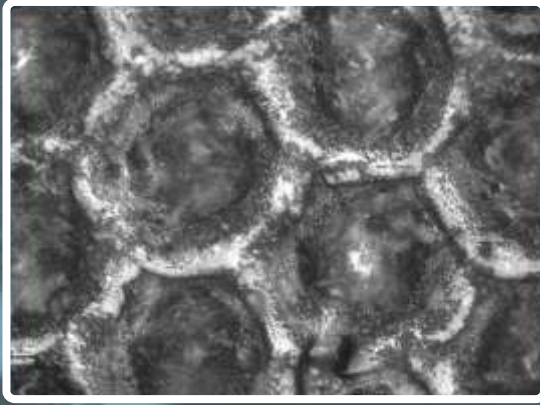


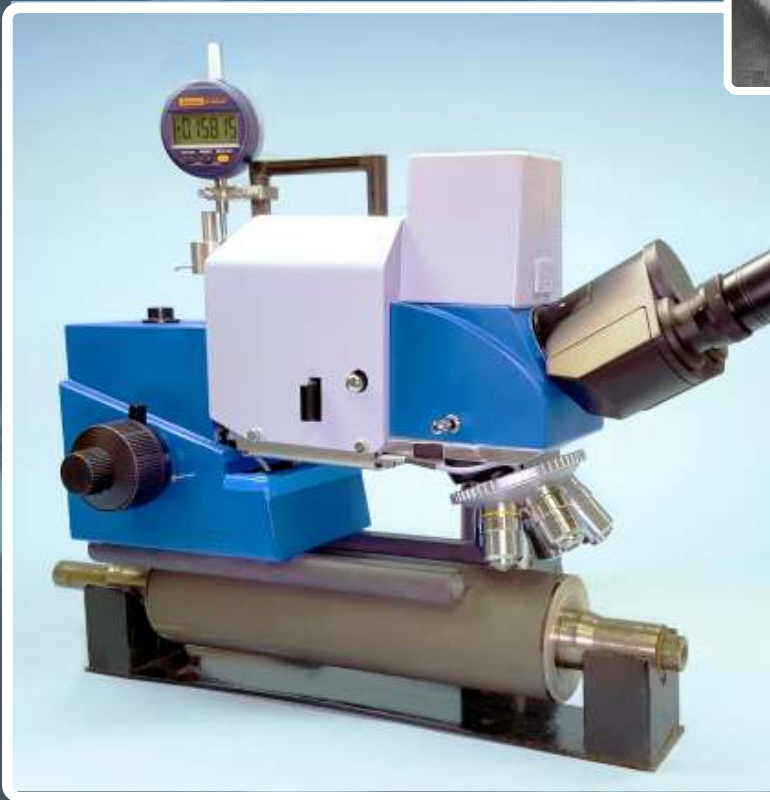
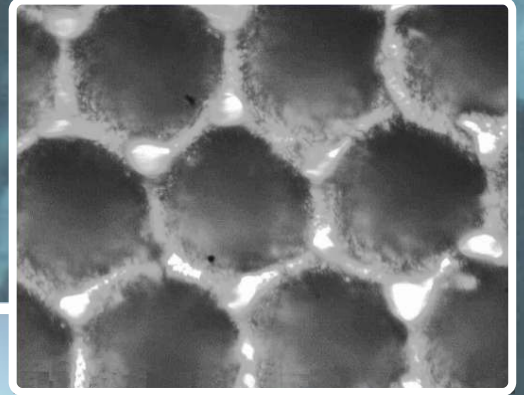
ANILOX SCOPE PIPE

SEE, MEASURE, & EVALUATE ANILOX & GRAVURE CELL VOLUME & STRUCTURE



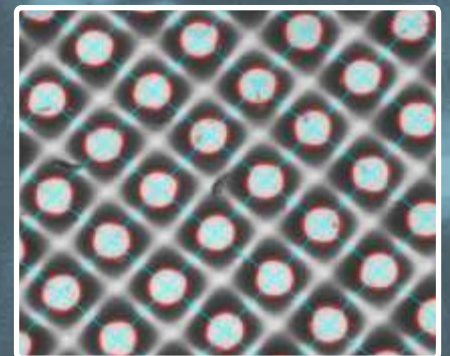
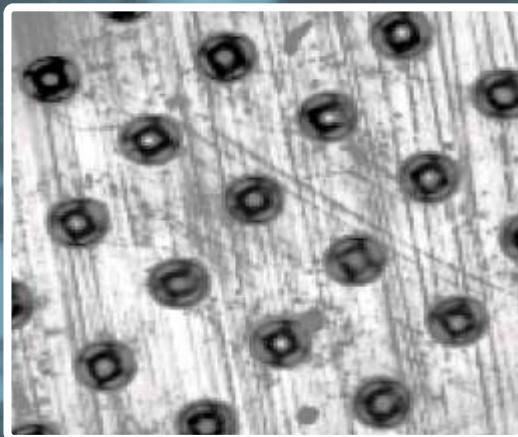
Anilox Cell 1070 LPI at 80X Magnification

3D CELL VIEW



Engraving Cell at 40X Magnification

Anilox
Gravure
Flexo
Plates



Optional Flexo Plate Analysis

Beta AniScope Operating Guide

The Beta AniScope is a high precision roll microscope designed for visual and video inspection of low-contrast subjects such as anilox rolls, gravure rolls, intaglio plates and flexo plates.

