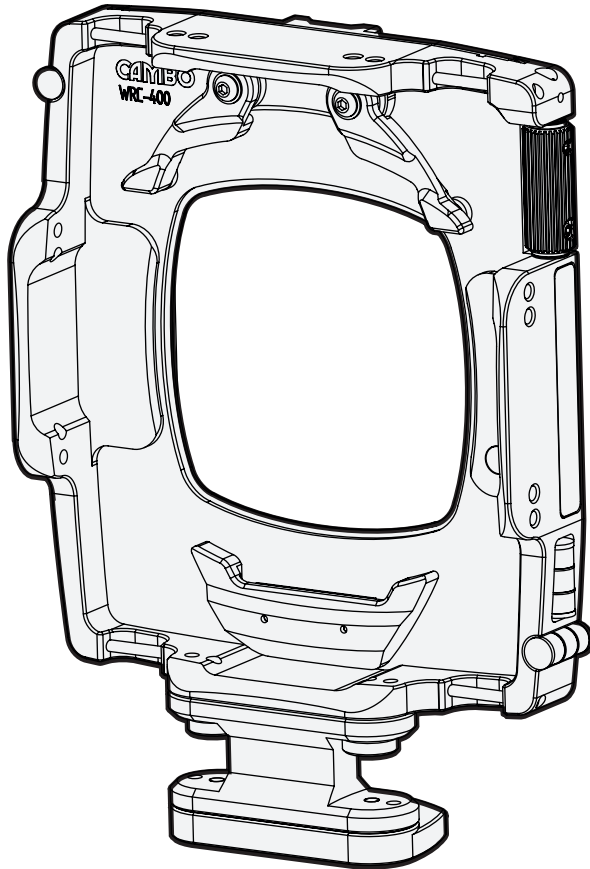


**CAMBO<sup>®</sup>**

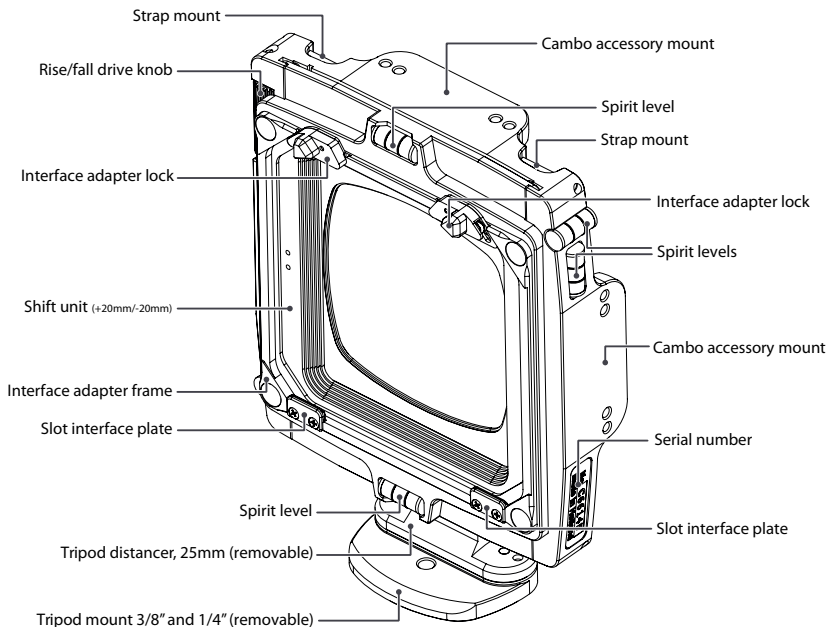
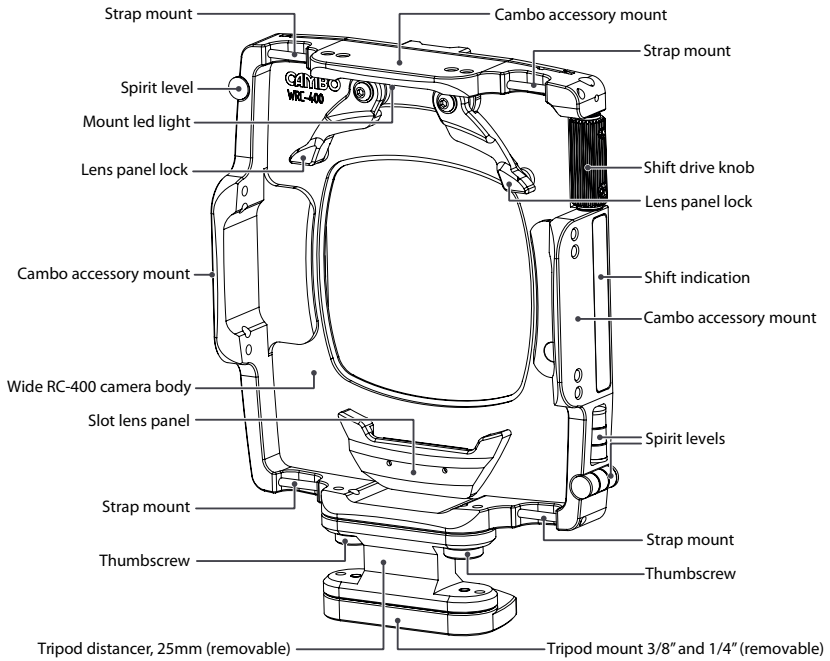
**Wide RC 400 series**



