

# Adjustable Distal Resection System

Persona® The Personalized Knee

Surgical Technique





# Table of Contents

- Introduction** ..... 2
  - Symbols
- Assemble Adjustable Distal Resection Instrumentation** ..... 3
- Establish Femoral Alignment** ..... 7
- Resect Distal Femur** ..... 9
- Optional Cutting Technique** ..... 12

## Introduction

The Persona Adjustable Distal Resection System establishes a new platform of instrumentation for performing the distal femoral resection.

Design innovations focused on improved precision and ergonomics include:

- Optimal placement of the resection plane enabled through fine-tune adjustments
  - 0 to 9 degrees valgus angle adjustments in 1 degree increments
  - 1 mm resection depth adjustments from 10 mm – 14 mm
  - Achieve 9 mm depth by simply attaching a resection plate
- Enhanced readability
  - Bold, engraved markings prominently display valgus angle and resection depth
  - Improved line of sight reassures proper use of settings
- Improved usability
  - Modular handle can be attached for use as a sword or a T-handle to accommodate surgical preference
  - Compatibility between fixed and adjustable distal resection components
  - Lock knob on the adjustable valgus guide secures orientation of the assembly on the I/M rod
  - Captured spikes provide additional fixation

## Symbols

Symbols have been established for the following:














- Left    
Left
- Right    
Right
- Varus/Valgus    
Varus/Valgus
- Medial/Lateral    
Medial/Lateral
- Standard    
Standard
- Do not implant – Not for implant    
Do not implant - Not for implant
- Lock    
Lock
- Unlock    
Unlock
- Anterior Referencing    
Anterior Referencing
- Do not impact    
Do not impact
- Cemented    
Cemented
- Stemmed    
Stemmed
- Inset Only    
Inset Only



Figure 1

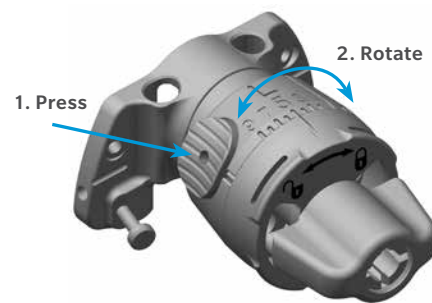


Figure 2

## Assemble Adjustable Distal Resection Instrumentation

Pull the lever on the modular handle and insert the IM rod (Figure 1). Orientation of the IM rod will align with the polished line on the sides of the modular handle.

**ⓘ Technique Tip:** Alternately, the IM rod may be inserted into the top of the modular handle to accommodate surgical preference.

Set the valgus angle on the adjustable valgus guide by pressing the button and rotating the dial to the appropriate left or right valgus angle from 0 to 9 degrees (Figure 2).

Insert the IM rod into the adjustable valgus guide.

Persona  
8 mm IM Rod  
42-5099-002-00



Persona  
Modular Handle  
42-5099-014-00



Persona Valgus  
Alignment Guide  
42-5099-004-00



Persona Adjustable  
Resection Tower  
42-5099-008-00





Figure 3

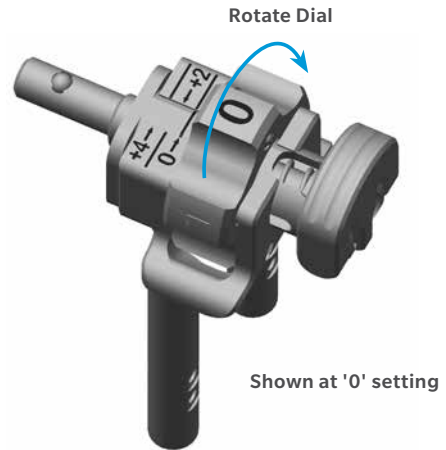


Figure 4

## Assemble Adjustable Distal Resection Instrumentation (cont.)

ⓘ **Note:** If desired, align the depth markings on the IM rod with the flat plate of the adjustable valgus guide to set the IM rod at a specific length. Inserting the IM rod beyond the double line marking, indicated with caution symbols, may prevent assembly of the modular handle to the IM rod (Figure 3).

Set the resection depth on the adjustable resection tower by rotating the dial (Figure 4). The '0' setting indicates a 10 mm resection. Adjustments can be made in 1 mm increments from 10 mm to 14 mm.