The integral roll mount allows it to be conveniently used on rolls as small as 2.55 inches in diameter. There is no upper limit on roll diameter and flat plates can be analysed as well. The 1.3MB monochrome camera offers a live preview function as well as the ability to capture, measure, annotate, and save high resolution images.

The revolving objective turret carries five lenses offering magnification levels of 50x, 100x, 200x, 400x, and 800x. Optional lenses extend the range to 40x and 1000x. Each lens is automatically recognized by the Windows application software, eliminating the need for the operator to manually note the magnification or adjust the image scaling calibration factor.

The AniScope is factory calibrated. As the objective lenses are changed, the software automatically applies the correct calibration factor.

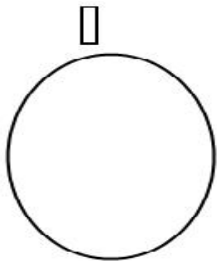
Cell Depth Measurement is handled by the integral digital micrometer with one micron resolution (0.000040 inches). Depth measurements are automatically recorded in the software.

Weight without the Binocular eyepiece: 7Kg (15.4 lbs); with Binocular: 7.3 Kg (16.1 lbs)

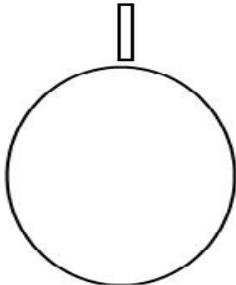
Handling recommendations

- Always use the integral handle to lift or carry the unit
- Always make sure the microscope optic is raised before placing it on a roll to be examined. This will avoid hitting the lens with the cylinder surface.
- Use the bubble level on the rear top surface to position the AniScope on the roll. This will assure a steady position and optimize focus adjustment.
- Use only special-purpose lens cleaning cloth if the eyepiece lenses need to be cleaned.
- The glass color filters have a special surface coating. Be very careful when cleaning. Use only special-purpose lens cleaning cloth and cleaning solution.
- Align the instrument-side USB connector and push it firmly in. Tighten the threaded cover to secure it in position.

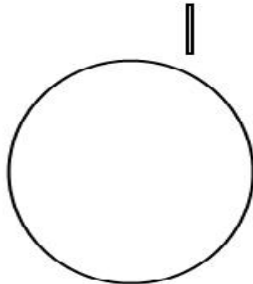
Align the objective lens to the 12 o'clock position on the roll.
Use the lower control knob to shift the AniScope left-to-right.



Optic not perfectly looking on the top peak of the role, move with lower handle to the center