**E**

**INSTRUCTION  
MANUAL**





## Thank you for purchasing a Cambo product.

The Wide RC (WRC) is a compact medium format system camera featuring either lateral or vertical shift of the rear standard. The precision rear shift control is ideal for architecture and landscape photography. It enables the photographer the use perspective control, image displacement and/or high-quality panoramic stitching.

The WRS is a high performance camera build with the highest precision and tightest tolerances.

### Key Features:

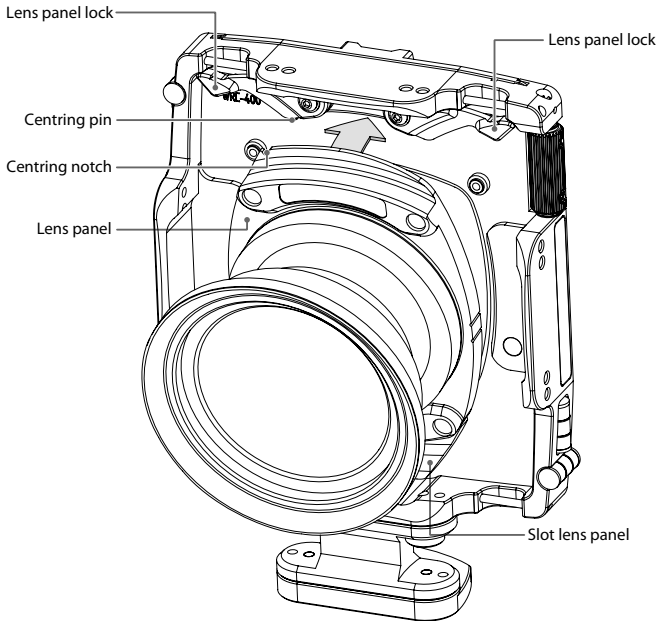
- Small size 125 x 150 mm / 4,9 x 5,9 inch (W x H) excl. tripod distancer
  - Lightweight only 0,5 kg / 1,1 lbs (excl. lens)
  - High grade aluminium camera body and shift plates
  - Horizontal or vertical shift of 40mm / 1,6 inch
  - Stitching possibilities (2-way)
  - Accelerated precision spindle gear drive knobs for fast movement
  - Millimeter movement indicator
  - Sensible click indication at 5, 10 and 15mm
  - Compatible with the WRS, WDS and Wide Compact
  - Four integrated mounts for 2 point fixed accessories
  - Four integrated strap mounts (standard size)
  - Removable 3/8 and 1/4 inch tripod mount
  - Removable tripod distancer (25 mm / 1 inch)
  - 6 integrated spirit levels, visible from top or bottom
- 
- Broad range of optics
  - Retrofitting of user lenses offered

