

This camera manual library is for reference and historical purposes, all rights reserved.

This page is copyright by mike@butkus.org M. Butkus, N.J.

**This page may not be sold or distributed without the expressed
permission of the producer**

I have no connection with any camera company

If you find this manual useful, how about a donation of \$3 to: M. Butkus, 29 Lake Ave., High Bridge, NJ 08829-1701 and send your E-mail address too so I can thank you. Most other places would charge you \$7.50 for a electronic copy or \$18.00 for a hard to read Xerox copy. These donations allow me to continue to buy new manuals and maintain these pages. It'll make you feel better, won't it?

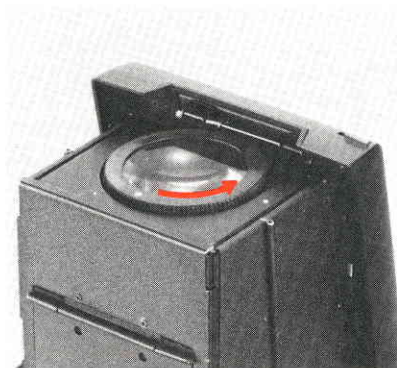
If you use Pay Pal, use the link below. Use the above address for a check, M.O. or cash. Use the E-mail of butkusmi@ptd.net for PayPal.



[back to my "Orphancameras" manuals /flash and light meter site](#)

Only one "donation" needed per manual, not per multiple section of a manual !

The large manuals are split only for easy download size.



Attaching a focusing hood

Match the grooves on the hood's front both sides to the pins of the camera body, fit the groove on the hood's rear to the focusing hood lock screw, then fasten it.

Changing the Magnifier

While holding both side panels of the focusing hood to prevent lowering of the magnifier base plate, turn the magnifier counterclockwise 90 degrees to remove it.

To attach the magnifier, align the magnifier white dot with the base plate white dot, then turn the magnifier clockwise 90 degrees.

- In addition to the standard magnifier (-1.5 diopters), diopter lenses of $+2$, $+1$, 0 , -2 and -3 diopters are available for near and farsighted users.

The standard -1.5 diopter magnifier is designed for users, whether eyeglass wearers or not, that have no trouble seeing a subject 2.5 ft. (70cm) away clearly. For those who have difficulty seeing clearly at such a distance, please use a diopter lens which is available as an optional accessory. However, before making a purchase, try the diopter lens at your Mamiya dealer to make sure it matches your eye.



When a flash unit is used for photographing, connect the synchro cord to the synchro socket (2).

When using an electronic flash unit, set the M-X synchro selector (3) at X to synchronize all shutter speeds.

When using M-class flash bulbs, set the M-X synchro selector (3) at M to synchronize flash at all shutter speeds. This M-X synchro selector can be switched even after cocking the shutter.

When photographing without flash, keep the M-X synchro selector on X.

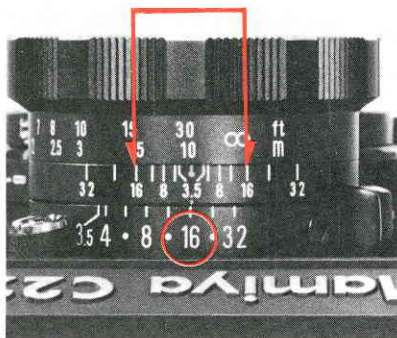
Flash Synchronization Table

Contact	Type of Flash	Shutter Speed										
		B	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500
M	M class	○	○	○	○	○	○	○	○	○	○	○
X	Electronic Flash	○	○	○	○	○	○	○	○	○	○	○
	M class	○	○	○	○	○	○	○	×	×	×	×

Combinations with the ○ mark synchronize.

Combinations with the × mark do not synchronize.

Handling the 105mm f/3.5 DS Lens



The 105 mm f/3.5 DS lens has diaphragms on the viewing lens, enabling you to observe the depth-of-field on the focusing screen. In addition, this lens-shutter has a built-in self-timer.