Optic is perfectly centered

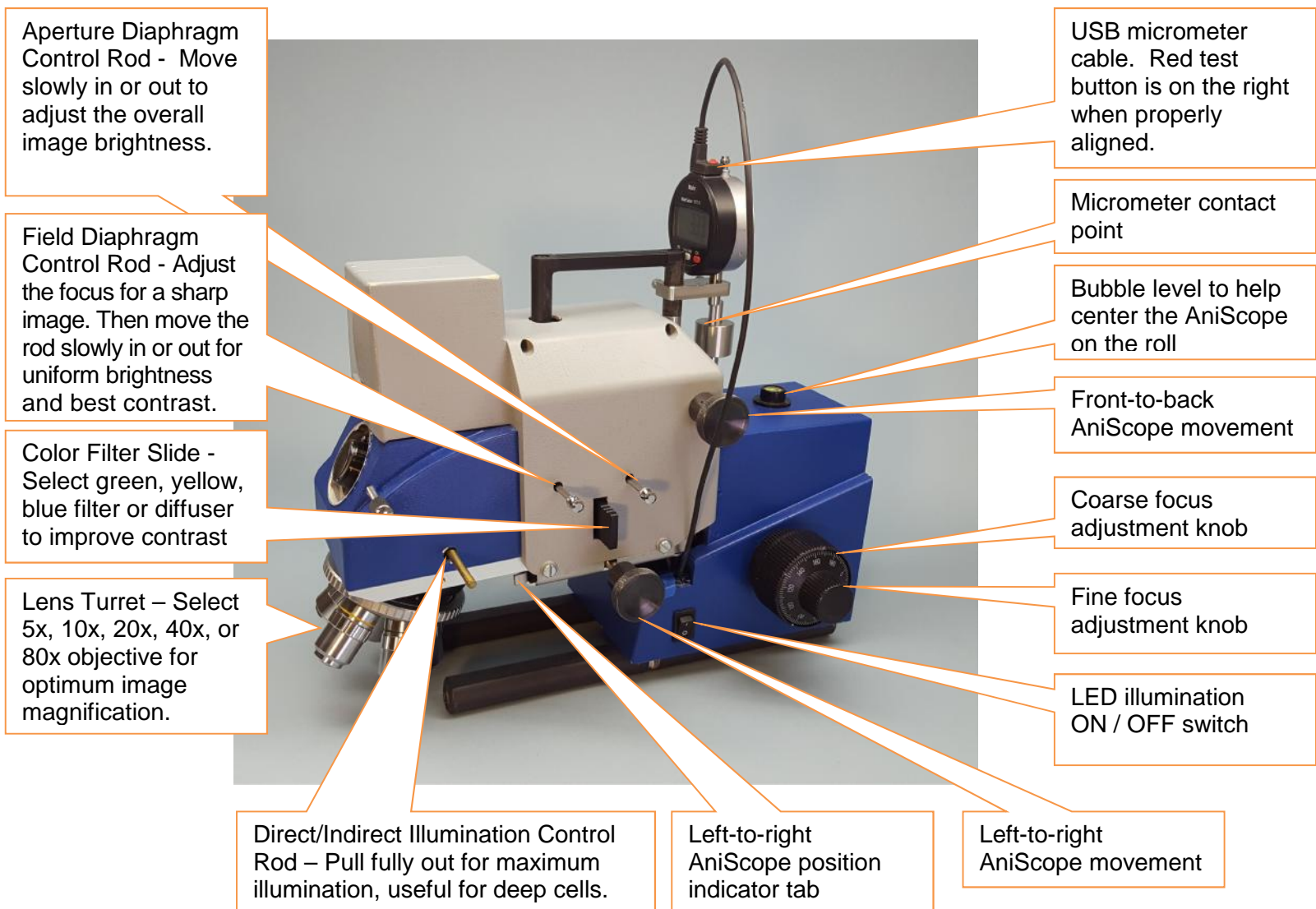


Optic not perfectly centered Use lower handle to move optic to the center

Use the curved metal guide plate shown below to set the center position of left-to-right travel;



AniScope Controls – Right Side

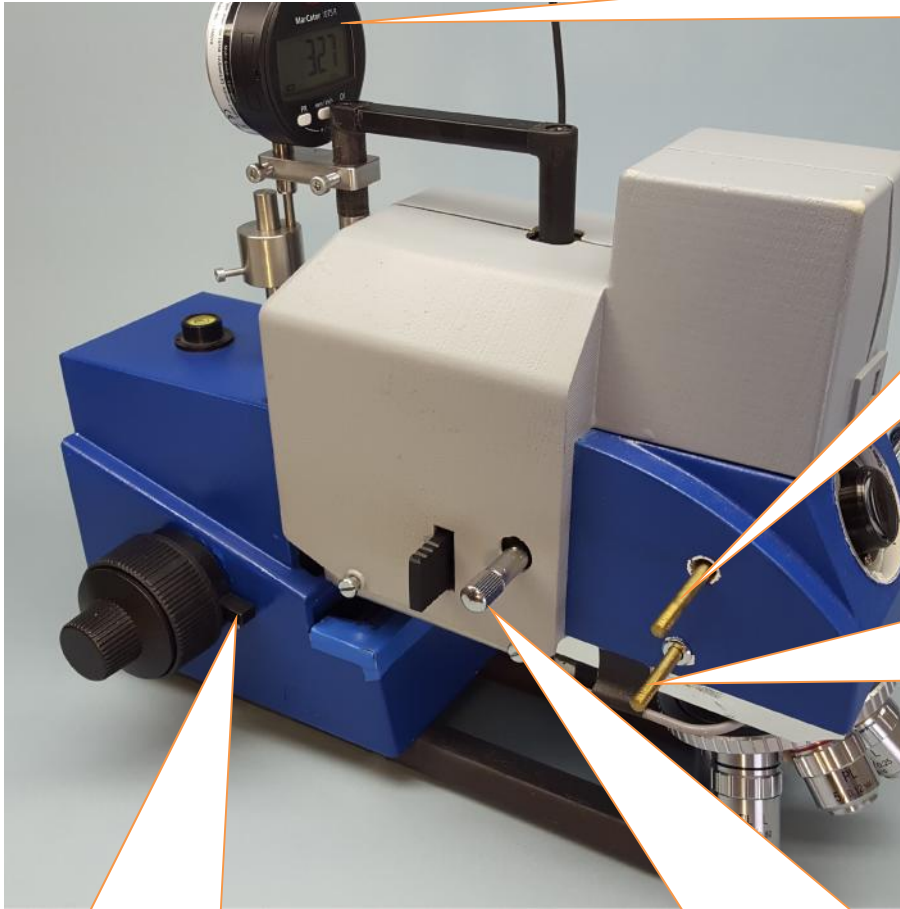


Front-to-Back movement

This knob moves the complete head front-to-back along the axis of the roll.

Due to the mechanical balance of the optical head it is recommended not to move the head more than a maximum of 4 full rotations, equivalent to 2400 microns (0.09 inches). This feature allows you to visualize adjacent cells without lifting the instrument.

AniScope Control – Left Side



Depth Micrometer – Use in conjunction with the Fine Focus control to determine cell depth.

Video/Eyepiece Selector Rod – Push the rod IN when using the binocular eyepiece. Pull it fully OUT when using the Video functions.

Direct/Indirect Illumination Control Rod – Use in conjunction with the same rod on the right side to obtain optimum image brightness.

Focus Lock – Rotate the lock lever one quarter turn counter-clockwise to lock the focus knob and prevent focus drift.

Polarization Control Knob – Pull the knob fully out as shown here to remove the polarizer from the illumination path to obtain maximum image brightness. Push the knob fully in use the polarizer, rotating it to remove glare from the image.