### *Optional:*

- WTS tilt-swing lens panels
- Compendium with filter holder (*Cambo WRS-1090*)
- Viewfinders (*Cambo WRS-1060, WRS-1080 or WDS-580*)
- High quality wooden hand grips (*Cambo WRC-H61*)
- Cambo compact soft case
- LED light module

## A. MOUNTING THE LENS PANEL

The Wide RC system is compatible with the Cambo WDS/WTS lens panels.



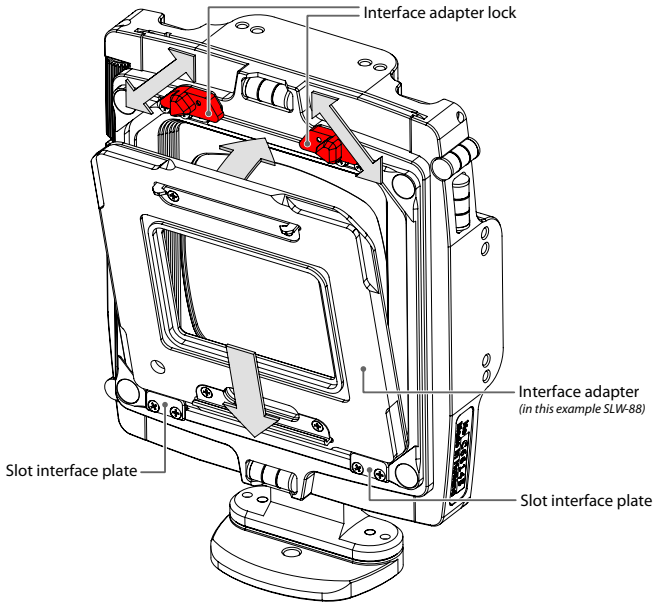
1. Open both *lens panel locks*
2. Slide the bottom of the lens plate into the *lens panel slot*
3. Tilt the lens panel flat to the camera body
4. Lock both *lens panel lock*

## B. MOUNTING AN INTERFACE ADAPTER

The Wide RC system is compatible with the Cambo SLW interface plates. The available interface (adapter) plates are:

<i>Interface plate</i>	<i>Compatible mount</i>
SLW-80	Hasselblad®-V
SLW-81	Leaf® AFi, Sinar® HY6
SLW-88	PhaseOne®, Mamiya® 645 AFd
SLW-87	Contax® 645
SLW-89	Hasselblad®-H
WRS-1068 (SLW mount)	Mamiya® RB roll film holder

*Note: all interface plates are interchangeable.*



1. Open both *interface adapter locks*
2. Slide the bottom of the *interface adapter* into the *interface plate slot*
3. Tilt the *interface adapter* flat to the camera body
4. Lock both *interface adapter locks*

*Note: the interface adapter can be mounted with or without the digital back attached. The interface adapter can be mounted 90° rotated, to change the orientation from landscape to portrait.*

The interface adapter can be exchanged with the Cambo WDS-619 ground glass frame with CCD-markings. The WDS-619 frame uses the same SLW mount as the interface adapters.

