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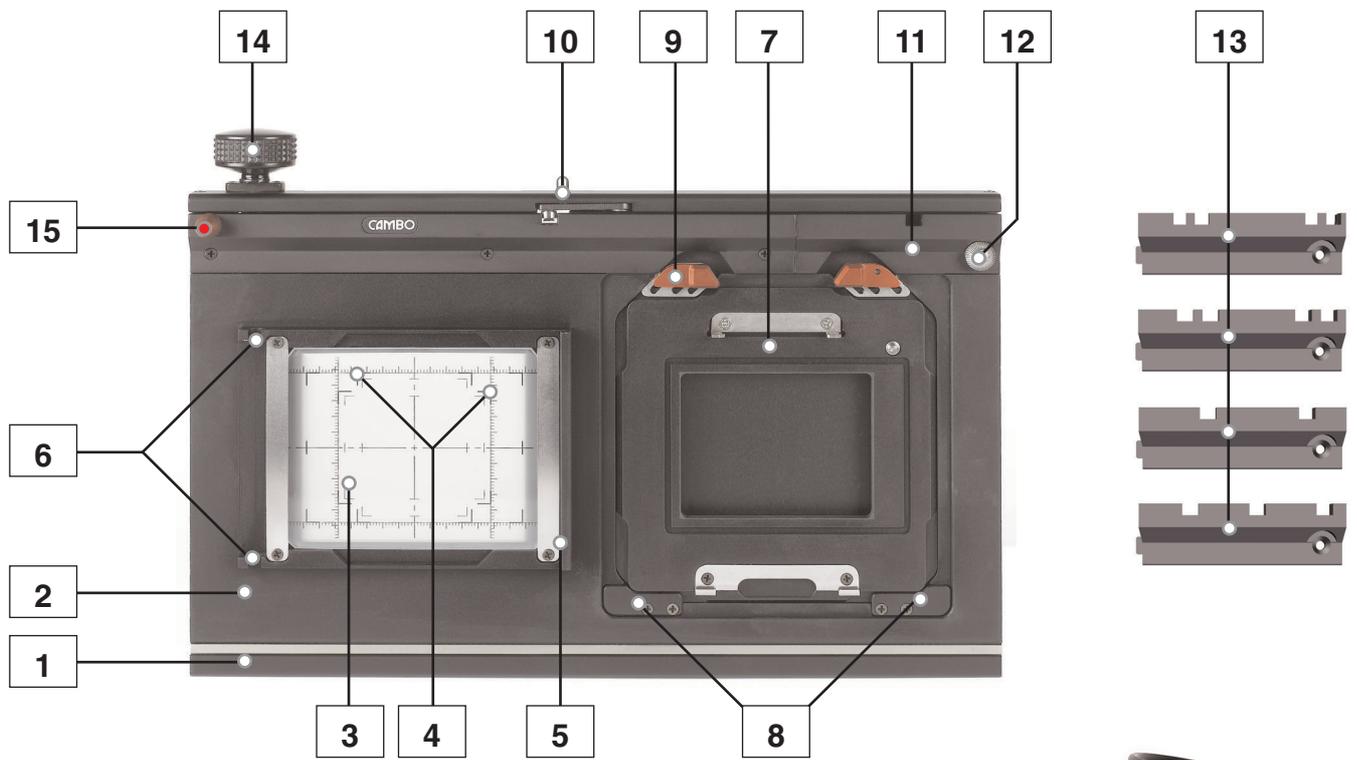
MULTISTEP SLIDING BACK

For use with Digital Backs



Instruction Manual

v.2008

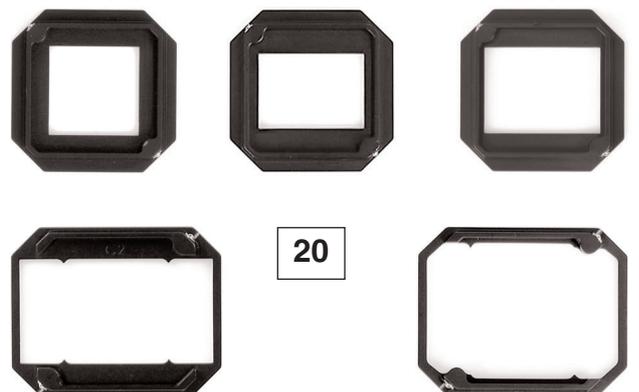


List of indicated items

1. Sliding back frame
2. Sliding plate
3. Ground glass
4. Printed format frames
5. Slot for viewing hood
6. Mounting holes for viewing hood
7. Adapter for digital back
8. Retaining clips for adapter
9. locking lever for adapter
10. Position click stop switch
11. Interchangeable insert for stitching
12. Knob for attaching insert
13. Optional stitching inserts
14. Driveknob for stitching movements
15. Grip for sliding movement