Use of the Binocular eyepiece:

Use the yellow color filter to show the cell surface with highest contrast and details. The extremely fine motion of the fine focus knob allows you to get a perfectly sharp image. Once you have adjusted the image quality like this it will stay and you can start the roll examination.

Rotate the fine focus knob to move the optical head up and down to show what happens. Test the different color filter to change contrast, rotate the polarisation filter to increase and decrease light and contrast, or pull it out to get maximum of light. Use the color filter selector to see the influence on image brightness and contrast.

You can make best use of the field diaphragm rod and aperture adjustment rod. The first one reduces the field of highlighted viewing area to only a few cells.

To obtain maximum contrast use the aperture adjustment rod.

More contrast can be obtained in the visual field in combination with the color filter.

The binocular creates a full color image for the. Ink remains would be even more visible.

Aperture

In critical microscopy applications, the illumination aperture must be adjusted to balance contrast and resolution.

An adjustable diaphragm is mounted below the condenser lens for this purpose.

A large diaphragm aperture provides maximum resolution but produces low image contrast.

A small aperture increases image contrast but reduces resolution.

The diaphragm setting also has an effect on the image brightness but it should not be used to adjust the illumination intensity.

Use a colored, neutral density, or polarizing filter to adjust illumination intensity.

Field iris diaphragm

Iris Diaphragms are used to limit the amount of light transmitted to an imaging sensor or photodetector in order to prevent oversaturation

Depth Micrometer

To start the micrometer, press the ON-OFF button.

The display will show 0.000

If you have a value like: 1.350, you moved a distance of 1350 μm ,

The gage resolution is 1 μm .

If the application software shows a micrometer error message, press the ON-OFF button on the micrometer.

If needed adjust the meter handle so the tip of the instrument hits the metal ring.

While moving the optic down you will see the number increase.

At the point when the image is sharp, i.e. on the surface, press the button to zero the meter.

Ongoing movements of the fine and coarse focus knob make the numbers change.

Aniscope

Details of the rods and filter

The Microscope uses various filter to deliver the user perfect image quality

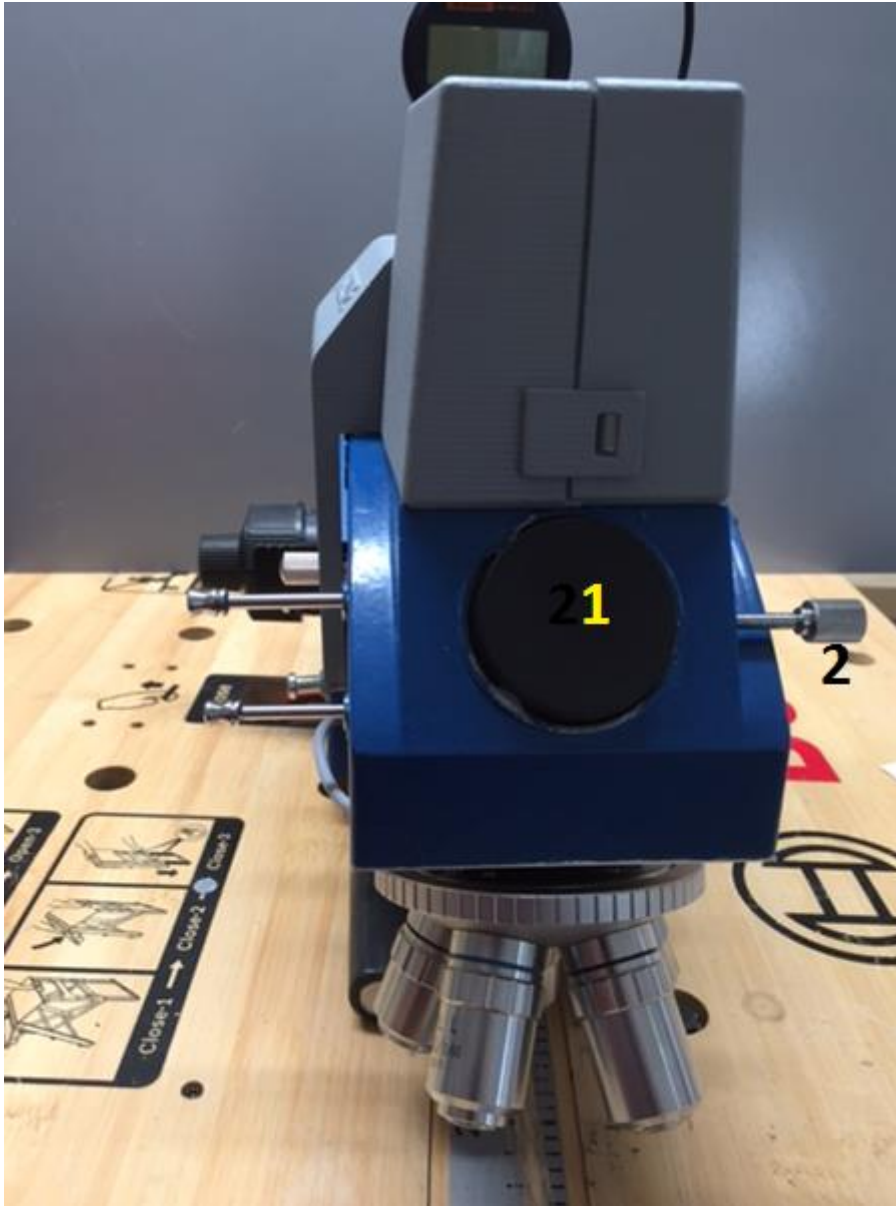


Image: Front view

Plastic cover 1 is to protect the glass of the binocular tubus,

Binocular tube set screw 2 is used to fix the binocular.