Figure 5

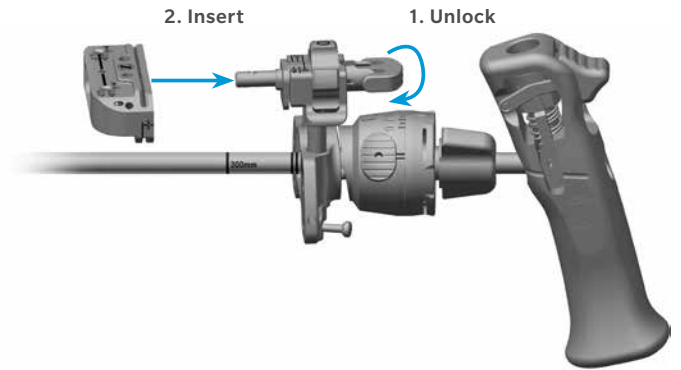


Figure 6a

## Assemble Adjustable Distal Resection Instrumentation (cont.)

**Note:** The '0' setting can be set to indicate a 9 mm resection depth by assembling the 9 mm resection plate to the valgus guide (Figure 5).

Insert the adjustable resection tower into the adjustable valgus guide.

Rotate the lock lever on the adjustable resection tower to the unlocked, or "in-line", position and fully insert into the cut guide (Figure 6a).

Persona  
8 mm IM Rod  
42-5099-002-00



Persona  
Modular Handle  
42-5099-014-00



Persona Valgus  
Alignment Guide  
42-5099-004-00



Persona Adjustable  
Resection Tower  
42-5099-008-00



Persona 0°  
Distal Cut Guide  
42-5099-010-00



Persona  
9 mm Distal Resection Plate  
42-5099-015-09



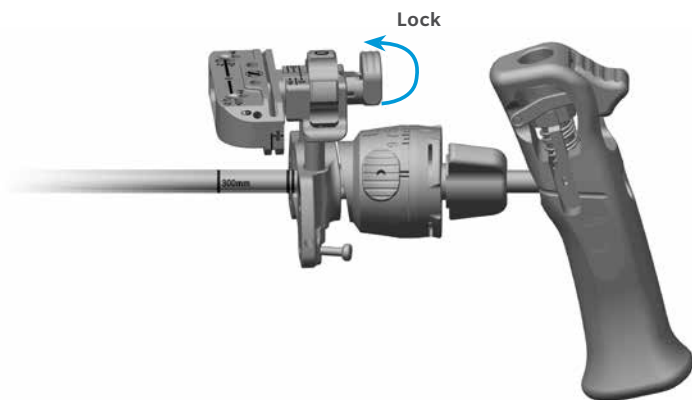


Figure 6b

### Assemble Adjustable Distal Resection Instrumentation (cont.)

Flip the lock lever to the locked, or “vertical”, position to secure it to the cut guide (Figure 6b).

☰ **Technique Tip:** The adjustable resection tower is compatible with the fixed valgus guide and the fixed resection tower is compatible with the adjustable valgus guide. These instruments can be interchanged to accommodate surgical preference.





Figure 7

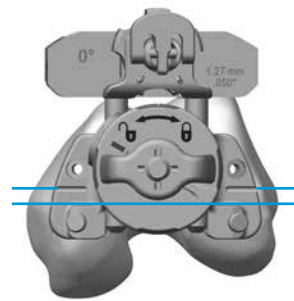


Figure 8a



Figure 8b

## Establish Femoral Alignment

Drill the IM canal using the 8 mm IM step drill (Figure 7). Suction the canal to remove medullary contents.

Insert the IM rod and assembled distal resection instrumentation into the IM canal far enough to ensure the most accurate replication of the anatomic axis.

Set the orientation of the adjustable valgus guide by placing it against the most prominent distal condyle and rotating it about the IM rod so that the engraved lines are aligned with the epicondylar axis (Figure 8a).

Turn the lock knob on the adjustable valgus guide clockwise, to the locked position, to secure orientation of the assembly (Figure 8b).