### **C. HAND GRIP, CABLE RELEASE AND SHUTTER** *(optional)*

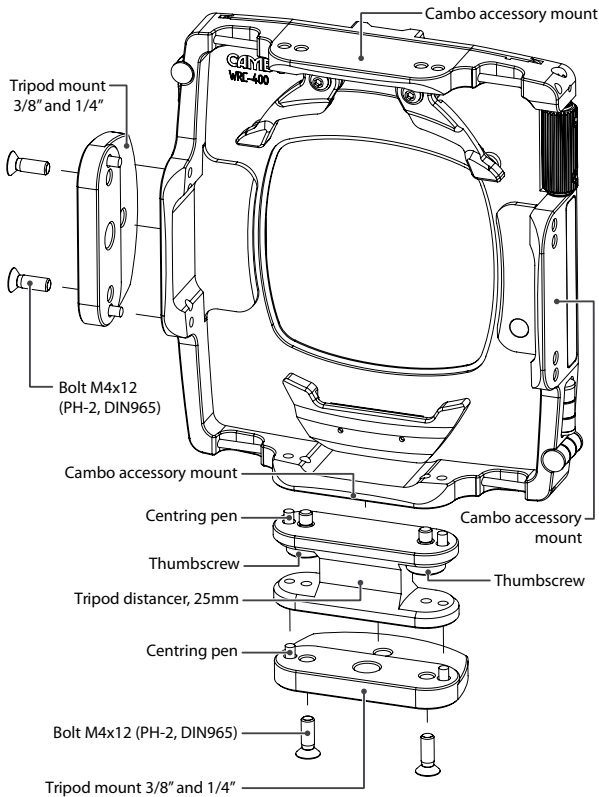
The optional WRC-H61 hand grip features a cable release socket. The cable release must be attached to the release socket/lever of the mechanical shutter. All WDS/WTS lens panels feature a Copal 0 shutter, with shutter speeds between 1/500 and 1 second, B and T. The mechanical shutter must be cocked between every exposure. WDS lens panels featuring the Schneider® or Rodenstock® electronic shutter are available on request.

## D. MOUNTING THE DIGITAL BACK

Please choose the SLW interface adapter corresponding to the interface mount of your digital back. The digital back is mounted to the SLW adapter as it would to corresponding medium format camera body (Hasselblad®-V, Mamiya® AFd, Leaf® AFi, etc.). To synchronize the digital back with the mechanical/electronic shutter please use the brand specific “synchro release cable”. For further operating details please follow the instructions of the manufacturer of the digital back.

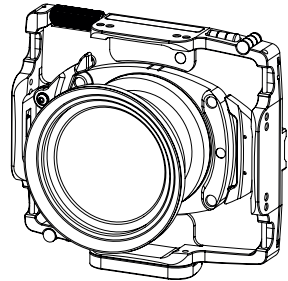
## E. MOVEMENTS: SHIFT, RISE AND FALL

The Wide RC features either horizontal or vertical (rise/fall) movement of the rear standard. These movements can be used for perspective control, image displacement and stitching of multiple exposures. This allows the user to take full advantage of the large image circle of certain lenses. The vertical or horizontal movements shift the image plane, which allows the user to take multiple images within the same focal plane, ideal for stitching. Stitching can be used to



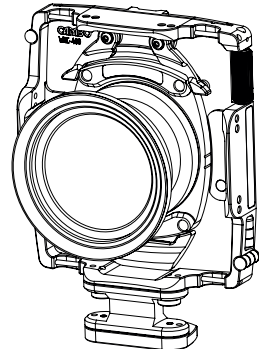
### Horizontal shift

20mm left - 20mm right



### Vertical shift

20mm rise - 20mm fall



create panoramas with the maximum viewing angle or to create higher resolution files.

To use the **horizontal shift** (20mm left / 20mm right) please attach the “tripod mount” (either with or without the “tripod distancer”) to the long side of the camera body. To use the **vertical shift** (20mm rise / 20mm fall) please attach the “tripod mount” with the “tripod distancer” to the short side of the camera body. The shift is operated by drive knob located at the side or top (depends on the orientation) of the camera. Please note that above movements are the mechanically feasible movements, which do not by default reflect the optical possibilities of all lenses. Each lens has its own possibilities and limits.