Depth-of-Field Control

When the camera is focused on a subject a certain area in front of and behind the subject is also in focus; this is called the depth-of-field. Depth-of-field varies in relation to the aperture in use; it increases as the aperture is stopped down to smaller apertures, and decreases as the lens is opened up to larger apertures.

Viewing on the focusing screen

After focusing, set the desired aperture to the central index mark by turning the aperture scale ring of the viewing lens. Now, the depth-of-field can be observed on the focusing screen.

Using the depth-of-field scale

Turn the distance scale ring and set the focused distance to the central index mark.

Next, select an aperture and set it to the central index mark, then look at the corresponding figures on the depth-of-field scale on both sides of the central index mark. This is the extent of the depth-of-field that will be obtained with the aperture you are using.

For example, if the camera is focused at 30ft. (10m) at an aperture of f/16, the range of sharp focus will be approximately from 15ft. (5m) to infinity.

Note:

The aperture scale of the viewing lens does not interlock with the taking lens, so in actual photography, never forget to set the aperture of the taking lens.

The distance scale of the viewing lens is provided to read the depth-of-field, and has no relation with actual focusing.

Self-Timer Operation



By setting the M-X synchro selector to the V position, the shutter is released approximately 10 seconds after pressing the shutter release button. At this V position, the shutter is activated at X setting for flash photography.

The M-X synchro selector can be moved before or after cocking the shutter.

After finishing photographing with the self-timer, return the selector to the X position. If left on the V position, the self-timer will be actuated on the next shot.

If you notice that the self-timer is activated after releasing the shutter for ordinary photography, depress the shutter cocking lever immediately to switch off the self-timer. Then set the synchro selector to X or M to restore ordinary shutter action.



To make multiple exposures, or when you want to release the shutter without taking a picture, turn the multiple exposure dial (18) until MULTI matches the red dot. Then the shutter release button can be depressed whenever the shutter is set, without advancing the film.

Make sure that the multiple exposure dial is turned to SINGLE thereafter to avoid inadvertent multiple exposures.

Precautions on Shutter Operation

When you depress the shutter release button on the half way and give up the shutter releasing action (as when you miss a chance to take a picture), the shutter release button may not move for the second shot. In this case, also, turn the multiple exposure dial to MULTI and the shutter release button can be depressed without winding up the film in vain.

When using a lens whose shutter release lever can be moved without being cocked (like the 80mm f/3.7 lens), the shutter release button can be pressed without previous cocking; however, the shutter does not operate and no picture can be taken. Even if you realize it after pressing the button and try to cock and release the shutter, the shutter release button will not move because of the double-exposure prevention mechanism. In this case, press the shutter release button after setting the multiple exposure dial (18) to MULTI or press the release lever of the shutter itself.

When this camera is under any of the following conditions, the shutter release button can not be depressed by the safety mechanism.

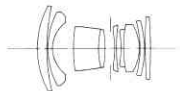
1. When the triangle mark of the lens lock knob points UNLOCK. Red warning mark will appear on the ground glass focusing screen in the finder.
2. When the shutter is uncocked.
3. When SINGLE of the multiple exposure dial is set to the red dot of the side plate, and
 - (1) When film is not loaded (exposure counter shows "0").
 - (2) When the shutter release button has already been pressed and the film has not been wound.
 - (3) When the last film in roll is exposed (after 12 or 24 exposures).

To freely release the shutter or for multiple exposures, turn the multiple exposure dial until MULTI matches the red dot.

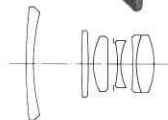
When no film is loaded in the camera

When no film is loaded in the camera, even when the film advance knob is turned, the exposure counter remains at "0", and the shutter release button (21) can not be depressed. However, when a take-up spool is in the take-up spool chamber (28), the exposure counter may be advanced, depending upon the type of spool.

