Alignment Rod. For intraoperatively confirming correction of the mechanical leg axis.

- Easy to use
- Accuracy of surgery
- Reduces X-ray exposure
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## Introduction

**Image intensifier control**

**Warning**

This description alone does not provide sufficient background for direct use of the instrument set. Instruction by a surgeon experienced in handling these instruments is highly recommended.

**Reprocessing, Care and Maintenance of Synthes Instruments**

For general guidelines, function control and dismantling of multi-part instruments, please refer to: www.synthes.com/reprocessing
**Alignment Rod.** For intraoperatively confirming correction of the mechanical leg axis.

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**Alignment Rod**

The Alignment Rod is designed to confirm correction of the mechanical axis of the leg. It consists of a metal rod and two stands (large and small). The alignment rod is used with an image intensifier to ensure the accuracy of surgery.

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**Handles**

Handles attach to the large stand to hold the alignment rod in the correct position, without hand exposure to the X-ray beam. The handles may be connected to the stand either parallel or perpendicular to the rod.

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**Small Stand**

The small stand is designed for the knee joint. It is adjusted to the position of the joint line and can be used to check the orientation of the knee joint line and the mechanical axis of the leg. It accepts a 2.0 mm K-wire for reference during image intensification. The small stand does not have handles.

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**Alignment Rod**

The metal rod consists of three sections that can be assembled for adaptation to individual leg lengths during surgery. Threaded connections facilitate stable assembly of the individual parts. After surgery, the rod can be disassembled into its three shorter lengths for reprocessing and storage.
Large Stand
The large stand, with its triangular shape, allows placement over the ankle joint. Two holes in the upper part of the stand allow the metal rod to be placed in two different positions.

K-Wire
To check the ankle joint line, a 2.0 mm K-wire can be inserted into the stand at a right angle to the metal rod as reference during image intensification.
The alignment rod should only be used by surgeons who are familiar with the principles of correct limb alignment.

**Preparation for surgery**

**Required instruments**

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<tbody>
<tr>
<td>03.108.030</td>
<td>Alignment Rod</td>
</tr>
<tr>
<td>03.108.031</td>
<td>Stand, large, for Alignment Rod, with handles</td>
</tr>
<tr>
<td>03.108.032</td>
<td>Stand, small, for Alignment Rod</td>
</tr>
<tr>
<td>292.210</td>
<td>Kirschner Wire Ø 2.0 mm with trocar tip, length 280 mm, Stainless Steel</td>
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</table>

- Preassemble the metal rod to the appropriate length
- Attach handles to the large stand in the desired position
- Insert the preassembled metal rod into the desired positioning holes of the two stands
- Insert Kirschner wires into the joint line holes of each stand
- Position the patient supine on a radiolucent table.
  Visualization of the complete leg with the image intensifier should be possible in the AP- and lateral views.

**Use during surgery**

After performing the osteotomy or reducing the fracture, use the alignment rod to confirm that the mechanical axis of the limb has been restored.

**Important**

- Use an image intensifier with laser light localizer (parallax-free).
- Position the leg for an exact AP image and ensure that all measurements are performed with the same leg rotation.
1
Placement

Place the preassembled alignment rod over the leg. Ensure positioning the stands in approximately the right positions over the ankle and knee joint. To avoid measuring errors make sure that the only contact between rod and limb is in the hip region.

2
Proximal placement

Align the proximal end of the metal rod with the center of the femoral head. Check it with an image intensifier.

Tip: Mark the skin at this point to allow making additional measurements without using the image intensifier to continuously relocate the center of the femoral head.
3  
**Distal placement**

Align the distal end of the metal rod with the center of the ankle joint. Verify with an image intensifier.

**Tip:** Mark the skin at this point to allow making additional measurements without using the image intensifier to continuously relocate the center of the ankle joint.

4  
**Verify knee joint line**

Verify that the projected axis line passes the knee joint in accordance with the preoperative plan. Confirm that the knee joint line is oriented correctly (the wire in small stand).
Optional technique

Before performing an osteotomy, the knee must be in full extension; the alignment rod can be used to confirm this position. After placing the two stands over the appropriate joints, check the rod with the image intensifier. The anterior cortex of femur and tibia should be parallel to the alignment rod.
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### Optional

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<tr>
<td>02.108.200S</td>
<td>Guide Wire Ø 3.0 mm, with thread and drill tip, length 230 mm, Stainless Steel, sterile</td>
</tr>
<tr>
<td>04.108.200.10</td>
<td>Guide Wire Ø 3.0 mm, with thread and drill tip, length 230 mm, Titanium Alloy (TAV)</td>
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