injektor solutions

KITOTEC

KITOZOOM: Optical system and USB camera:



A zoom system consists of the following components: zoom unit with optical magnification 6.5x, adapter, accessory lens and C-mount adapter. This is in addition to the right USB camera. To work accurately with the **KITEC** measurement software we need to be able to adjust the individual zoom levels in a reproducible way. For this reason the zoom unit has six spherical recesses which a spring-loaded ball can engage when rotated. The levels, marked by numbers, are created as "lenses" in the **KITEC** software and calibrated and saved using a reticle plate with certificate.



One of the great advantages of the zoom system is that within the zoom range the working distance (end of lens to test subject) does not need to be changed. The distance is adjusted at the highest magnification level and then remains in force for the entire zoom range. The **KITOZOOM**'s scope of delivery includes an accessory 0.5x accessory lens. This way we get two zoom ranges, which will be entirely sufficient in 95% of all cases. Two accessory 1.5x and 2.0x lenses are available for higher magnifications.

The USB 2.0 camera used (two megapixels) with a 1/3" CMOS chip used offers a resolution of 1600 x 1200 pixels. As an option USB cameras can be supplied with a higher resolution and with CCD chips. However we do not often recommend this since hardly anybody uses the corresponding PC hardware to display pictures of 2048 x 1600 pixels or more on the PC monitor. Also the image transfer rate is lower. Lens coverages, magnifications and working distances are as follows:

With 0.5x accessory lens:

Lens coverage:	27 mm – 4 mm
Working distance:	170 mm
Magnification factor:	15 times to 105 times (on 24" monitor)

Without accessory lens:

Lens coverage:	13 mm – 2 mm
Working distance:	85 mm
Magnification factor:	30 times to 215 times (on 24" monitor)