The instrument can be used with or w/o the binocular while operation with the camera



Image 1

Correct connection of the gauge meter with the power cable

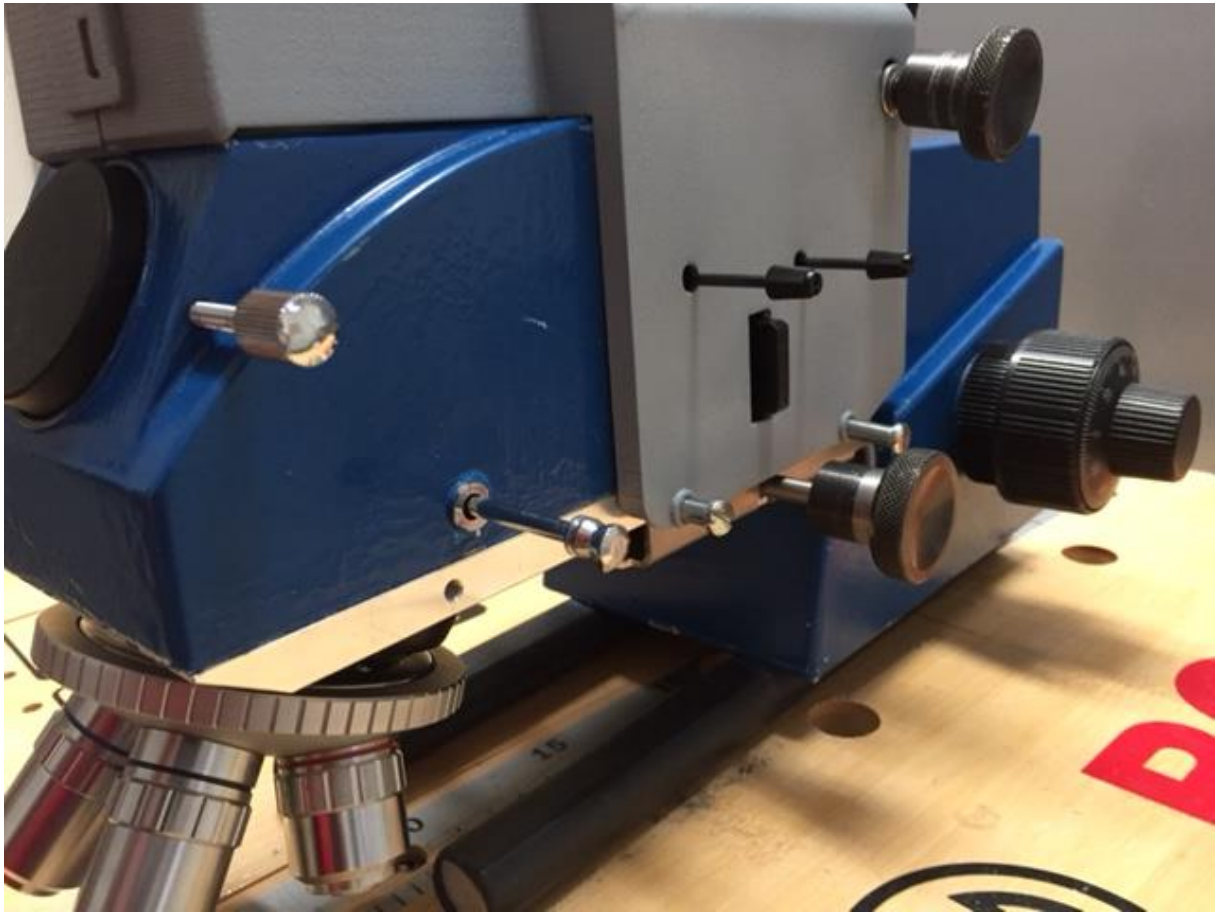


Image 2

The instrument's right side (seen from the front)

