in extension during hardening of the bone cement (Fig. 64).

Remark

After insertion of the Inlay and hardening of the bone cement, extra care should be given to remove any remaining cement inside the femoral box.

Appendix

1 – Intramedullary tibial osteotomy

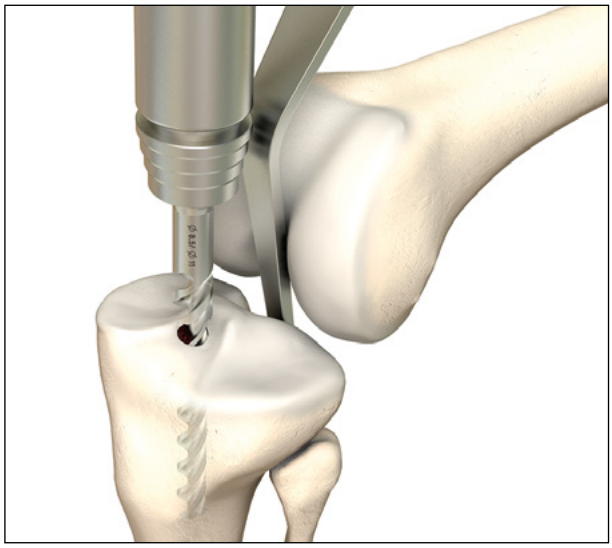


Fig. 65 Opening of the medullary canal

The tibial osteotomy can also be performed using intramedullary alignment.

The medullary canal is opened in the longitudinal axis at the eminentia with a 8.5 mm Drill (Fig. 65).

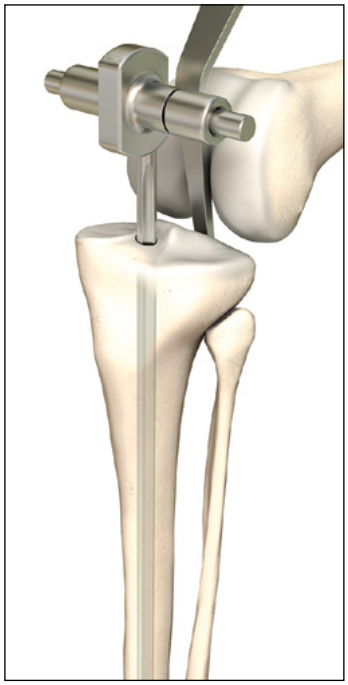


Fig. 66

Slow insertion of the Trs. Intramedullary Rod (Fig. 66).

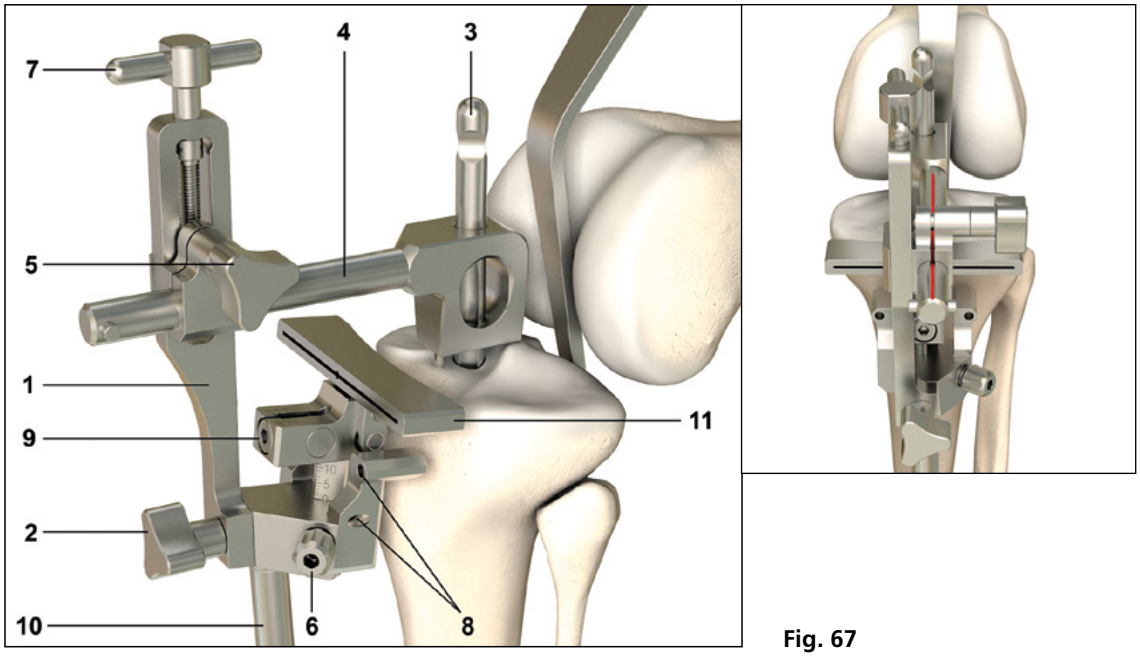


Fig. 67

Positioning of the intramedullary aligned Tibial Reference System (Fig. 67)

- Connect the intramedullary Tibial Reference System (1) with the Trs. Aiming Device Proximal (10)
- Fix it with the screw (2)
- Slide pre-mounted equipment onto the Trs. Intramedullary Rod (3)
- Distal alignment of the Tibial Reference System to the second metatarsophalangeal bone and proximally to the transition of the medial to the middle third of the tibial tuberosity
- Impaction on the bracket (4)
- Adjustment of the varus-valgus angle with the aid of the adjusting screw (5)
- First set the Tibial Cutting Guide (11) to zero and fix it with the screw (6). Determine the slope. Use the Hexagonal Screwdriver to set the posterior slope in accordance with the anatomy, as required from 0° – 11° (9)
- Determine the original joint line at the height of the best preserved tibial joint surface with the Reference Plate or Tibial Stylus
- The adjustment of the joint line is made with the aid of the T-screw (7)
- Fix the reference system proximally with at least two Pins in the specified holes (oblique and straight) (8)
- The holes are pre-drilled with the 3.2 mm Drill
- Adjust the Tibial Cutting Guide 6 – 8 mm distally with the aid of the Hexagonal Screwdriver (6)
- Check the planned tibial osteotomy with the aid of the Reference Plate
- Removal screw of the intramedullary retainer (2) and the intramedullary aligned tibial resection instrument (1, 3, 4)

Remark

Our authors recommend a posterior slope of 7° for a cruciate retaining implant and up to 5° for a PCL substituting implant.

For continuation see section «Tibial osteotomy», (Fig. 8).

Appendix

2 – balanSys 3-Peg Patella

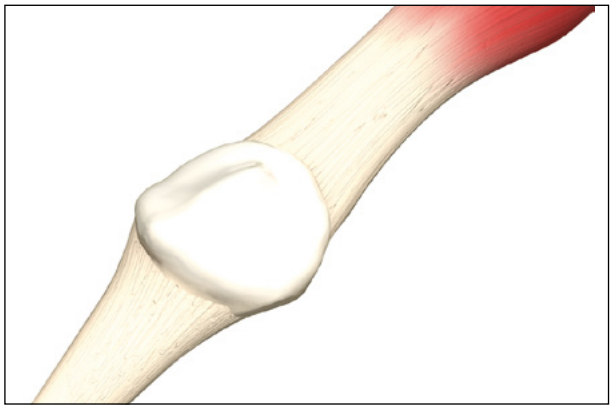


Fig. 68

Remove any marginal osteophytes.

Determine the size of the patella on the basis of the anatomical situation.

Dia	3-Peg FLAT	3-Peg
26	8 mm	–
28	8 mm	10.2 mm
31	8 mm	11.4 mm
34	9 mm	12.3 mm
37	9 mm	13.0 mm

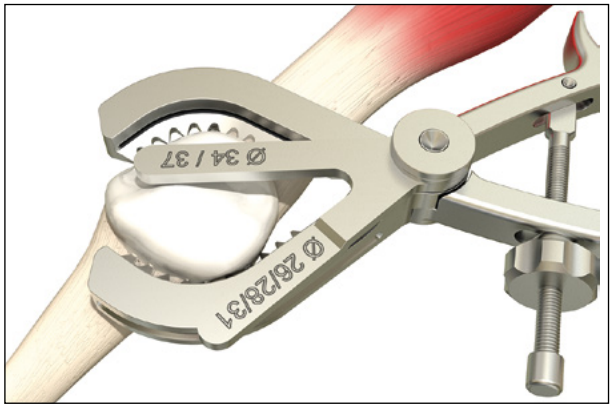


Fig. 69

Evert the patella and grip centrically with the Patella Forceps.

Adjust the resection height with the height topper to the selected patellar size setting.

Remark

*Ensure that you are using the Patella Resection Pliers Flat for the 3-Peg Patella FLAT (marked with sizes **26**–37) and the Patella Resection Pliers Standard for the 3-Peg Patella (marked with sizes **28**–37), respectively.*

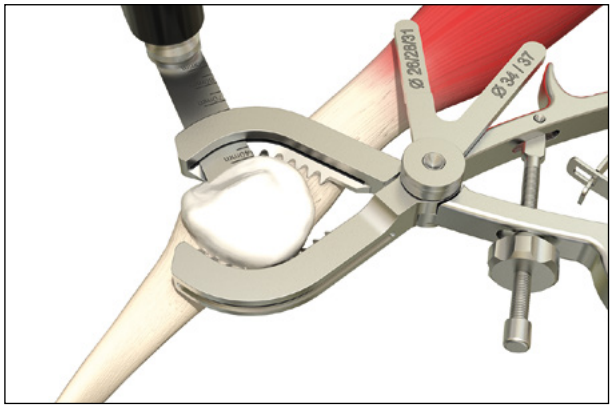


Fig. 70

Perform the patellar osteotomy through the saw guide on lateral side of the Patella Forceps.

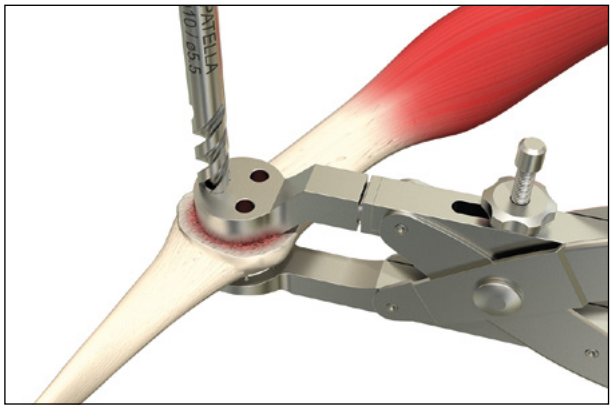


Fig. 71

Place the Drill Guide in order to determine the final positioning of the patella implant with regard to the predetermined gliding path of the femoral shield.

Drill the three patella peg holes with the 5.5 mm Drill Bit.

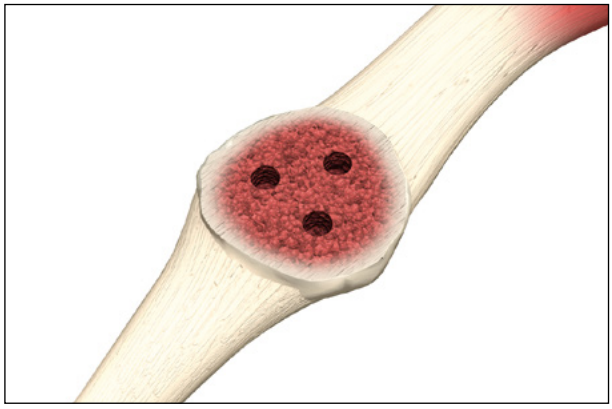


Fig. 72

Retro patellar surface prepared for implantation.

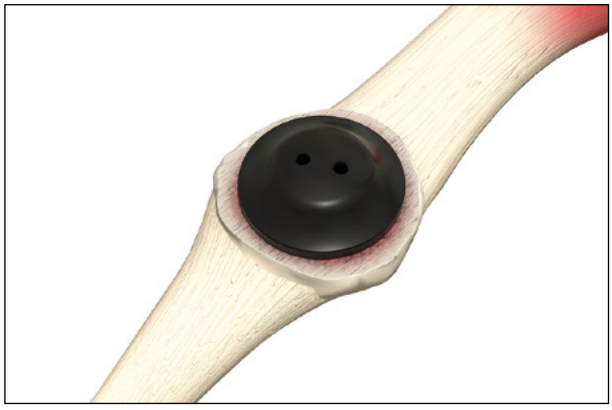


Fig. 73

Insert the Trial Patella of predetermined size (FLAT or standard).

Chamfer the medial and lateral edges of the rear surface of the patella.

Check the gliding movement in the femoro-patellar joint with respect to centering.

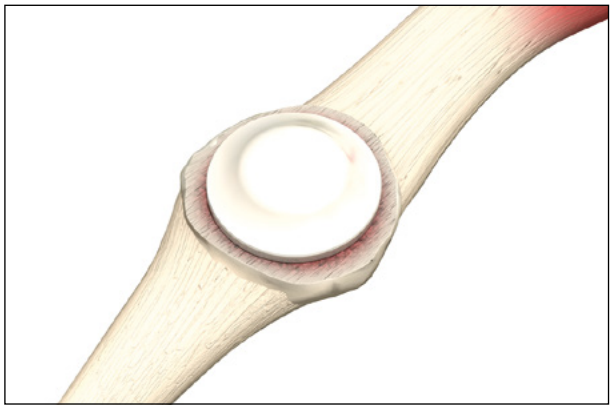


Fig. 74

Thoroughly clean the osteotomy surface.

Insertion of balanSys 3-Peg Patella cemented using the cement clamp.

Remove any marginal cement rests.

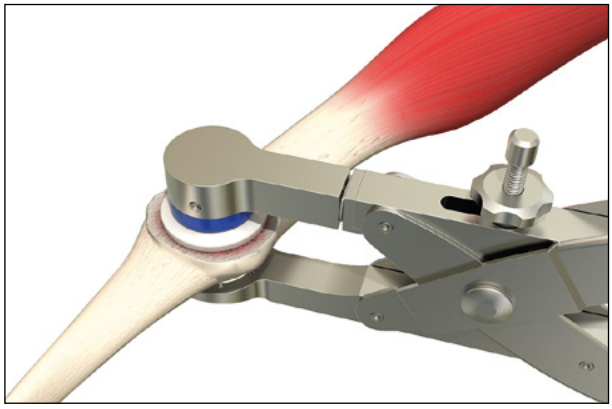


Fig. 75

After hardening of the cement remove the Cement Clamp.

