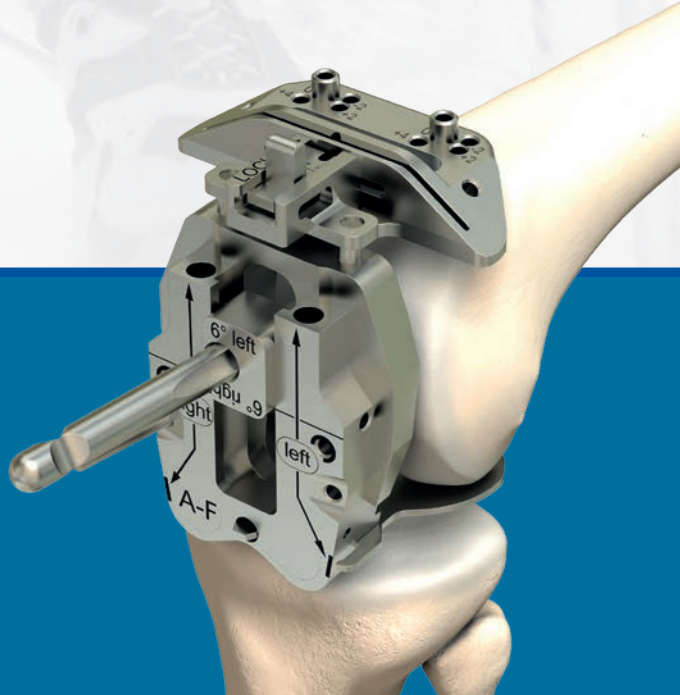
MATHYS
European Orthopaedics

Surgical technique

balanSys BICONDYLAR

LIS 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

Remarks
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 individual 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 in Switzerland for continuously excellent clinical results. Quality made in Switzerland.

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, nervous or vascular 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

Objectives of preoperative planning

- Determination of the angle between anatomical axis and mechanical axis
- Detection and quantification of bone deformities and defects, as well as of osteophytes
- Preliminary determination of the femoral and tibial prosthesis sizes using the X-ray template

Preoperative planning comprises

- X-ray images of the knee joint in anteroposterior (AP) and lateral direction, and of the patella in tangential direction
- Full-leg imaging
- 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, where the joint line should be orthogonal to this axis
- Reconstruction of the physiological axis ratios
- Kinematics appropriate for the prosthesis
  – Physiological joint line
  – Sufficient medial and lateral stability upon extension and flexion
  – Properly centred and balanced femoropatellar joint
  – Freedom of movement: from maximum extension to maximum possible flexion

The selection of the surgical approach depends on the axis malalignment (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.

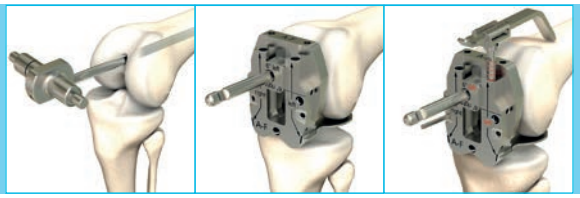
Place the patient in supine position.

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. Femoral resection



Opening of the medullary cavity and introduction of the Intramedullary Rod. Attachment of the Femoral Sizing/Rotation Guide LIS. Determination of rotational orientation and femoral size.

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Pre-drilling of the two receiving holes for the 4in1 Cutting Block. Attaching and fixation of the Distal Femoral Cutting Block. Distal femoral resection.

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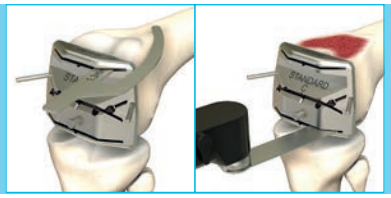

Insertion of the 4in1 Cutting Block. Control of the planned resection depth. Anterior and posterior femoral resection with bevel cuts.

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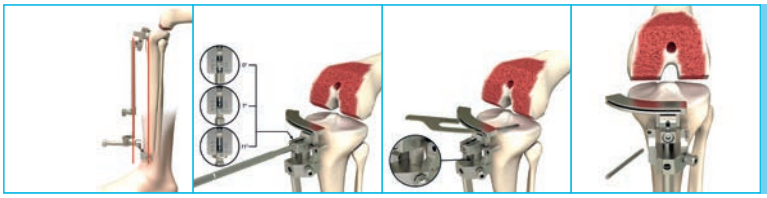
2. Tibial resection



Application and aligning of the Tibia Reference System parallel to the tibial crest. Adjustment of the posterior tilt. Determination of the original joint plane and fixation of the Tibia Reference System.

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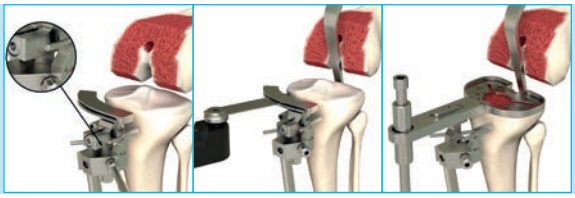

Selection of the resection depth.
Tibial resection.
Determination of Tibial Plateau size.

Remarks

Place retractors to protect ligaments during tibial resection.

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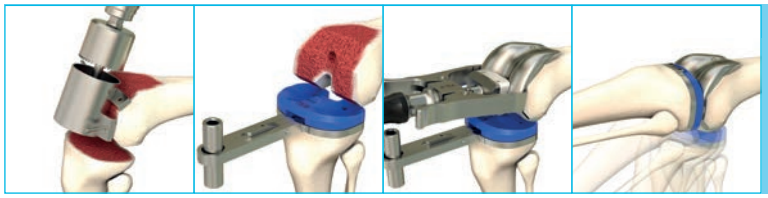
3.1 Preparation and implantation: balanSys CR, UC und RP



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

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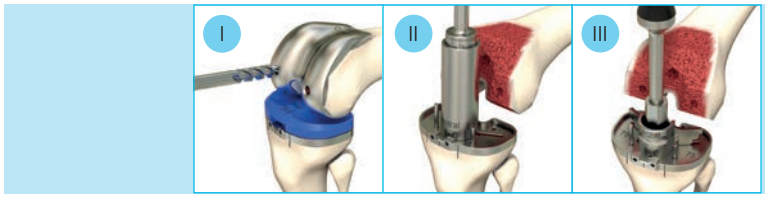

I. Preparation of the femoral anchoring pins
II. Preparation of the tibial medullary cavity
III. Preparation of the fins

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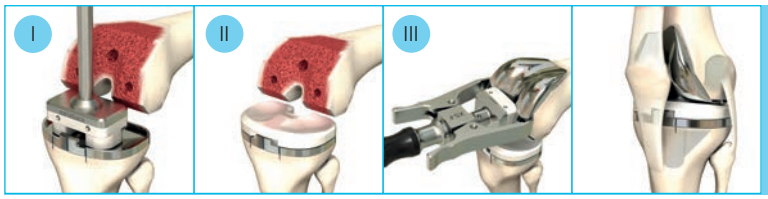

I. Insertion of the balanSys PS Tibial Plateau
II. Insertion of the balanSys Inlay
III. Insertion of the balanSys Femur

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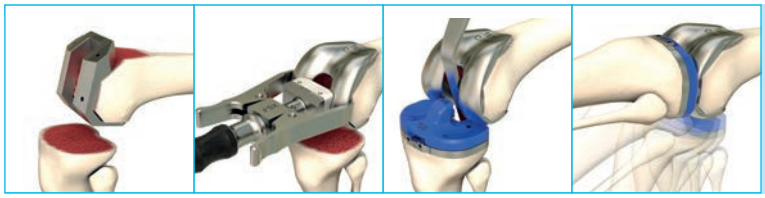
3.2 Preparation and implantation: balanSys PS



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

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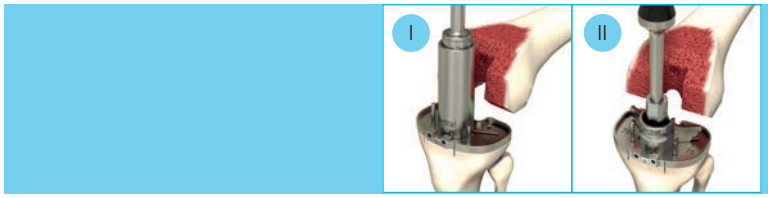

I. Preparation of the tibial medullary cavity
II. Preparation of the fins

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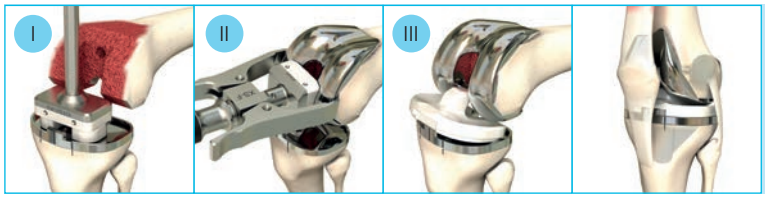

I. Insertion of the balanSys PS Tibial Plateau
II. Insertion of the balanSys PS Femur
III. Insertion of the balanSys PS Inlay

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Remarks

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. Femoral resection

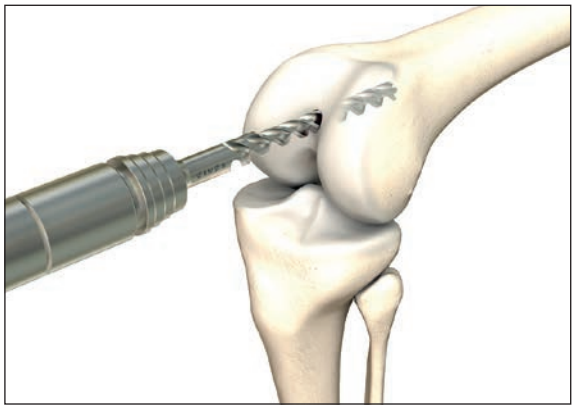


Fig. 1 Opening of the medullary cavity

Intramedullary alignment of the femoral resection

Open the medullary cavity with the 8.5 mm Drill Bit (Fig. 1).

Remarks

The femoral medullary cavity must be opened in the correct axial extension of its course to avoid incorrect implantation in flexion and extension.

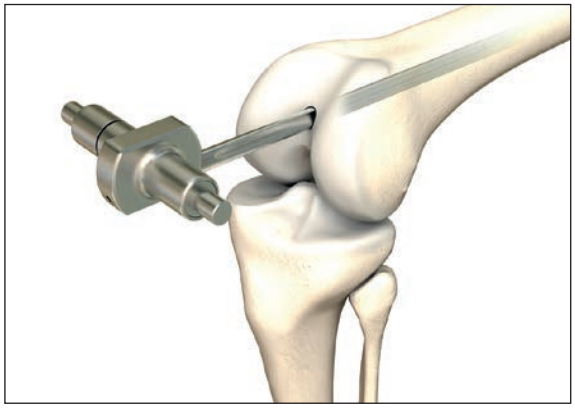


Fig. 2 Introduction of the Intramedullary Rod

Introduce the Intramedullary Rod using the Tibia Reference System Handle. Existing osteophytes must be removed first (Fig. 2).

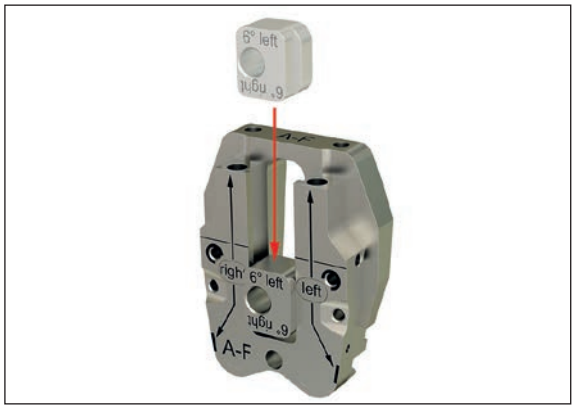


Fig. 3 Introduction of the Axis Alignment Block LIS

Positioning of the Femoral Sizing / Rotation Guide

Select size of Femoral Sizing / Rotation Guide (XS – D or A – F). Introduction of the Axis Alignment Block LIS (3°, 5°, 6°, 7° or 9°) into the Femoral Sizing / Rotation guide (Fig. 3). The angle of the Axis Alignment Block corresponds to the pre-operatively determined angle between the mechanical and anatomical femoral axis (femoral valgus angle).

Remarks

Introduce Axis Alignment Block according to right or left leg. «Left» means a left knee; «right» means a right knee. The orientation of the lettering on the Axis Alignment Block must be identical to that on the Femoral Sizing / Rotation Guide.

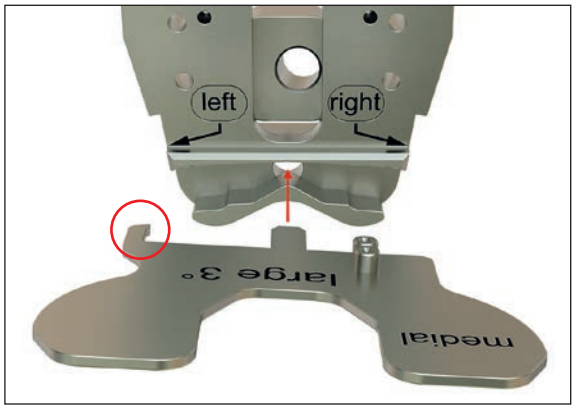


Fig. 4 Introduction of the Femur Rotation Bearing

For rotation adjustment, 3 angles are available. Depending on the angle, the Femur Rotation Bearing 0°, 3° or 5° can be selected.

Introduction of the desired Femur Rotation Bearing small or large (Fig. 4).

Remarks

The pointer on the Femur Rotation Bearing must point to the respectively specified side (right or left) on the Femoral Sizing/Rotation guide. For a left knee, the pointer must point to «left», for a right knee, to «right» (Figs. 4 & 5).

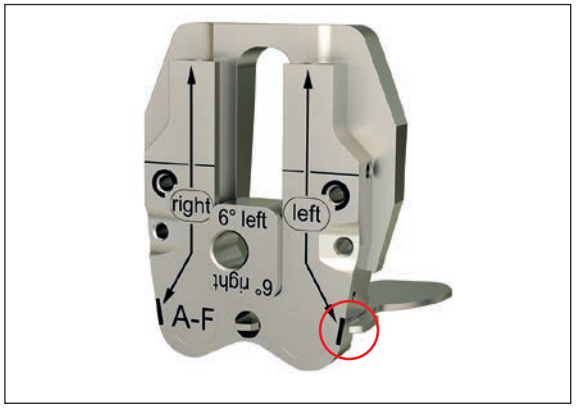


Fig. 5 Position of the pointer

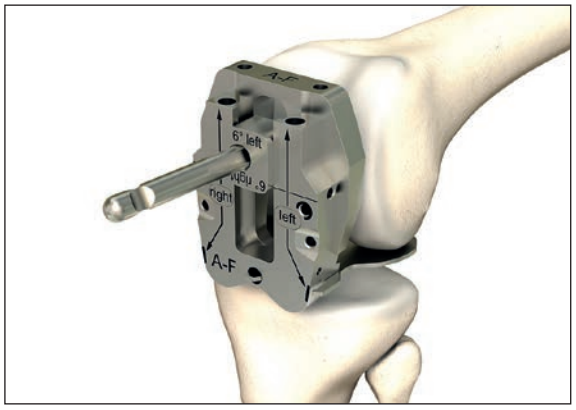


Fig. 6

Push up the Femoral Sizing/Rotation Guide over the Intramedullary Rod through the borehole in the Axis Alignment Block until the instrument stops at a distal condyle (Fig. 6).

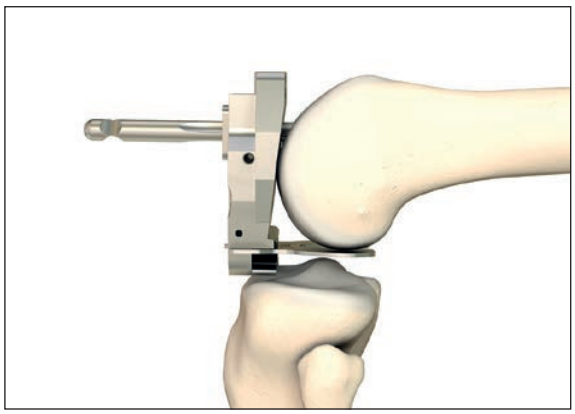


Fig. 7

Push instrument in anterior direction until the Femur Rotation Bearing touches the posterior condyles on both sides (Fig. 7).