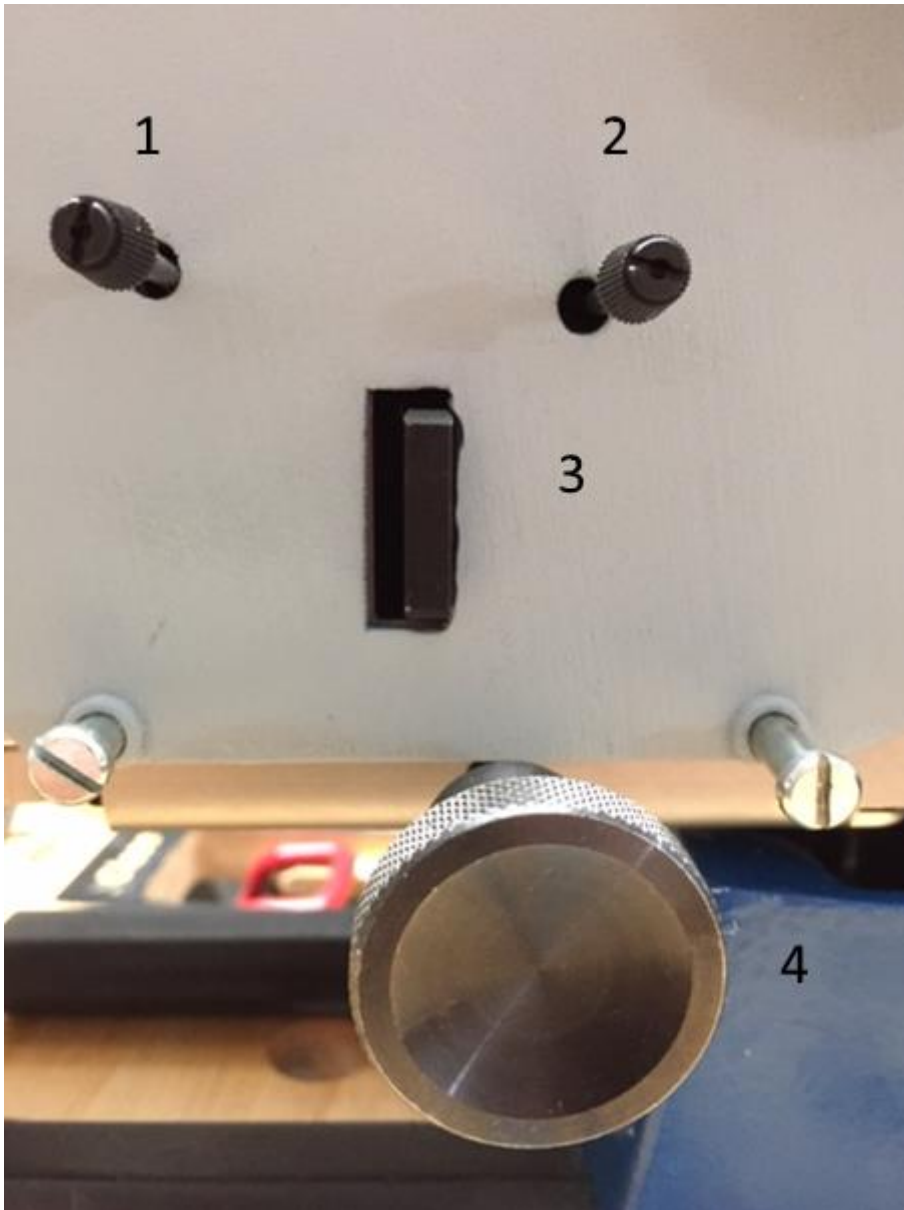


Image 3

Instruments right side in detail

Rod top left 1: (can be in silver also)

Function: Field diaphragm adjustment rod.

Adjust the focus control until the image is clear. If the brightness is not all over equal, use the Field diaphragm adjustment rod by pushing it in in small steps. This will help to increase the over all contrast

Rod top right 2: (can be in silver also)

Function: Aperture diaphragm adjustment rod

The use of this rod reduces the overall light if you push the rod in or out

Filter seat 3:

The filter seat contains a green, yellow and blue filter as well as matt filter and no filter that cuts the wave lengths of the light. This is most useful to obtain a good surface contrast with a maximum of details to see.

Knob 4: Turn the knob left or right and the head moves in horizontal direction, either left or right, (seen from front)