After closing the joint capsule, make a final functional test and check the centred running of the patella.

Appendix

3 – Item numbers of the balanSys implants

balanSys Femur Components for CR / UC / RP

balanSys Femur, cemented

Item no.	Mediolat.	Size
72.15.3401	56 mm	XS left
72.15.3701	58 mm	S left
72.15.4001	60 mm	A left
72.15.4301	64 mm	B left
72.15.4601	68 mm	C left
72.15.4901	72 mm	D left
72.15.5201	76 mm	E left
72.15.5501	80 mm	F left
72.15.3402	56 mm	XS right
72.15.3702	58 mm	S right
72.15.4002	60 mm	A right
72.15.4302	64 mm	B right
72.15.4602	68 mm	C right
72.15.4902	72 mm	D right
72.15.5202	76 mm	E right
72.15.5502	80 mm	F right

Material: CoCrMo

balanSys Femur, uncemented

Item no.	Mediolat.	Size
73.15.3401TPS	56 mm	XS left
73.15.3701TPS	58 mm	S left
73.15.4001TPS	60 mm	A left
73.15.4301TPS	64 mm	B left
73.15.4601TPS	68 mm	C left
73.15.4901TPS	72 mm	D left
73.15.5201TPS	76 mm	E left
73.15.5501TPS	80 mm	F left
73.15.3402TPS	56 mm	XS right
73.15.3702TPS	58 mm	S right
73.15.4002TPS	60 mm	A right
73.15.4302TPS	64 mm	B right
73.15.4602TPS	68 mm	C right
73.15.4902TPS	72 mm	D right
73.15.5202TPS	76 mm	E right
73.15.5502TPS	80 mm	F right

Material: CoCrMo, TiCP coated

balanSys Fixed Bearing Components

balanSys CR PE Inlay

Item no.	Mediolat.	Size
74.30.5908	59 mm	8.0 mm
74.30.5910	59 mm	10.5 mm
74.30.5913	59 mm	13.0 mm
74.30.5915	59 mm	15.5 mm
74.30.6208	62 mm	8.0 mm
74.30.6210	62 mm	10.5 mm
74.30.6213	62 mm	13.0 mm
74.30.6215	62 mm	15.5 mm
74.30.6408	64 mm	8.0 mm
74.30.6410	64 mm	10.5 mm
74.30.6413	64 mm	13.0 mm
74.30.6415	64 mm	15.5 mm
74.30.6708	67 mm	8.0 mm
74.30.6710	67 mm	10.5 mm
74.30.6713	67 mm	13.0 mm
74.30.6715	67 mm	15.5 mm

Item no.	Mediolat.	Size
74.30.7008	70 mm	8.0 mm
74.30.7010	70 mm	10.5 mm
74.30.7013	70 mm	13.0 mm
74.30.7015	70 mm	15.5 mm
74.30.7508	75 mm	8.0 mm
74.30.7510	75 mm	10.5 mm
74.30.7513	75 mm	13.0 mm
74.30.7515	75 mm	15.5 mm
72.34.0170	80 mm	8.0 mm
72.34.0171	80 mm	10.5 mm
72.34.0172	80 mm	13.0 mm
72.34.0173	80 mm	15.5 mm
72.34.0174	85 mm	8.0 mm
72.34.0175	85 mm	10.5 mm
72.34.0176	85 mm	13.0 mm
72.34.0177	85 mm	15.5 mm

Material: UHMWPE

balanSys CR vitamys Inlay

Item no.	Mediolat.	Size
72.34.1000	59 mm	8.0 mm
72.34.1001	59 mm	9.0 mm
72.34.1002	59 mm	10.5 mm
72.34.1003	59 mm	11.5 mm
72.34.1004	59 mm	13.0 mm
72.34.1005	59 mm	15.5 mm
72.34.1010	62 mm	8.0 mm
72.34.1011	62 mm	9.0 mm
72.34.1012	62 mm	10.5 mm
72.34.1013	62 mm	11.5 mm
72.34.1014	62 mm	13.0 mm
72.34.1015	62 mm	15.5 mm
72.34.1020	64 mm	8.0 mm
72.34.1021	64 mm	9.0 mm
72.34.1022	64 mm	10.5 mm
72.34.1023	64 mm	11.5 mm
72.34.1024	64 mm	13.0 mm
72.34.1025	64 mm	15.5 mm
72.34.1030	67 mm	8.0 mm
72.34.1031	67 mm	9.0 mm
72.34.1032	67 mm	10.5 mm
72.34.1033	67 mm	11.5 mm
72.34.1034	67 mm	13.0 mm
72.34.1035	67 mm	15.5 mm

Item no.	Mediolat.	Size
72.34.1040	70 mm	8.0 mm
72.34.1041	70 mm	9.0 mm
72.34.1042	70 mm	10.5 mm
72.34.1043	70 mm	11.5 mm
72.34.1044	70 mm	13.0 mm
72.34.1045	70 mm	15.5 mm
72.34.1050	75 mm	8.0 mm
72.34.1051	75 mm	9.0 mm
72.34.1052	75 mm	10.5 mm
72.34.1053	75 mm	11.5 mm
72.34.1054	75 mm	13.0 mm
72.34.1055	75 mm	15.5 mm
72.34.1060	80 mm	8.0 mm
72.34.1061	80 mm	9.0 mm
72.34.1062	80 mm	10.5 mm
72.34.1063	80 mm	11.5 mm
72.34.1064	80 mm	13.0 mm
72.34.1065	80 mm	15.5 mm
72.34.1070	85 mm	8.0 mm
72.34.1071	85 mm	9.0 mm
72.34.1072	85 mm	10.5 mm
72.34.1073	85 mm	11.5 mm
72.34.1074	85 mm	13.0 mm
72.34.1075	85 mm	15.5 mm

Material: VEPE

balanSys UC PE Inlay

Item no.	Mediolat.	Size
77.30.5908	59 mm	8.0 mm
77.30.5910	59 mm	10.5 mm
77.30.5913	59 mm	13.0 mm
77.30.5915	59 mm	15.5 mm
77.30.5918	59 mm	18.0 mm
77.30.5920	59 mm	20.5 mm
77.30.6208	62 mm	8.0 mm
77.30.6210	62 mm	10.5 mm
77.30.6213	62 mm	13.0 mm
77.30.6215	62 mm	15.5 mm
77.30.6218	62 mm	18.0 mm
77.30.6220	62 mm	20.5 mm
77.30.6408	64 mm	8.0 mm
77.30.6410	64 mm	10.5 mm
77.30.6413	64 mm	13.0 mm
77.30.6415	64 mm	15.5 mm
77.30.6418	64 mm	18.0 mm
77.30.6420	64 mm	20.5 mm
77.30.6708	67 mm	8.0 mm
77.30.6710	67 mm	10.5 mm
77.30.6713	67 mm	13.0 mm
77.30.6715	67 mm	15.5 mm
77.30.6718	67 mm	18.0 mm
77.30.6720	67 mm	20.5 mm

Item no.	Mediolat.	Size
77.30.7008	70 mm	8.0 mm
77.30.7010	70 mm	10.5 mm
77.30.7013	70 mm	13.0 mm
77.30.7015	70 mm	15.5 mm
77.30.7018	70 mm	18.0 mm
77.30.7020	70 mm	20.5 mm
77.30.7508	75 mm	8.0 mm
77.30.7510	75 mm	10.5 mm
77.30.7513	75 mm	13.0 mm
77.30.7515	75 mm	15.5 mm
77.30.7518	75 mm	18.0 mm
77.30.7520	75 mm	20.5 mm
72.34.0182	80 mm	8.0 mm
72.34.0183	80 mm	10.5 mm
72.34.0184	80 mm	13.0 mm
72.34.0185	80 mm	15.5 mm
72.34.0186	80 mm	18.0 mm
72.34.0187	80 mm	20.5 mm
72.34.0188	85 mm	8.0 mm
72.34.0189	85 mm	10.5 mm
72.34.0190	85 mm	13.0 mm
72.34.0191	85 mm	15.5 mm
72.34.0192	85 mm	18.0 mm
72.34.0193	85 mm	20.5 mm

Material: UHMWPE

vitamys®

balanSys UC vitamys Inlay

Item no.	Mediolat.	Size
72.34.1100	59 mm	8.0 mm
72.34.1101	59 mm	9.0 mm
72.34.1102	59 mm	10.5 mm
72.34.1103	59 mm	11.5 mm
72.34.1104	59 mm	13.0 mm
72.34.1105	59 mm	15.5 mm
72.34.1106	59 mm	18.0 mm
72.34.1107*	59 mm	20.5 mm
72.34.1110	62 mm	8.0 mm
72.34.1111	62 mm	9.0 mm
72.34.1112	62 mm	10.5 mm
72.34.1113	62 mm	11.5 mm
72.34.1114	62 mm	13.0 mm
72.34.1115	62 mm	15.5 mm
72.34.1116	62 mm	18.0 mm
72.34.1117*	62 mm	20.5 mm
72.34.1120	64 mm	8.0 mm
72.34.1121	64 mm	9.0 mm
72.34.1122	64 mm	10.5 mm
72.34.1123	64 mm	11.5 mm
72.34.1124	64 mm	13.0 mm
72.34.1125	64 mm	15.5 mm
72.34.1126	64 mm	18.0 mm
72.34.1127*	64 mm	20.5 mm
72.34.1130	67 mm	8.0 mm
72.34.1131	67 mm	9.0 mm
72.34.1132	67 mm	10.5 mm
72.34.1133	67 mm	11.5 mm
72.34.1134	67 mm	13.0 mm
72.34.1135	67 mm	15.5 mm
72.34.1136	67 mm	18.0 mm
72.34.1137*	67 mm	20.5 mm

Item no.	Mediolat.	Size
72.34.1140	70 mm	8.0 mm
72.34.1141	70 mm	9.0 mm
72.34.1142	70 mm	10.5 mm
72.34.1143	70 mm	11.5 mm
72.34.1144	70 mm	13.0 mm
72.34.1145	70 mm	15.5 mm
72.34.1146	70 mm	18.0 mm
72.34.1147*	70 mm	20.5 mm
72.34.1150	75 mm	8.0 mm
72.34.1151	75 mm	9.0 mm
72.34.1152	75 mm	10.5 mm
72.34.1153	75 mm	11.5 mm
72.34.1154	75 mm	13.0 mm
72.34.1155	75 mm	15.5 mm
72.34.1156	75 mm	18.0 mm
72.34.1157*	75 mm	20.5 mm
72.34.1160	80 mm	8.0 mm
72.34.1161	80 mm	9.0 mm
72.34.1162	80 mm	10.5 mm
72.34.1163	80 mm	11.5 mm
72.34.1164	80 mm	13.0 mm
72.34.1165	80 mm	15.5 mm
72.34.1166	80 mm	18.0 mm
72.34.1167*	80 mm	20.5 mm
72.34.1170	85 mm	8.0 mm
72.34.1171	85 mm	9.0 mm
72.34.1172	85 mm	10.5 mm
72.34.1173	85 mm	11.5 mm
72.34.1174	85 mm	13.0 mm
72.34.1175	85 mm	15.5 mm
72.34.1176	85 mm	18.0 mm
72.34.1177*	85 mm	20.5 mm

Material: VEPE

*on request

balanSys PS Tibial Plateau, cemented

Item no.	Mediolateral
79.15.0400	59 mm
79.15.0401	62 mm
79.15.0056	64 mm
79.15.0402	67 mm
79.15.0057	70 mm
79.15.0058	75 mm
79.15.0059	80 mm
79.15.0060	85 mm

Material: CoCrMo

balanSys Mobile Bearing RP Components

balanSys RP PE Inlay

Item no.	Femur	Size
72.34.0200	XS	8.0 mm
72.34.0201	XS	10.5 mm
72.34.0202	XS	13.0 mm
72.34.0203	XS	15.5 mm
72.34.0206	S	8.0 mm
72.34.0207	S	10.5 mm
72.34.0208	S	13.0 mm
72.34.0209	S	15.5 mm
78.30.6208	A	8.0 mm
78.30.6210	A	10.5 mm
78.30.6213	A	13.0 mm
78.30.6215	A	15.5 mm
78.30.6608	B	8.0 mm
78.30.6610	B	10.5 mm
78.30.6613	B	13.0 mm
78.30.6615	B	15.5 mm

Item no.	Femur	Size
78.30.7008	C	8.0 mm
78.30.7010	C	10.5 mm
78.30.7013	C	13.0 mm
78.30.7015	C	15.5 mm
78.30.7408	D	8.0 mm
78.30.7410	D	10.5 mm
78.30.7413	D	13.0 mm
78.30.7415	D	15.5 mm
78.30.7808	E	8.0 mm
78.30.7810	E	10.5 mm
78.30.7813	E	13.0 mm
78.30.7815	E	15.5 mm
72.34.0242	F	8.0 mm
72.34.0243	F	10.5 mm
72.34.0244	F	13.0 mm
72.34.0245	F	15.5 mm

Material: UHMWPE, FeCrNiMoMn (Contrast balls, optional)

balanSys RP vitamys Inlay

Item no.	Femur	Size
72.34.1200	XS	8.0 mm
72.34.1201	XS	9.0 mm
72.34.1202	XS	10.5 mm
72.34.1203	XS	11.5 mm
72.34.1204	XS	13.0 mm
72.34.1205	XS	15.5 mm
72.34.1210	S	8.0 mm
72.34.1211	S	9.0 mm
72.34.1212	S	10.5 mm
72.34.1213	S	11.5 mm
72.34.1214	S	13.0 mm
72.34.1215	S	15.5 mm
72.34.1220	A	8.0 mm
72.34.1221	A	9.0 mm
72.34.1222	A	10.5 mm
72.34.1223	A	11.5 mm
72.34.1224	A	13.0 mm
72.34.1225	A	15.5 mm
72.34.1230	B	8.0 mm
72.34.1231	B	9.0 mm
72.34.1232	B	10.5 mm
72.34.1233	B	11.5 mm
72.34.1234	B	13.0 mm
72.34.1235	B	15.5 mm

Item no.	Femur	Size
72.34.1240	C	8.0 mm
72.34.1241	C	9.0 mm
72.34.1242	C	10.5 mm
72.34.1243	C	11.5 mm
72.34.1244	C	13.0 mm
72.34.1245	C	15.5 mm
72.34.1250	D	8.0 mm
72.34.1251	D	9.0 mm
72.34.1252	D	10.5 mm
72.34.1253	D	11.5 mm
72.34.1254	D	13.0 mm
72.34.1255	D	15.5 mm
72.34.1260	E	8.0 mm
72.34.1261	E	9.0 mm
72.34.1262	E	10.5 mm
72.34.1263	E	11.5 mm
72.34.1264	E	13.0 mm
72.34.1265	E	15.5 mm
72.34.1270	F	8.0 mm
72.34.1271	F	9.0 mm
72.34.1272	F	10.5 mm
72.34.1273	F	11.5 mm
72.34.1274	F	13.0 mm
72.34.1275	F	15.5 mm