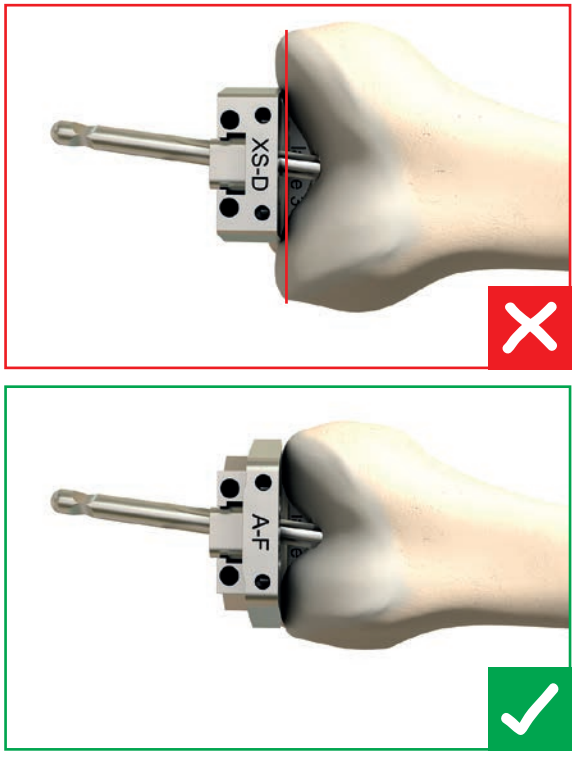


Fig. 8

If the Femoral Sizing/Rotation Guide XS–D slides between the condyles in the notch, the Femoral Sizing/Rotation guide A–F must be selected (Fig. 8).

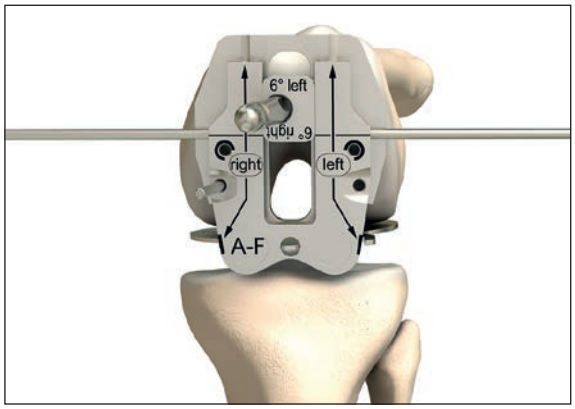


Fig. 9

The Femoral Sizing/Rotation Guide can be accordingly adjusted using the scribed line and the inserted Pins for line extension to the transepicondylar axis (Fig. 9).

After adjustment, the Femoral Sizing/Rotation Guide is fixed with a Pin through the oblique holes in the lower instrument area. The hole is pre-drilled using the 3.2 mm Drill Bit.

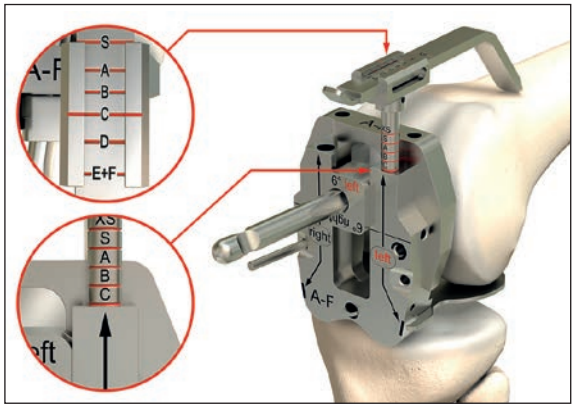


Fig. 10 Determination of the femoral sizes

The femoral size is determined using the Size Feeler LIS, which is placed on the highest point of the femoral metaphysis.

Introduce the Size Feeler LIS on the relevant side (right/left) of the Femoral Sizing/Rotation Guide (Fig. 10).

The size of the femur is read on the anterior and distal scale of the Size Feeler LIS.

1. Read the marking on the distal scale.
2. Transfer the value read to the anterior scale.
3. The two sizes must match.

Remarks

The size of the femur must match the tibial size (Annex 4).

The Femoral Feeler LIS proximally touches the position at which the tip of the anterior femoral plate comes to rest after implantation.

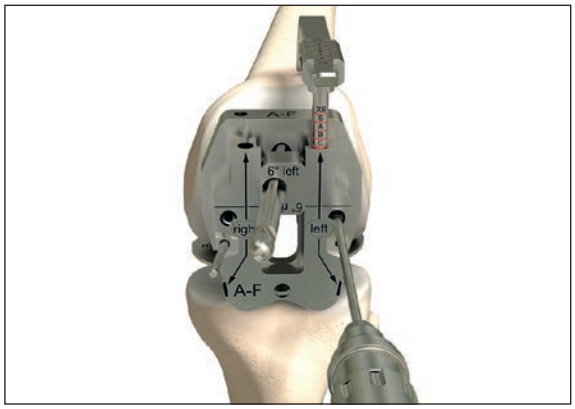


Fig. 11 Drilling of the two receiving holes with the 3.2 mm Drill Bit

After the sizing of the femur, the two holes for receiving the 4in1 Cutting Block are drilled (Fig. 11).

Remarks

The two bores of the receiving holes must be deep enough to remain visible even after the distal femoral resection.

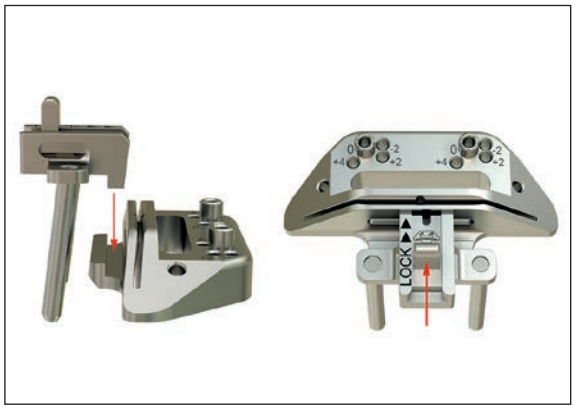


Fig. 12

Place the Distal Cutting Block onto the Holder LIS.

Push the slider in the Holder LIS forward until it latches into place (Fig. 12).

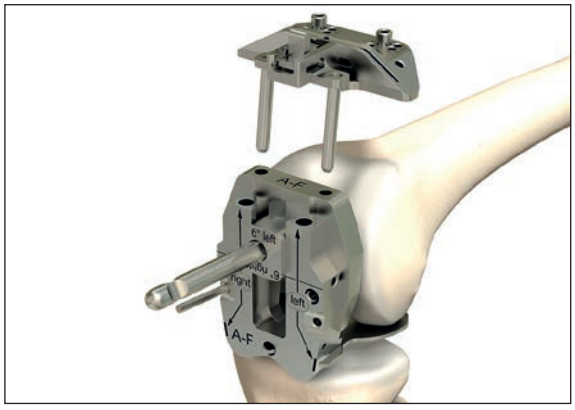


Fig. 13

Introduce the Holder LIS with the Distal Cutting Block into the borehole of the Femoral Sizing/Rotation Guide and push it onto the anterior femur (Fig. 13).

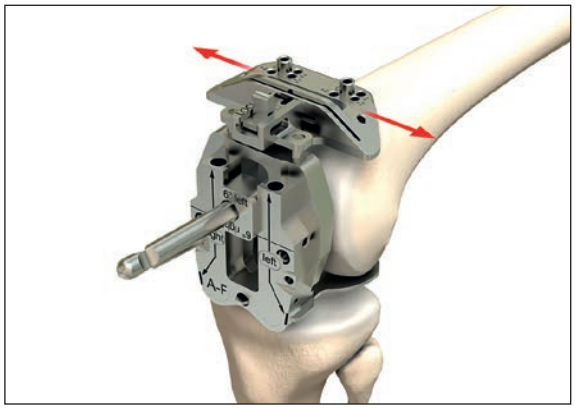


Fig. 14 Positioning the Distal Cutting Block

The Distal Cutting Block can be moved mediolaterally on the basis of the anatomical situation (Fig. 14).

The Distal Cutting Block must butt against the anterior condyle.

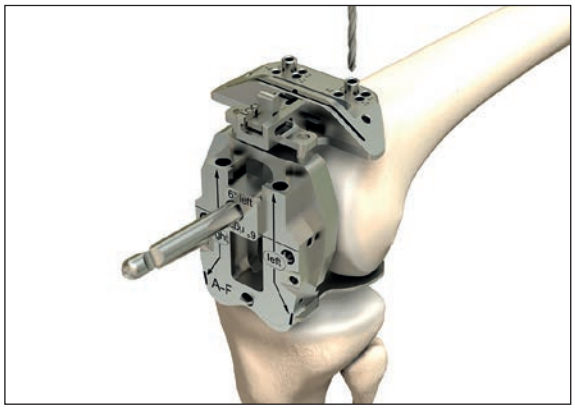


Fig. 15 Pre-drilling and setting of 2 Pins

Pre-drilling of the two reference holes for the Distal Cutting Block. The 0-mark must be paid attention to. Insert two Pins into the anteriorly predrilled holes (Fig. 15).
Removal of the instruments in the following order:

1. Loosen the slide on the Holder LIS, then pull out the Holder from the LIS Femoral Sizing/Rotation Guide.
2. Pull out Fixation Spin in the Femoral Sizing/Rotation Guide.
3. Remove Femoral Sizing/Rotation Guide incl. Axis Alignment Block and Femur Rotation Bearing.
4. Pull out Intramedullary Rod.

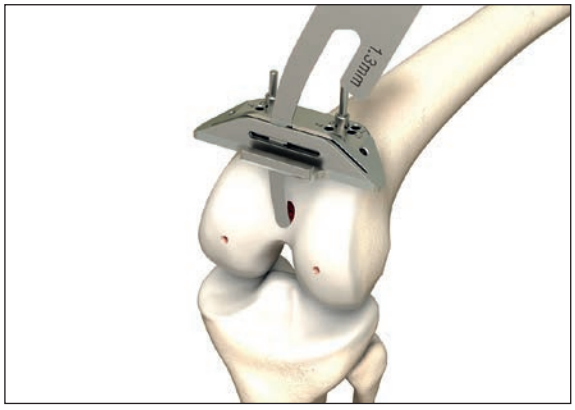


Fig. 16 Control of the planned distal resection surface

Check the planned distal resection plane using the Feeler Plate (Fig. 16).

If necessary, move the Distal Cutting Block by +2/+4/-2 mm.

Remarks
The Distal Cutting Block can be moved to obtain constant ligament tension in flexion and extension.

To ensure optimum stability, the Distal Cutting Block should be fixed with an additional oblique pin.

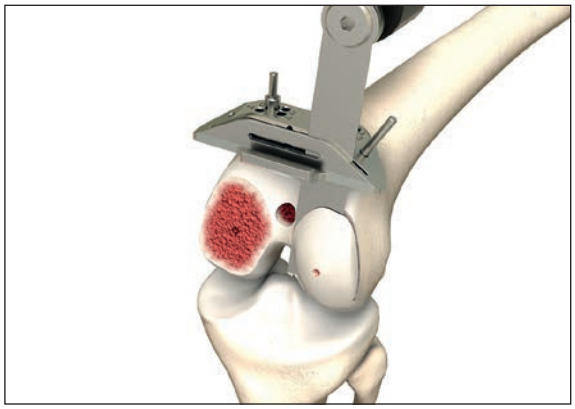


Fig. 17 Performing the distal femoral resection

Performing the distal femoral resection (Fig. 17).

Removal of the Pins and the Distal Cutting Block.

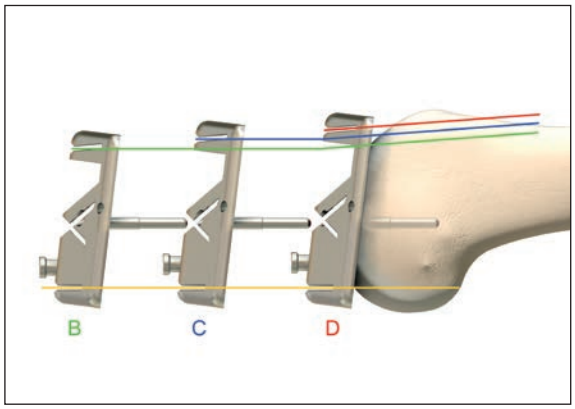


Fig. 18 Adjusting the femoral size by changing the Cutting Block

Remarks

*The size increase of the balanSys Femoral Components, viewed from posterior to anterior, is **3mm** for each of sizes XS to E and **4mm** for sizes E to F. The distance between the two posterior resections and the bores for receiving the 4in1 Cutting Block remains the same for all sizes. The resulting flexion gap will thus be of the same width for all sizes. This corresponds to the principle of posterior femoral referencing (Fig. 18).*

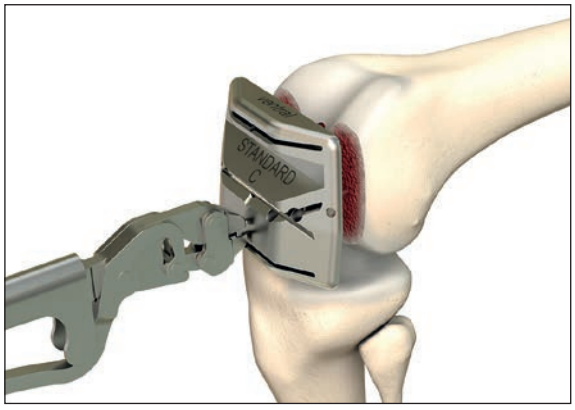


Fig. 19 Insertion of the 4in1 Cutting Block

Position the selected 4in1 Cutting Block with the Pliers into the two pre-drilled holes until it abuts the distal resection surface (Fig. 19).

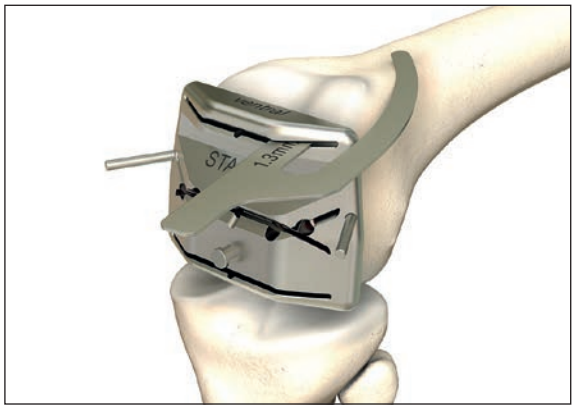


Fig. 20 Control of the planned distal resection plane

Control of the planned resection plane with the Feeler Plate (Fig. 20). Mediolateral fixation of the 4in1 Cutting Block with two Pins.

Remarks

The 4in1 Cutting Block can be provided with offset holes through which the Block can be, if required, offset by 1.5 mm in either anterior or posterior direction. Pre-drill suitable holes through the 4in1 Cutting Block. Remove the 4in1 Cutting Block using the Pliers and insert it into the newly pre-drilled holes until it abuts the distal resection surface.

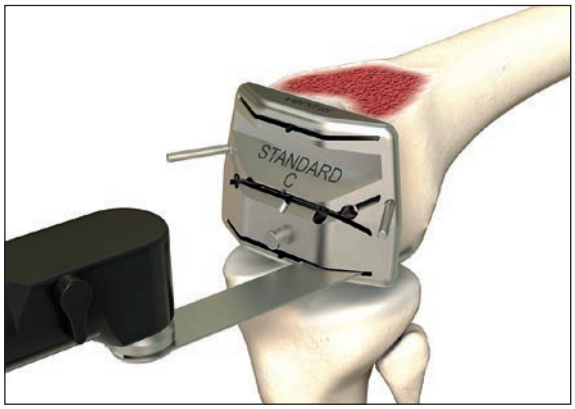


Fig. 21 Performing the resections

Perform the resections (Fig. 21) in the following order:

1. Anterior resection
2. Posterior resection
3. Bevel cuts

Remarks

The posterior resection should be carried out at a knee flexion of 90°. This prevents on the one hand touching of the tibial surface with the Saw Blade, on the other hand the posterior soft tissues are kept away from the condyles.

Removal of the 4in1 Cutting Block with the Pliers.

Removal of all marginal bone portions and osteophytes, especially in the area of the posterior condyles.

Surgical technique

2. Tibial resection

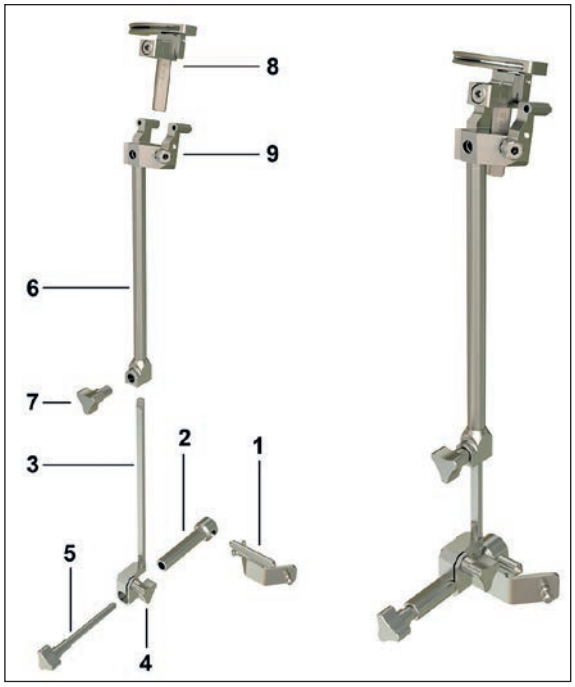


Fig. 22

Installation of the extramedullarily aligned Tibia Reference System (Fig. 22)

Push Ankle Holder (1) onto the Distal Connector (2). Push the Aiming Device Distal (3) onto the Ankle Holder (2) and tighten the Distal Connector using the Locking Bolt (5). Do not tighten the Connecting Screw (4) completely. Join the Aiming Device Distal (3) with the Aiming Device Proximal (6) and fix it with the Connecting Screw (7). Slide the Tibial Cutting Guide (8) onto the Aiming Device Proximal (6). Set Cutting Guide to 0 and tighten the screw (9) with the Hex Screwdriver.

