

# ROSA<sup>®</sup> KNEE



## Understanding robotic technology for total knee replacement

You're unique and so is your individual anatomy. That's why Zimmer Biomet offers ROSA<sup>®</sup> Knee, a robotic surgical assistant. The ROSA Knee robot is designed to help your specially trained surgeon tailor the placement of your knee implant just for you. This brochure will explain what makes the ROSA Knee robot unique, what to expect before surgery, what will happen during surgery and what to expect after your surgery.

To learn more about Zimmer Biomet joint replacements, obtain helpful information for patients and caregivers, or for assistance in finding a surgeon familiar with our products and surgical techniques, **call 800-447-5633 or visit [zimmerbiomet.com](http://zimmerbiomet.com).**

**Important Note:** This brochure is intended to provide an overview of knee replacement surgery and should be reviewed with your doctor. It does not include all of the information needed to determine eligibility for knee replacement or for the proper use and care of artificial knee replacements. Please consult your surgeon for more information. Information may also be obtained by calling the toll-free number or visiting the website. The toll-free number can also be used to obtain complete product contraindications, warnings, precautions, and possible adverse effects. Individual results may vary. Your results will depend on your personal circumstances. How long a knee replacement will last varies from patient to patient. It depends on many factors, such as the patient's physical condition, activity level and body weight, and the surgical technique. Replacement joints are not as strong or durable as a natural, healthy joint, and there is no guarantee that an artificial joint will last the rest of a patient's life. All knee replacements may need to be replaced at some point.

This device is available only on the order of a physician.



## ROSA<sup>®</sup> KNEE SYSTEM

Robotic Technology for Total Knee Replacement



## Arthritis in the knee joint

The knee is a hinge joint formed by the tibia (shinbone), femur (thighbone) and patella (kneecap). The ends of the bones in the knee joint are covered with cartilage, a tough, lubricating tissue that helps cushion the bones during movement.

Osteoarthritis, the most common form of arthritis, is a wear-and-tear condition that destroys joint cartilage and bone. It typically develops after years of constant motion and pressure on the joint. As the cartilage continues to wear away, the joint becomes increasingly painful and difficult to move. If conservative treatment options fail to provide relief, your surgeon may recommend total knee replacement using the ROSA Knee robot.



Arthritic Knee

Healthy Knee

## ROSA KNEE Robotic Technology

Getting a precise knee implant fit is important to your comfort and overall experience following knee replacement surgery. The ROSA Knee robot uses data collected before and during surgery to inform your surgeon of many details related to your unique anatomy that may affect your implant fit. By using this data to make more informed decisions, your surgeon is able to plan and carry out a personalized surgery based upon your individual needs.



## Before surgery

Your experience before surgery will be like that of most total knee patients. But, unlike traditional knee replacement methods, with ROSA Knee, a set of X-rays may be used to create a 3D model of your knee anatomy. This 3D model will enable your surgeon to plan many specifics of your knee replacement prior to your surgery.

## During surgery

The surgical procedure using the ROSA Knee robot is similar to traditional total knee replacement, but with a robotic assistant. Your surgeon has been specially trained to use the ROSA Knee robot to personalize the surgical approach for your unique anatomy. It's important to understand that the robot does not operate on its own. That means it does not move unless your surgeon prompts it to. Your surgeon is still in the operating room the entire time and is making all of the decisions throughout your surgery.

During your procedure, the ROSA Knee robot utilizes a camera and optical trackers that are attached to your leg to know exactly where your knee is in space. Think of it like a very detailed global positioning system (GPS) that you might use in your car. If your leg moves even a fraction of an inch, the robot can tell and adjusts accordingly. This helps ensure that the plan your surgeon put into place is executed as intended. Throughout your surgery, the ROSA Knee robot provides your surgeon with data about your knee. This information, combined with your surgeon's skill, helps them know how to position your implant based on your unique anatomy.

## After surgery

Following surgery, you may return home the same day or remain in the hospital for one to three days, depending on the recovery plan your surgeon decides is best for you. Recovery time varies, but most people should be able to drive after two weeks, garden after three to four weeks and golf after six to eight weeks. Your surgeon will tell you when and what activities you can return to and what activities to avoid.

## What Risks are Involved?

It is important to understand the risks involved. There are potential complications both during and after surgery. Generally, these include infection, blood clots, pneumonia, implant loosening, nerve damage, bone fracture and implant breakage; any of which can require additional surgery. While joint replacement is generally successful in lowering pain levels and increasing mobility, some patients will continue to experience pain and your doctor may permanently restrict certain activities that could damage and wear out your new hip parts. Ask your doctor to explain other surgery risks.

## Summary

The decision to have surgery is sometimes difficult. We hope that this has helped you understand the ROSA Knee robot so that you can make the best decision for yourself. This information is not intended to replace the experience and counsel of your orthopedic surgeon. If you have any further questions, please speak with your orthopedic surgeon.

**ROSA**  
**ROBOTICS**