Material: VEPE

balanSys RP Tibial Plateau, cemented

Item no.	Mediolateral
72.34.0059	59 mm
72.34.0060	62 mm
72.34.0061	64 mm
72.34.0062	67 mm
72.34.0063	70 mm
72.34.0064	75 mm
72.34.0065	80 mm
72.34.0066	85 mm

Material: CoCrMo

balanSys PS Components

balanSys PS Femur, cemented

Item no.	Mediolat.	Size
79.15.0999	56 mm	XS right
79.15.1000	58 mm	S right
79.15.0001	60 mm	A right
79.15.0002	64 mm	B right
79.15.0003	68 mm	C right
79.15.0004	72 mm	D right
79.15.0005	76 mm	E right
79.15.1006	80 mm	F right
79.15.1009	56 mm	XS left
79.15.1010	58 mm	S left
79.15.0011	60 mm	A left
79.15.0012	64 mm	B left
79.15.0013	68 mm	C left
79.15.0014	72 mm	D left
79.15.0015	76 mm	E left
79.15.1016	80 mm	F left

Material: CoCrMo

balanSys PS PE Inlay

Item no.	Mediolat.	Size
79.30.9986	59 mm	8.0 mm
79.30.9987	59 mm	10.5 mm
79.30.9988	59 mm	13.0 mm
79.30.9989	59 mm	15.5 mm
79.30.9990	59 mm	18.0 mm
79.30.9991	59 mm	20.5 mm
79.30.9992	59 mm	23.0 mm
79.30.9993	62 mm	8.0 mm
79.30.9994	62 mm	10.5 mm
79.30.9995	62 mm	13.0 mm
79.30.9996	62 mm	15.5 mm
79.30.9997	62 mm	18.0 mm
79.30.9998	62 mm	20.5 mm
79.30.9999	62 mm	23.0 mm
79.30.0200	64 mm	8.0 mm
79.30.0201	64 mm	10.5 mm
79.30.0202	64 mm	13.0 mm
79.30.0203	64 mm	15.5 mm
79.30.0204	64 mm	18.0 mm
79.30.0205	64 mm	20.5 mm
79.30.0206	64 mm	23.0 mm
79.30.0210	67 mm	8.0 mm
79.30.0211	67 mm	10.5 mm
79.30.0212	67 mm	13.0 mm
79.30.0213	67 mm	15.5 mm
79.30.0214	67 mm	18.0 mm
79.30.0215	67 mm	20.5 mm
79.30.0216	67 mm	23.0 mm

Item no.	Mediolat.	Size
79.30.0010	70 mm	8.0 mm
79.30.0011	70 mm	10.5 mm
79.30.0012	70 mm	13.0 mm
79.30.0013	70 mm	15.5 mm
79.30.0014	70 mm	18.0 mm
79.30.0015	70 mm	20.5 mm
79.30.0016	70 mm	23.0 mm
79.30.0020	75 mm	8.0 mm
79.30.0021	75 mm	10.5 mm
79.30.0022	75 mm	13.0 mm
79.30.0023	75 mm	15.5 mm
79.30.0024	75 mm	18.0 mm
79.30.0025	75 mm	20.5 mm
79.30.0026	75 mm	23.0 mm
72.34.0255	80 mm	8.0 mm
72.34.0256	80 mm	10.5 mm
72.34.0257	80 mm	13.0 mm
72.34.0258	80 mm	15.5 mm
72.34.0259	80 mm	18.0 mm
72.34.0260	80 mm	20.5 mm
72.34.0261	80 mm	23.0 mm
72.34.0262	85 mm	8.0 mm
72.34.0263	85 mm	10.5 mm
72.34.0264	85 mm	13.0 mm
72.34.0265	85 mm	15.5 mm
72.34.0266	85 mm	18.0 mm
72.34.0267	85 mm	20.5 mm
72.34.0268	85 mm	23.0 mm

Material: UHMWPE

balanSys PS vitamys Inlay

Item no.	Mediolat.	Size
72.34.1300	59 mm	8.0 mm
72.34.1301	59 mm	9.0 mm
72.34.1302	59 mm	10.5 mm
72.34.1303	59 mm	11.5 mm
72.34.1304	59 mm	13.0 mm
72.34.1305	59 mm	15.5 mm
72.34.1306	59 mm	18.0 mm
72.34.1307*	59 mm	20.5 mm
72.34.1310	62 mm	8.0 mm
72.34.1311	62 mm	9.0 mm
72.34.1312	62 mm	10.5 mm
72.34.1313	62 mm	11.5 mm
72.34.1314	62 mm	13.0 mm
72.34.1315	62 mm	15.5 mm
72.34.1316	62 mm	18.0 mm
72.34.1317*	62 mm	20.5 mm
72.34.1320	64 mm	8.0 mm
72.34.1321	64 mm	9.0 mm
72.34.1322	64 mm	10.5 mm
72.34.1323	64 mm	11.5 mm
72.34.1324	64 mm	13.0 mm
72.34.1325	64 mm	15.5 mm
72.34.1326	64 mm	18.0 mm
72.34.1327*	64 mm	20.5 mm
72.34.1330	67 mm	8.0 mm
72.34.1331	67 mm	9.0 mm
72.34.1332	67 mm	10.5 mm
72.34.1333	67 mm	11.5 mm
72.34.1334	67 mm	13.0 mm
72.34.1335	67 mm	15.5 mm
72.34.1336	67 mm	18.0 mm
72.34.1337*	67 mm	20.5 mm

Item no.	Mediolat.	Size
72.34.1340	70 mm	8.0 mm
72.34.1341	70 mm	9.0 mm
72.34.1342	70 mm	10.5 mm
72.34.1343	70 mm	11.5 mm
72.34.1344	70 mm	13.0 mm
72.34.1345	70 mm	15.5 mm
72.34.1346	70 mm	18.0 mm
72.34.1347*	70 mm	20.5 mm
72.34.1350	75 mm	8.0 mm
72.34.1351	75 mm	9.0 mm
72.34.1352	75 mm	10.5 mm
72.34.1353	75 mm	11.5 mm
72.34.1354	75 mm	13.0 mm
72.34.1355	75 mm	15.5 mm
72.34.1356	75 mm	18.0 mm
72.34.1357*	75 mm	20.5 mm
72.34.1360	80 mm	8.0 mm
72.34.1361	80 mm	9.0 mm
72.34.1362	80 mm	10.5 mm
72.34.1363	80 mm	11.5 mm
72.34.1364	80 mm	13.0 mm
72.34.1365	80 mm	15.5 mm
72.34.1366	80 mm	18.0 mm
72.34.1367*	80 mm	20.5 mm
72.34.1370	85 mm	8.0 mm
72.34.1371	85 mm	9.0 mm
72.34.1372	85 mm	10.5 mm
72.34.1373	85 mm	11.5 mm
72.34.1374	85 mm	13.0 mm
72.34.1375	85 mm	15.5 mm
72.34.1376	85 mm	18.0 mm
72.34.1377*	85 mm	20.5 mm

Material: VEPE

*on request

balanSys TiNbN Components

balanSys Femur TiNbN, cemented

Item no.	Mediolat.	Size	Item no.	Mediolat.	Size
72.23.3401	56 mm	XS left	72.23.3402	56 mm	XS right
72.23.3701	58 mm	S left	72.23.3702	58 mm	S right
72.23.4001	60 mm	A left	72.23.4002	60 mm	A right
72.23.4301	64 mm	B left	72.23.4302	64 mm	B right
72.23.4601	68 mm	C left	72.23.4602	68 mm	C right
72.23.4901	72 mm	D left	72.23.4902	72 mm	D right
72.23.5201	76 mm	E left	72.23.5202	76 mm	E right
72.23.5501	80 mm	F left	72.23.5502	80 mm	F right

Material: CoCrMo, TiNbN coating

balanSys PS Tibial Plateau TiNbN Fix, cemented

Item no.	Mediolateral	Item no.	Mediolateral
79.23.0400	59 mm	79.23.0057	70 mm
79.23.0401	62 mm	79.23.0058	75 mm
79.23.0056	64 mm	79.23.0059	80 mm
79.23.0402	67 mm	79.23.0060	85 mm

Material: CoCrMo, TiNbN coating

balanSys PS Femur TiNbN, cemented

Item no.	Mediolat.	Size	Item no.	Mediolat.	Size
79.23.1009	56 mm	XS left	79.23.0999	56 mm	XS right
79.23.1010	58 mm	S left	79.23.1000	58 mm	S right
79.23.0011	60 mm	A left	79.23.0001	60 mm	A right
79.23.0012	64 mm	B left	79.23.0002	64 mm	B right
79.23.0013	68 mm	C left	79.23.0003	68 mm	C right
79.23.0014	72 mm	D left	79.23.0004	72 mm	D right
79.23.0015	76 mm	E left	79.23.0005	76 mm	E right
79.23.1016	80 mm	F left	79.23.1006	80 mm	F right

Material: CoCrMo, TiNbN coating

balanSys 3-Peg Patella FLAT Components

Item no.	Diameter Ø
72.34.0049	26 mm
72.34.0050	28 mm
72.34.0051	31 mm
72.34.0052	34 mm
72.34.0053	37 mm

Material: UHMWPE, FeCrNiMoMn (Contrast balls)

balanSys 3-Peg Patella Components

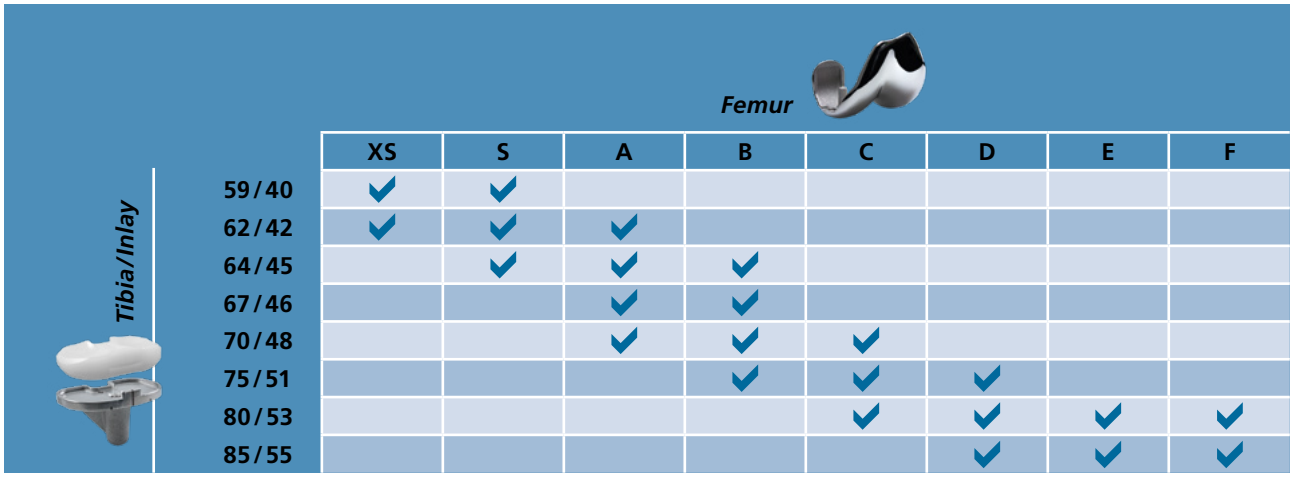
Item no.	Diameter Ø
72.30.0128	28 mm
72.30.0131	31 mm
72.30.0134	34 mm
72.30.0137	37 mm

Material: UHMWPE, FeCrNiMoMn (Contrast balls)

Appendix

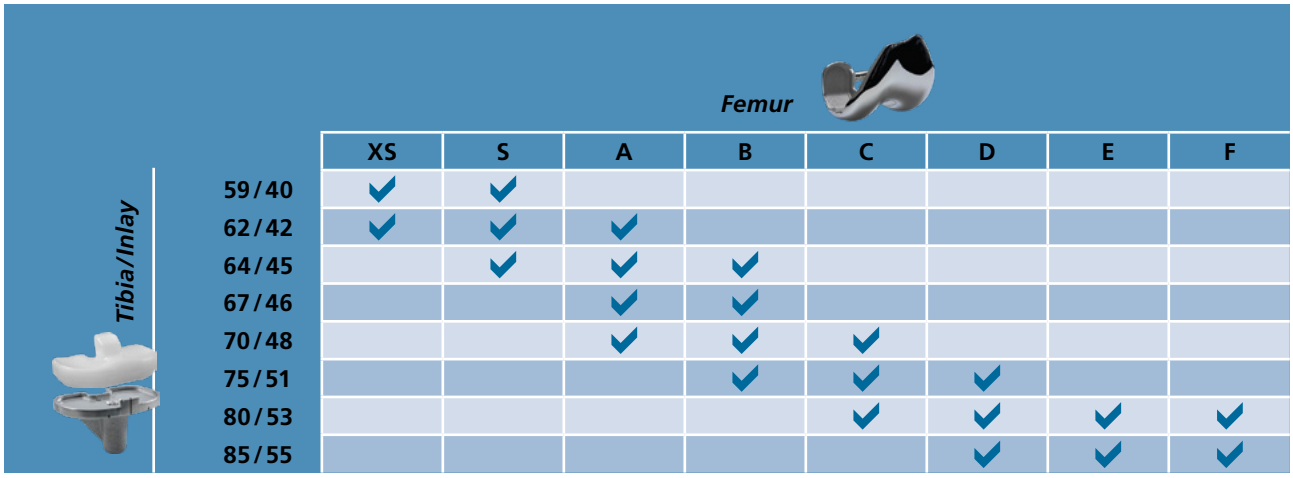
4 – balanSys implant size and compatibility

