MATHYS
European Orthopaedics

15 YEARS
CLINICAL
EXPERIENCE

balanSys UNI

balanSys UNI

From the patients perspective, the balanSys UNI knee system offers **excellent satisfaction** and leads to a **clinically significant reduction in pain**.[1]

[1] Campbell, D.: Unicondylar knee replacement with a new tensioner device: clinical results of a multicentre study on 168 cases. Arch Orthop Trauma Surg, 2010.

balanSys UNI

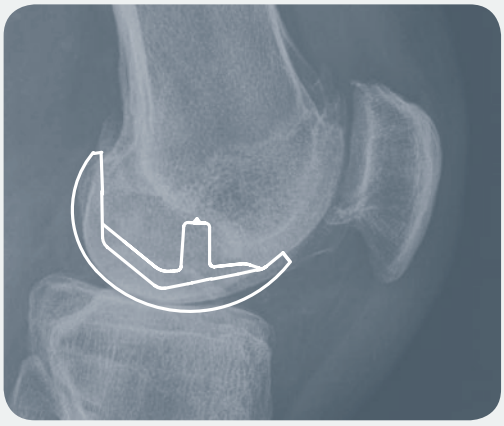
The implantation of a unicondylar knee prosthesis is now one of the standard procedures for treating isolated unicondylar knee arthritis where the knee ligaments are intact.

The aim of partial joint replacement is to reduce pain, restore function and to preserve more natural knee joint kinematics.

When compared to a total knee replacement, a unicondylar knee replacement offers a number of advantages. It is less invasive with a shorter operative time. It also allows a broader post-operative range of motion and preservation of more natural knee function, as well as giving patients a chance to regain their normal levels of activity.

15 YEARS CLINICAL EXPERIENCE

Implant design

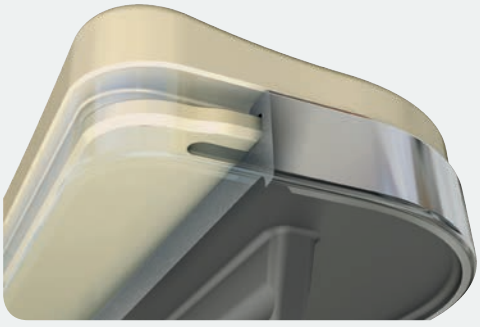


FEMORAL COMPONENT

Multi-radius design allowing reconstruction of the condylar surface with preservation of deep knee flexion.

TIBIAL COMPONENT

Central fin for homogeneous force distribution across the tibia.



INLAY

Instrument-less, simple intraoperative implantation with an audible click sound and posterior locking mechanism for secure fixation.

balanSys UNI

vitamys inlays

vitamys is a vitamin E-enhanced, highly cross-linked polyethylene belonging to the class of VEPEs (vitamin-enhanced, highly cross-linked polyethylenes). It is made from GUR 1020-E, a polyethylene with 0.1 % alpha-tocopherol (vitamin E).

vitamys is designed to deliver superior resilience and a long service life. This tried-and-tested material boasts the following characteristics:

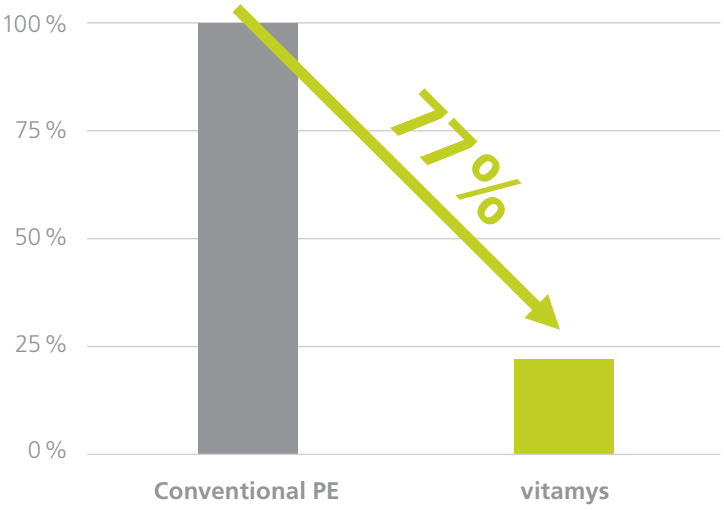
- Excellent mechanical properties
- High wear resistance
- High oxidation resistance
- High ageing resistance

Unlike other highly cross-linked materials, a tension-reducing heat treatment well below the melting point of the material is used during the production of vitamys to safeguard the material's dimensional stability. This produces good mechanical properties.

The addition of the natural antioxidant vitamin E ensures that vitamys is highly resistant to oxidation. This preserves its excellent mechanical and tribological properties even after long periods of use.[2]

77 % REDUCTION IN WEAR[3]

% wear reduction vitamys vs. conventional PE balanSys UNI



[2/3] Data on file at Mathys Ltd Bettlach

Surgical techniques

The balanSys UNI system offers two surgical techniques to suit the surgeon's preference.

The first is a spacer block technique (**SB**), while the second is a ligament tensioner technique (**LT**). This minimally invasive partial joint replacement prosthesis allows the cruciate ligaments to be preserved to preserve good proprioception.