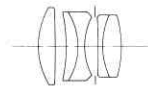
55mm f/4.5



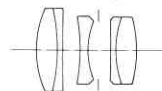
65mm f/3.5



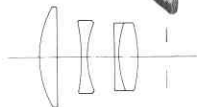
80mm f/2.8



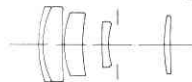
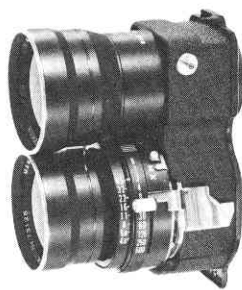
105mm f/3.5DS



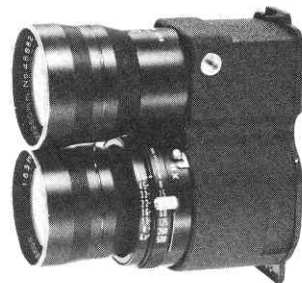
135mm f/4.5



Super 180mm f/4.5



250mm f/6.3



Lens	Composition	Picture Angle	Minimum Aperture	Filter Diameter (mm)	Lens Hood Diameter (mm)	Close-Up Capabilities	
						Shortest Distance from Film to Subject	Subject Coverage
55mm f/4.5	9 element 7 group	70°30'	f/22	46ø	48ø	9 1/2 in. (24.1 cm)	2 17/32 × 2 17/32 in. (6.4 × 6.4 cm)
65mm f/3.5	6 element 5 group	63°	f/32	49ø	50ø	10 11/16 in. (27.1 cm)	2 21/32 × 2 21/32 in. (6.7 × 6.7 cm)
80mm f/2.8	5 element 3 group	50°40'	f/32	46ø	48ø	1 ft. 1 15/16 in. (35.4 cm)	3 25/64 × 3 25/64 in. (8.6 × 8.6 cm)
105mm f/3.5DS	5 element 3 group	41°20'	f/32	46ø	48ø	1 ft. 1 in. (58.4 cm)	7 1/4 × 7 1/4 in. (18.4 × 18.4 cm)
135mm f/4.5	4 element 3 group	33°	f/45	46ø	48ø	2 ft. 11 1/2 in. (90.2 cm)	9 15/16 × 9 15/16 in. (25.2 × 25.2 cm)
Super 180mm f/4.5 ✓	5 element 4 group	24°30'	f/45	49ø	50ø	4 ft. 2 3/4 in. (1 m 29 cm)	10 53/64 × 10 53/64 in. (27.5 × 27.5 cm)
250mm f/6.3	6 element 4 group	18°	f/64	49ø	50ø	6 ft. 8 3/4 in. (2 m 05 cm)	1 ft. 1/4 in. × 1 ft. 1/4 in. (31.1 × 31.1 cm)

Filter

Filters are available in five types: SY48 (Y2), SO56(02), SL39(UV), YG, SL-1B (skylight). Filter sizes for each lens are shown in the system chart.

- When using a 49mm diameter filter, employ the 49mm filter for Mamiya C; otherwise attaching the lens hood might be impossible. When you order filters, always specify the Mamiya C Professional type.
- To attach a filter to a lens of 49mm filter diameter, place your palm on the protective lens ring screwed into the front barrel of the lens, turn the ring counter-clockwise to remove it, and then screw in the filter. When a filter is not used, always replace the ring to protect the lens barrel.

Lens hood

There are four different types of lens hoods available for interchangeable lenses.

1. Lens hood for 55mm lens (*)
 2. Lens hood for 65mm lens (*)
 3. Lens hood 48mm ϕ for 80mm f/2.8, 105mm f/3.5 DS and 135mm f/4.5 lenses
 4. Lens hood for super 180mm and 250mm lenses (*)
- Lens hoods marked with an asterisk (*) have a side plate which can be inclined. Attach the lens hood to the lens with this plate upward. When light reflected from the lens hood to the viewing lens becomes annoying while focusing, due to a certain light condition, incline the side plate to eliminate the annoying reflection.
 - All of these lens hoods are comparatively new type attached only to the taking lens. Old type lens hoods are also acceptable.