balanSys Fixed Bearing CR and UC



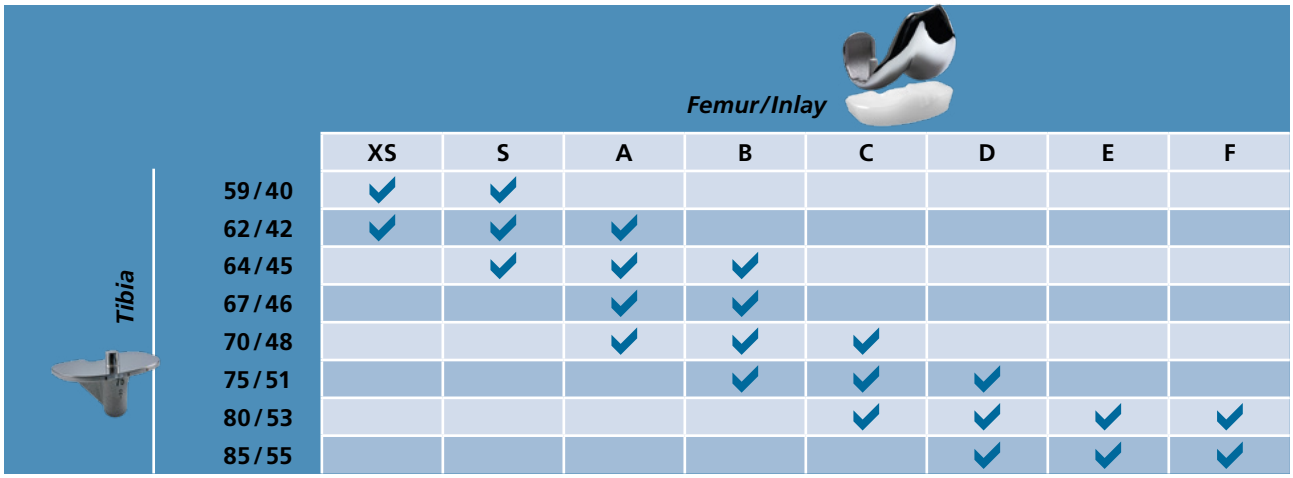
Tibia/Inlay	XS	S	A	B	C	D	E	F
59/40	✓	✓						
62/42	✓	✓	✓					
64/45		✓	✓	✓				
67/46			✓	✓				
70/48			✓	✓	✓			
75/51				✓	✓	✓		
80/53					✓	✓	✓	✓
85/55						✓	✓	✓

balanSys PS



Tibia/Inlay	XS	S	A	B	C	D	E	F
59/40	✓	✓						
62/42	✓	✓	✓					
64/45		✓	✓	✓				
67/46			✓	✓				
70/48			✓	✓	✓			
75/51				✓	✓	✓		
80/53					✓	✓	✓	✓
85/55						✓	✓	✓

balanSys Mobile Bearing RP



Tibia	XS	S	A	B	C	D	E	F
59/40	✓	✓						
62/42	✓	✓	✓					
64/45		✓	✓	✓				
67/46			✓	✓				
70/48			✓	✓	✓			
75/51				✓	✓	✓		
80/53					✓	✓	✓	✓
85/55						✓	✓	✓

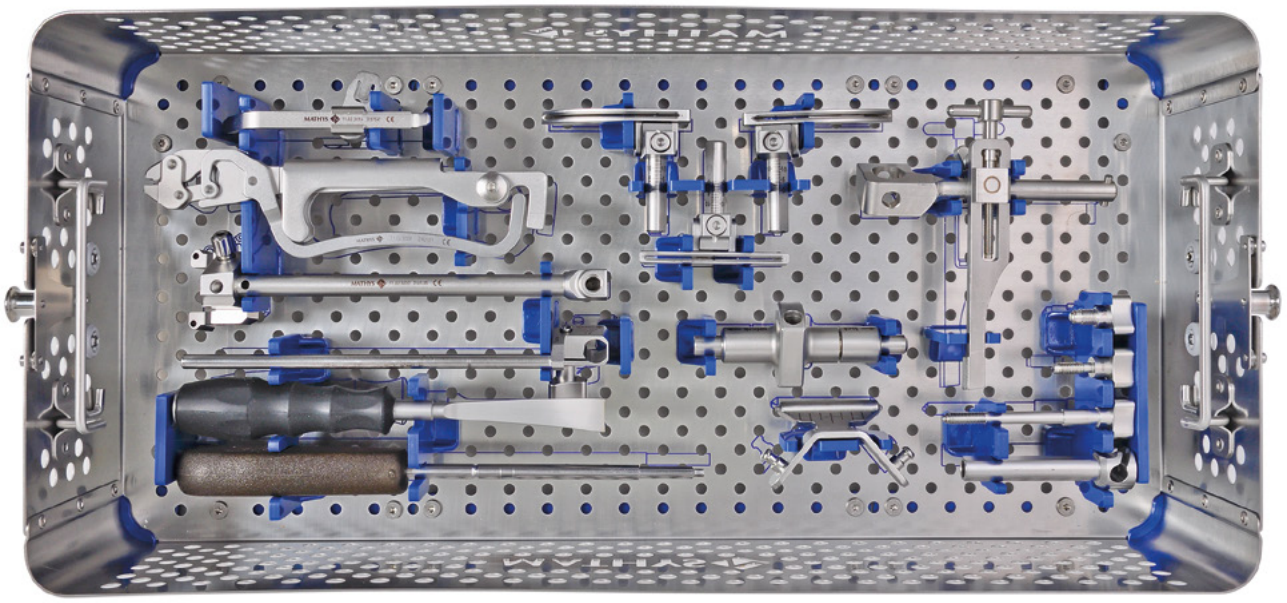
Appendix

5 – Item numbers of the balanSys instruments

Before each surgery, instruments should be checked for damage or deformation.
Use only undamaged instruments. Do not use trial components with marks or scratches.

balanSys Basic Set 71.34.9000A

No Picture / 71.34.0545 **balanSys Basic Set Lid**



71.34.0546 **balanSys Basic Set Tray**

Item no.	Description	Qty.
71.02.3096	balanSys tibial stylus	1

Item no.	Description	Qty.
71.02.3006	balanSys pliers	1

Item no.	Description	Qty.
71.02.3032	balanSys Trs. aiming device proximal	1

Item no.	Description	Qty.
71.02.3034	balanSys Trs. aiming device distal	1

Item no.	Description	Qty.
71.34.0686	balanSys osteophyte chisel, curved	1

Item no.	Description	Qty.
314.270	Screwdriver, hex., 3.5	1

Item no.	Description	Qty.
71.02.4018	balanSys tibial cutting guide 1.3	1

Item no.	Description	Qty.
71.02.3083	balanSys Trs. tibial cut. guide ri. LIS	1

Item no.	Description	Qty.
71.02.3084	balanSys Trs. tibial cut. guide lft LIS	***1***

Item no.	Description	Qty.
71.02.3043	balanSys Trs. handle f/intramedullary rod	1

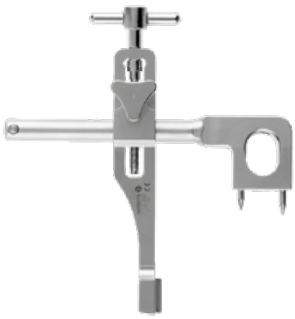
Item no.	Description	Qty.
71.02.3035	balanSys Trs. ankle holder	1

Item no.	Description	Qty.
77.02.0041	balanSys Trs. connecting screw	1

Item no.	Description	Qty.
77.02.0019	balanSys Trs. screw	1

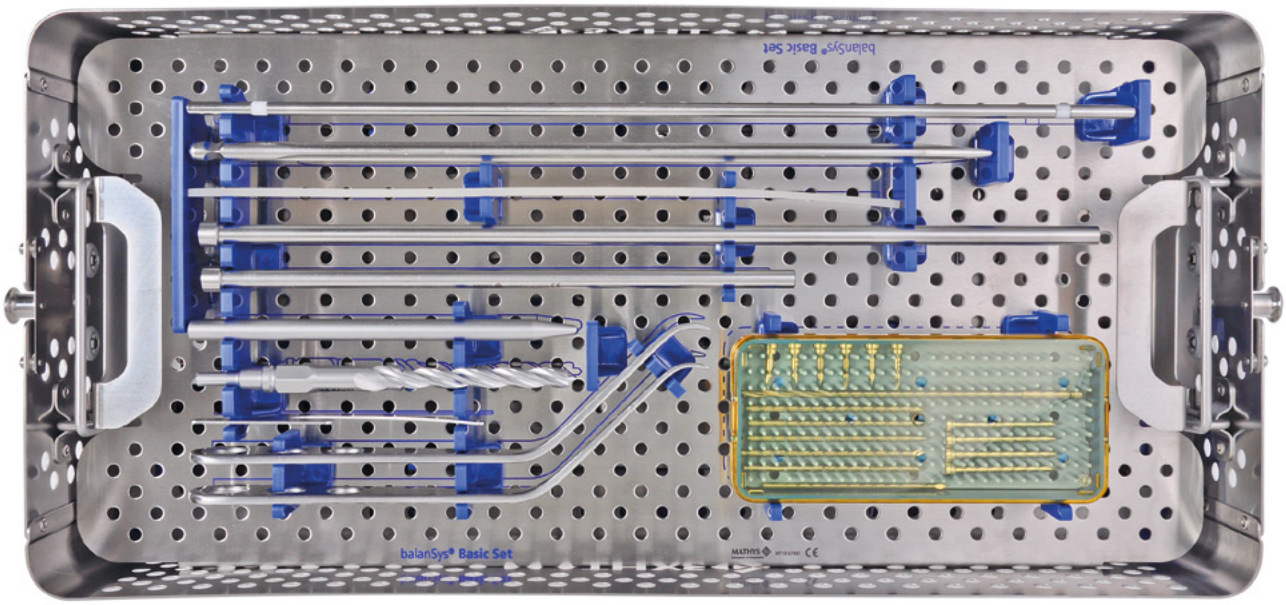
Item no.	Description	Qty.
77.02.0043	balanSys Trs. locking bolt	1

Item no.	Description	Qty.
71.02.3036	balanSys Trs. distal connector	1



Item no.	Description	Qty.
71.02.3041	balanSys Trs. intramedullary shackle	1

balanSys Basic Set 71.34.9000A



71.34.0547 **balanSys Basic Set Tray Insert**

Item no.	Description	Qty.
70.04.0109	balanSys alignment rod centre piece	1

Item no.	Description	Qty.
71.02.3042	balanSys Trs. intramedullary rod	1

Item no.	Description	Qty.
71.02.1005	balanSys Trs. rubber band 3x25x300	1

Item no.	Description	Qty.
70.04.0111	balanSys alignment rod long	1

Item no.	Description	Qty.
70.04.0110	balanSys alignment rod short	1

Item no.	Description	Qty.
71.02.3014	balanSys impaction/extraction rod	1

Item no.	Description	Qty.
71.02.3054	balanSys pin 3.2/80	6

Item no.	Description	Qty.
71.34.0108	balanSys Pin with Head 3.2/20	6

Item no.	Description	Qty.
71.02.3003	Pin with head, Ø3.2/6.5x52	4

Item no.	Description	Qty.
71.34.0100	balanSys drill bit 8.5/11 mm	1

Item no.	Description	Qty.
315.310	AO Drill bit 3.2	1

Item no.	Description	Qty.
71.34.0107	balanSys feeler plate 1.3	1

Item no.	Description	Qty.
71.02.3005	balanSys bone retractor	2

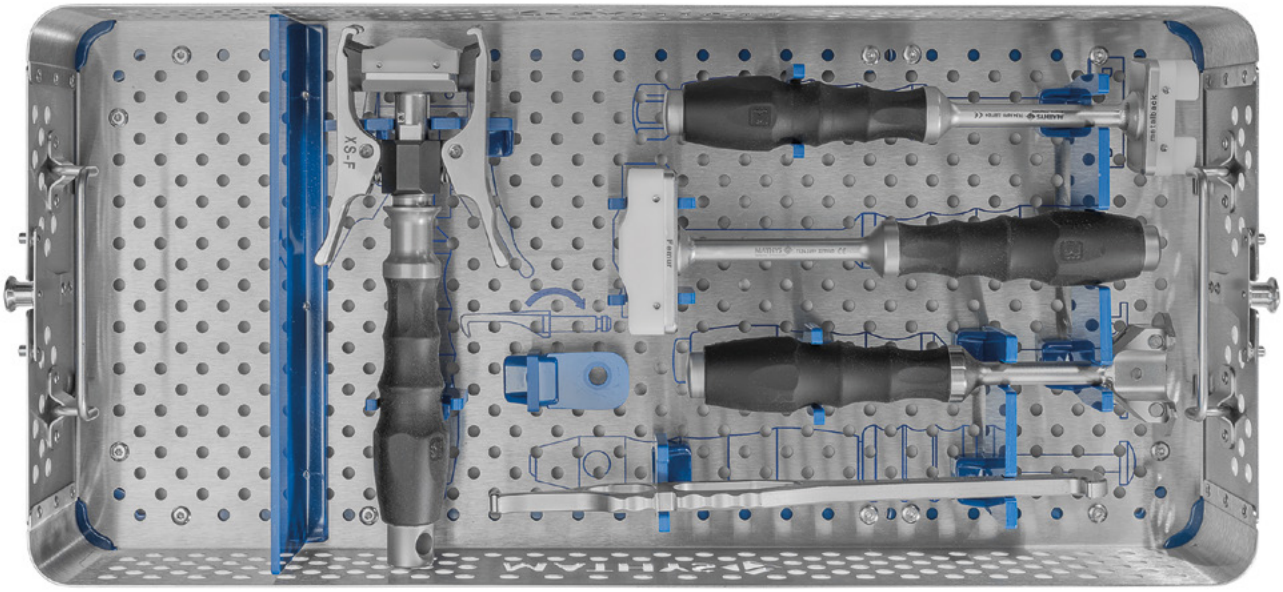
Optional instruments

Item no.	Description	Qty.
71.34.0647	Drill Pin 3.2 mm x89 mm	6

Item no.	Description	Qty.
71.34.0787	Quick Coupling Square 2.25 (Adapter for Drill Pin)	1

