



enztec

HIP CALIBRATION GAUGE FOR TOTAL HIP ARTHROPLASTY

INTRODUCTION

The Hip Calibration Gauge is intended to provide a means to accurately assess changes in leg length and offset, and to assist with acetabular placement during total hip arthroplasty from a posterior or lateral approach.

Supplied in a customized sterilization tray, the Hip Calibration Gauge is a reusable instrument set made from medical grade stainless steel. It consists of a socket screw for a fixed reference point in the iliac crest, as well as a removable measuring arm device and reference marker in the greater trochanter. These can be re-inserted at any time during the procedure to reflect the original state of the operative leg.

CONTRAINDICATIONS

The following are relative contraindications for the Hip Calibration Gauge:

- ❑ Lack of any secure iliac crest bone.
- ❑ Any intra-abdominal herniae near the region.
- ❑ Any active infection where the device is to be inserted.

> STEP ONE

Instrument Preparation

To assemble the measuring arm device, insert the reference post and measuring arm into the two openings on the universal and turn the tee bolts to secure in place. Ensure the measuring arm will lie posterior to the reference post during use.

Patient Preparation

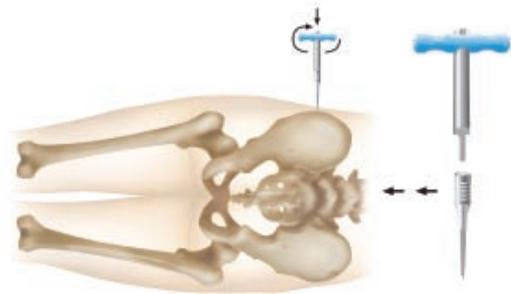
Position the patient laterally with the operative limb in the reference position. This will be the position the patient is placed in when the measuring arm device is set.



> STEP TWO

Engaging the Socket Screw

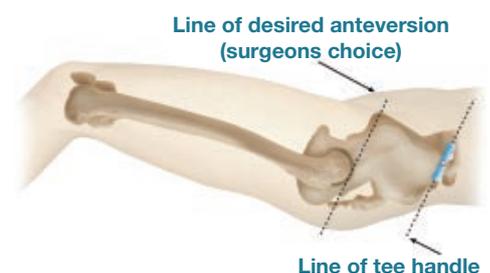
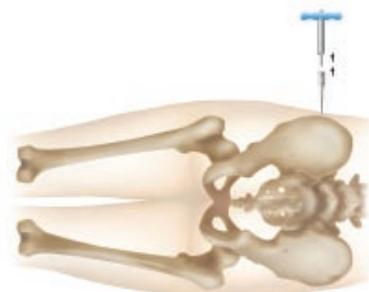
Insert the tee handle into the socket screw. Approximately 6 to 8 centimetres posterior to the anterior superior iliac spine, engage the socket screw vertically using a standard surgical mallet. Secure the socket screw in the iliac crest by rotating the tee handle (approximately 6 turns).



> STEP THREE (Optional)

Setting Acetabular Anteversion Reference

To set the final point of reference, rotate the tee handle so that it is orientated along the line of desired acetabular anteversion. Gently remove the tee handle, leaving the socket screw correctly aligned.



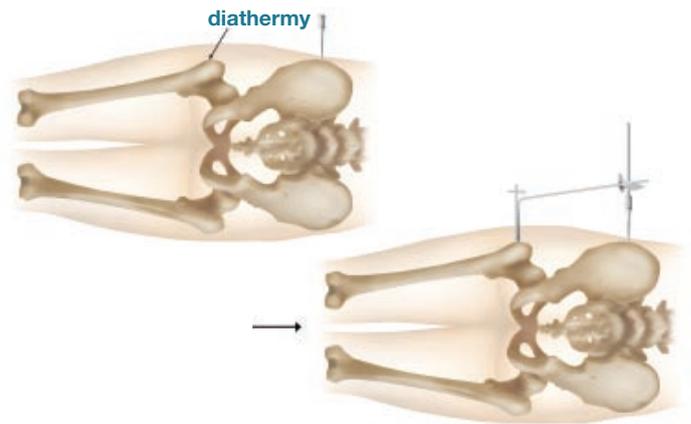
> STEP FOUR

Setting Leg Length and Offset Reference

Make your standard exposure to the hip. When the greater trochanter has been exposed, mark its most lateral point with diathermy on the bone.

Insert the measuring arm device into the socket screw via the reference post and adjust the measuring arm so the tip is over the diathermy mark. To adjust the position of the measuring arm, loosen and tighten using the tee bolts.

Ensuring the marker pin is parallel to the vertical segment of the measuring arm, use a standard surgical mallet to gently tap the trochanteric marker pin into the diathermy mark. Carefully remove the trochanteric marker pin.



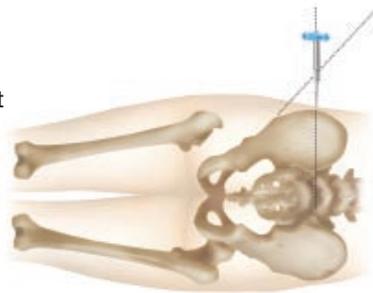
> STEP FIVE

Perform the standard hip replacement technique to the stage of acetabular placement.

> STEP SIX (Optional)

Checking Acetabular Anteversion

Prior to reaming and placement of the cup, re-insert tee handle into the socket screw. Confirm the correct orientation of the patient's pelvis by seeing that the tee handle is vertical and displaying the desired acetabular anteversion. Ream and insert cup.



TOP VIEW

Tee handle reflecting desired acetabular anteversion



> STEP SEVEN

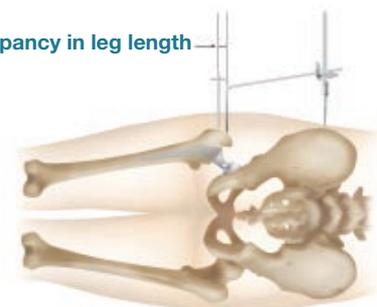
Checking Leg Length and Offset

Continue with the standard hip replacement.

Once trial components have been inserted, place the patient's limb in the reference position by moving the pelvis, ensuring the tee handle is vertical. Re-insert the measuring arm device into the socket screw and the trochanteric marker pin into its hole in the greater trochanter. Adjust the limb position so that the marker pin is parallel to the vertical segment of the measuring arm.

Displacement between the vertical component of the measuring arm and the trochanteric marker pin reflects a change from the initial leg length and/or offset. Implant components can be chosen accordingly.

Discrepancy in leg length



> STEP EIGHT

Completion of Procedure

Remove the measuring arm device and trochanteric marker pin and complete the standard hip replacement closure.

Once closure is completed re-insert tee handle into the socket screw to unscrew and remove.