Diopter Lens

For persons whose vision is not adapted to the magnifier (-1.5 diopter) mounted on the focusing hood as standard equipment, five additional types of lens (-3 , -2 , 0 , $+1$, $+2$ diopters) are available to effect diopter correction.

① CdS Magnifying Hood

This is a spot metering finder with a CdS exposure meter incorporated in the magnifying hood. Since the meter measures light which passes through the lens, the correct exposure setting is easily obtained. A compensating exposure factor need not be considered even if the bellows is extended. When employing a color filter, however, compensating exposure must be made by considering the filter exposure factor. (By attaching the same color filter to the viewing lens, such compensation is unnecessary.)

② Prism Finder

As with the magnifying hood, this prism finder may be used instead of the focusing hood. Through this prism finder, the image on the ground glass focusing screen appears exactly as the subject is seen. Really an indispensable accessory for eye-level photo-journal photos or candid shots.

Magnification of this finder is approximately 2.5 times the image on the ground glass focusing screen, particularly bright and clear.

③ CdS Porrofinder

This is a Porrofinder with built-in CdS exposure meter. Match the index needles within the finder by turning the dial on the back of the finder, and read the dial scale. This device measures the amount of light traveling through the viewing lens, offering correct exposure setting even for amateurs.



Eye Correction Lens

This lens, designed to correct visibility, is installed inside the eyepiece ring of the CdS Porrofinder, or Prism Finder.

Nine types of lenses are provided from +2.5 to -2 diopter (each diopter is +2.5, +2.0, +1.5, +1.0, +0.5, -0.5, -1.0, -1.5, and -2.0).



When installing the lens on the finder, hold the milled portion of the eyepiece ring with the thumb and finger, and turn it counterclockwise to remove the ring. When the lens is a plus (convex) lens, position it with the flat surface outside, and when it is a minus (concave) lens, place the concave surface on the exterior, then screw the ring into its original position.

4 Grip Holder

The grip holder is a very convenient accessory for hand-holding the camera while taking pictures or for carrying the camera. Its accessory shoe is attached on the top of the grip.

5 Pistol Grip

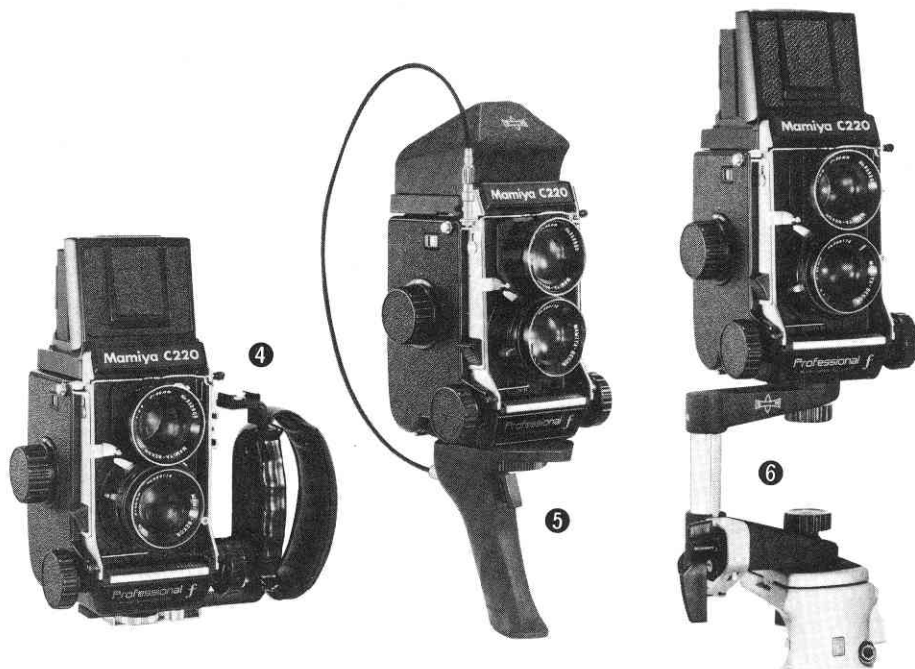
This grip, which supports the camera from the bottom, has a trigger type shutter release button which many persons prefer when following sports action.