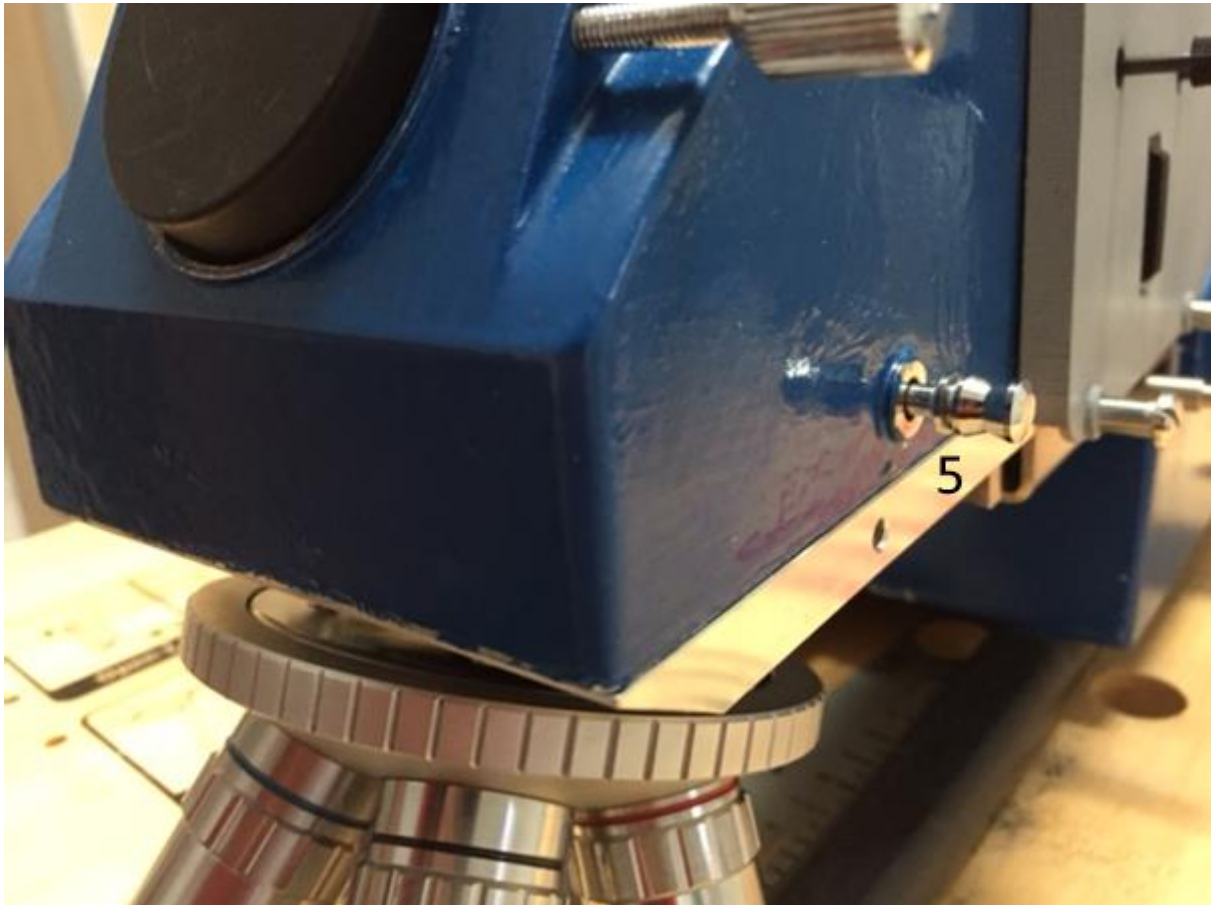


Image 4

If rod 5 is pushed in the opposite rod comes out and the other way around.

The function behind it is that the light is direct or indirect shining on the surface. If rod 5 is out and the counter rod on the other side pushed in this increases the amount of light nearly 2x.

This can be useful if the cell center is very deep and/or shallow. The combination of the color filter and polarization filter helps to achieve good image quality.

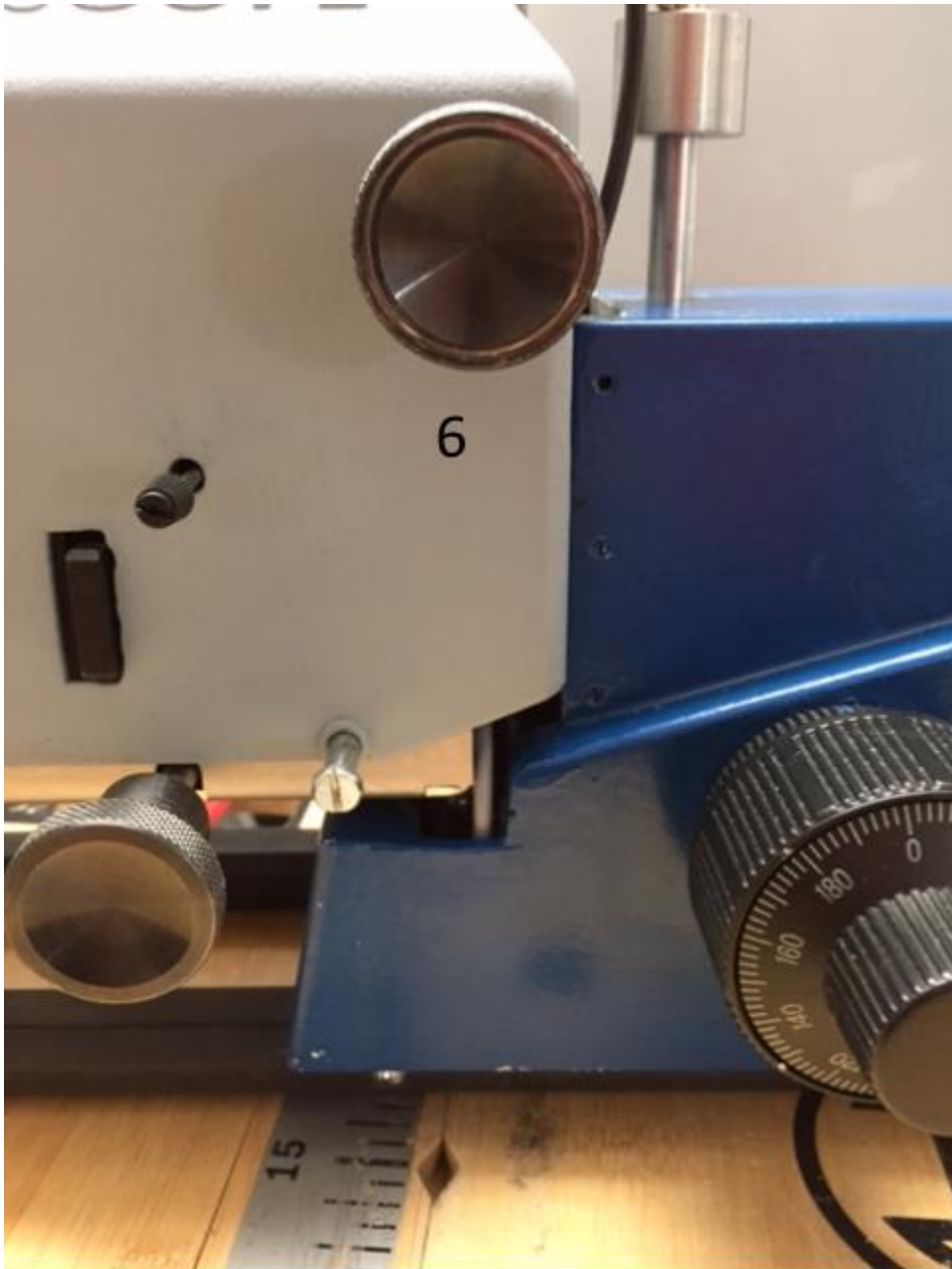


Image 5

Knob 6

Moves the complete optic head back and forth.