## **F. MOVEMENTS AND SCALES**

The horizontal or vertical movement can be referred at the millimeter scale at side or top (depends on the orientation) of the camera.

## **G. ACCESSORY MOUNT, VIEWFINDER AND COMPENDIUM**

At the top of the camera body features the Cambo accessory mount. The Cambo accessory modules are mounted using a two-way fixation, which results in a accurate and stable fixation.

The available Cambo modules are:

- WRC-H61 Hand grip module (*hardwood*)
- WRS-1060 Apple® Iphone® viewfinder holder (*Iphone® 4 and 4s*)
- WRS-1075 Module with an universal accessory shoe mount
- WRS-1080 Optical wide angle (120 degree) viewfinder (*optional masks*)
- WRS-1090 Compendium

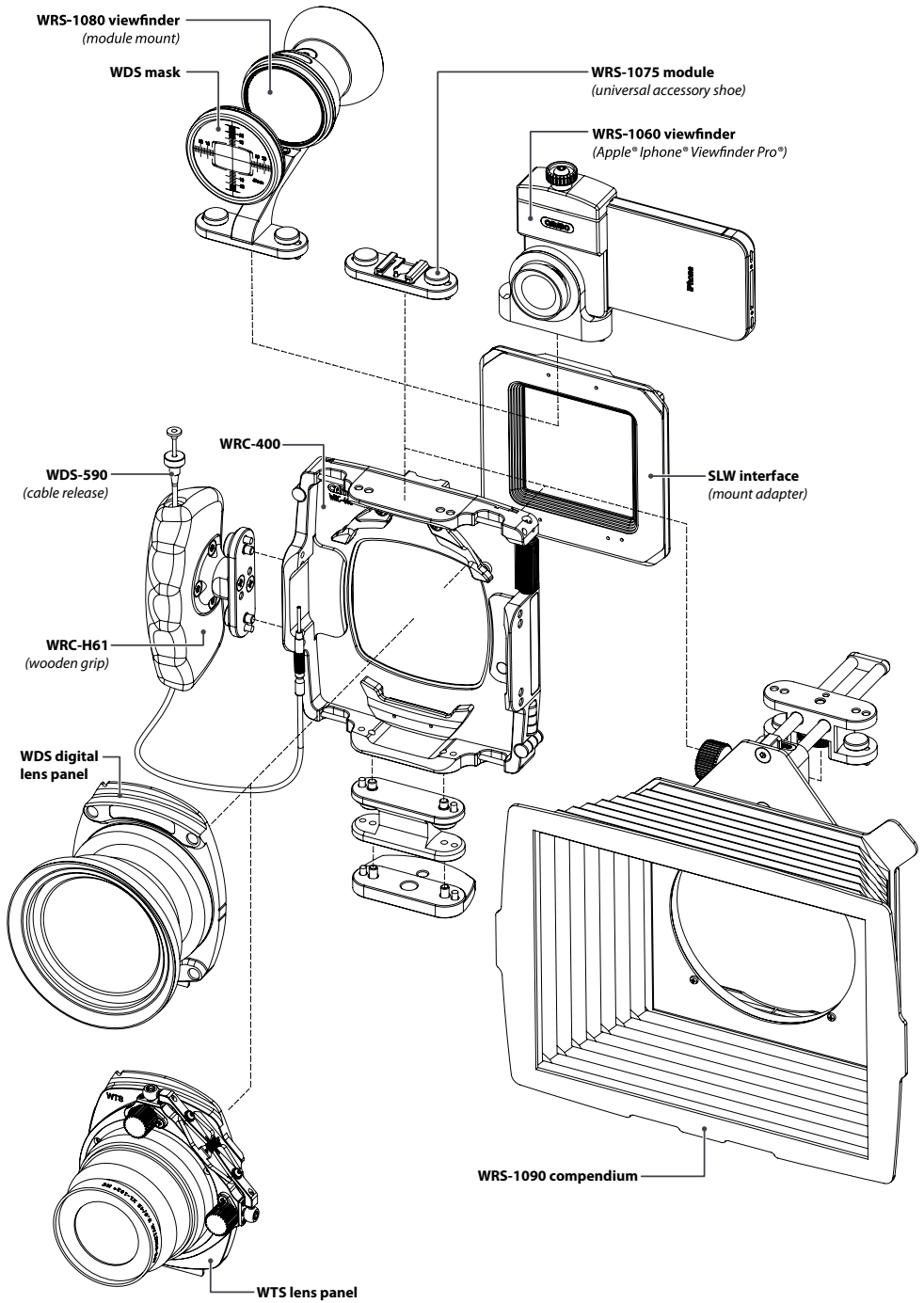
## **H. LED LIGHT MODULE** (*optional*)