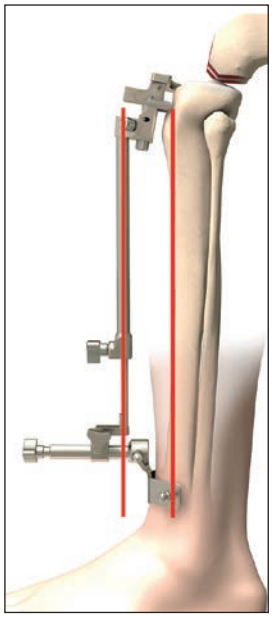


Fig. 23 Placing of the Tibia Reference System

Fig. 24 Alignment of the Tibia Reference System

Positioning of the extramedullarily aligned Tibia Reference System

The Reference System is placed parallel to the tibial crest (Fig. 23). Align the Tibia Reference System distally to the second metatarsal and fix it with the Rubber Band (Fig. 24). To ensure correct rotational orientation, the centre of the Tibial Cutting Guide should be aligned to the transition from the medial to the middle third of the tibial tubercle. Optionally, the Cutting Guide can be also applied parallel to the line between the posterior edges of the medial and lateral tibial plateau.

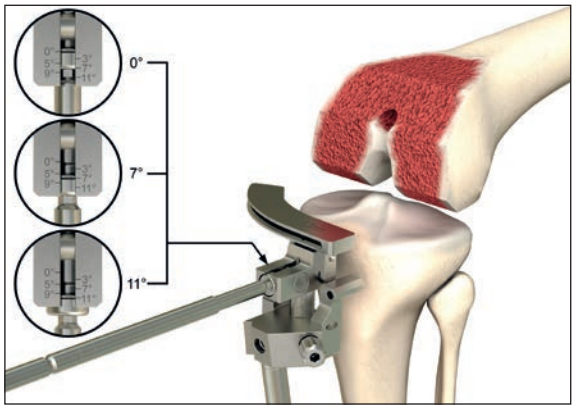


Fig. 25 Adjustment of the posterior tilt

Adjustment of the posterior tilt

Using a Hex Screwdriver, adjust the posterior tilt according to the anatomy (Feeler Plate parallel to the best-preserved tibial articular surface) (Fig. 25).

Remarks

The authors recommend a posterior tilt of 7° for a cruciate ligament-preserving implant and up to 5° for a posterior-stabilising implant.

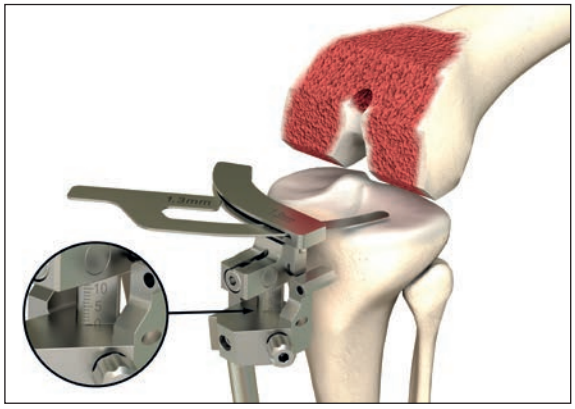


Fig. 26 Determination of the original joint plane

Using the Feeler Plate or the Optional Tibial Stylus, determine the original joint level at the height of the best-preserved tibial articular surface (Fig. 26).

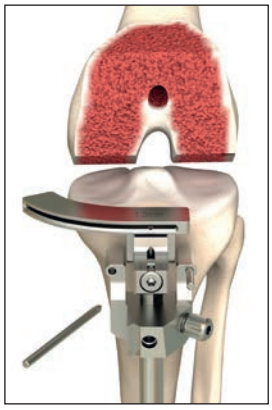


Fig. 27 Fixation of the Tibia Reference System

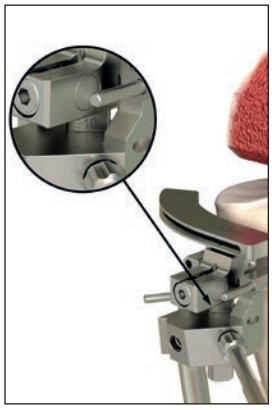


Fig. 28 Adjustment of the resection depth

Fixation of the Tibia Reference System

Fixate the Reference System proximally with at least two Pins in the prepared holes (angled and straight) (Fig. 27). The holes are pre-drilled with the 3.2 mm Drill Bit.

Tibial resection

Move the Tibial Cutting Guide with the Hex Screwdriver distally by 6–8 mm, depending on the tension status of the capsule/ligament system (Fig. 28).

Use the Feeler Plate to check the selected resection plane.

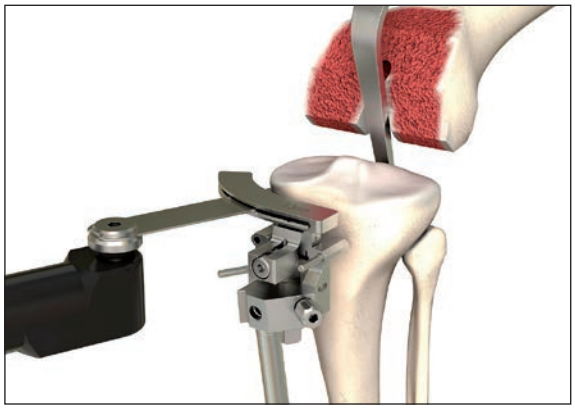


Fig. 29 Performance of the tibial resection

Performance of the tibial resection (Fig. 29) and removal of the posterior meniscal residues.

Remarks
Place retractors to protect ligaments during tibial resection.

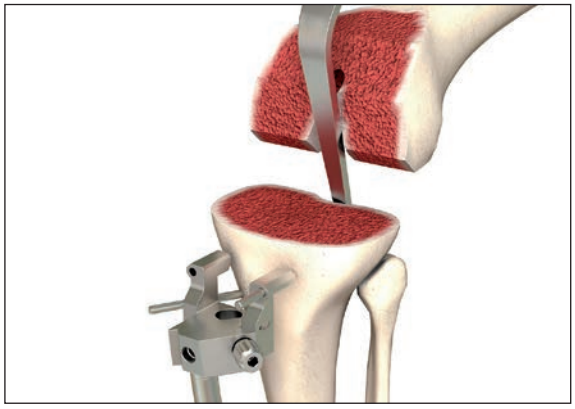


Fig. 30

Remove the Tibial Cutting Guide (Fig. 30).

Remarks
Upon removal of the Tibia Reference System, leave a Pin as a reference for a possibly required secondary resection.

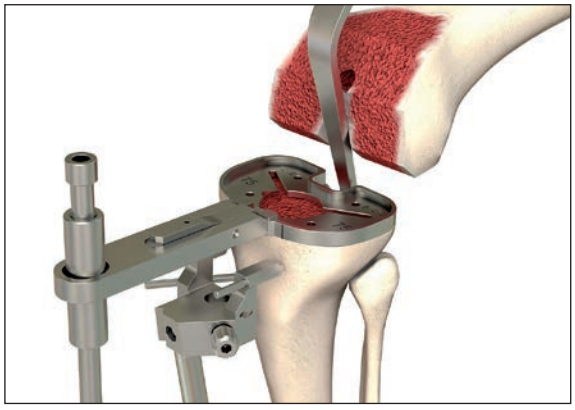


Fig. 31 Determination of tibial prosthesis size

Determination of tibial prosthesis size
Use the Tibial Template to determine the tibial prosthesis size, taking into account the rotational orientation (Fig. 31). The goal is maximum coverage of the resection surface. Use the Alignment Rod to control the axis and tilt of the resection plane.

As an alternative to extramedullarily aligned tibial resection, intramedullary alignment is likewise possible (see Annex 1).

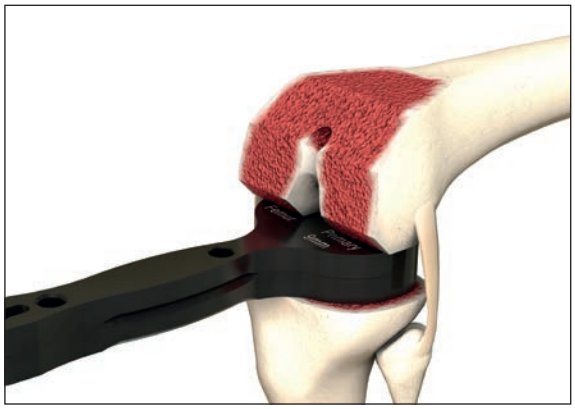


Fig. 32 Checking the flexion gap

Checking the flexion gap by insertion of the Spacer Block Femur with corresponding Spacer Block Tibia (Fig. 32).

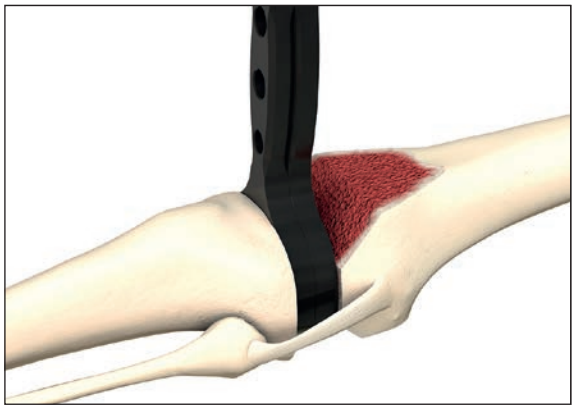


Fig. 33 Control of the extension gap

Control of the extension gap
Insertion of the Spacer Block Femur into the extension gap with the Spacer Block Tibia previously defined in flexion (Fig. 33).

Fig. 34 Control of the mechanical axis

Control of the mechanical axis with the Alignment Rod (Fig. 34) and of the medial and lateral stability and extensibility. In case of too taut conditions, secondary resection at the distal femur or the tibia can be performed.

Removal of the Spacer Block.

Surgical technique

3. Preparation and implantation

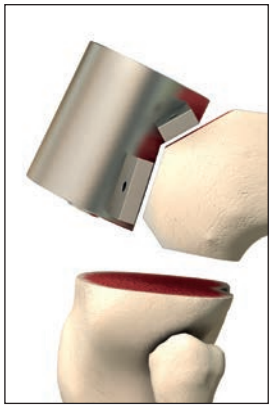


Fig. 35 Positioning the Trochlea Bushing

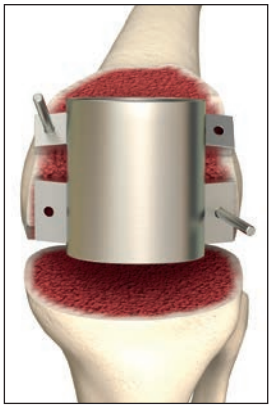


Fig. 36 Fixation of the Trochlea Bushing

3.1 balanSys CR, UC and RP

Preparation of the femur

Place the Trochlea Bushing for processing of the trochlea onto the femur (Fig. 35) and fix it diagonally with at least two Pins (Fig. 36).

Remarks

The authors recommend placing the Trochlea Bushing slightly laterally for optimal patella guiding.

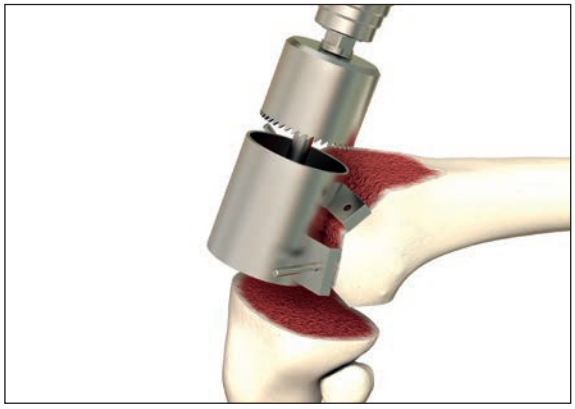


Fig. 37

Grooving the trochlea with the Trochlea Reamer to the stop (Fig. 37).

Removal of all instruments.

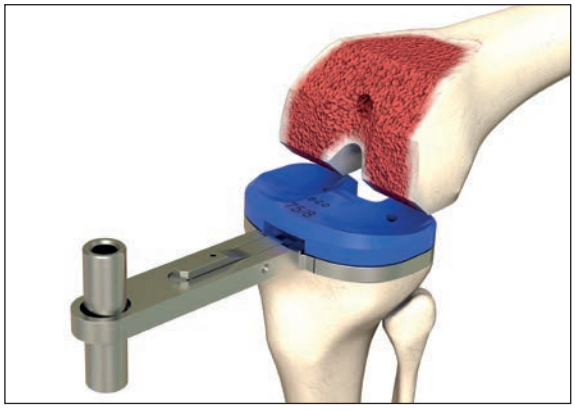


Fig. 38 Insertion of the Tibial Trial Prosthesis

Insertion of the appropriate PE Trial Inlay having the predetermined size with the Tibial Template (Fig. 38).

Remarks

It must be ensured that the selected Trial Component covers the tibia as required, taking into account the selected femoral size.

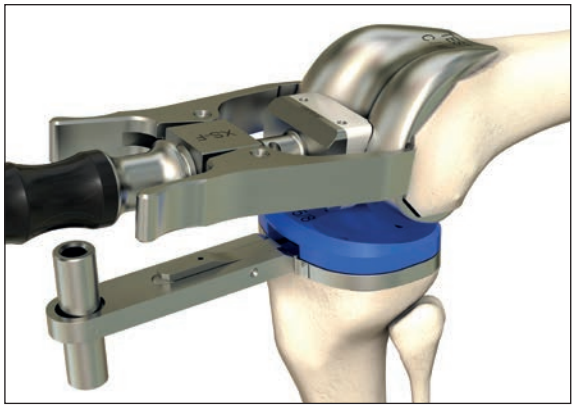


Fig. 39 Insertion of the Trial Femur

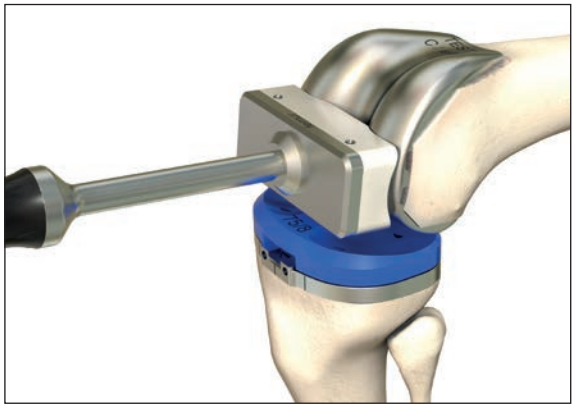


Fig. 40 Fixation using the Femoral Impactor

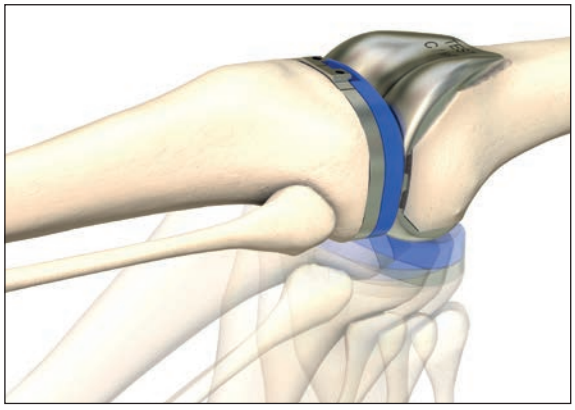


Fig. 41 Moving of the knee joint over the full range of movement

Insertion of the Trial Femur (Fig. 39) using the Femur Holder and fixation with the Femoral Impactor (Fig. 40).

Reduction of the extensor mechanism.

Remarks

In case of patella replacement, the authors recommend carrying out the patella resection and the attachment of the Patella Trial Components before the knee is moved over the full range of movement.

After insertion of all the Trial Components, test the knee for maximum range of motion, stability, kinematics and mobility (Fig. 41).

The Tibial Component will generally align itself according to the Femoral Component. Any adjustments necessary should be made before marking the definitive position.

After definitive placement, the position of the laser lines on the anterior Tibial Template is transferred to the tibia using a Cautery.

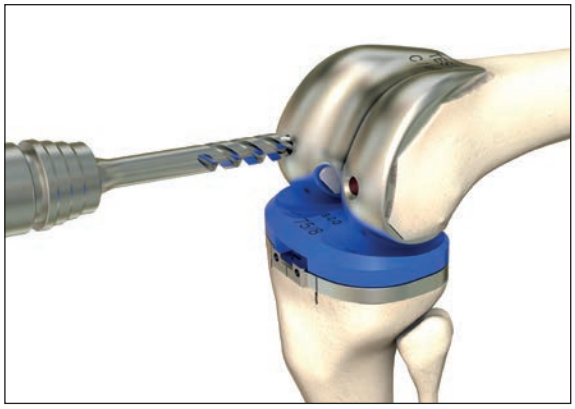


Fig. 42 Borehole for the Femoral Anchoring Pins

Drilling of the two holes for the Femoral Anchoring Pin (Fig. 42).