balanSys Basic Trial Set Essential 71.34.9005A

No Picture / 71.34.0203 **balanSys Trial Set Essential No. 1 Lid**



71.34.0204 **balanSys Trial Set Essential No. 1 Tray**

Item no.	Description	Qty.
71.34.0744	balanSys Femur Holder XS–F	1

Item no.	Description	Qty.
71.34.0698	balanSys tibial impactor	1

Item no.	Description	Qty.
71.34.0699	balanSys femoral impactor	1

Item no.	Description	Qty.
71.34.0240	balanSys positioner for tibial plateau	1

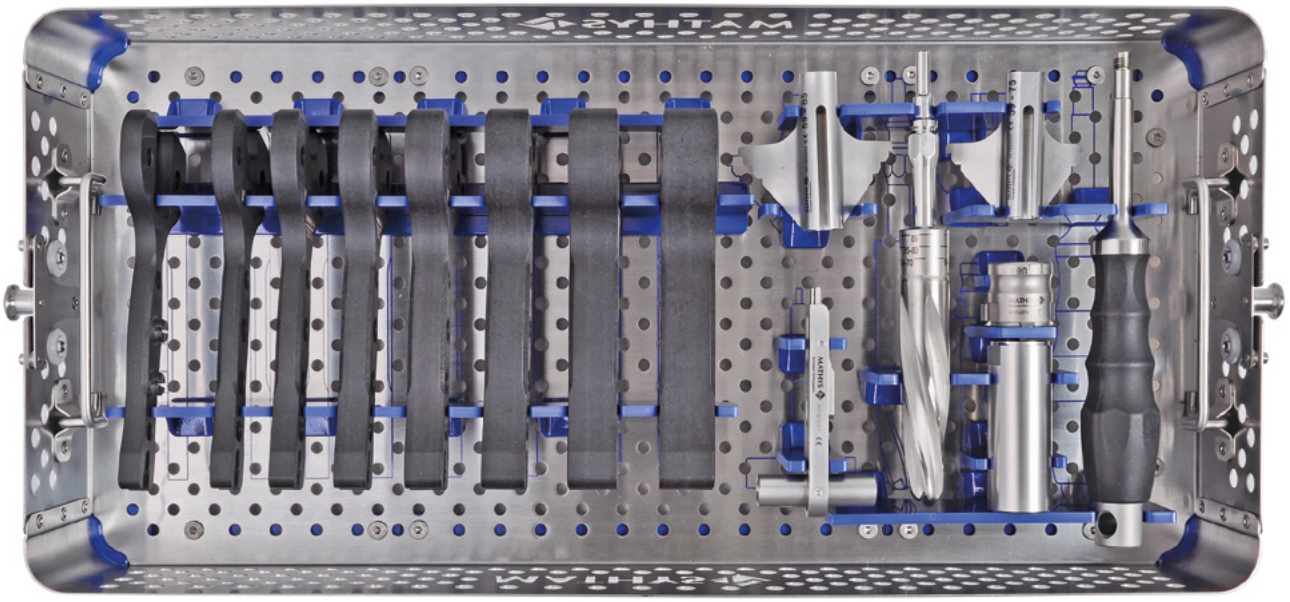
Item no.	Description	Qty.
71.34.0788	balanSys Femur Extractor	1

Optional instruments

Item no.	Description	Qty.
71.34.0745	balanSys Femur Holder XS–D	1

balanSys Basic Trial Set Essential 71.34.9005A

No Picture / 71.34.0205 **balanSys Trial Set Essential No. 2 Lid**



71.34.0206 **balanSys Trial Set Essential No. 2 Tray**

Item no.	Description	Qty.
79.02.0651	balanSys Spacer block femur 9	1

Item no.	Description	Qty.
79.02.0640	balanSys Spacer block tibia 8	1
71.34.0947*	balanSys Spacer block tibia 9	1
79.02.0641	balanSys Spacer block tibia 10.5	1
71.34.0948*	balanSys Spacer block tibia 11.5	1
79.02.0642	balanSys Spacer block tibia 13	1
79.02.0643	balanSys Spacer block tibia 15.5	1
79.02.0644	balanSys Spacer block tibia 18	1
79.02.0645	balanSys Spacer block tibia 20.5	1
79.02.0646	balanSys Spacer block tibia 23	1

* balanSys PE Inlays 9 mm and 11.5 mm are available in vitamys only.

Item no.	Description	Qty.
71.34.0198	balanSys Fin Chisel 59–85	1
71.34.0199	balanSys Fin Chisel 59–75	1

Item no.	Description	Qty.
71.34.0197	balanSys Chisel Centering Guide	1

Item no.	Description	Qty.
71.34.0196	balanSys holder tibial template	1

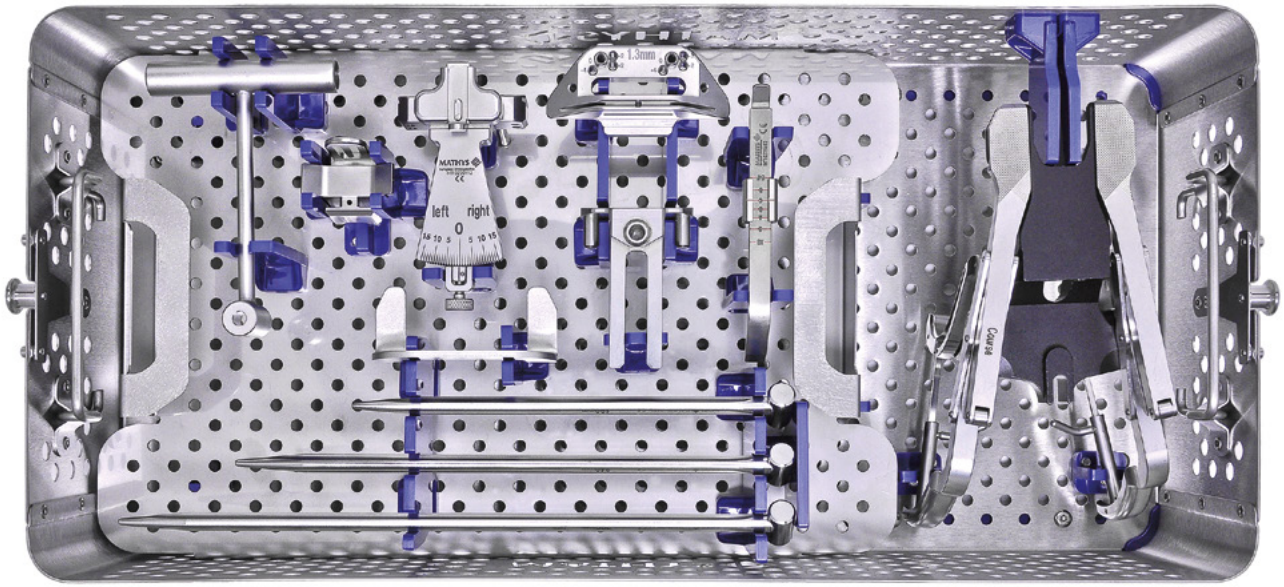
Item no.	Description	Qty.
71.34.0200	balanSys Reamer	1

Item no.	Description	Qty.
71.34.0201	balanSys Reamer Guide	1

Item no.	Description	Qty.
71.34.0700	balanSys handle for tib. cutting chisel	1

balanSys Combination 4in1 71.34.9040A

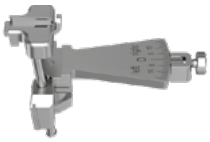
No Picture / 71.34.0185 **balanSys combination 4in1 Lid**



71.34.0187 **balanSys Combination 4in1 Tray Insert**
71.34.0186 **balanSys Combination 4in1 Tray**

Item no.	Description	Qty.
71.02.2104	balanSys intramedullary rod 190	1
71.02.2105	balanSys intramedullary rod 240	1
71.02.2106	balanSys intramedullary rod 290	1

Item no.	Description	Qty.
71.02.2110	balanSys handle f/intramedullary rod	1



Item no.	Description	Qty.
71.34.0115	balanSys Angle guide	1

Item no.	Description	Qty.
71.34.0116	adapter for angle guide	1

Item no.	Description	Qty.
71.34.0143	balanSys Femoral feeler 8G	1

Item no.	Description	Qty.
71.34.0168	balanSys Spacer 8G	1

Item no.	Description	Qty.
71.34.0606	balanSys Drill Guide 4in1 CuttBlock 8G	1

Item no.	Description	Qty.
71.02.3018	balanSys ligament tensor	1

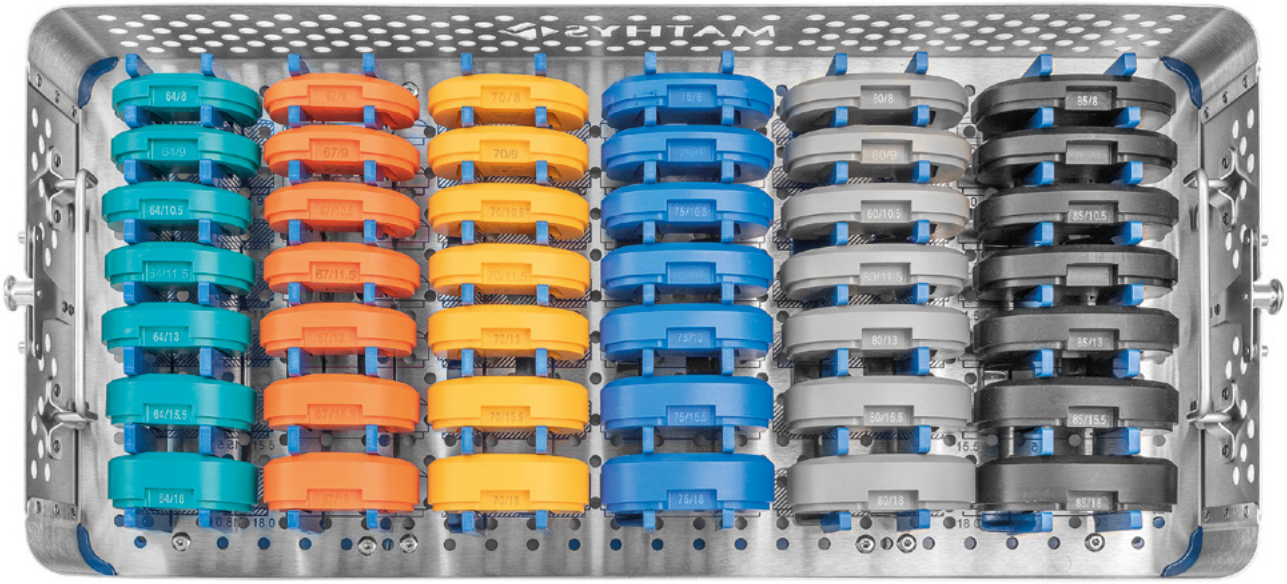
Item no.	Description	Qty.
71.34.0121	balanSys Distal Cutting Guide STANDARD	1

Optional instruments
NOT part of the standard configuration and must be ordered separately:

Item no.	Description	Qty.
71.34.0128	balanSys Distal Cutting Guide MINI	1

balanSys Trial Set CR / UC No. 1

No Picture / 71.34.0241 **balanSys Trial Set CR / UC No. 1 Lid**



71.34.1075 **balanSys Trial Set 7-CR / UC No. 1 Tray**

balanSys Trial Set CR / UC
Choose your size configuration

Set-no.	Femur	Tibia
71.34.9050A	A/B/C/D/E	64/67/70/75/80/85
71.34.0789A	XS/S/F	59/62

Item no.	Description	Qty.
71.34.0357	balanSys PE Trial Inlay 59/8	1
71.34.0949*	balanSys PE Trial Inlay 59/9	1
71.34.0358	balanSys PE Trial Inlay 59/10.5	1
71.34.0950*	balanSys PE Trial Inlay 59/11.5	1
71.34.0359	balanSys PE Trial Inlay 59/13	1
71.34.0360	balanSys PE Trial Inlay 59/15.5	1
71.34.0361	balanSys PE Trial Inlay 59/18	1
71.34.0362	balanSys PE Trial Inlay 59/20.5	1
71.34.0210	balanSys PE Trial Inlay 62/8	1
71.34.0951*	balanSys PE Trial Inlay 62/9	1
71.34.0211	balanSys PE Trial Inlay 62/10.5	1
71.34.0952*	balanSys PE Trial Inlay 62/11.5	1
71.34.0212	balanSys PE Trial Inlay 62/13	1
71.34.0213	balanSys PE Trial Inlay 62/15.5	1
71.34.0214	balanSys PE Trial Inlay 62/18	1
71.34.0215	balanSys PE Trial Inlay 62/20.5	1
71.34.0216	balanSys PE Trial Inlay 64/8	1
71.34.0953*	balanSys PE Trial Inlay 64/9	1
71.34.0217	balanSys PE Trial Inlay 64/10.5	1
71.34.0954*	balanSys PE Trial Inlay 64/11.5	1
71.34.0218	balanSys PE Trial Inlay 64/13	1
71.34.0219	balanSys PE Trial Inlay 64/15.5	1
71.34.0220	balanSys PE Trial Inlay 64/18	1
71.34.0221	balanSys PE Trial Inlay 64/20.5	1
71.34.0222	balanSys PE Trial Inlay 67/8	1
71.34.0955*	balanSys PE Trial Inlay 67/9	1
71.34.0223	balanSys PE Trial Inlay 67/10.5	1
71.34.0956*	balanSys PE Trial Inlay 67/11.5	1
71.34.0224	balanSys PE Trial Inlay 67/13	1
71.34.0225	balanSys PE Trial Inlay 67/15.5	1
71.34.0226	balanSys PE Trial Inlay 67/18	1
71.34.0227	balanSys PE Trial Inlay 67/20.5	1
71.34.0477	balanSys PE Trial Inlay 70/8	1
71.34.0957*	balanSys PE Trial Inlay 70/9	1
71.34.0478	balanSys PE Trial Inlay 70/10.5	1
71.34.0958*	balanSys PE Trial Inlay 70/11.5	1
71.34.0479	balanSys PE Trial Inlay 70/13	1
71.34.0480	balanSys PE Trial Inlay 70/15.5	1
71.34.0481	balanSys PE Trial Inlay 70/18	1
71.34.0482	balanSys PE Trial Inlay 70/20.5	1

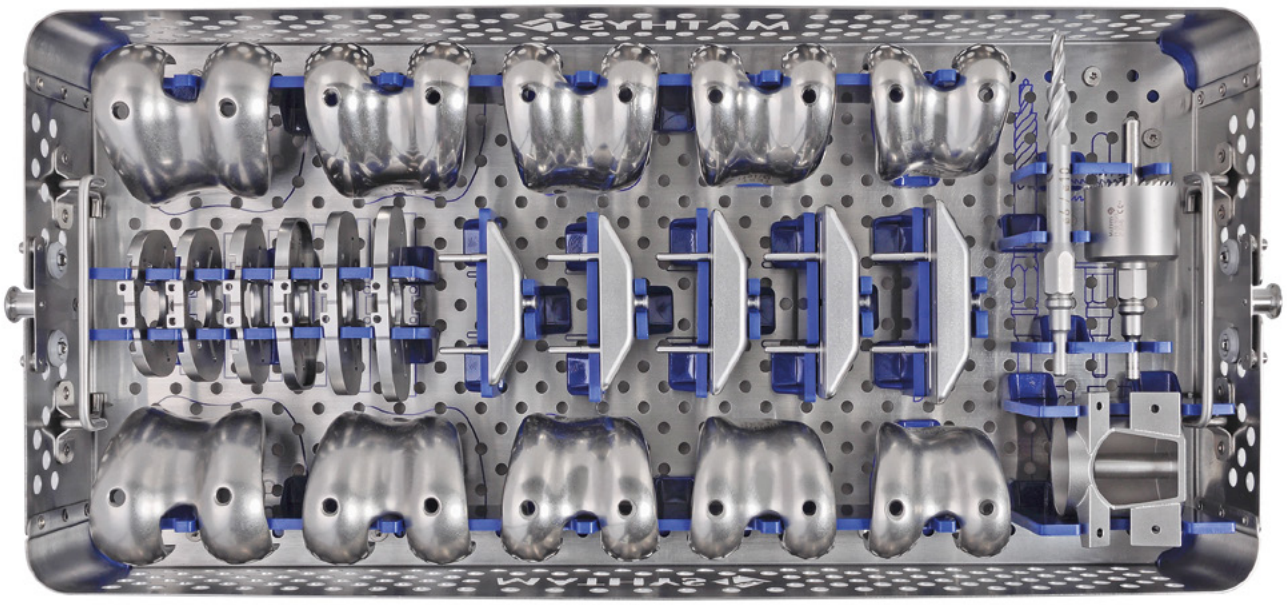
* balanSys PE Inlays 9 mm and 11.5 mm are available in vitamys only.