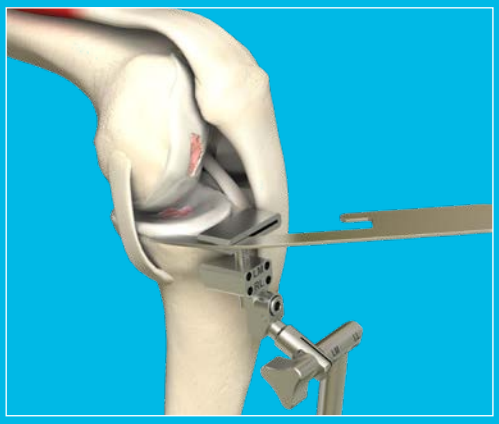
An intuitive and slimline set of instruments ensures reproducible, unicondylar knee joint replacement.

SB

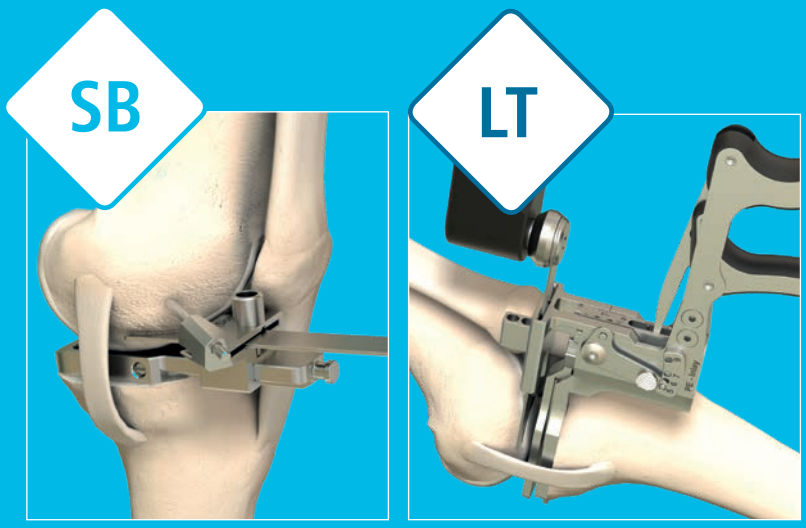
LT

Surgical technique

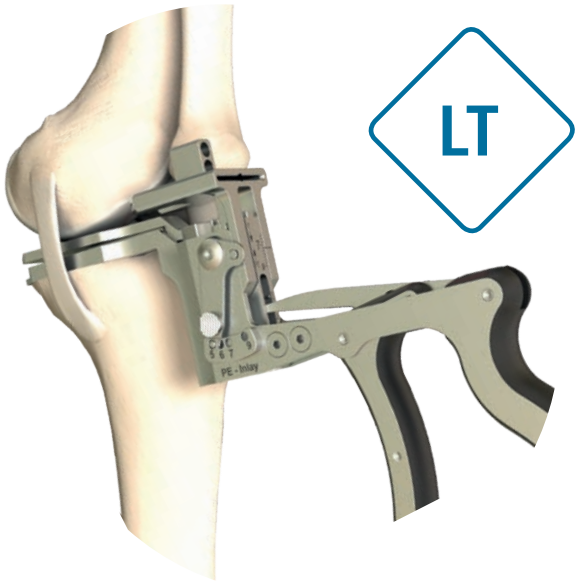
An infinitely adjustable resection depth for anatomy-reflecting tibial reconstruction.



Distal femoral resection is coupled to the tibia. Additional assessment of the natural ligament tension with the optional ligament tensioner technique.

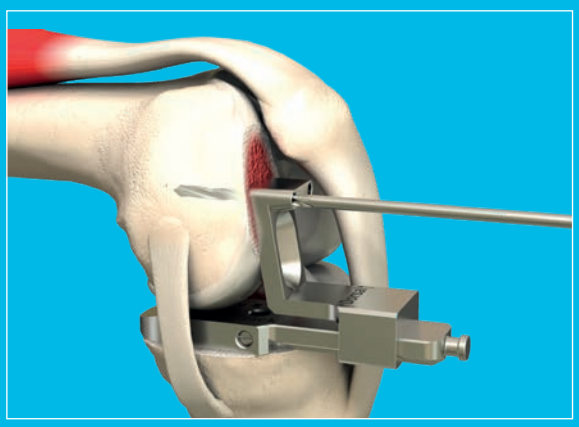


Ligament tensioners

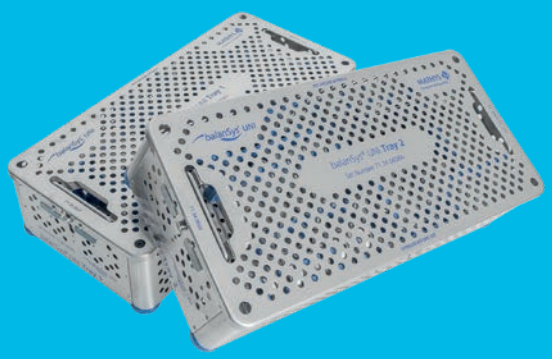


The balanSys UNI ligament tensioner exemplifies the ligament-centric, fundamental philosophy of the balanSys UNI system. It ensures a resection that takes account of the natural ligament tension in the knee and facilitates a thorough assessment of the femoral resection height both in extension and in flexion: All of this is possible before the first femoral cut is even made. This technology, combined with the balanSys UNI prosthesis, helps to preserve the kinematic properties of the knee.

Review and modification of the femoral size following the distal and posterior cuts – allowing optimal anterior and posterior adjustment.



Slim, 2-tray configuration



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