Removal of the Trial Femur and the PE Trial Inlay.

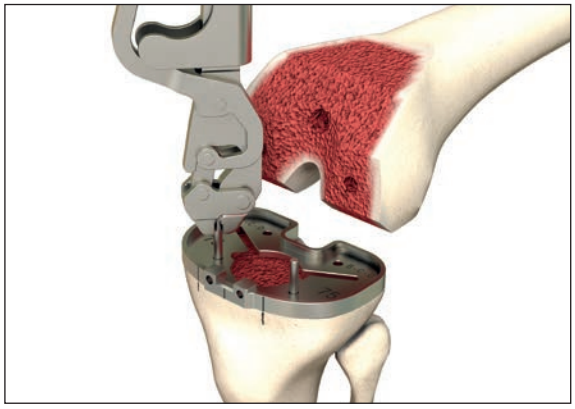


Fig. 43 Fixation of the Tibial Template

Preparation of the tibia
Fixating the Tibial Template with two Pins (Fig. 43), taking into account the marking on the tibial head.

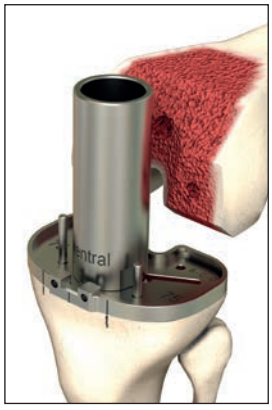


Fig. 44 a

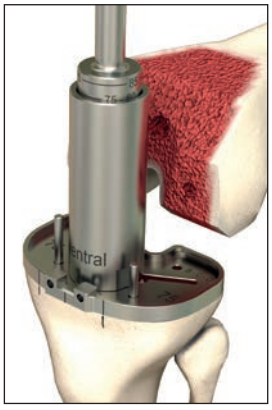


Fig. 44 b

The Reamer must be connected to a drilling machine.
Position the Reamer Guide onto the Tibial Template. Introduce the three Pins into the holes of the Tibial Template. Mind the mark **«ventral»**. By slightly rotating the Reamer Guide up to the stop in clockwise direction, connect the Reamer Guide to the Tibial Template. In this position, the unit of Reamer Guide and Tibial Template is locked (Fig. 44 a). Ream the tibial medullary cavity (Fig. 44 b).

The depth must match the appropriate length of the stem anchoring of the previously determined balanSys PS Tibial Plateau. On the Reamer, size markings are engraved.

Removal of the Reamer Guide.

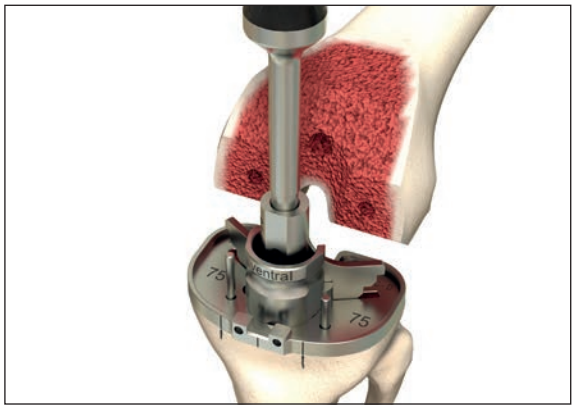


Fig. 45 Preparation of the fins

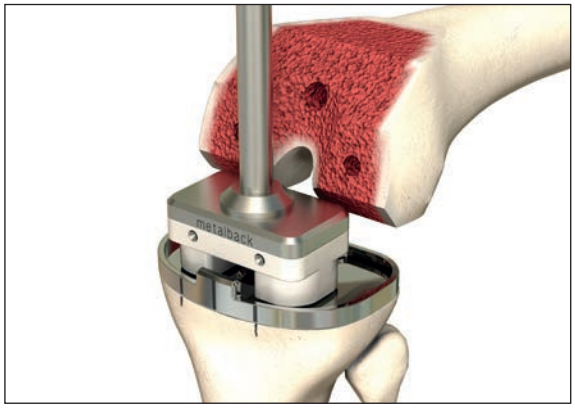


Fig. 46

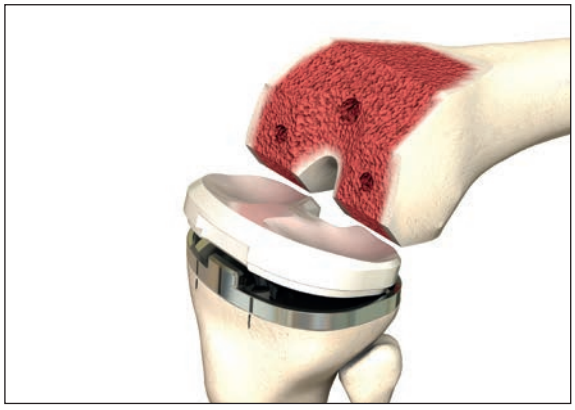


Fig. 47

Connect the Fin Chisel with the Handle.

Position the Chisel Centring Guide onto the Tibial Template. Introduce the three Pins into the holes of the Tibial Template. Mind the mark **«ventral»**. By slightly rotating the Chisel Centring Guide clockwise to the stop, lock the Chisel Centring Guide into the Tibial Template. In this position, the unit of Chisel Centring Guide and Tibial Template is locked. Upon impaction of the Fin Chisel arrangement, take caution to avoid fracturing of the tibia (Fig. 45).

In case of medial access, take care to avoid injury to the lateral collateral ligament and the popliteus tendon when introducing the Fin Chisel.

Impact until the instrument abuts the bottom of the Tibial Template. The depth of the fins is determined by the size of the Tibial Template.

Remove all other instruments.

Thorough cleaning of the resection surfaces (e. g. using pulsating pressure flushing).

Definitive implantation of the balanSys Tibial Plateau with balanSys CR / UC Inlay

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.

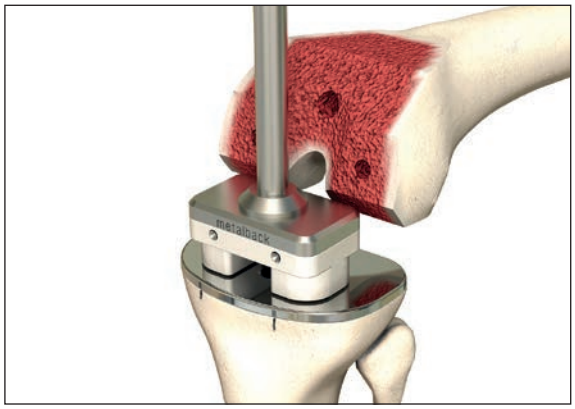


Fig. 48 Insertion of the balanSys RP Tibial Plateau

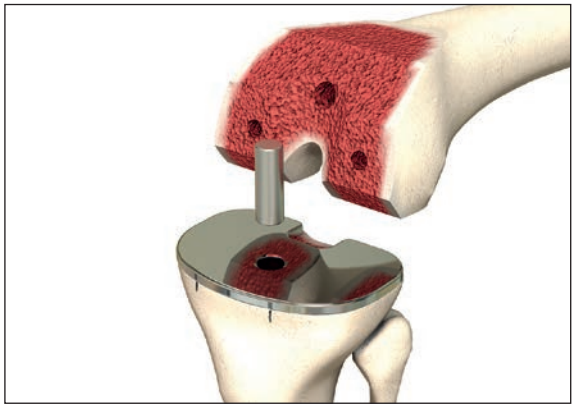


Fig. 49 Insertion of the balanSys Bolt for the RP Tibial Plateau

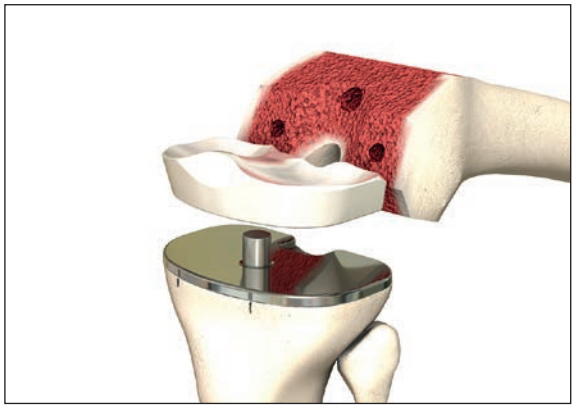


Fig. 50 Insertion of the balanSys RP Inlay

Remarks
Careful application of the cement must be ensured in order to avoid an excess in the posterior region of the femur and the Femoral Component, since the cement is difficult to remove later.

Insertion of the balanSys Tibial Plateau using the Tibial Impactor (Fig. 46).

Insertion of the balanSys PE Inlay (Fig. 47).

Definitive implantation of the balanSys Tibial Plateau with balanSys RP Inlay

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.

Remarks
Careful application of the cement must be ensured in order to avoid an excess in the posterior region of the femur and the Femoral Component, since the cement is difficult to remove later.

Insertion of the balanSys Tibial Plateau using the Tibial Impactor (Fig. 48).

Insertion of the balanSys Bolt for the RP Tibial Plateau (Fig. 49) and the balanSys RP Inlay (Fig. 50).

Remarks
Ensure that there are no foreign bodies in the receiving hole of the Bolt.

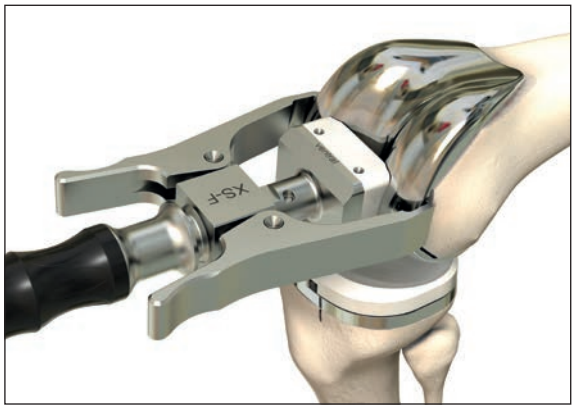


Fig. 51

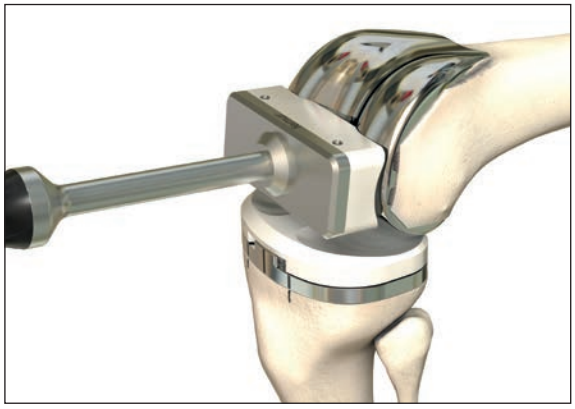


Fig. 52

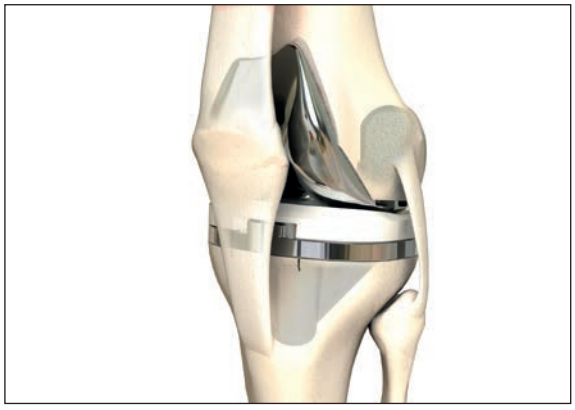


Fig. 53

Definitive implantation of the balanSys Femur (CR / UC / RP)

Implantation of the balanSys Femur (cemented or uncemented) using the Femur Holder (Fig. 51) and definitive impaction using the Femoral Impactor (Fig. 52).

During the curing of the bone cement, place the leg in extension (Fig. 53).

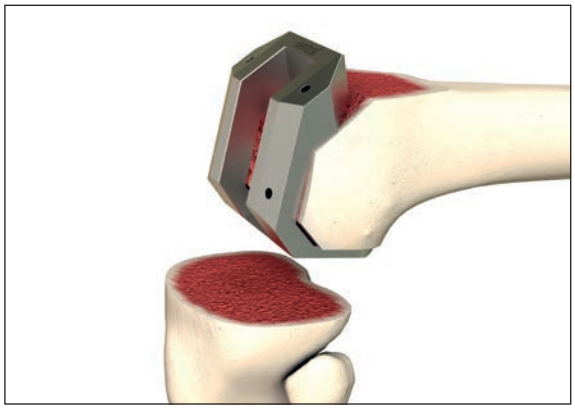


Fig. 54 Positioning of the Femur Box Cutting Guide

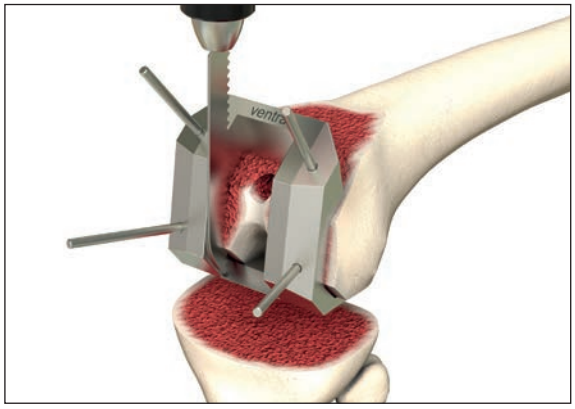


Fig. 55

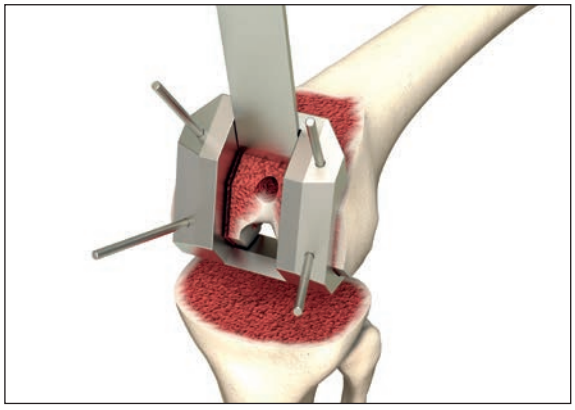


Fig. 56

3.2 balanSys PS

Preparation of the femur

Position an appropriately sized Femur Box Cutting Guide onto the femur. It must be flush with the posterior and distal resection surfaces of the femur (Fig. 54).

Remarks

The authors recommend placing the Femur Box Cutting Guide slightly laterally for optimum passage of the patella.

The Guide resting on the resection surfaces must be secured with four Pins diagonally on the femur. The posterior Pins should be inserted first.

Guide an Oscillating Saw along the walls of the Box Cutting Guide to produce the cuts on the medial and lateral sides as well as on the base of the intercondylar area (Fig. 55).

The base of the intercondylar area can optionally be cut out with a balanSys Chisel (Fig. 56).

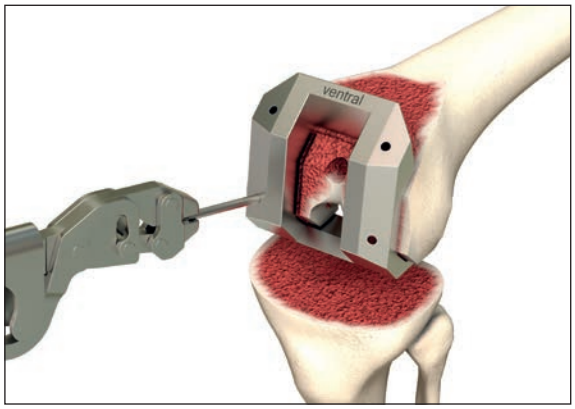


Fig. 57 Removal of the Pins with Pliers

After performing the resection, remove Femur Box Cutting Guide and Pins (Fig. 57) in the following order:
1. Pins
2. Cutting Guide
3. Resected bone block

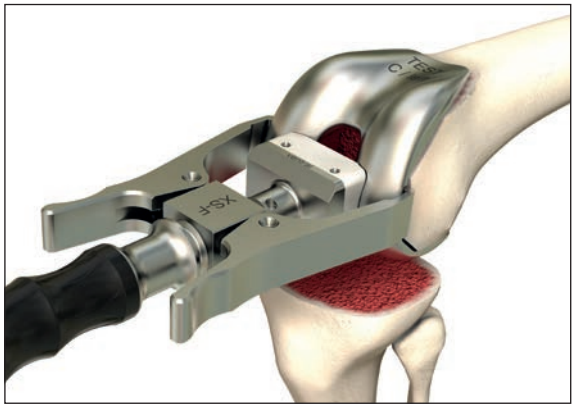


Fig. 58 Insertion of the Trial Femur

Determination of the definitive implant position
Insertion of the Trial Femur using the Femur Holder (Fig. 58).