The Wide RS system includes a removable LED light which is convenient for use in darker environments when reading the distance scale, aperture and shutter speed. The LED unit attaches to the magnet positioned under the accessory mount of the camera body.

The LED module can be set to different lighting modes. Standard the LED module is in “demonstration mode”, which means it will turn off automatically after four seconds. To change the LED module to “constant light mode” press and hold the button until the light turns off (at least 20 seconds).

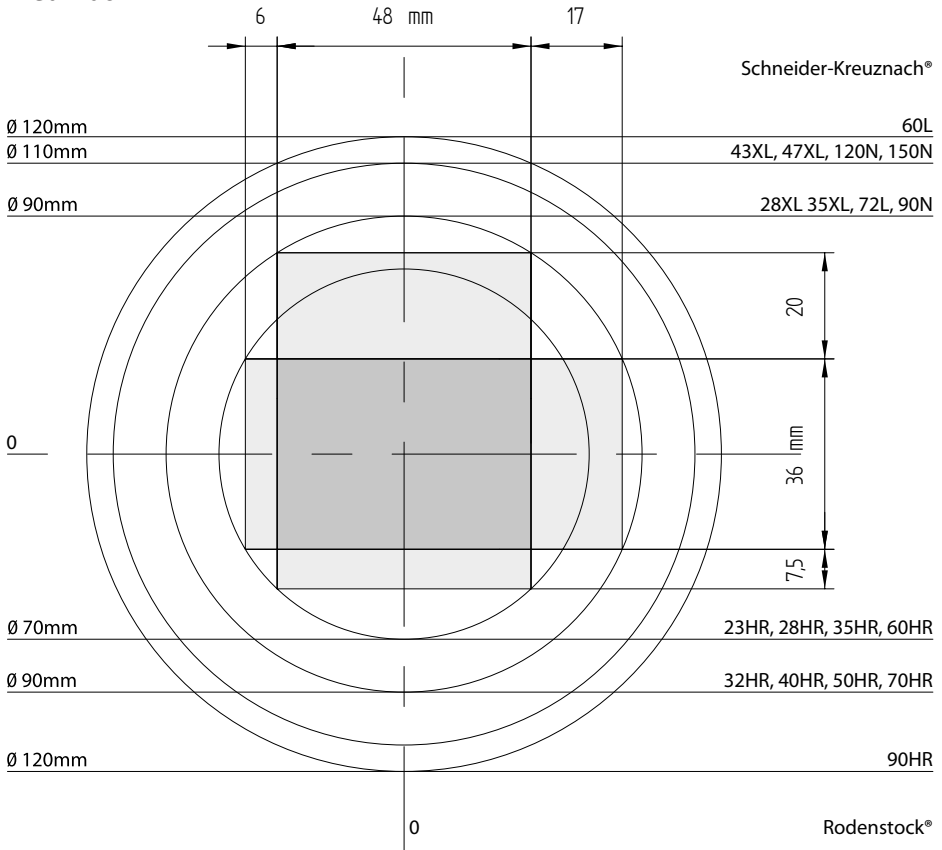
Press the button to turn the light ON or OFF. Press and hold to change the brightness of the LED. The LED unit uses CR-2016 lithium batteries, to replace the batteries, the housing can be opened at the base by the key ring (note small notch in key ring hole).