8 mm IM  
Step Drill  
00-5978-014-00



Persona  
8 mm IM Rod  
42-5099-002-00



Persona  
Modular Handle  
42-5099-014-00



Persona Valgus  
Alignment Guide  
42-5099-004-00



Persona Adjustable  
Resection Tower  
42-5099-008-00



Persona 0°  
Distal Cut Guide  
42-5099-010-00



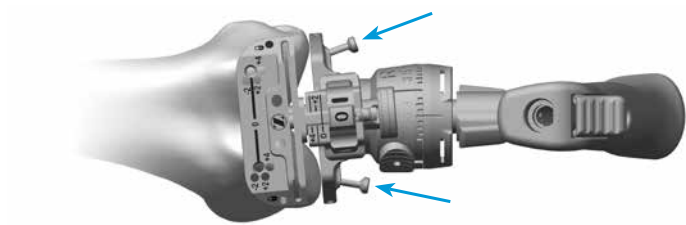


Figure 9

### Establish Femoral Alignment (cont.)

ⓘ **Note:** Setting rotation of the adjustable valgus guide is important for creating a distal resection that matches the desired valgus angle selected. It does not set the rotation of the femoral component.

For additional fixation, or in lieu of using the lock knob, impact the captured pin on the medial or lateral side of the adjustable valgus guide until the head of the captured pin is flush with the plate (Figure 9).



Figure 10



Figure 11

## Resect Distal Femur

Verify the adjustable valgus guide is set to the proper side (left or right) and angle and that the adjustable resection tower is set to the appropriate depth.

**ⓘ Technique Tip:** If unsure of the adjustable resection tower depth setting, rotate the dial clockwise until a “click” is felt. This occurs when the dial moves from the ‘4’ setting to the ‘0’ setting. The bold ‘0’ will be visible on the dial and the line will be aligned with the ‘0’ mark along the shaft (Figure 10).

**ⓘ Technique Tip:** Confirm valgus alignment by inserting the drop rod adapter into the large holes on the anterior face of the cut guide and insert an alignment rod into the drop rod adapter (Figure 11).

Persona  
8 mm IM Rod  
42-5099-002-00



Persona  
Modular Handle  
42-5099-014-00



Persona Valgus  
Alignment Guide  
42-5099-004-00



Persona Adjustable  
Resection Tower  
42-5099-008-00



Persona 0°  
Distal Cut Guide  
42-5099-010-00



Persona  
Drop Rod Adapter  
42-5399-006-00



Alignment Rod  
with Coupler  
00-5785-080-00





Figure 12

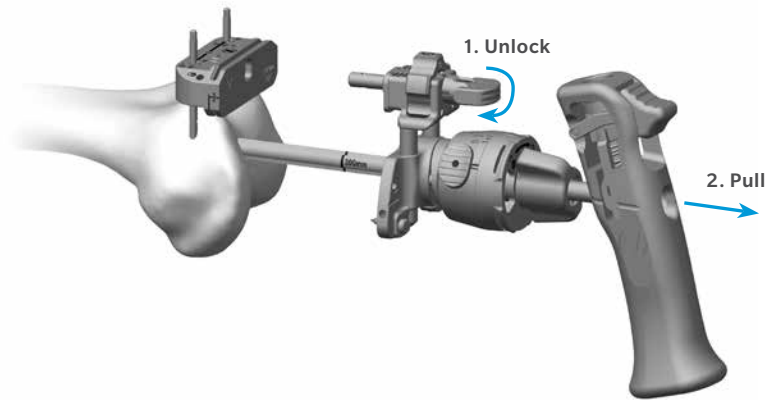


Figure 13

## Resect Distal Femur (cont.)

Insert a trocar tipped pin through each of the standard pin holes marked '0' on the anterior surface of the cut guide (Figure 12).

Flip the lock lever on the adjustable resection tower to the unlocked, or "in-line", position and pull the handle to remove the IM rod and assembled distal resection instrumentation leaving only the cut guide attached to the femur (Figure 13).

**Note:** If the captured pin was deployed it may be necessary to first remove it from the bone using the pin puller. Alternatively, removing the IM rod from

the adjustable valgus guide may facilitate removal of the captured pin from the bone.

**Technique Tip:** Additional 2 mm adjustments may be made by using the sets of holes marked -2, +2, and +4. These sets of holes indicate, in millimeters, the amount of additional bone resection each will yield relative to the resection setting on the resection tower (where '0' represents 10 mm. However, if the 9 mm resection plate is used, the '0' represents 9 mm).