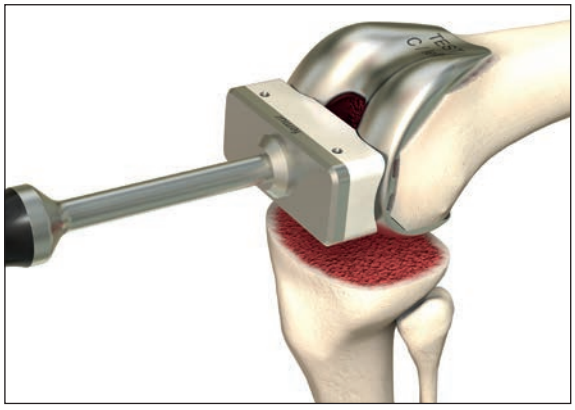


Fig. 59 Fixation with the Femoral Impactor

The final fixation is carried out with the Femoral Impactor (Fig. 59).

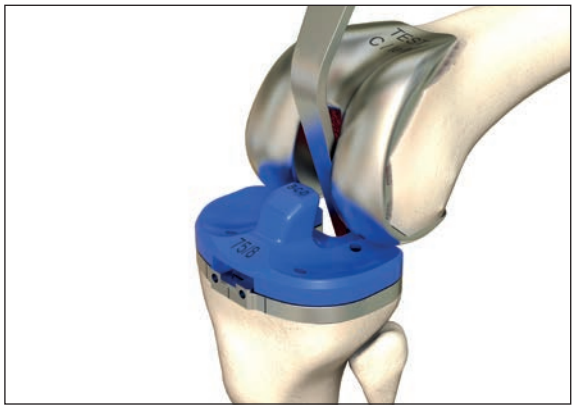


Fig. 60 Insertion of the Tibial Template and the PE Trial Inlay

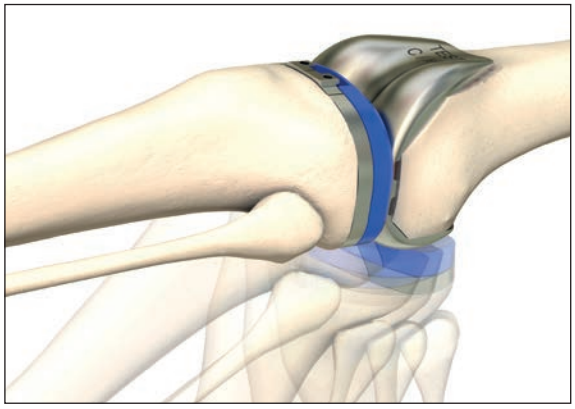


Fig. 61 Full moving of the knee joint over the full range of movement

Once the Trial Femur is inserted, the tibia can be subluxated in anterior direction with a Hohmann Retractor to position the Tibial Template and the PS PE Trial Inlay (Fig. 60).

Insertion of the Tibial Template and PS PE Trial Inlay of the predetermined size and positioning on the resected tibia.

Remarks
It must be ensured that the selected Trial Component covers the tibia as required, taking into account the selected femoral size.

Reduction of the extensor mechanism.

Remarks
In case of patella replacement, the authors recommend carrying out the patella resection and the attachment of the Patella Trial Components before the knee is moved over the full range of movement.

After insertion of all the PS Trial Components, check the knee for maximum range of motion, stability, kinematics and mobility (Fig. 61).

The Tibial Component will generally align itself according to the Femoral Component. Any adjustments necessary should be made before marking the definitive position.

After the definitive placement, the position of the laser lines on the anterior tibia template is transferred to the tibia with a Cautery.

Removal of the Trial Femur and the PE Trial Inlay.

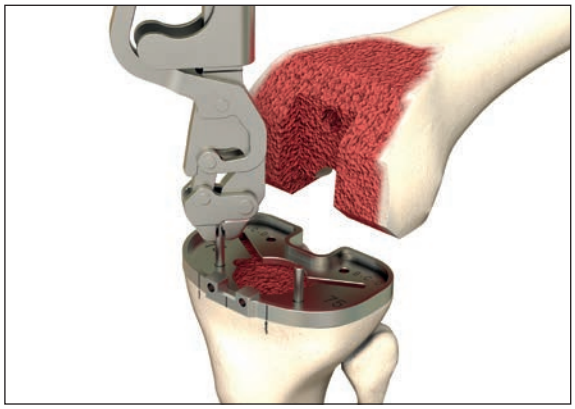


Fig. 62 Fixation with Pins

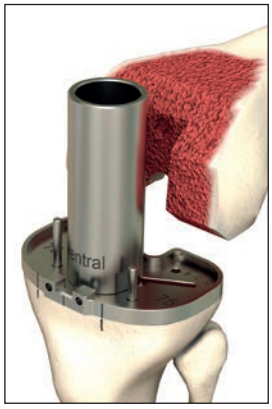


Fig. 63 Positioning of the Reamer Guide

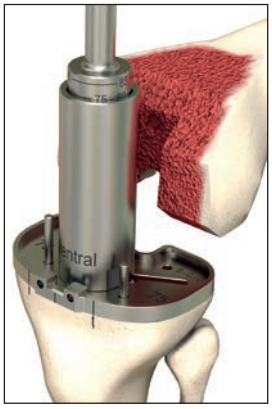


Fig 64 Reaming of the tibial medullary cavity

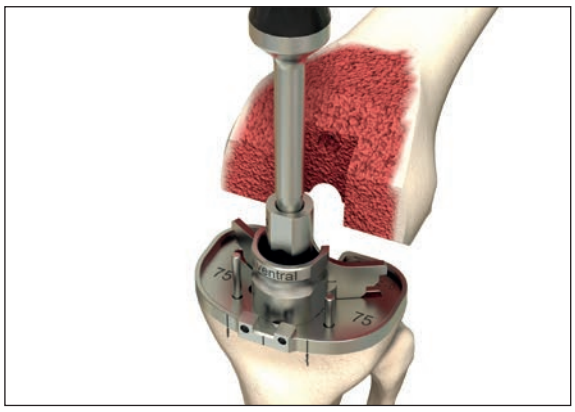


Fig. 65 Preparation of the Fins

Preparation of the tibia

Reduction of the Tibial Template according to the Cautery mark and fixation with two anterior Pins (Fig. 62).

The Reamer must be connected to a drilling machine.

Position the Reamer Guide onto the Tibial Template. Introduce the three Pins into the holes of the Tibial Template. Mind the mark **«ventral»**. By slightly rotating the Reamer Guide up to the stop in clockwise direction, connect the Reamer Guide to the Tibial Template. In this position, the unit of Reamer Guide and Tibial Template is locked (Fig. 63). Ream the tibial medullary cavity (Fig. 64).

The depth must match the appropriate length of the stem anchoring of the previously determined balanSys PS Tibial Plateau. On the Reamer, size markings are engraved.

Removal of the Reamer Guide.

Connect the Fin Chisel with the Handle.

Position the Chisel Centring Guide onto the tibial template. Introduce the three Pins into the holes of the Tibial Template. Mind the mark **«ventral»**. By slightly rotating the Chisel Centring Guide clockwise to the stop, lock the Chisel Centring Guide into the Tibial Template. In this position, the unit of Chisel Centring Guide and Tibial Template is locked. Upon impaction of the Fin Chisel arrangement, take caution to avoid fracturing of the tibia (Fig. 65).

In case of medial access, take care to avoid injury to the lateral collateral ligament and the popliteus tendon when introducing the Fin Chisel.

Impact until the instrument abuts the bottom of the Tibial Template. The depth of the Fins is determined by the size of the Tibial Template.

Remove all other instruments.

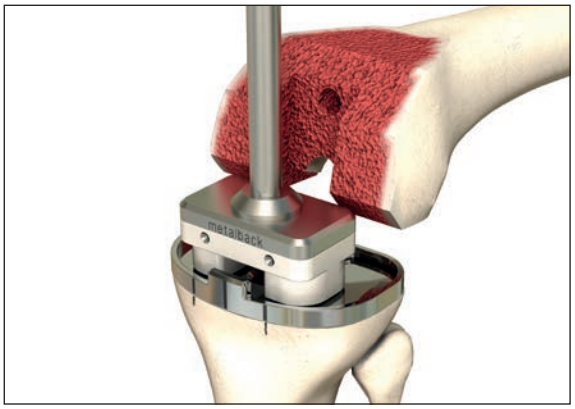


Fig. 66 Insertion and impaction of the Tibial Component

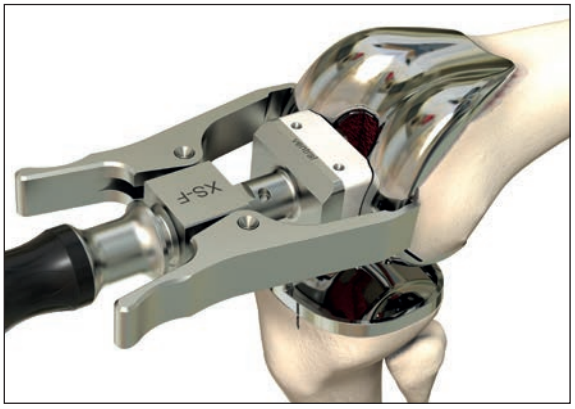


Fig. 67 Insertion of the femur

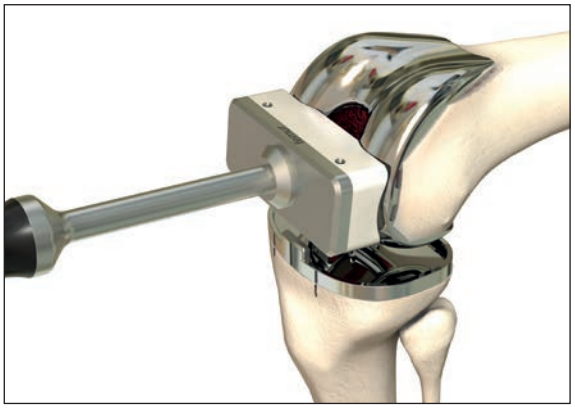


Fig. 68 Definitive impaction using the Femoral Impactor

Definitive implantation balanSys PS
A final control after selection of the implants is recommended to ensure that the femoral, tibial and PE implants 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.

Remarks
Careful application of the cement must be ensured in order to avoid an excess in the posterior region of the femur and the Femoral Component, since the cement is difficult to remove later.

During the definitive implantation, the knee should be positioned in flexion.

Insertion of the balanSys Tibial Plateau and impaction using the Tibial Impactor (Fig. 66).

Insertion of the balanSys PS Femoral Component with the Femur Holder (Fig. 67). Protect the femoral condyles of the balanSys PS Femur from possible scratch damage.

Definitive impaction using the Femoral Impactor (Fig. 68).

Remarks
Remove excess cement. It is strongly recommended to carefully remove excess cement along the proximal portion of the Femoral Component and the femur box. The Tibial Plateau surface needs to be cleaned.

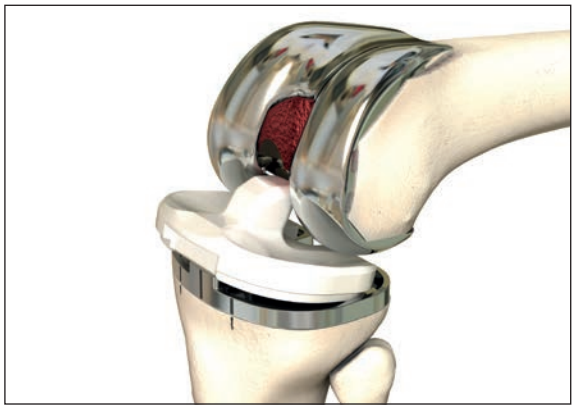


Fig. 69

Insertion of the balanSys PS Inlay (Fig. 69).

Fig. 70

During the curing of the bone cement, place the leg in extension (Fig. 70).

Remarks

After insertion of the balanSys Inlay and curing of the bone cement, remaining cement residues within the femur box should be removed with utmost care.

Annex

1 – Intramedullary tibial resection

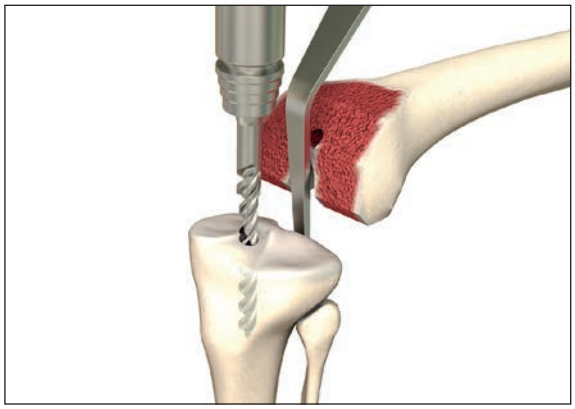


Fig. 71 Opening of the medullary cavity

Open the medullary cavity with the 8.5 mm Drill Bit (Fig. 71).

Remarks

In order to ensure good positioning of the Intramedullary Rod (near the anatomical axis of the tibia), increase the diameter of the tibial hole. This permits automatic centring of the Rod.

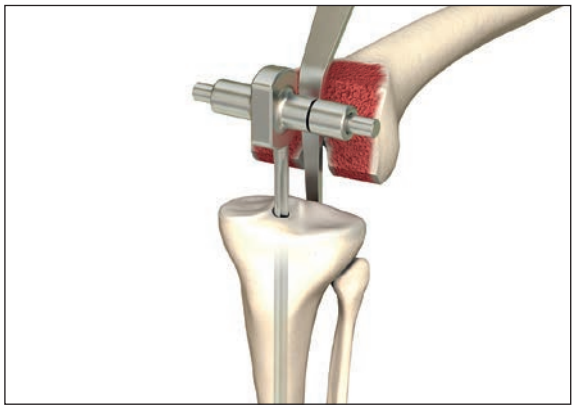


Fig. 72

Introduce the Intramedullary Rod of the Tibia Reference System using the handle (Fig. 72).

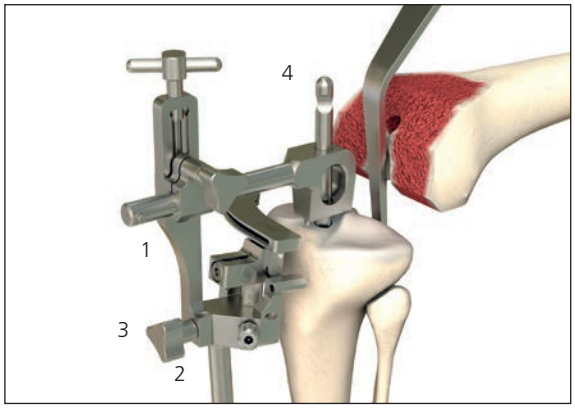


Fig. 73 Positioning of the intramedullarily aligned Tibia Reference System

Positioning of the intramedullarily aligned Tibia Reference System (Fig. 73).

- Coupling of the Tibia Reference System intramedullarily Shackle (1) with the Tibia Reference System Aiming Device Proximal (2)
- Fixation with the Tibia Reference System Screw (3)
- Placing the pre-assembled Instrument set over the Intramedullary Rod of the Tibia Reference System (4)

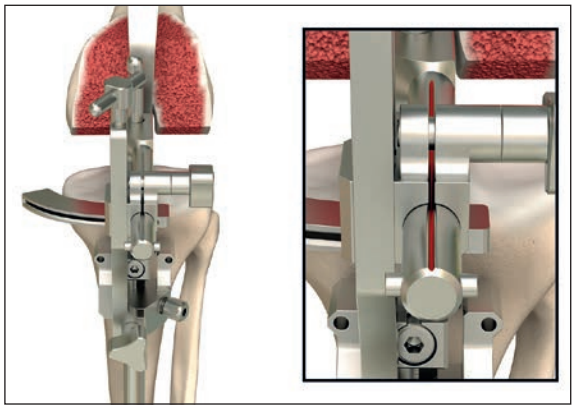


Fig. 74

Distal alignment of the Tibia Reference System on the second metatarsal and proximally at the transition from the medial to the middle third of the tibial tubercle.

Impaction of the Shackle.

Adjustment of the varus-valgus angle with the Set-Screw. In order for the tibial resection to be carried out at 90° to the Intramedullary Rod, the notch in the Round Guide must be in alignment with the Slot in the clamping (Fig. 74).

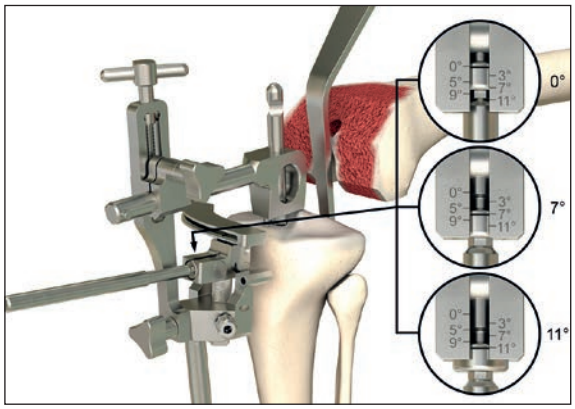


Fig. 75 Adjustment of the posterior tilt

Adjustment of the posterior tilt
Using the Hex Screwdriver, adjust the posterior tilt according to the anatomy (Feeler Plate parallel to the best-preserved tibial articular surface) (Fig. 75).

Remarks
The authors recommend a posterior tilt of 7° for a cruciate ligament-preserving implant and up to 5° for a posterior-stabilising implant.