## I. USE OF LENS PANELS

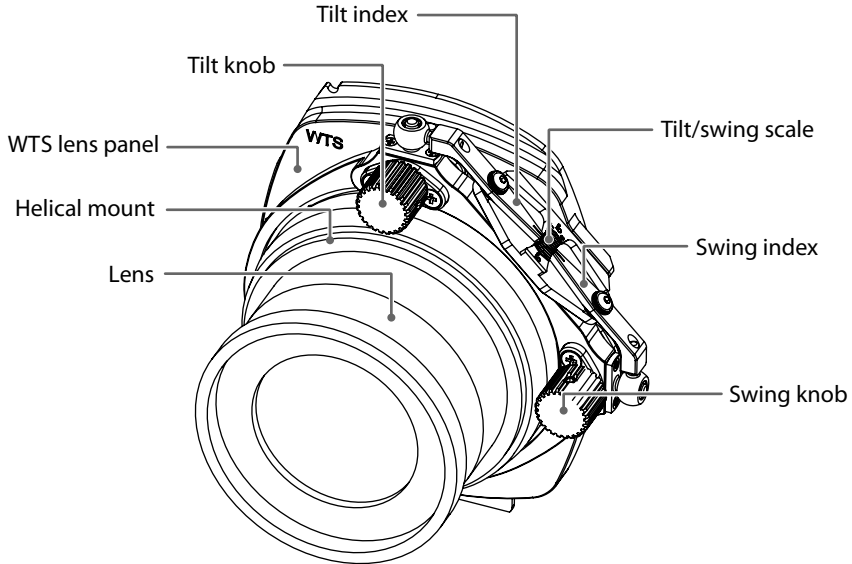
Each lens has a defined image circle and viewing angle specified by the lens manufacturer. The indicated image circle is defined by the circle containing acceptable image quality, defined by the quality standards of the lens manufacturer. Cambo does not change these specifications. For detailed lens specifications users are referred to data provided by Rodenstock® or Schneider-Kreuznach®.



The maximum image displacement, to keep the image inside the specified image circle, depends on the size of the image circle and the image sensor used. In this example we use a digital back with a CCD size of 48x36mm. When we use a lens with a image circle of 70m, like the Rodenstock® 5,6/23HR Digaron-S, the maximum horizontal shift is 6mm (to either side) and the maximum rise or fall is 7,5mm. When we use a lens with a image circle of 90m, like the Schneider® 5,6/35 XL Apo-digitar, the maximum horizontal shift is 17mm (to either side) and the maximum rise or fall is 20mm.

## J. WTS TILT-SWING LENS PANELS

The WTS panel allows an angle adjustment between +5 and -5 degrees in both swing and tilt direction for setting Scheimpflug corrections. These can be used separately as well as simultaneously, using the 2 adjustment knobs. The lens plane and CCD are parallel when the tilt (T) and swing (S) indicators are set to zero on the scale. This zero-position is reached when the bearing snaps into the lock, where the drive knobs become slightly loose by purpose.



To apply tilt only use tilt knob, to apply swing only use swing knob. When needed, a combination of both can be applied.

*Note: do not force beyond the +5/-5 boundary marks.*

## K. LENS CAST

Under certain circumstances there may be occurrence of lens cast, caused by the light striking the CCD under an angle due to either shifts or very short focal length. The effect may differ quite a lot from one CCD to another and is not a constant factor. This effect is acknowledged by all digital back manufacturers and each have their own software solution for this.



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All specifications in this manual are subject to change without notice. Please check [www.cambo.com](http://www.cambo.com) for updates.

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