16. Direct viewing hood
17. Reflex viewing hood
18. Mounting pins for viewing hood
19. Cut-out for format mask
20. Optional format masks



Instruction manual for the Cambo Multistep Sliding Back

CMSLB-69 for the Cambo Ultima 23
CMSLB-45 for the Cambo Ultima 45
SMSLB-45 for the Sinar 4x5 Camera

Table of contents

1. List of indicated items
2. Introduction
3. Installing your Multistep sliding back
4. How to use your Multistep sliding back
5. Depth correction focal plane on the Cambo Ultima
6. Specifications Multistep sliding back

2. Introduction

We thank you for acquiring a Cambo multistep sliding back CMSL. This sliding back has been specifically developed for use with digital back on a Cambo view camera. The high precision and smooth positioning, combined with a very stable construction offer you maximum performance in digital capturing. The sliding back has a compact construction to establish an optimal situation also for wide angle photography.

The Multistep system makes it possible to establish larger images with your digital back, either to obtain more data information or to utilise more of your lens' image circle. Stitching software takes two (or three) image files you make and allows you to work with an image file upto 68mm width.

The geared movement between shooting positions allows you to get your digital back at the exposure positions without interfering with your camera setup. The optional available masks give you the total image lay-out and the middle position for normal sliding back use.

The adapting systems of the current digital backs are based on Hasselblad-V, Hasselblad-H, Mamiya 645AFd, Contax 645 and Leaf AFi/SinarHY6 mounts. Although this Cambo product is optimised for the use on a Cambo Ultima camera, it can also be fitted to a Cambo SC-2, 45SF and Legend-2 camera, and a SMSLB version fitting to a Sinar 4x5" camera.

Limitations in use may apply when used on other platforms than the Cambo Ultima. To use your Cambo Multistep sliding back most efficiently we recommend that the following instructions are carefully read.

3. Installing your sliding back CMSL

A. Mounting the sliding back to the view camera

To install the sliding back on a Cambo camera, move the slide-lock on top of the rear-standard to the right -in case of the safety lock: after engaging also the second button- Then insert the bottom of the back mounting plate behind the chrome retainer clips of the rear standard, push the back plate in place and close the slide-lock on top of the camera.

B. Placing the optional Format Mask (20)

Depending on the type of digital back is being used (CCD-size), the appropriate mask (20) can be mounted to the mask holder plate (19) of either the direct viewing (16) or reflex viewing hood (17). Place the appropriate format mask into the opening (19) of the viewing hood. Masks can be clicked-in horizontal as well as vertical to follow the orientation of the digital back. Available masks are with frames for 37x37, 33x44 and 36x48mm, as well as for stitched area with 37x37 and 36x48mm CCD's.

C. Placing the optional Viewing Hood (16/17)

The optional viewing hoods can be placed in position by inserting the right edge of plate in to the slot (5) near the right side of the ground glass, then while pushing pins (18) on top and bottom side of the hood together, place the viewing hood until you can release the pins (18) in the mounting holes (6) near the left side of the ground glass.

To remove the viewing hood, just push the 2 pins together and remove the hood.

D. Placing the interchangeable adapter plate (7)

The CMSLB sliding back accepts interchangeable interface plates from the SLW-series. The same plates are being used on the WideRS system. To insert the plate, open the sliders (9) by sliding diagonally upwards, place the insert behind the retainer clips (8), put the plate (7) flat to the baseplate (2) and close the sliders (9) while sliding downwards. Each adapter can be placed in horizontal as well as vertical position, either rotated left or right. Adapters can be replaced with other adapters without need for recalibration.

4. How to use your sliding back CMSLB

A. Depth adjustment on the Ultima

After installing your Multistep sliding back to the camera we recommend to perform the correct depth adjustment to the camera if you are using a Cambo Ultima, to get the best possible camera movements in combination with the sliding back system.