Instruments left side in detail

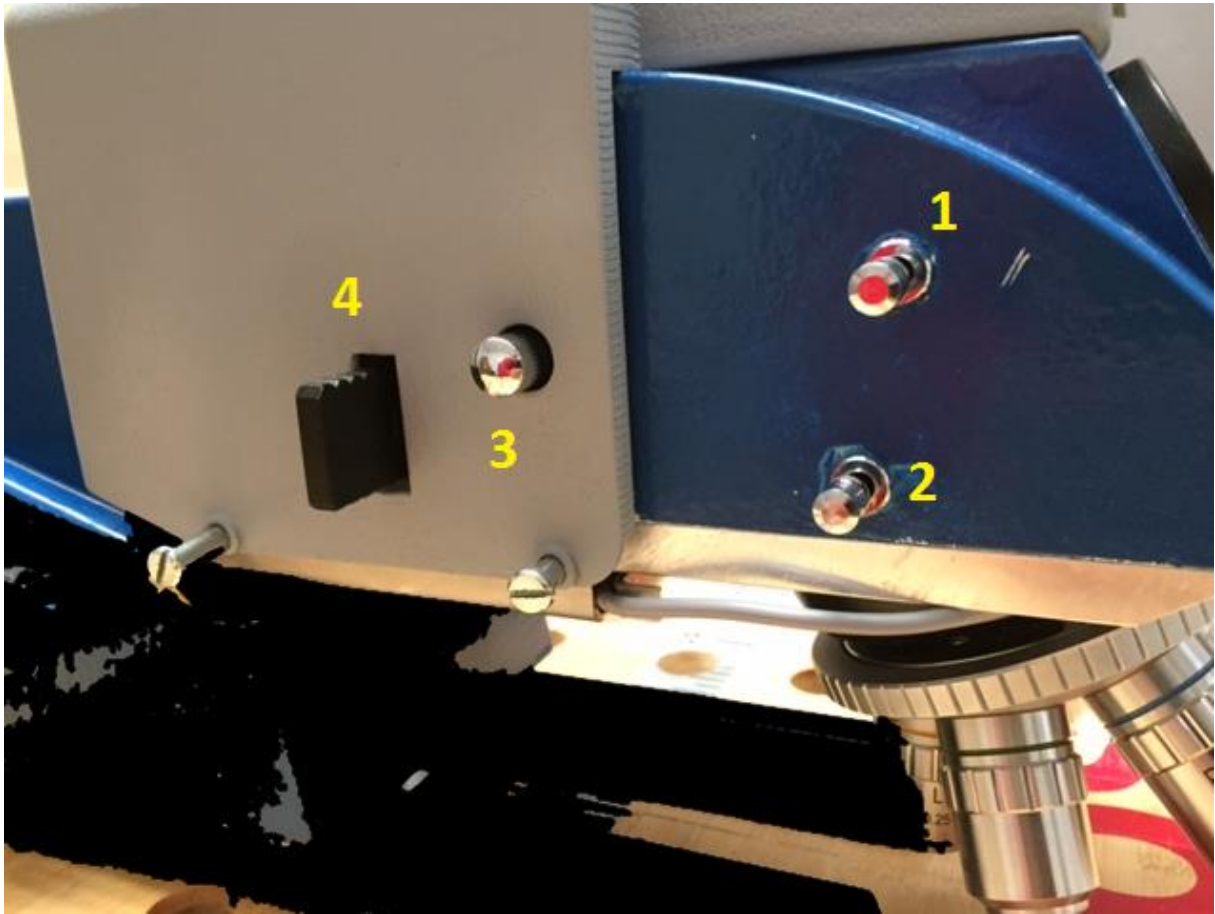


Image 6

Rod 1

This rod is used to direct the image to the binocular tube. The binocular is equipped with a 10x Magnification. If the binocular is placed on the front and screwed push rod 1 in.

The camera image is NOT shown anymore.

Rod 2

Rod for normal upper light, on the right side of the scope rod 5 comes out



Image 7

Rod 3 (see image 6) is the polarizer adjustment pole

In the pulled out position (image 7 right) the polarization filter is not in use. The light goes straight through and makes the image very bright

In the pushed in position (image 7 right) the polarization filter is in use. If you rotate the knob you see the image turn slowly brighter or darker. This will help to prevent reflections or light flashes.

Color filter 4

As already mentioned, The filter seat contains a green, yellow and blue filter as well as matt filter and no filter that cuts the wave lengths of the light. This is most useful to obtain a good surface contrast with a maximum of details to see.