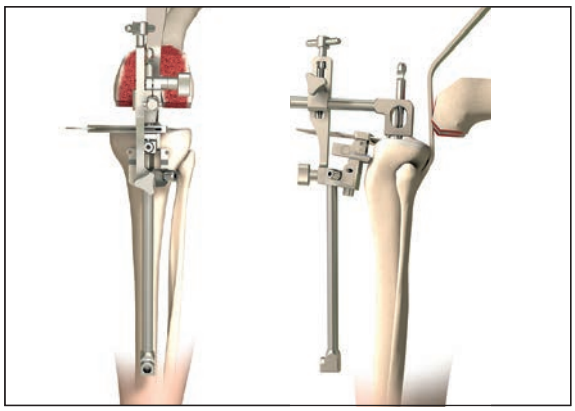


Fig. 76 Determination of the original joint plane

Using the Feeler Plate or the Tibial Stylus, determine the original joint plane at the level of the best-preserved tibial articular surface (Fig. 76).

Fixate the Reference System (straight and diagonally) proximally with at least two Pins into the prepared holes. The holes are pre-drilled with the 3.2 mm Drill Bit.

Removal of the Intramedullary rod of the Tibia Reference System.

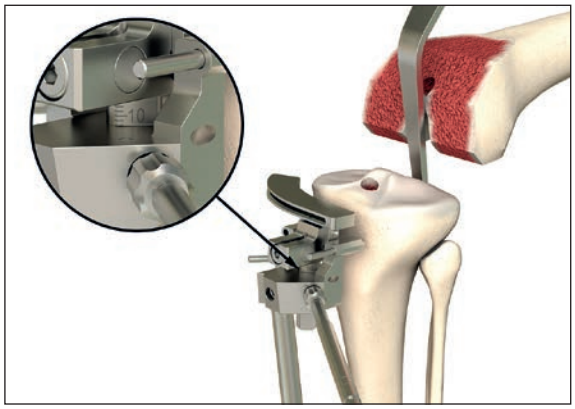


Fig. 77

Tibial resection
Using the Hex Screwdriver, move the Tibial Cutting Guide in distal direction by 6–8 mm (Fig. 77).

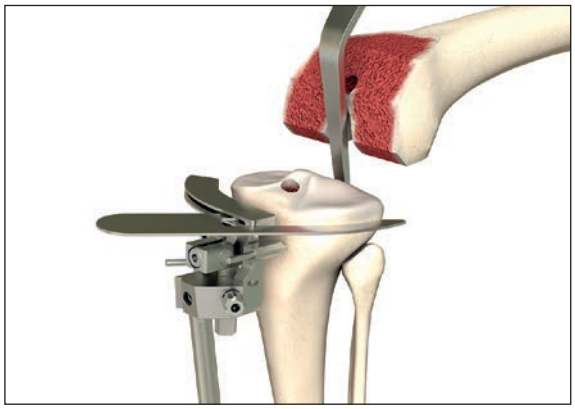


Fig. 78 Check the planned tibial resection plane

Use the Feeler Plate to check the selected tibial resection plane.

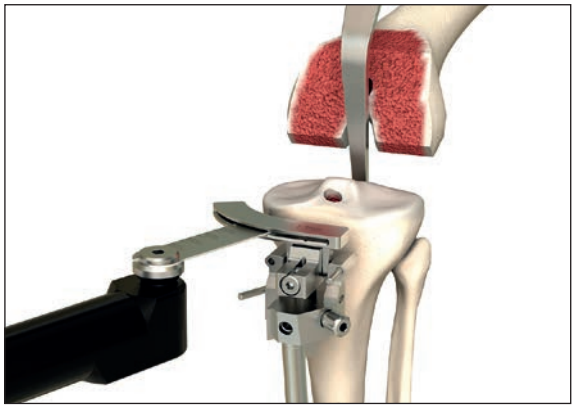


Fig. 79 Tibial resection

Performance of the Tibial Resection (Fig. 79) and removal of the posterior meniscal residues.

Remove the Tibial Cutting Guide.

Remarks
Upon removal of the Tibia Reference System, leave a Pin as a reference for a possibly required secondary resection.

Annex

2 – balanSys 3-Peg Patella

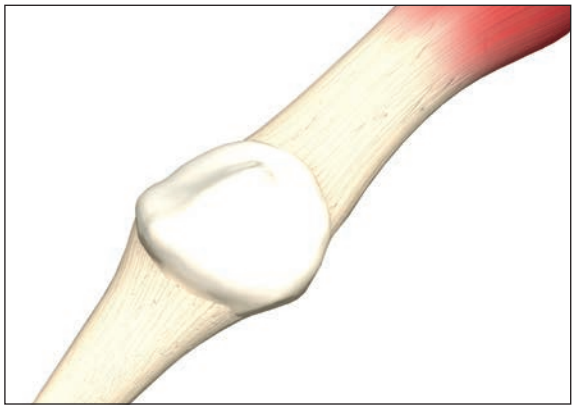


Fig. 80

Remove all osteophytes from the edge.

Determination of the patella size based on 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

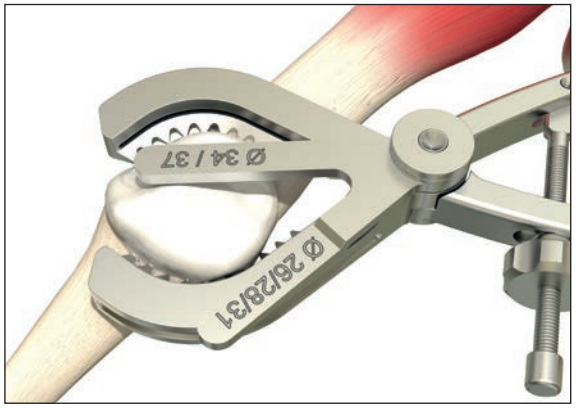


Fig. 81

Evert patella and grasp centrally with the Patella Resection Pliers.

Align the resection level with the clamping support to the selected patella size setting.

Remarks
*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.*

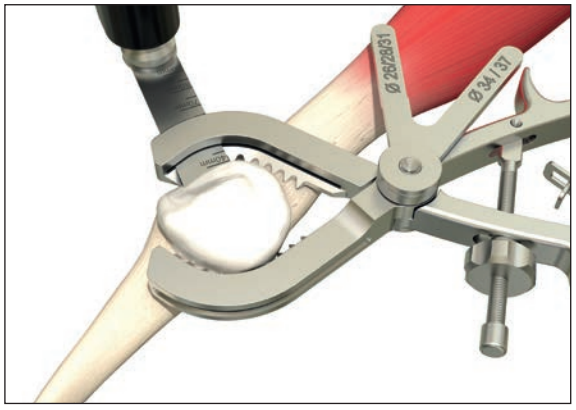


Fig. 82

Performing the patella resection through the saw guide on the lateral side of the Patella Resection Pliers.

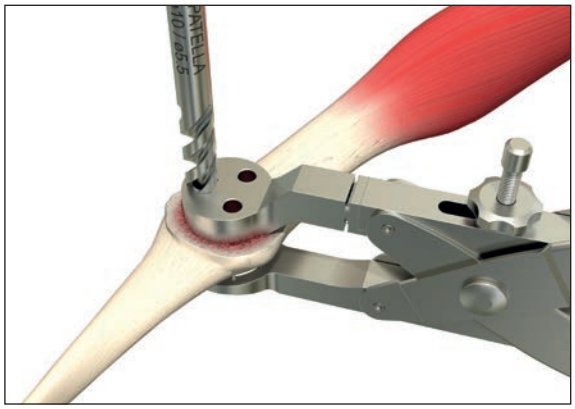


Fig. 83

Positioning of the Drill Guide to determine the definitive position of the Patella Implant in relation to the predetermined sliding path of the femoral plate.

Pre-drilling of the holes for the three Patella Pins with the 5.5 mm Drill Bit.

Fig. 84

Retropatellar area prepared for implantation.

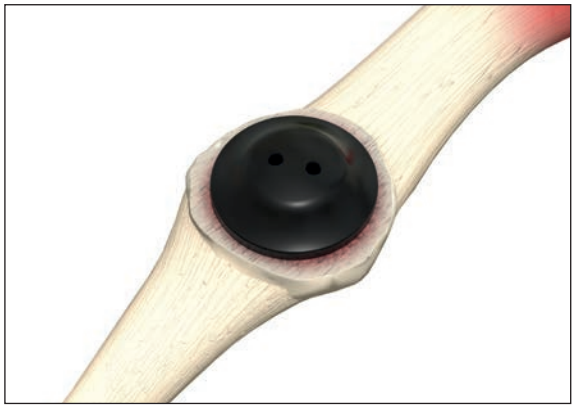


Fig. 85

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

Chamfering of the medial and lateral edges of the patellar rear surface.

Control of the sliding movement in the femoropatellar joint regarding centring.

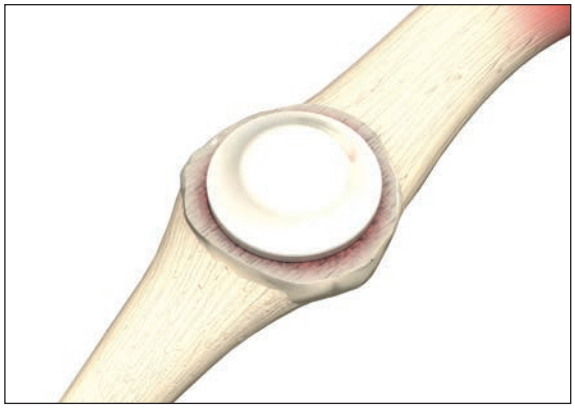


Fig. 86

Thorough cleaning of the resection surface.

Insertion of the cemented balanSys 3-Peg Patella using the Cementing Clamp.

Removal of marginal cement residues.

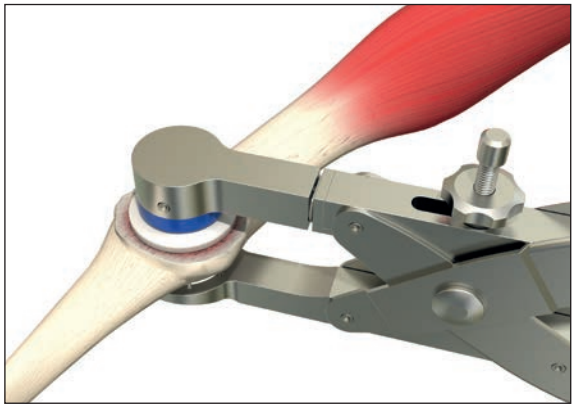


Fig. 87

After the curing of the cement, remove the Cementing Clamp.

After closing the joint capsule, perform a final functional test and check for centred movement of the patella.

Annex

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	8.0mm
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

vitamys®

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	10.5mm
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)

vitamys®

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)

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)

Annex

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						✓	✓	✓

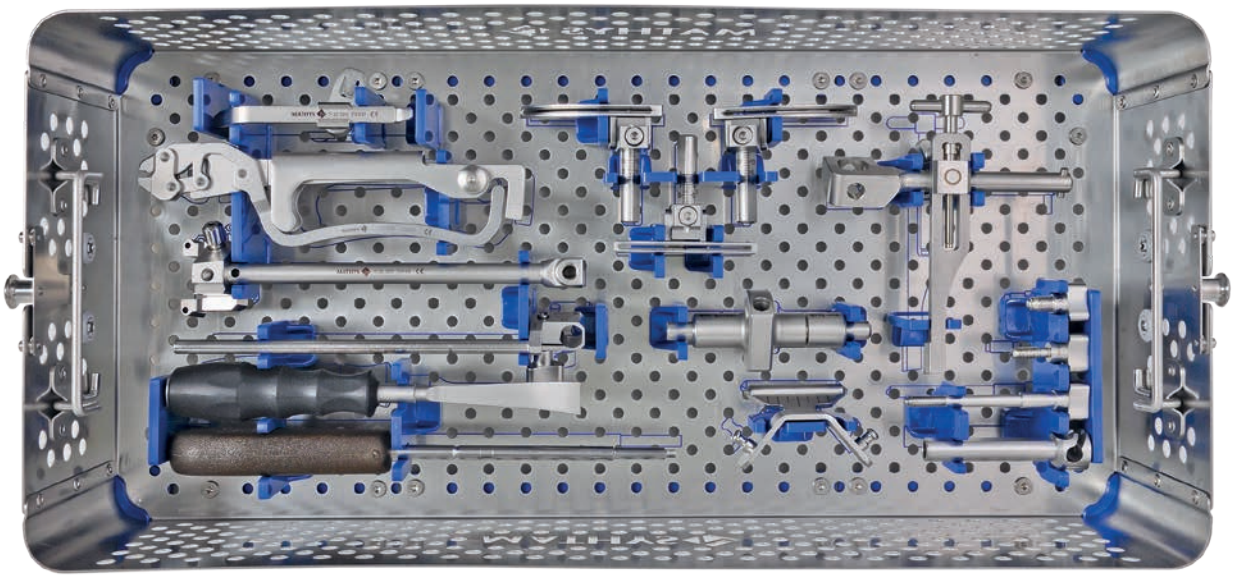
Annex

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.		Qty
71.02.3096	balanSys tibial stylus	1

Item no.		Qty
71.02.3006	balanSys pliers	1

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

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

Item no.		Qty
71.34.0686	balanSys osteophyte chisel, curved	1

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

Item no.		Qty
71.02.4018	balanSys tibial cutting guide 1.3	1

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

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

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

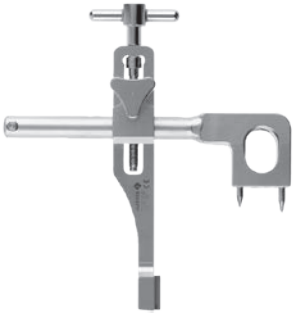
Item no.		Qty
71.02.3035	balanSys Trs. ankle holder	1

Item no.		Qty
77.02.0041	balanSys Trs. connecting screw	1

Item no.		Qty
77.02.0019	balanSys Trs. screw	1

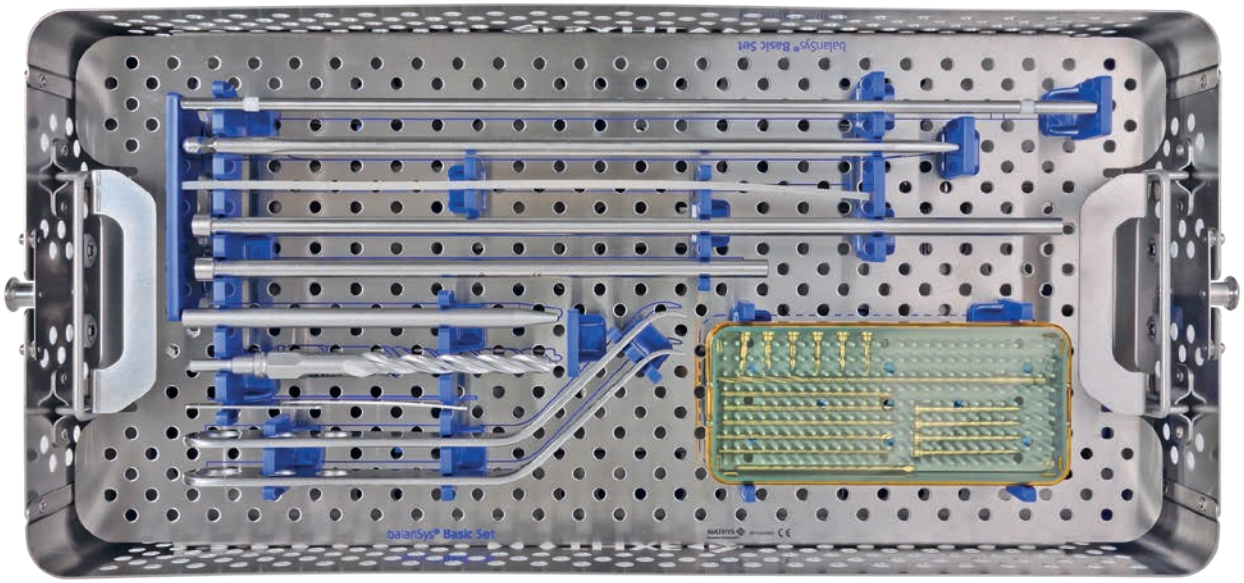
Item no.		Qty
77.02.0043	balanSys Trs. locking bolt	1

Item no.		Qty
71.02.3036	balanSys Trs. distal connector	1



Item no.		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.		Qty
70.04.0109	balanSys Alignment Rod Centre Piece	1