The depth correction is shortly described in chapter 5 of this instruction manual.

B. Attaching your digital back

Before you install a digital back to the sliding back, make sure the sliding back is properly installed and check if your interface plate (7) is corresponding with the interface of the digital back. If so, attach the digital back to the interface plate of the sliding back and make sure the attachment system is secure fitted and locked before you let go of the digital back.

Connect the digital back to your computer and shutter system, following instructions of the specific manufacturer of the digital back. Make sure that cables are long enough to allow for the movements of the sliding back and the view camera.

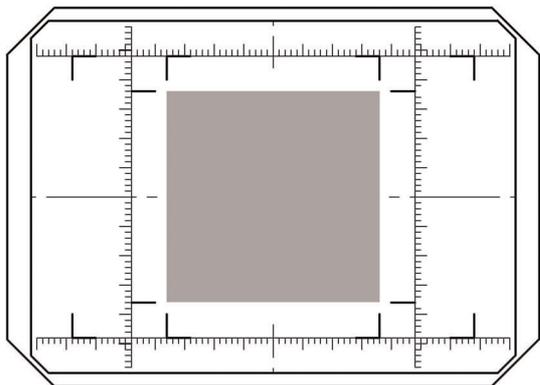
C. Using the sliding back for film

The sliding back is developed for digital use, and does NOT support the use of film holders from the Medium format manufacturers. If you want to experiment with the use of film, be aware that there is not filmforwarding mechanism, nor release pins for the dark slide. Any damage caused by the use of a filmback on this sliding back is at your own risk.

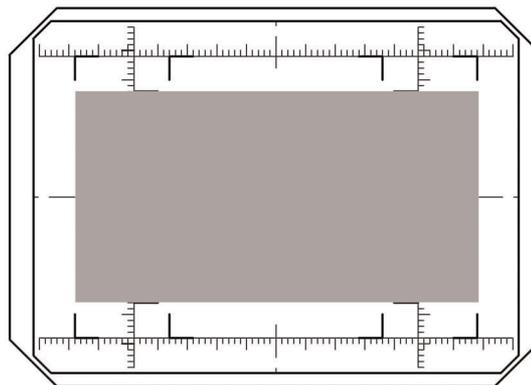
D. Ground glass masking

The ground glass (3) has been printed with a number of lines and stripes to indicate the framing for 44x33mm CCD's, for 48x36mm CCD's both in horizontal and vertical format.

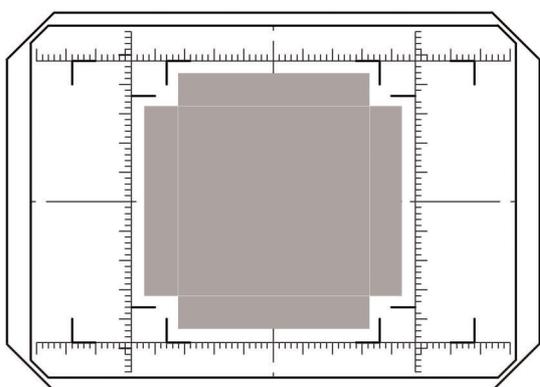
The 37x37 mm CCD format is indicated in the following field:



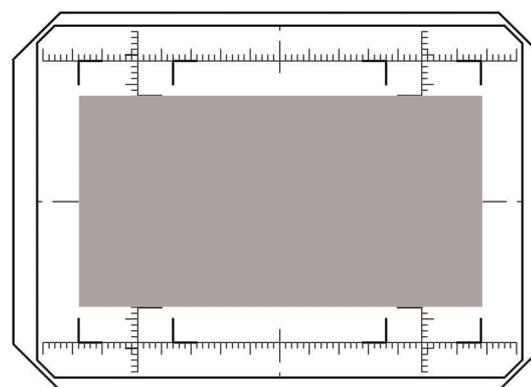
The 37x68 mm stitched format is indicated in the following field (two shots 37x37mm):