Persona  
8 mm IM Rod  
42-5099-002-00



Persona  
Modular Handle  
42-5099-014-00



Persona Valgus  
Alignment Guide  
42-5099-004-00



Persona Adjustable  
Resection Tower  
42-5099-008-00



Persona 0°  
Distal Cut Guide  
42-5099-010-00



3.2 mm x 75 mm  
Trocar Tipped Drill Pin  
(2.5 mm hex)  
00-5901-020-00



Pin/Screw Inserter  
00-5901-021-00



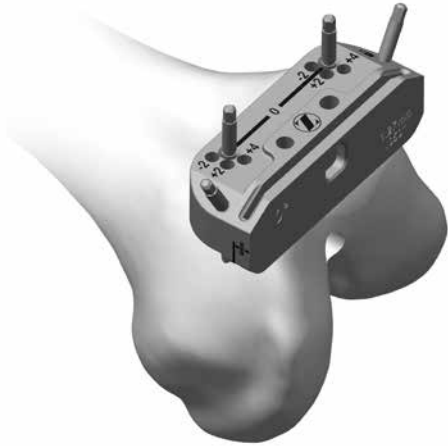


Figure 14

## Resect Distal Femur (cont.)

Insert the resection guide into the cut slot of the cut guide to verify the depth of resection.

Insert a trocar tipped pin through at least one of the locking, or oblique, pin holes in the cut guide to further secure the cut guide to the femur (Figure 14).

Using a 1.27 mm (0.050 inch) oscillating saw blade through the cut slot in the cut guide, resect the distal femur.

**Note:** The flatness of the distal femoral resection is critical to ensuring adequate contact between the porous femoral implant and the bone. If using a porous femoral implant, evaluate the flatness of the resection prior to sizing and modify the cut as necessary so that it is completely flat.

Remove all pins and the cut guide.

Persona 0°  
Distal Cut Guide  
42-5099-010-00



3.2 mm x 75 mm Trocar  
Tipped Drill Pin (2.5 mm hex)  
00-5901-020-00



Pin/Screw Inserter  
00-5901-021-00



Resection Guide  
00-5977-084-00



Multi Pin Puller  
00-5901-022-00



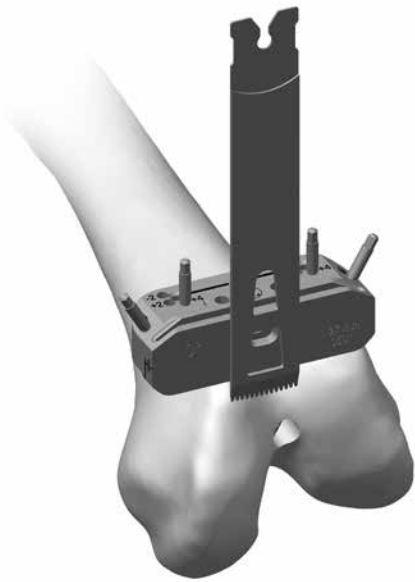


Figure 15a

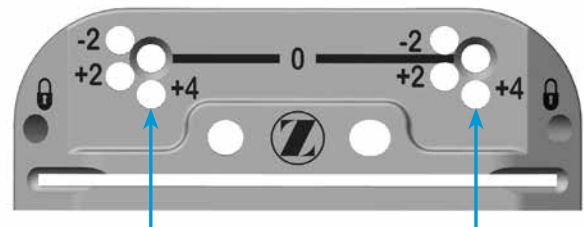


Figure 15b

### Optional Cutting Technique

If desired, the bone resection can be made from the top (most distal) surface of the cut guide (Figure 15a). The top surface of the cut guide is 4 mm from the cut slot. Therefore, if cutting from the top surface, the position of the cut guide must be adjusted by moving the cut guide from the trocar tipped pins

through the '0' holes and reinserting the cut guide onto the trocar tipped pins through the holes marked '+4' (Figure 15b). Insert a trocar tipped pin through at least one of the locking, or oblique, pin holes in the cut guide to further secure the cut guide to the femur prior to cutting the femur.



This documentation is intended exclusively for physicians and is not intended for laypersons.

Information on the products and procedures contained in this document is of a general nature and does not represent and does not constitute medical advice or recommendations. Because this information does not purport to constitute any diagnostic or therapeutic statement with regard to any individual medical case, each patient must be examined and advised individually, and this document does not replace the need for such examination and/or advice in whole or in part.

Please refer to the package inserts for important product information, including, but not limited to, contraindications, warnings, precautions, and adverse effects.

©2016 Zimmer Biomet



**ZIMMER BIOMET**

Your progress. Our promise.™



**Legal Manufacturer**

Zimmer, Inc  
1800 West Center Street  
Warsaw, IN 46581-0708  
USA

97-5026-016-00-REV0516

[zimmerbiomet.com](http://zimmerbiomet.com)