Item no.	Description	Qty.
71.34.0483	balanSys PE Trial Inlay 75/8	1
71.34.0959*	balanSys PE Trial Inlay 75/9	1
71.34.0484	balanSys PE Trial Inlay 75/10.5	1
71.34.0960*	balanSys PE Trial Inlay 75/11.5	1
71.34.0485	balanSys PE Trial Inlay 75/13	1
71.34.0486	balanSys PE Trial Inlay 75/15.5	1
71.34.0487	balanSys PE Trial Inlay 75/18	1
71.34.0488	balanSys PE Trial Inlay 75/20.5	1
71.34.0228	balanSys PE Trial Inlay 80/8	1
71.34.0961*	balanSys PE Trial Inlay 80/9	1
71.34.0229	balanSys PE Trial Inlay 80/10.5	1
71.34.0962*	balanSys PE Trial Inlay 80/11.5	1
71.34.0230	balanSys PE Trial Inlay 80/13	1
71.34.0231	balanSys PE Trial Inlay 80/15.5	1
71.34.0232	balanSys PE Trial Inlay 80/18	1
71.34.0233	balanSys PE Trial Inlay 80/20.5	1
71.34.0234	balanSys PE Trial Inlay 85/8	1
71.34.0963*	balanSys PE Trial Inlay 85/9	1
71.34.0235	balanSys PE Trial Inlay 85/10.5	1
71.34.0964*	balanSys PE Trial Inlay 85/11.5	1
71.34.0236	balanSys PE Trial Inlay 85/13	1
71.34.0237	balanSys PE Trial Inlay 85/15.5	1
71.34.0238	balanSys PE Trial Inlay 85/18	1
71.34.0239	balanSys PE Trial Inlay 85/20.5	1

* balanSys PE Inlays 9 mm and 11.5 mm are available in vitamys only.

balanSys Trial Set CR / UC No. 2

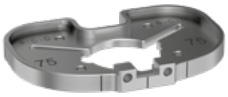
No Picture / 71.34.0243 **balanSys Trial Set CR / UC No. 2 Lid**



71.34.0244 **balanSys Trial Set CR / UC No. 2 Tray**

Item no.	Description	Qty.
71.34.0355	balanSys trial femur XS left	1
71.34.0356	balanSys trial femur XS right	1
71.34.0504	balanSys trial femur S left	1
71.34.0505	balanSys trial femur S right	1
71.02.4001	balanSys trial femur A left	1
71.02.4002	balanSys trial femur A right	1
71.02.4301	balanSys trial femur B left	1
71.02.4302	balanSys trial femur B right	1
71.02.4601	balanSys trial femur C left	1
71.02.4602	balanSys trial femur C right	1
71.02.4901	balanSys trial femur D left	1
71.02.4902	balanSys trial femur D right	1
71.02.5201	balanSys trial femur E left	1
71.02.5202	balanSys trial femur E right	1
71.34.0371	balanSys trial femur F left	1
71.34.0372	balanSys trial femur F right	1

Item no.	Description	Qty.
71.34.0353V	balanSys 4in1 Cutting Block STANDARD XS	1
71.34.0122V	balanSys 4in1 Cutting Block STANDARD S	1
71.34.0123V	balanSys 4in1 Cutting Block STANDARD A	1
71.34.0124V	balanSys 4in1 Cutting Block STANDARD B	1
71.34.0125V	balanSys 4in1 Cutting Block STANDARD C	1
71.34.0126V	balanSys 4in1 Cutting Block STANDARD D	1
71.34.0127V	balanSys 4in1 Cutting Block STANDARD E	1
71.34.0370V	balanSys 4in1 Cutting Block STANDARD F	1



Item no.	Description	Qty.
71.34.0535	balanSys CR/PS Tibial Template 59	1
71.34.0536	balanSys CR/PS Tibial Template 62	1
71.34.0537	balanSys CR/PS Tibial Template 64	1
71.34.0538	balanSys CR/PS Tibial Template 67	1
71.34.0539	balanSys CR/PS Tibial Template 70	1
71.34.0540	balanSys CR/PS Tibial Template 75	1
71.34.0541	balanSys CR/PS Tibial Template 80	1
71.34.0542	balanSys CR/PS Tibial Template 85	1

Item no.	Description	Qty.
71.02.3023	balanSys trochlea reamer	1

Item no.	Description	Qty.
71.02.3024	balanSys trochlea bushing	1

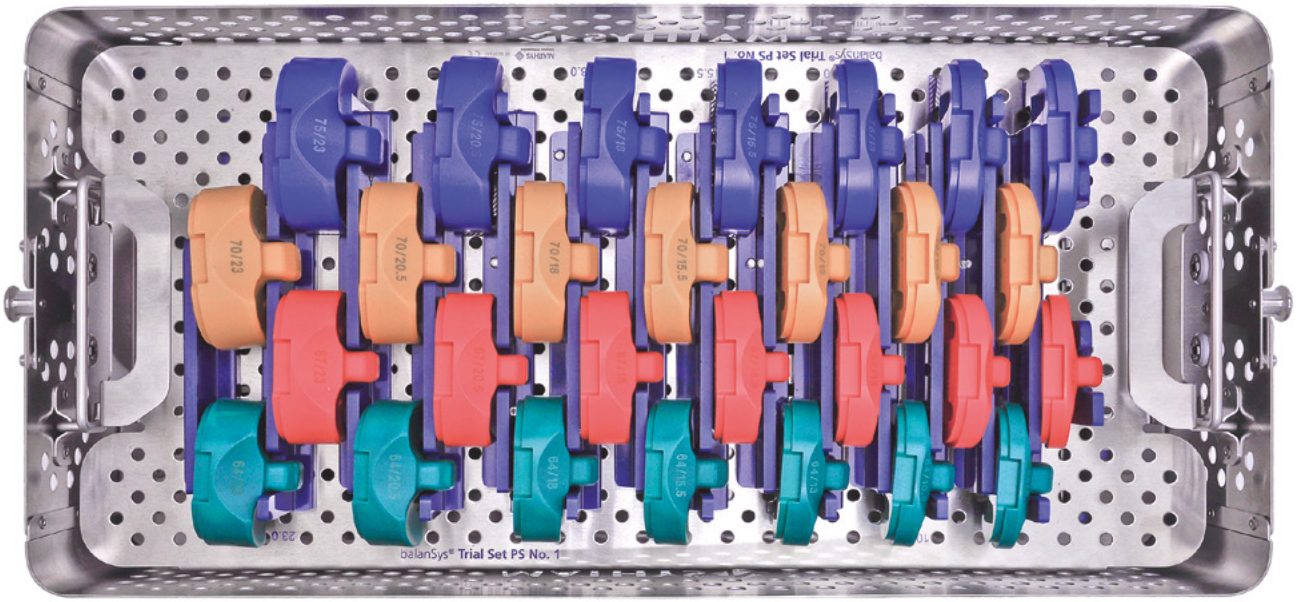
Item no.	Description	Qty.
71.34.0023	balanSys Drill Bit with stop 6	1

Optional instruments
NOT part of the standard configuration and must be ordered separately:

Item no.	Description	Qty.
71.34.0363	balanSys 4in1 Cutting Block MINI XS	1
71.34.0129	balanSys 4in1 Cutting Block MINI S	1
71.34.0130	balanSys 4in1 Cutting Block MINI A	1
71.34.0131	balanSys 4in1 Cutting Block MINI B	1
71.34.0132	balanSys 4in1 Cutting Block MINI C	1
71.34.0133	balanSys 4in1 Cutting Block MINI D	1
71.34.0134	balanSys 4in1 Cutting Block MINI E	1
71.34.0373	balanSys 4in1 Cutting Block MINI F	1

balanSys Trial Set PS

No Picture / 71.34.0286 **balanSys trial set PS no. 1 Lid**



71.34.0288 **balanSys Trial Set PS No. 1 Tray Insert**

balanSys Trial Set PS
Choose your size configuration

Set-no.	Femur	Tibia
71.34.9070A	A/B/C/D/E	64/67/70/75/80/85
71.34.0790A	XS/S/F	59/62

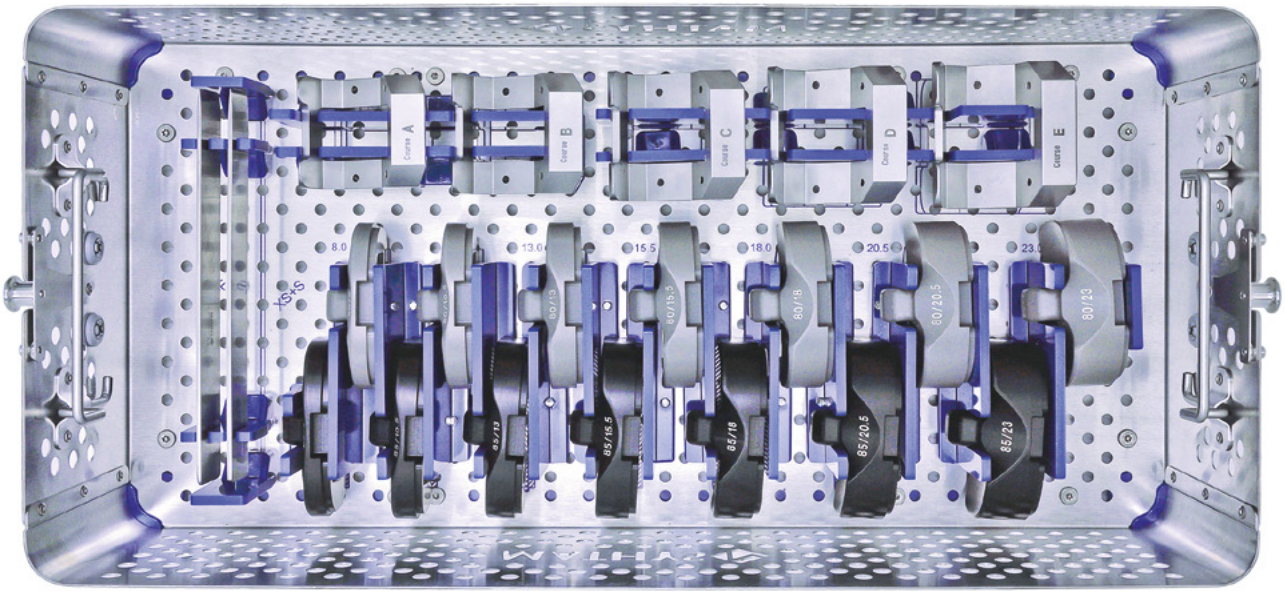
Item no.	Description	Qty.
71.34.0384	balanSys PS PE Trial Inlay 59/8	1
71.34.0965*	balanSys PS PE Trial Inlay 59/9	1
71.34.0385	balanSys PS PE Trial Inlay 59/10.5	1
71.34.0966*	balanSys PS PE Trial Inlay 59/11.5	1
71.34.0386	balanSys PS PE Trial Inlay 59/13	1
71.34.0387	balanSys PS PE Trial Inlay 59/15.5	1
71.34.0388	balanSys PS PE Trial Inlay 59/18	1
71.34.0389	balanSys PS PE Trial Inlay 59/20.5	1
71.34.0503	balanSys PS PE Trial Inlay 59/23	1
71.34.0249	balanSys PS PE Trial Inlay 62/8	1
71.34.0967*	balanSys PS PE Trial Inlay 62/9	1
71.34.0250	balanSys PS PE Trial Inlay 62/10.5	1
71.34.0968*	balanSys PS PE Trial Inlay 62/11.5	1
71.34.0251	balanSys PS PE Trial Inlay 62/13	1
71.34.0252	balanSys PS PE Trial Inlay 62/15.5	1
71.34.0253	balanSys PS PE Trial Inlay 62/18	1
71.34.0254	balanSys PS PE Trial Inlay 62/20.5	1
71.34.0255	balanSys PS PE Trial Inlay 62/23	1
71.34.0256	balanSys PS PE Trial Inlay 64/8	1
71.34.0969*	balanSys PS PE Trial Inlay 64/9	1
71.34.0257	balanSys PS PE Trial Inlay 64/10.5	1
71.34.0970*	balanSys PS PE Trial Inlay 64/11.5	1
71.34.0258	balanSys PS PE Trial Inlay 64/13	1
71.34.0259	balanSys PS PE Trial Inlay 64/15.5	1
71.34.0260	balanSys PS PE Trial Inlay 64/18	1
71.34.0261	balanSys PS PE Trial Inlay 64/20.5	1
71.34.0262	balanSys PS PE Trial Inlay 64/23	1
71.34.0263	balanSys PS PE Trial Inlay 67/8	1
71.34.0971*	balanSys PS PE Trial Inlay 67/9	1
71.34.0264	balanSys PS PE Trial Inlay 67/10.5	1
71.34.0972*	balanSys PS PE Trial Inlay 67/11.5	1
71.34.0265	balanSys PS PE Trial Inlay 67/13	1
71.34.0266	balanSys PS PE Trial Inlay 67/15.5	1
71.34.0267	balanSys PS PE Trial Inlay 67/18	1
71.34.0268	balanSys PS PE Trial Inlay 67/20.5	1
71.34.0269	balanSys PS PE Trial Inlay 67/23	1

* balanSys PS PE Inlays 9 mm and 11.5 mm are available in vitamys only.