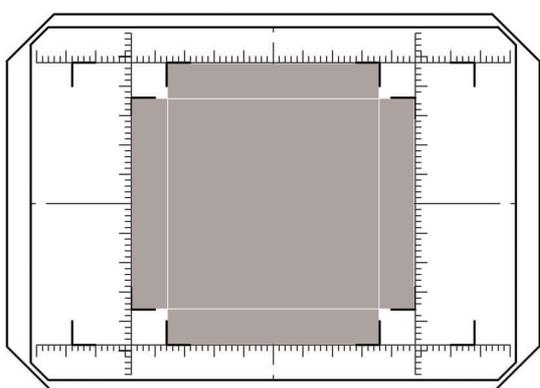
The 33x44 mm CCD format is indicated in the following field (portrait-landscape):



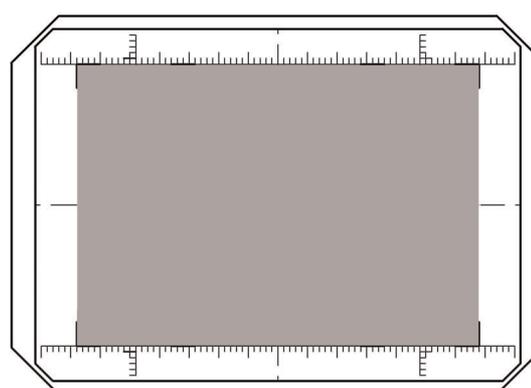
The 37x68 mm stitched format is indicated in the following field (2-shot 36x48 landscape):



The 36x48 mm CCD format is indicated in the following field (portrait-landscape):



The 48x68 mm stitched format is indicated in the following field (2-shot 36x48 portrait):



E. Focusing

Open the shutter of the view camera and focus the image using the camera functions. The high-quality focusing screen has grid lines to indicate the center of the image. The optional focusing hood (16/17) allow you to use the flexible loupe position for the best viewing angle. The hoods can be removed for the use of any other magnification loupe.

F. Sliding operation

The sliding plate (2) is automatically locked in place at the focusing and exposing positions to avoid any unwanted movement during focusing and exposures.

After focusing, close the shutter of the lens of the view camera first and then press the position click stop switch (10) forward to unlock the sliding plate (2). Be careful in case the camera setup is in an odd position (f.i. tilted sideways) to protect for unwanted movements. While holding the switch (10) only until the plate is out of the focusing position, slide the whole plate to the left, using the grip (15) for added support. You will notice that during the last 25mm before the central exposure position there will be extra support for the movement by a gear rack. Turning the knob (14) you will be able to move the sliding back from the center exposure position to the left and to the right by a geared movement to accommodate for stitching. The click switch will snap into position before exposure.

G. Stitching operation

By default, the CMSLB is fitted with an insert (11) which has the central exposure position. You will be able to use driveknob (14) to move left and right for multi positioning, however when you have acquired the optional stitching insert (13) you can use this for precise positioning of the exposures with a fixed overlap. This exact overlap is suitable for the PhaseOne software for stitching raw files. Other software is widely available for stitching tiff-files, including Adobe Photoshop CS.

To exchange an insert, release attaching knob (12), slide insert (11) to the right, and place the optional insert (13) into the same position and fix it with knob (12) again.

The inserts (13) have slots on dedicated positions, corresponding with different CCD-sizes, for portrait as well as landscape placement of the digital back (slots indicated H and V).

Note: The gear rack is loaded with a spring to avoid damage of the first teeth of the gear. Make sure you slide the sliding plate (2) far enough to pick up the movement of the gear rack.

5. Depth correction focal plane on Cambo Ultima

The depth correction is a feature on the Cambo Ultima that makes it possible to use exact focal-plane- on-axis swing and tilts movements. This depth adjustment allows for precise alignment of the CCD plane, preventing the center of the image from moving out of focus when swings or tilts are applied. The correction is different for different models, as shown in the table below. Further instructions are found in the Cambo Ultima instruction manual.

Original ground glass 4x5 or 2x3:	Depth correction position 0 (A)
Sliding back CMSLB-45:	Depth correction position B+3
Sliding back CMSLB-69:	Depth correction position C+1

6. Specifications

Dimensions: 258 x 180 x 20 mm (excl. viewing hood)

Weight: 1,2 kg / 2.7 Lbs. (excl. viewing hood, including adapter)

This manual has been prepared by Cambo with care, although no responsibility, financial or otherwise, is accepted for any consequences arising out of the use of this manual or this material. All specifications in this manual are subject to change without notice.

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