Item no.		Qty
71.02.3042	balanSys Trs. Intramedullary Rod	1

Item no.		Qty
71.02.1005	balanSys Trs. Rubber Band 3x25x300	1

Item no.		Qty
70.04.0111	balanSys Alignment Rod Long	1

Item no.		Qty
70.04.0110	balanSys Alignment Rod Short	1

Item no.		Qty
71.02.3014	balanSys Impaction/Extraction Rod	1

Item no.		Qty
71.02.3054	balanSys Pin 3.2/80	6

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

Item no.		Qty
71.02.3003	Pin with Head, Ø 3.2/6.5x52	4

Item no.		Qty
71.34.0100	balanSys Drill Bit 8.5/11 mm	1

Item no.		Qty
315.310	Drill Bit 3.2	1

Item no.		Qty
71.34.0107	balanSys Feeler Plate 1.3	1

Item no.		Qty
71.02.3005	balanSys Bone Retractor	2

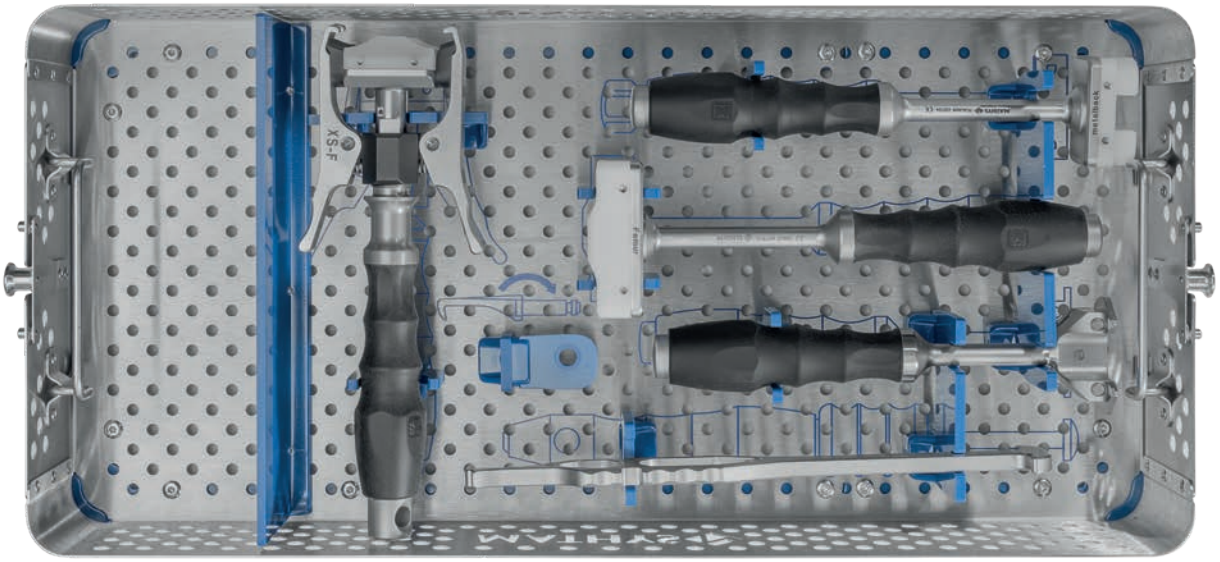
Optional

Item no.		Qty
71.34.0647	Drill Pin 3.2 mm x 89 mm	6

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

Item no.		Qty
71.34.0698	balanSys tibial impactor	1

Item no.		Qty
71.34.0699	balanSys femoral impactor	1

Item no.		Qty
71.34.0240	balanSys positioner for tibial plateau	1

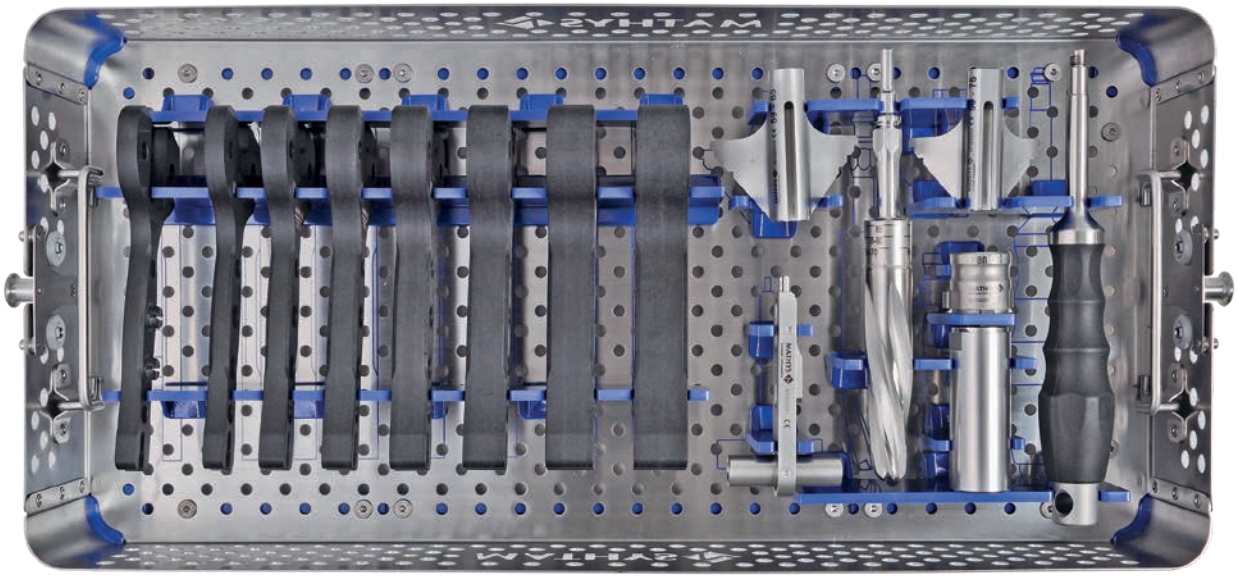
Item no.		Qty
71.34.0788	balanSys Femur Extractor	1

Optional instruments

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

balanSys 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.		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.		Qty
71.34.0197	balanSys Chisel Centering Guide	1

Item no.		Qty
71.34.0196	balanSys holder tibial template	1

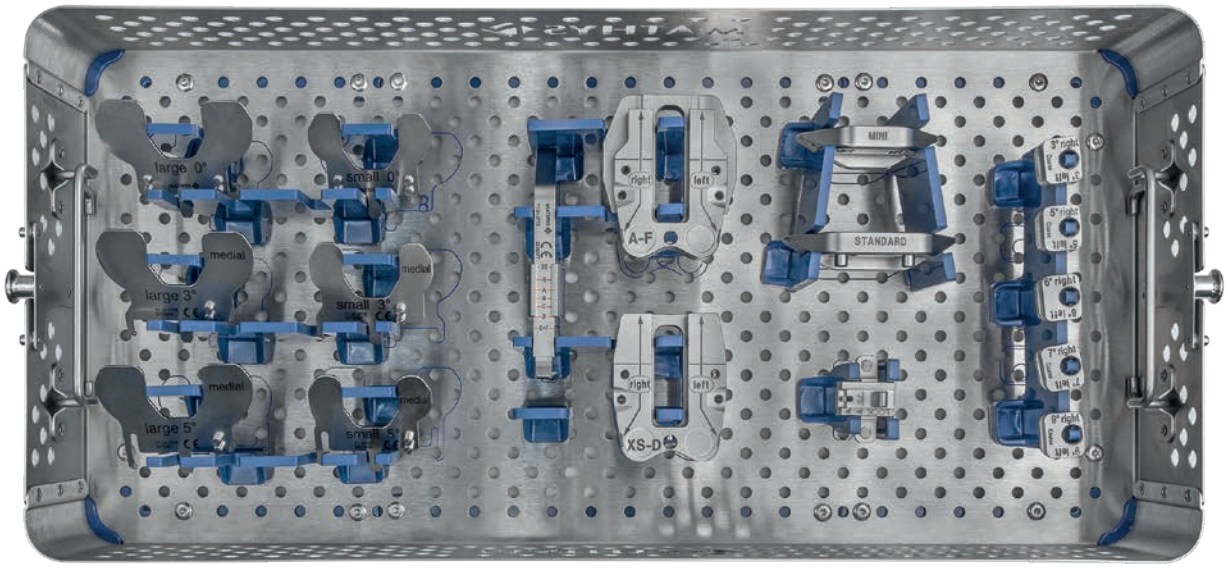
Item no.		Qty
71.34.0200	balanSys Reamer	1

Item no.		Qty
71.34.0201	balanSys Reamer Guide	1

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

balanSys LIS 4in1 71.34.9030A

No Picture / 71.34.0162 **balanSys LIS 4in1 Lid**



71.34.0163 **balanSys LIS 4in1 Tray**

Item no.		Qty
71.34.0767	balanSys Fem. Sizing/Rot.Guide LIS XS–D	1

Item no.		Qty
71.34.0768	balanSys Fem. Sizing/Rot.Guide LIS A–F	1

Item no.	Description	Qty
71.34.0769	balanSys Femur Rotation Bearing Small 0°	1
71.34.0770	balanSys Femur Rotation Bearing Small 3°	1
71.34.0771	balanSys Femur Rotation Bearing Small 5°	1

Item no.	Description	Qty
71.34.0772	balanSys Femur Rotation Bearing Large 0°	1
71.34.0773	balanSys Femur Rotation Bearing Large 3°	1
71.34.0774	balanSys Femur Rotation Bearing Large 5°	1

Item no.		Qty
71.34.0775	balanSys Size Feeler LIS	1

Item no.		Qty
71.34.0776	balanSys Holder Distal Cutting Guide LIS	1

Item no.	Description	Qty
71.02.3091	balanSys axis alignment block 3° LIS	1
71.02.3092	balanSys axis alignment block 5° LIS	1
71.34.0777	balanSys axis alignment block 6° LIS	1
71.02.3093	balanSys axis alignment block 7° LIS	1
71.02.3094	balanSys axis alignment block 9° LIS	1

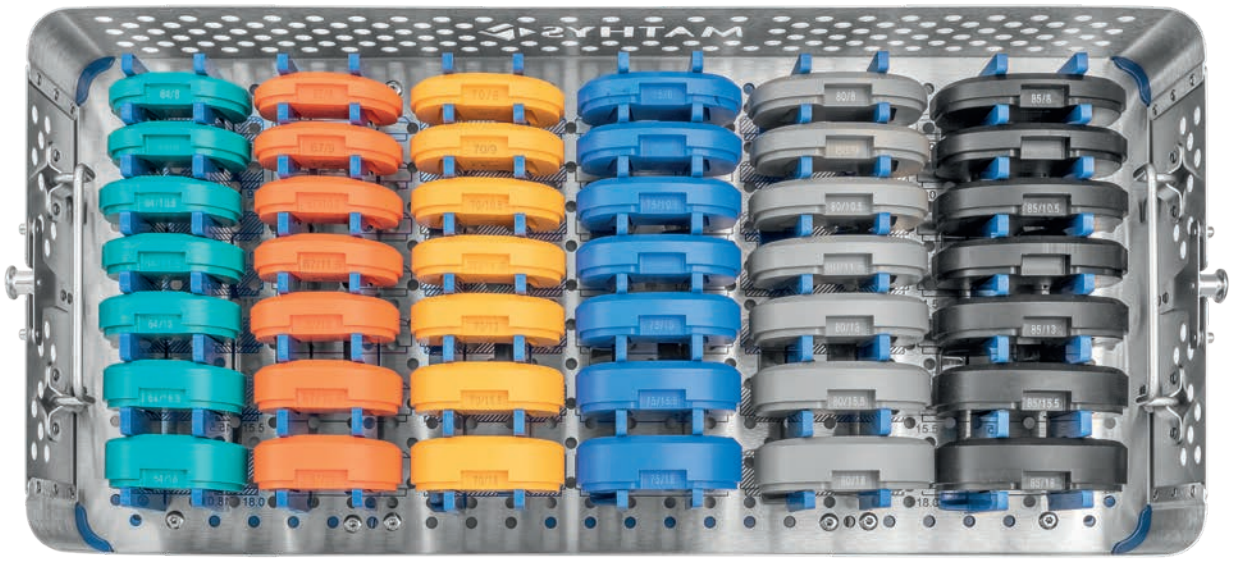
Item no.		Qty
71.34.0121	balanSys Distal Cutting Guide STANDARD	1

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

Item no.		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**

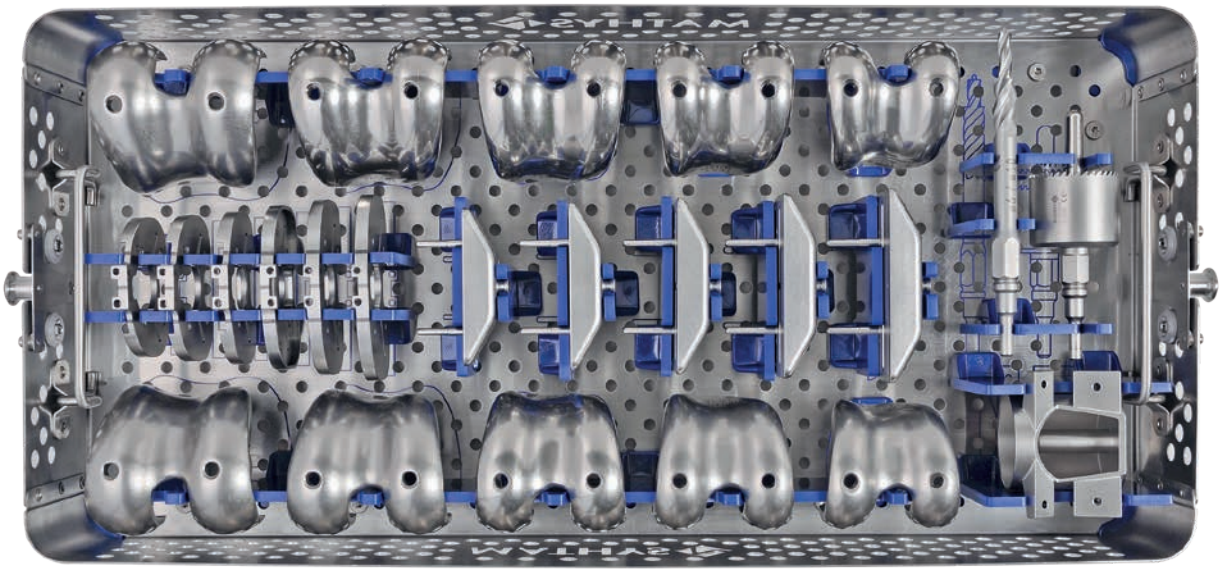
* balanSys PE Inlays 9 mm and 11.5 mm are available in vitamys only.

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.		Qty
71.02.3023	balanSys trochlea reamer	1

Item no.		Qty
71.02.3024	balanSys trochlea bushing	1

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

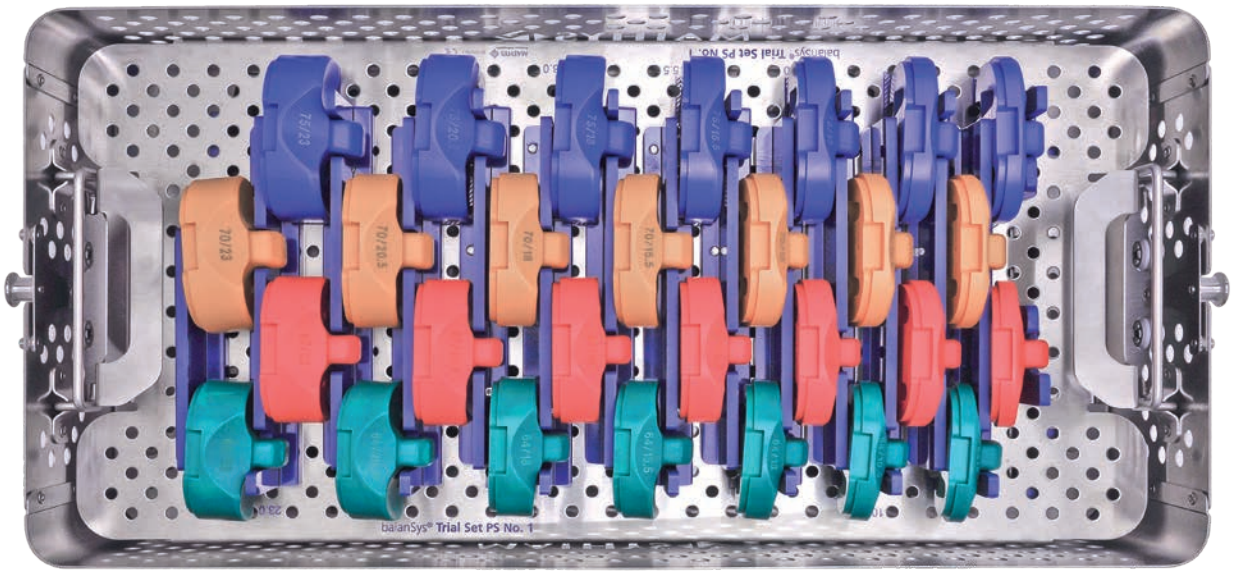
Optional instruments

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

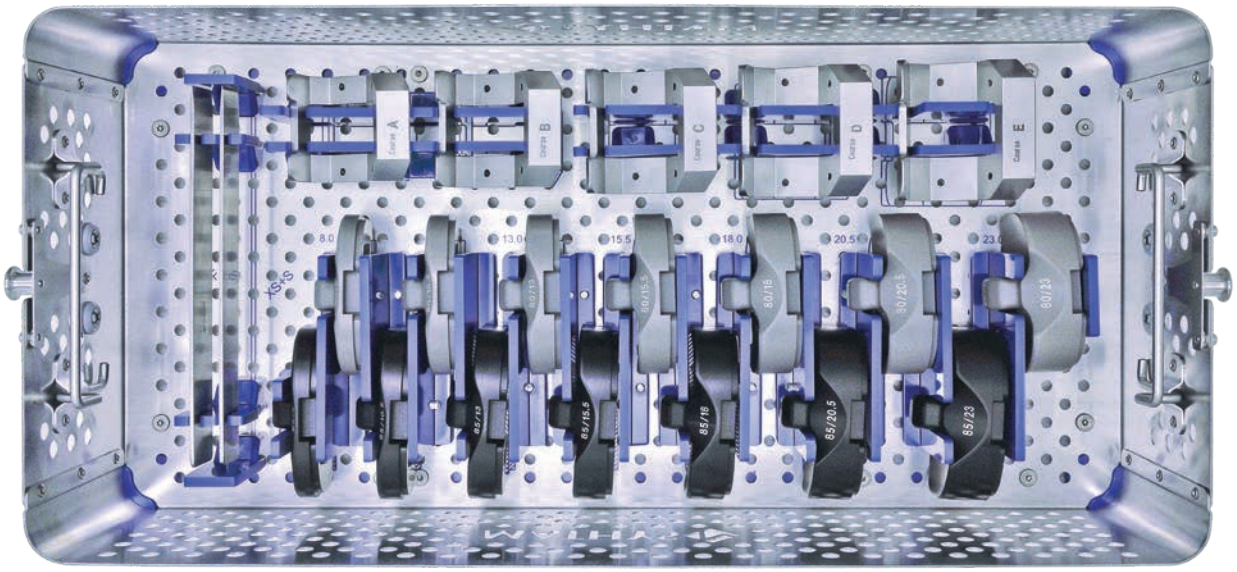
Item no.	Description	Qty
71.34.0384	balanSys PS PE Trial Inlay 59/8	**1**
71.34.0965	balanSys PS PE Trial Inlay 59/9*	**1**
71.34.0385	balanSys PS PE Trial Inlay 59/10.5	**1**
71.34.0966	balanSys PS PE Trial Inlay 59/11.5*	**1**
71.34.0386	balanSys PS PE Trial Inlay 59/13	**1**
71.34.0387	balanSys PS 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**