Item no.	Description	Qty.
71.34.0489	balanSys PS PE Trial Inlay 70/8	1
71.34.0973*	balanSys PS PE Trial Inlay 70/9	1
71.34.0490	balanSys PS PE Trial Inlay 70/10.5	1
71.34.0974*	balanSys PS PE Trial Inlay 70/11.5	1
71.34.0491	balanSys PS PE Trial Inlay 70/13	1
71.34.0492	balanSys PS PE Trial Inlay 70/15.5	1
71.34.0493	balanSys PS PE Trial Inlay 70/18	1
71.34.0494	balanSys PS PE Trial Inlay 70/20.5	1
71.34.0495	balanSys PS PE Trial Inlay 70/23	1
71.34.0496	balanSys PS PE Trial Inlay 75/8	1
71.34.0975*	balanSys PS PE Trial Inlay 75/9	1
71.34.0497	balanSys PS PE Trial Inlay 75/10.5	1
71.34.0976*	balanSys PS PE Trial Inlay 75/11.5	1
71.34.0498	balanSys PS PE Trial Inlay 75/13	1
71.34.0499	balanSys PS PE Trial Inlay 75/15.5	1
71.34.0500	balanSys PS PE Trial Inlay 75/18	1
71.34.0501	balanSys PS PE Trial Inlay 75/20.5	1
71.34.0502	balanSys PS PE Trial Inlay 75/23	1
71.34.0270	balanSys PS PE Trial Inlay 80/8	1
71.34.0977*	balanSys PS PE Trial Inlay 80/9	1
71.34.0271	balanSys PS PE Trial Inlay 80/10.5	1
71.34.0978*	balanSys PS PE Trial Inlay 80/11.5	1
71.34.0272	balanSys PS PE Trial Inlay 80/13	1
71.34.0273	balanSys PS PE Trial Inlay 80/15.5	1
71.34.0274	balanSys PS PE Trial Inlay 80/18	1
71.34.0275	balanSys PS PE Trial Inlay 80/20.5	1
71.34.0276	balanSys PS PE Trial Inlay 80/23	1
71.34.0277	balanSys PS PE Trial Inlay 85/8	1
71.34.0979*	balanSys PS PE Trial Inlay 85/9	1
71.34.0278	balanSys PS PE Trial Inlay 85/10.5	1
71.34.0980*	balanSys PS PE Trial Inlay 85/11.5	1
71.34.0279	balanSys PS PE Trial Inlay 85/13	1
71.34.0280	balanSys PS PE Trial Inlay 85/15.5	1
71.34.0281	balanSys PS PE Trial Inlay 85/18	1
71.34.0282	balanSys PS PE Trial Inlay 85/20.5	1
71.34.0283	balanSys PS PE Trial Inlay 85/23	1

* balanSys PS PE Inlays 9 mm and 11.5 mm are available in vitamys only.

balanSys Trial Set PS



71.34.0287 **balanSys Trial Set PS No. 1 Tray**

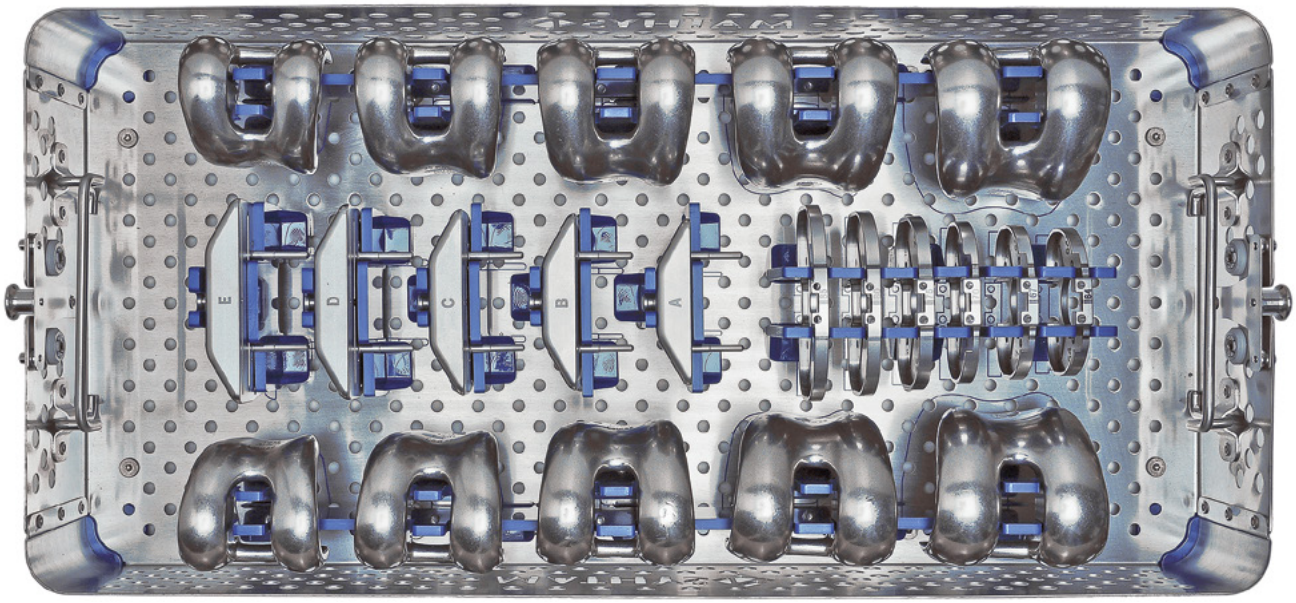
Item no.	Description	Qty.
71.34.0690	balanSys Chisel 22 mm XS/S	1

Item no.	Description	Qty.
71.34.0691	balanSys Chisel 25 mm A–F	1

Item no.	Description	Qty.
71.34.0390	balanSys PS femur box cutting guide XS	1
71.34.0284	balanSys PS femur box cutting guide S	1
79.02.0265	balanSys PS femur box cutting guide A	1
79.02.0266	balanSys PS femur box cutting guide B	1
79.02.0267	balanSys PS femur box cutting guide C	1
79.02.0268	balanSys PS femur box cutting guide D	1
79.02.0269	balanSys PS femur box cutting guide E	1
71.34.0401	balanSys PS femur box cutting guide F	1

balanSys Trial Set PS

No Picture / 71.34.0289 **balanSys Trial Set PS No. 2 Lid**



71.34.0290 **balanSys Trial Set PS No. 2 Tray**

Item no.	Description	Qty.
71.34.0383	balanSys PS trial femur XS right	1
71.34.0382	balanSys PS trial femur XS left	1
71.34.0248	balanSys PS trial femur S right	1
71.34.0247	balanSys PS trial femur S left	1
79.02.0040	balanSys PS trial femur A right	1
79.02.0041	balanSys PS trial femur A left	1
79.02.0042	balanSys PS trial femur B right	1
79.02.0043	balanSys PS trial femur B left	1
79.02.0044	balanSys PS trial femur C right	1
79.02.0045	balanSys PS trial femur C left	1
79.02.0046	balanSys PS trial femur D right	1
79.02.0047	balanSys PS trial femur D left	1
79.02.0048	balanSys PS trial femur E right	1
79.02.0049	balanSys PS trial femur E left	1
71.34.0400	balanSys PS trial femur F right	1
71.34.0399	balanSys PS trial femur F left	1

Item no.	Description	Qty.
71.34.0353V	balanSys 4in1 Cutting Block STANDARD XS	1
71.34.0122V	balanSys 4in1 Cutting Block STANDARD S	1
71.34.0123V	balanSys 4in1 Cutting Block STANDARD A	1
71.34.0124V	balanSys 4in1 Cutting Block STANDARD B	1
71.34.0125V	balanSys 4in1 Cutting Block STANDARD C	1
71.34.0126V	balanSys 4in1 Cutting Block STANDARD D	1
71.34.0127V	balanSys 4in1 Cutting Block STANDARD E	1
71.34.0370V	balanSys 4in1 Cutting Block STANDARD F	1

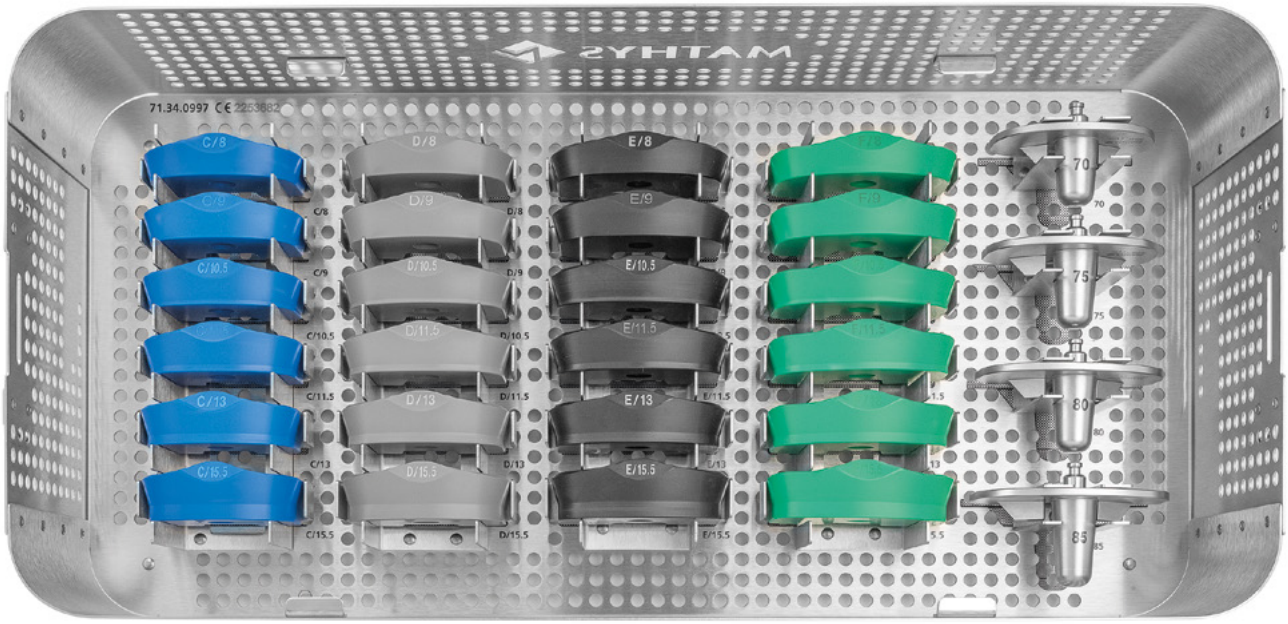
Item no.	Description	Qty.
71.34.0535	balanSys CR/PS Tibial Template 59	1
71.34.0536	balanSys CR/PS Tibial Template 62	1
71.34.0537	balanSys CR/PS Tibial Template 64	1
71.34.0538	balanSys CR/PS Tibial Template 67	1
71.34.0539	balanSys CR/PS Tibial Template 70	1
71.34.0540	balanSys CR/PS Tibial Template 75	1
71.34.0541	balanSys CR/PS Tibial Template 80	1
71.34.0542	balanSys CR/PS Tibial Template 85	1

Optional instruments
NOT part of the standard configuration and must be ordered separately:

Item no.	Description	Qty.
71.34.0363	balanSys 4in1 Cutting Block MINI XS	1
71.34.0129	balanSys 4in1 Cutting Block MINI S	1
71.34.0130	balanSys 4in1 Cutting Block MINI A	1
71.34.0131	balanSys 4in1 Cutting Block MINI B	1
71.34.0132	balanSys 4in1 Cutting Block MINI C	1
71.34.0133	balanSys 4in1 Cutting Block MINI D	1
71.34.0134	balanSys 4in1 Cutting Block MINI E	1
71.34.0373	balanSys 4in1 Cutting Block MINI F	1

balanSys Trial Set RP 71.34.9060A (optional)

No Picture / 71.34.1056 **leggera Set Lid**



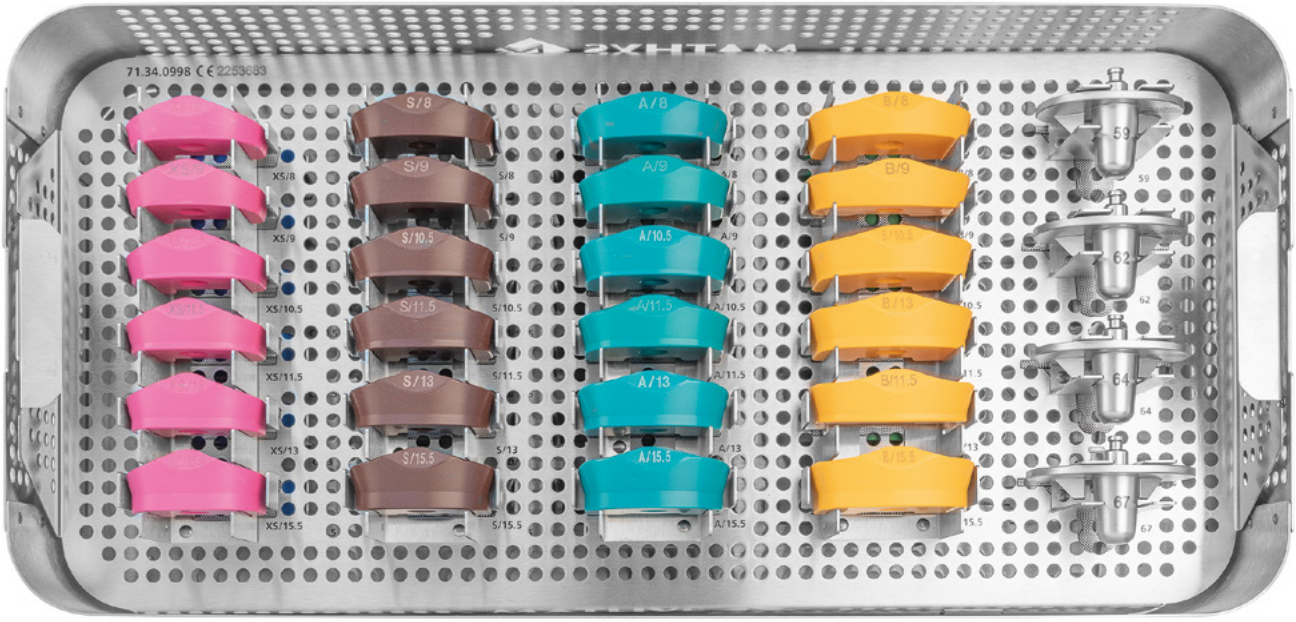
71.34.0997 **balanSys Trial Set 6-RP Tray**

