



# How to change camera focus and scaling

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## INTRODUCTION

If a work holder or indexer is changed or a new Product with different height is introduced.

The focus depth of the camera may not be enough to set a sharp focus. In this case one has to change the Camera focus.

## Step 1 — Preparation



- Place a Product on the work holder
- Enter Mode#11
- in Focus height enter the height you want to set ex. 5.000

**⚠** Make sure that the camera focus is higher than any obstacle in the working area, tool inspection area and home position. In case of an indexer with product clamping, the Focus height has to be set over the Clamping height at open position.

## Step 2 — Necessary Tools



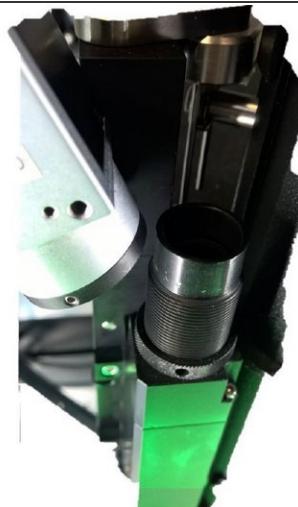
- for the setting you need a Hook key with pivot (delivered with the machine/ gray box) and a 1.5 hexagonal wrench

## Step 3



- loosen the ring bolt using the Hook key with pivot as shown

## Step 4



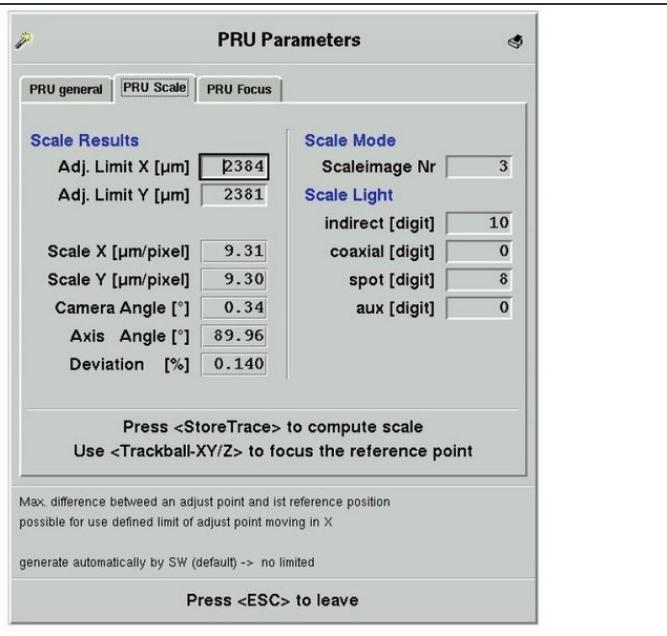
- loosen the headless screw and remove the camera
- now you can screw and unscrew the threaded lens barrel and control the focus by mounting the camera temporarily (without fixing it with the headless screw), do this till you have a focus on the screen.
- once the image is sharply focused →screw the ring bolt tight using the special wrench

## Step 5



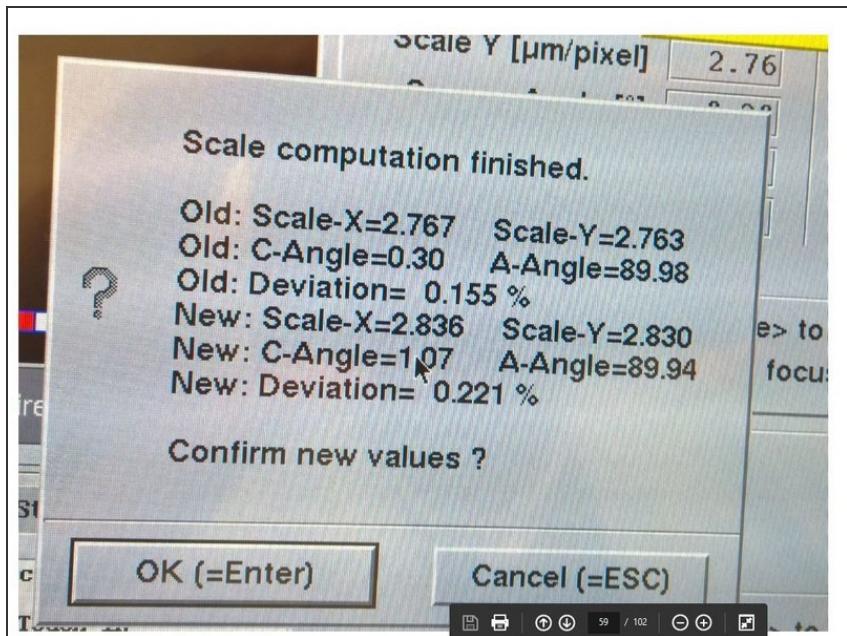
- mount the camera and fix it with the headless screw → After every mechanical adjustment on the Camera, Scaling must be done again

## Step 6 — Camera scaling



- in Menu Page#8 PRU Parameter - select the Tab PRU Scale make sure the pattern below is focused sharp and there is enough light. else set the light parameter
- activate the XY key (active = red LED), use the track ball to move the head → select a high contrast unique pattern
- Store trace
- i* the machine starts to compute the scaling automatically (head moves back and forth during scaling)

## Step 7



- after the scaling computation is done a popup window as shown
- ! if the value of New: Deviation is % < 0:2 → confirm the new Value with OK → else redo the scaling (try another pattern)
- do offset correction in Mode3 after scaling
- i* Once the camera focus is set and the scaling is computed, you need to do the Offset correction - Mode#3.

To reassemble your device, follow these instructions in reverse order.