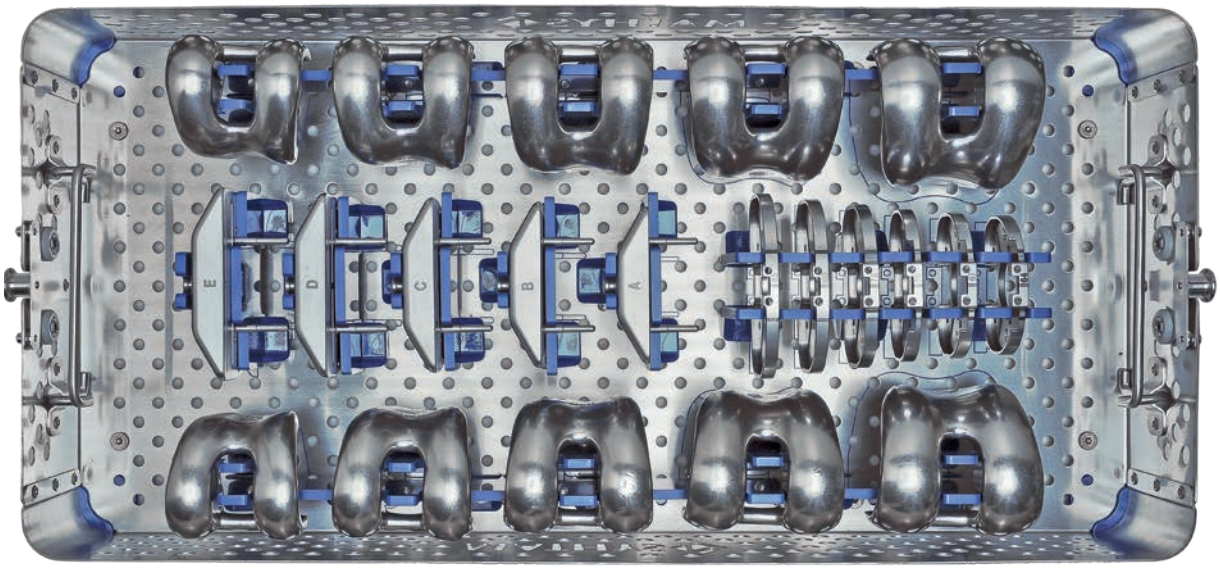
Item no.		Qty
71.34.0690	balanSys Chisel 22 mm XS/S	1

Item no.		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

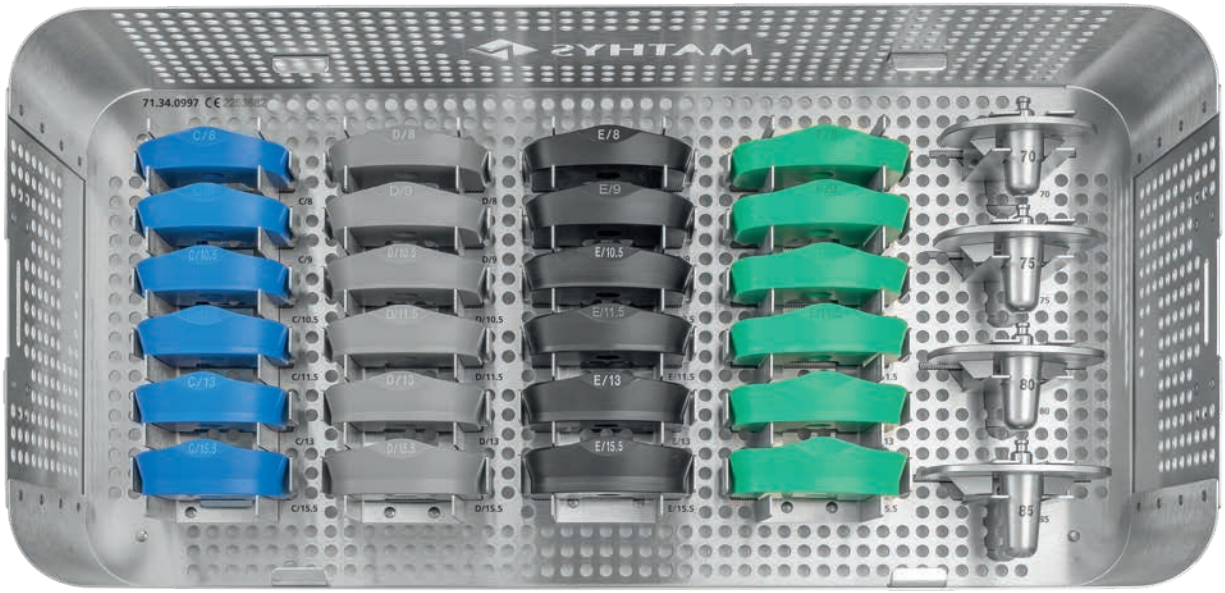
Optional instruments

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**



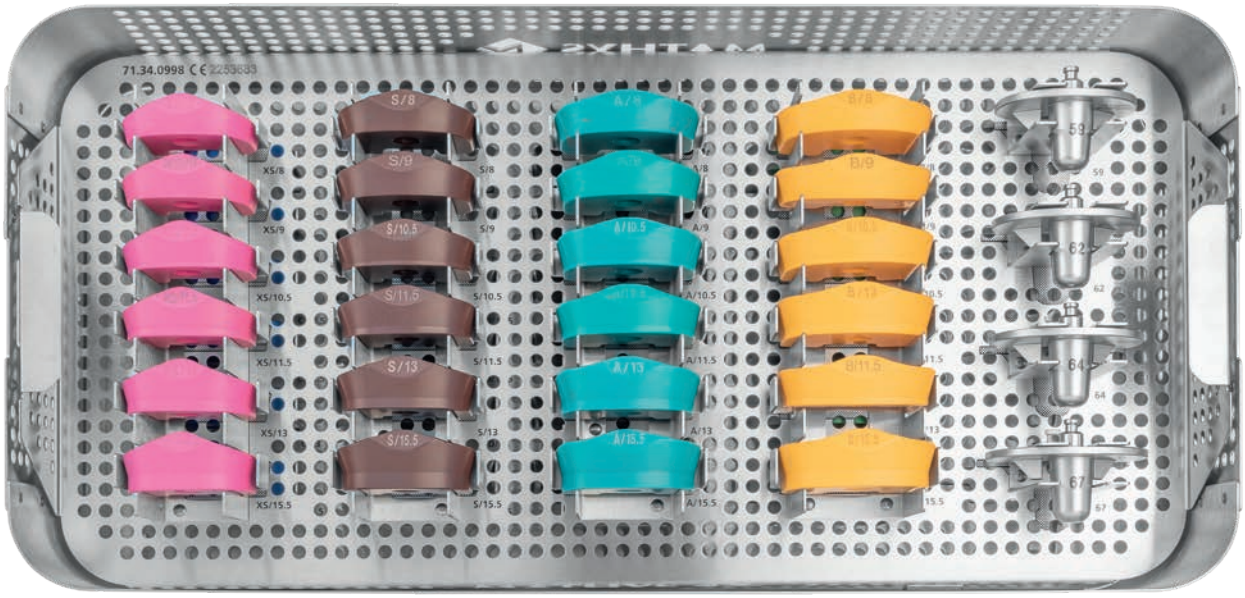
71.34.0997 **balanSys Trial Set 6-RP Tray**

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 Set 71.34.9060A (optional)



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

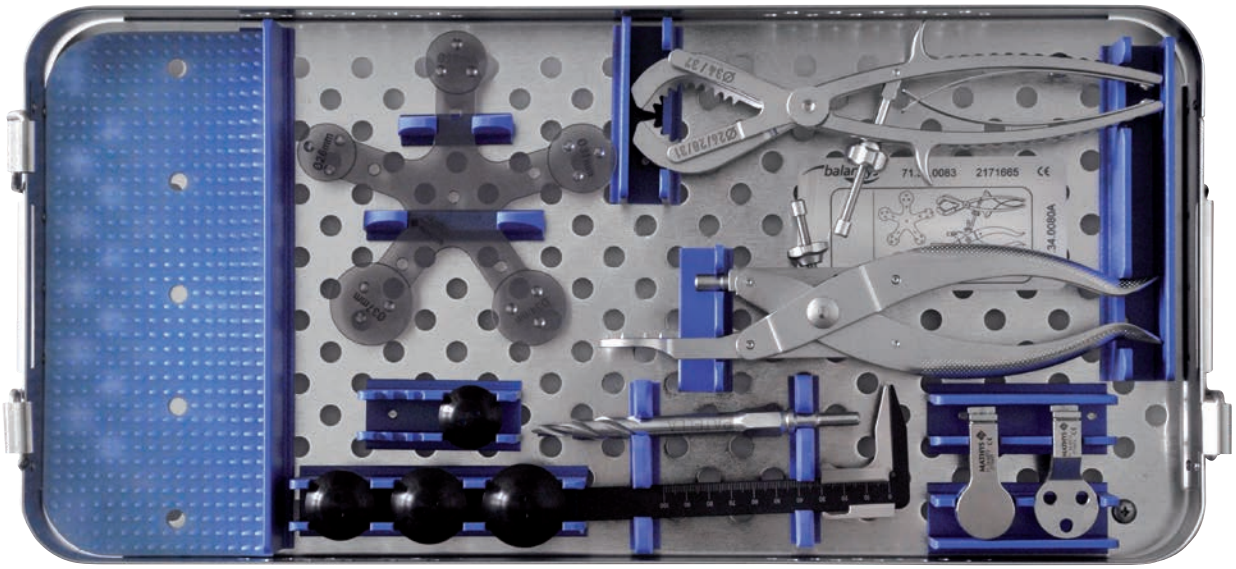
Item no.	Description	Qty
71.34.0418	balanSys RP Trial Tibial Plateau 59	**1**
71.34.0294	balanSys RP Trial Tibial Plateau 62	**1**
71.34.0295	balanSys RP Trial Tibial Plateau 64	**1**
71.34.0296	balanSys RP Trial Tibial Plateau 67	**1**

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.

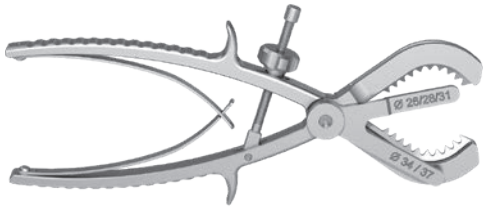
balanSys 3-Peg Patella FLAT
71.34.0080A
No Picture / 71.34.0082
balanSys Lid 3-Peg Patella FLAT

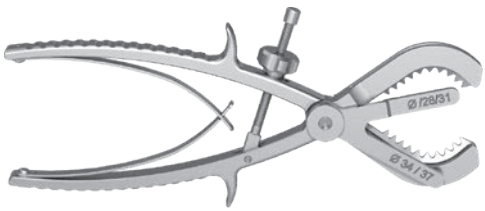
balanSys 3-Peg Patella STANDARD
71.34.0081A
No Picture/71.34.0084
balanSys Lid 3-Peg Patella STANDARD



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

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





Item no.	
71.34.0071	balanSys Patella Resection Pliers Flat

Item no.	
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.		Qty
71.02.2201	balanSys Patella Universal Pliers	1

Item no.		Qty
71.34.0074	balanSys Patella Drill Guide to Pliers	1

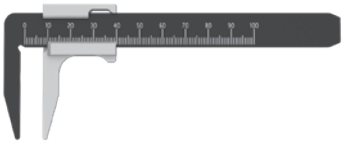
Item no.		Qty
71.34.0073	balanSys Patella Cementing Aid to Pliers	1

Item no.		Qty
71.02.3061	Drill Bit 5.5	1

Optional instruments

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

Item no.		Qty
71.34.0079	balanSys Patella Sizing Guide	1



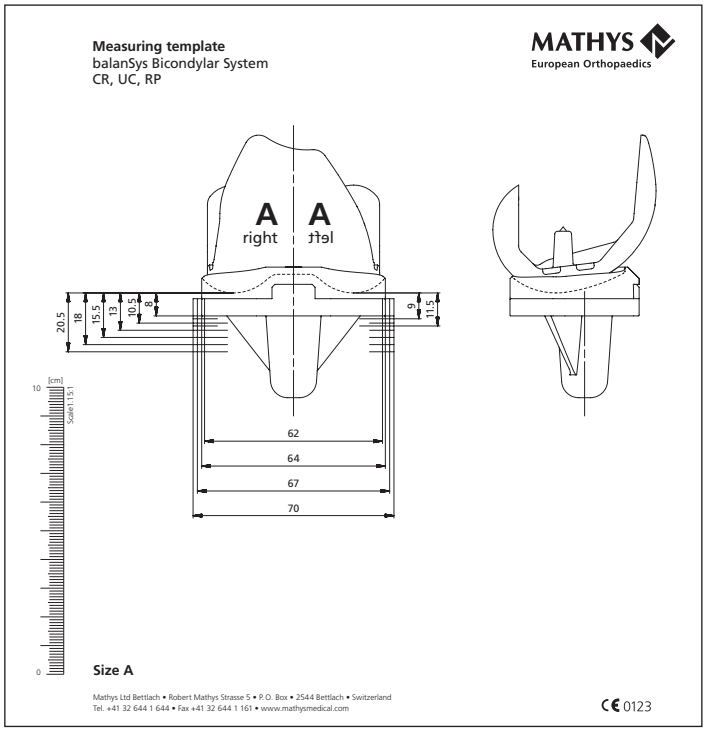
Item no.		Qty
71.02.3002	balanSys Patella Calliper	1

Annex

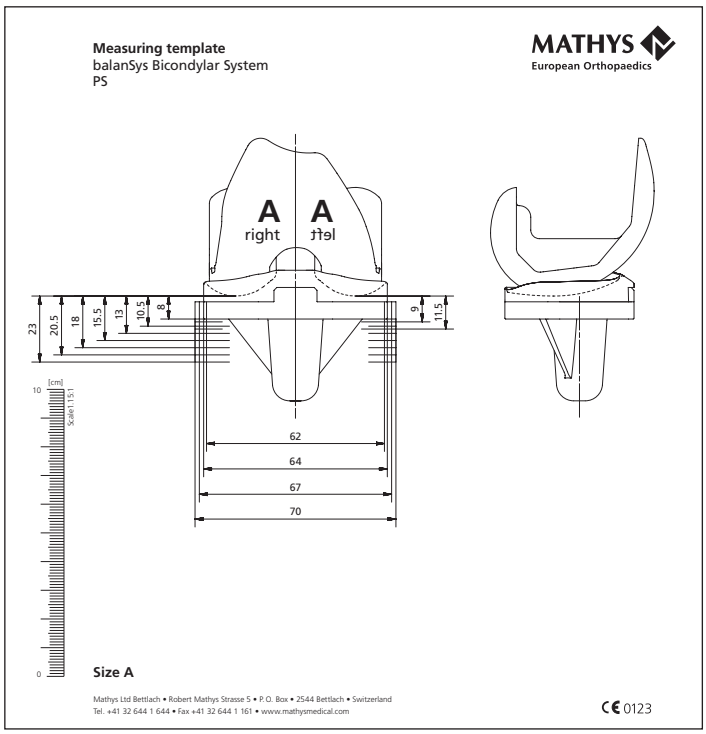
6 – Item numbers of balanSys measuring templates

balanSys BICON Knee System 330.030.034

Suitable for CR, UC and RP



balanSys PS Knee System 330.030.035



Symbols


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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