Item no.	Description	Qty.
71.34.0297	balanSys RP Trial Tibial Plateau 70	1
71.34.0298	balanSys RP Trial Tibial Plateau 75	1
71.34.0299	balanSys RP Trial Tibial Plateau 80	1
71.34.0300	balanSys RP Trial Tibial Plateau 85	1

Item no.	Description	Qty.
71.34.0574	balanSys RP PE Trial Inlay C/8	1
71.34.0989*	balanSys RP PE Trial Inlay C/9	1
71.34.0575	balanSys RP PE Trial Inlay C/10.5	1
71.34.0990*	balanSys RP PE Trial Inlay C/11.5	1
71.34.0576	balanSys RP PE Trial Inlay C/13	1
71.34.0577	balanSys RP PE Trial Inlay C/15.5	1
71.34.0580	balanSys RP PE Trial Inlay D/8	1
71.34.0991*	balanSys RP PE Trial Inlay D/9	1
71.34.0581	balanSys RP PE Trial Inlay D/10.5	1
71.34.0992*	balanSys RP PE Trial Inlay D/11.5	1
71.34.0582	balanSys RP PE Trial Inlay D/13	1
71.34.0583	balanSys RP PE Trial Inlay D/15.5	1
71.34.0586	balanSys RP PE Trial Inlay E/8	1
71.34.0993*	balanSys RP PE Trial Inlay E/9	1
71.34.0587	balanSys RP PE Trial Inlay E/10.5	1
71.34.0994*	balanSys RP PE Trial Inlay E/11.5	1
71.34.0588	balanSys RP PE Trial Inlay E/13	1
71.34.0589	balanSys RP PE Trial Inlay E/15.5	1
71.34.0429	balanSys RP PE Trial Inlay F/8	1
71.34.0995*	balanSys RP PE Trial Inlay F/9	1
71.34.0430	balanSys RP PE Trial Inlay F/10.5	1
71.34.0996*	balanSys RP PE Trial Inlay F/11.5	1
71.34.0431	balanSys RP PE Trial Inlay F/13	1
71.34.0432	balanSys RP PE Trial Inlay F/15.5	1

* balanSys RP PE Inlays 9 mm and 11.5 mm are available in vitamys only.

balanSys Trial Set RP 71.34.9060A (optional)



71.34.0998 **balanSys Trial Set 6-RP Insert**

Item no.	Description	Qty.
71.34.0418	balanSys RP Trial Tibial Plateau 59	1
71.34.0294	balanSys RP Trial Tibial Plateau 62	1
71.34.0295	balanSys RP Trial Tibial Plateau 64	1
71.34.0296	balanSys RP Trial Tibial Plateau 67	1

Item no.	Description	Qty.
71.34.0413	balanSys RP PE Trial Inlay XS/8	1
71.34.0981*	balanSys RP PE Trial Inlay XS/9	1
71.34.0414	balanSys RP PE Trial Inlay XS/10.5	1
71.34.0982*	balanSys RP PE Trial Inlay XS/11.5	1
71.34.0415	balanSys RP PE Trial Inlay XS/13	1
71.34.0416	balanSys RP PE Trial Inlay XS/15.5	1
71.34.0301	balanSys RP PE Trial Inlay S/8	1
71.34.0983*	balanSys RP PE Trial Inlay S/9	1
71.34.0302	balanSys RP PE Trial Inlay S/10.5	1
71.34.0984*	balanSys RP PE Trial Inlay S/11.5	1
71.34.0303	balanSys RP PE Trial Inlay S/13	1
71.34.0304	balanSys RP PE Trial Inlay S/15.5	1
71.34.0562	balanSys RP PE Trial Inlay A/8	1
71.34.0985*	balanSys RP PE Trial Inlay A/9	1
71.34.0563	balanSys RP PE Trial Inlay A/10.5	1
71.34.0986*	balanSys RP PE Trial Inlay A/11.5	1
71.34.0564	balanSys RP PE Trial Inlay A/13	1
71.34.0565	balanSys RP PE Trial Inlay A/15.5	1
71.34.0568	balanSys RP PE Trial Inlay B/8	1
71.34.0987*	balanSys RP PE Trial Inlay B/9	1
71.34.0569	balanSys RP PE Trial Inlay B/10.5	1
71.34.0988*	balanSys RP PE Trial Inlay B/11.5	1
71.34.0570	balanSys RP PE Trial Inlay B/13	1
71.34.0571	balanSys RP PE Trial Inlay B/15.5	1

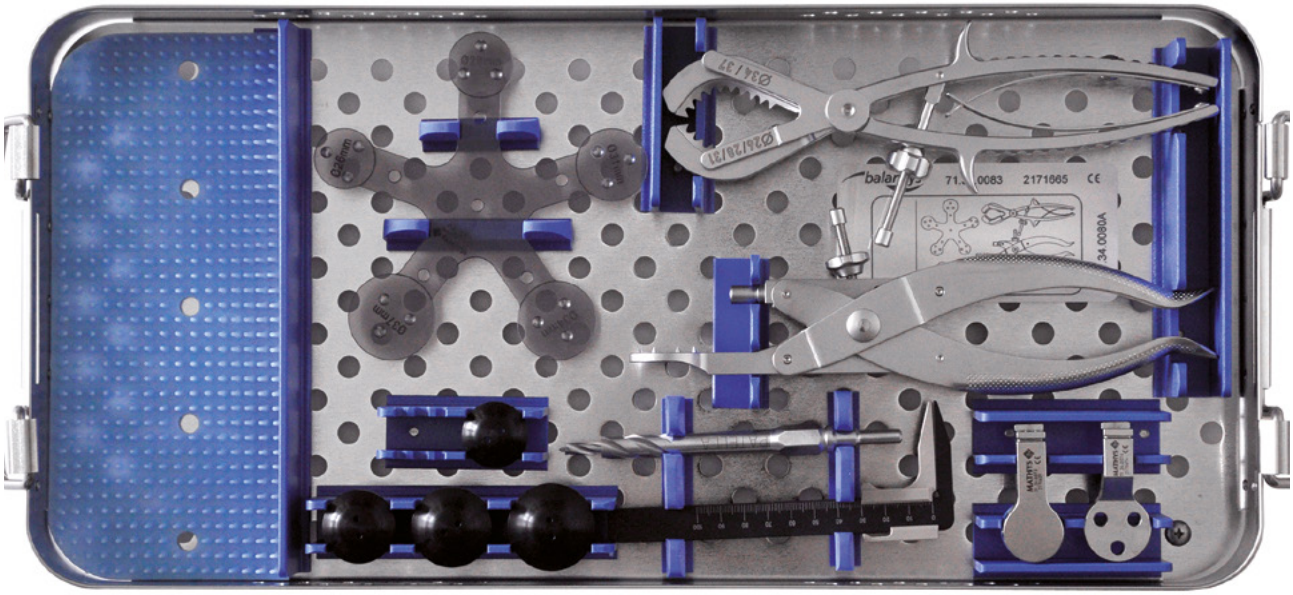
* balanSys RP PE Inlays 9 mm and 11.5 mm are available in vitamys only.

balanSys 3-Peg Patella FLAT 71.34.0080A

No Picture / 71.34.0082
balanSys Lid 3-Peg Patella FLAT

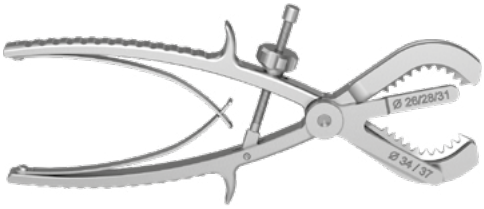
balanSys 3-Peg Patella Standard 71.34.0081A

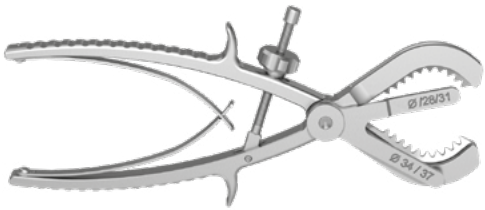
No Picture / 71.34.0084
balanSys Lid 3-Peg Patella STANDARD



71.34.0083 **balanSys Tray f / patella 3 pegs FLAT**

71.34.0085 **balanSys Tray f / patella 3 pegs STANDARD**





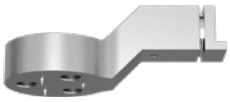
Item no.	Description
71.34.0071	balanSys Patella resection pliers flat

Item no.	Description
71.34.0070	balanSys Patella resection pliers raised

Item no.	Description
71.34.0708	balanSys Trial patella 3 pegs flat 26
71.34.0075	balanSys Trial patella 3 pegs flat 28
71.34.0076	balanSys Trial patella 3 pegs flat 31
71.34.0077	balanSys Trial patella 3 pegs flat 34
71.34.0078	balanSys Trial patella 3 pegs flat 37

Item no.	Description
71.02.3063	balanSys trial patella 3-peg 28
71.02.3064	balanSys trial patella 3-peg 31
71.02.3065	balanSys trial patella 3-peg 34
71.02.3066	balanSys trial patella 3-peg 37

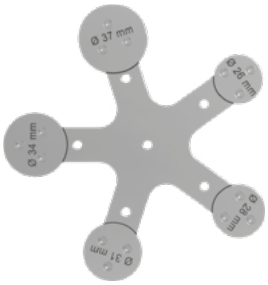
Item no.	Description	Qty.
71.02.2201	balanSys Patella universal pliers	1



Item no.	Description	Qty.
71.34.0074	balanSys Patella drill guide to pliers	1

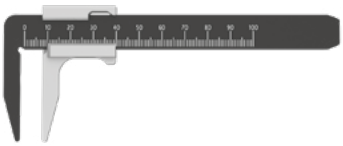
Item no.	Description	Qty.
71.34.0073	balanSys Patella cementing aid to pliers	1

Item no.	Description	Qty.
71.02.3061	Drill bit 5.5	1



Optional instruments
NOT part of the standard configuration and must be ordered separately:

Item no.	Description	Qty.
71.34.0079	balanSys patella sizing guide	1



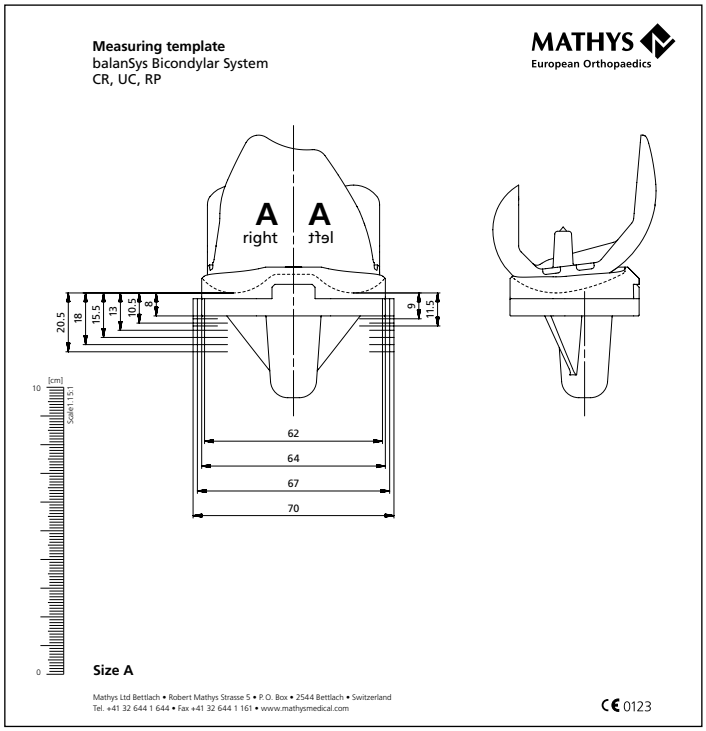
Item no.	Description	Qty.
71.02.3002	balanSys Patella calliper	1

Appendix

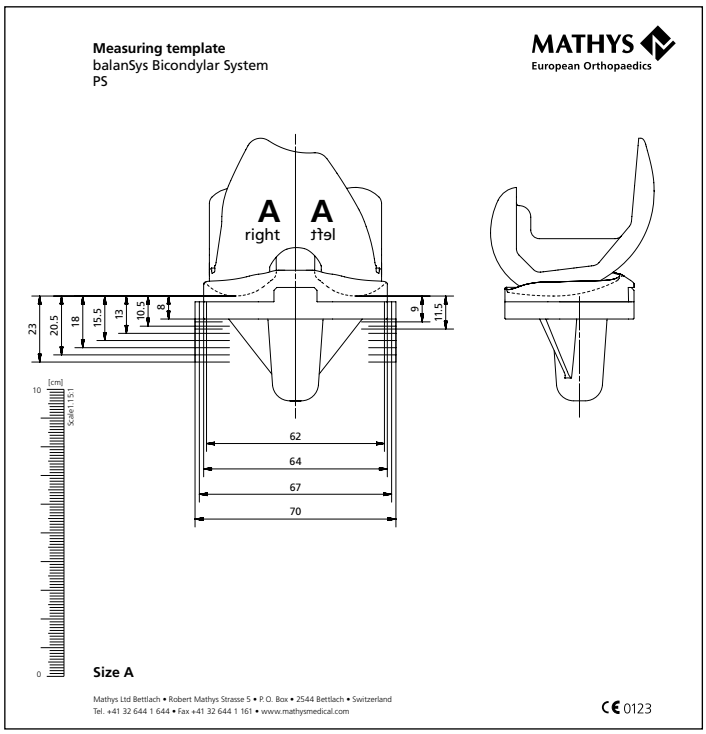
6 – Item numbers of the balanSys measuring templates

balanSys BICON Knee System 330.030.034

Suitable for CR, UC and RP



balanSys PS Knee System 330.030.035



Symbols and abbreviations


Manufacturer


Correct


Incorrect


Caution

CR	Cruciate Retaining
UC	Ultra Congruent
PS	Posterior Stabilized
RP	Rotating Platform
ACL	Anterior Cruciate Ligament
PCL	Posterior Cruciate Ligament
MCL	Medial Collateral Ligament
LCL	Lateral Collateral Ligament
TRS	Tibia Reference System
IFU	Instruction For Use

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