6 Paramender Model 2

This is a parallax-correcting instrument used between the camera base and a tripod. Keep the part attached to the camera base downward while focusing, then raise the camera position by turning the handle until it stops prior to releasing the shutter. Thus, the taking lens is lifted to the position where the viewing lens was, and parallax is hereby automatically corrected.

7 Focusing Knob Adapter DSF/DSM

An adapter for attaching to the focusing knob to facilitate precise focusing. Focused distance can be read easily by using distance scales (for 65, 80, and 105mm lenses) which comes with the adapter. The DSF is calibrated in foot and the DSM, in meter.



8 Quick-shoe Model 2

A two piece set in which one piece is attached to the camera and the other to the tripod. When this is done, the camera can instantly be mounted to, or removed from, a tripod without the need to fumble with screws.

9 Mamiyalite MZ 36R

This grip-type auto electronic flash has a guide number of 36 (ASA 100-m); 28 when wide-angle adapter is attached.

The head of unit can be swung upward 90° and rotated almost one full turn, so bounce flash operation on auto is possible. You can select three different apertures and the flash unit automatically controls flash intensity according to the subject distance. In

addition, you can select one of five different flash intensity for your purpose, so it is highly convenient for close-up work and daylight synchro flash.

Power source: Eight AA-size alkaline or rechargeable Ni-Cad batteries.



Accessories

Lens Case

To protect and easily carry interchangeable lenses, the following hard cases (4 types) are available:

- (1) Case for 55, 80, and 105mm lenses
- (2) Case for 65 and 135mm lenses
- (3) Case for 180mm lens
- (4) Case for 250mm lens

Soft Lens Case

The soft lens case is widely applicable to protect interchangeable lenses for the Mamiya C Professional or to store accessories.

This case also can hold lenses for the Mamiya Press and Mamiya RB.

10 Compartment Case

In addition to the Camera and Standard Lens set, this convenient, heavy-duty camera case holds interchangeable lenses and camera accessories in separate compartments. Panels inside the case may be rearranged freely for accommodating various items. Accessory wrapping cloth for protection of the camera body and lenses is also provided.

Inside Dimensions:

Length Width Height (Top Cover)

$13\frac{9}{16}" \times 7\frac{7}{8}" \times 6\frac{7}{8}" + 2"$

34.5cm \times 20cm \times 17.5cm + 5cm

11 Aluminum Custom Case

The Mamiya Custom Case is a smartly portable, luggage-type aluminum case.

The Custom Case is designed to accommodate and to easily hand-carry normally required interchangeable lenses and accessories as well as standard equipment. By changing the inserts, the Custom Case conveniently accommodates the Mamiya C, Mamiya RB, or Mamiya Press and related equipment.

The interchangeable inserts, made of sponge rubber, provide effective shock absorption and sufficient protection of the equipment.

The case measures $18\frac{3}{8}" \times 13\frac{7}{8}" \times 6\frac{3}{4}"$ ($47 \times 35 \times 17$ cm) and weighs 8 lbs, $2\frac{1}{2}$ oz., (3.7 kg).



Depth-of-Field Table

55 mm f/4.5

Aperture	Distance (in feet)									
	∞	30	15	7	5	3	2.5	2	1.5	1
4.5	29 1' ∞	14 11' ∞	10 30 1'	5 9' 9	4 43' 5 11'	2 93' 3 33'	2 46' 2 83'	1 103' 2 13'	1 53' 1 63'	1 113' 1 3'
5.6	23 2' ∞	13 3' ∞	9 3' 9 83'	5 6' 9 83'	4 23' 6 2'	2 83' 3 43'	2 44' 2 93'	1 103' 2 13'	1 53' 1 63'	1 113' 1 3'
8	16 5' ∞	10 9' ∞	8 145 11 7'	5 1' 11 7'	3 113' 6 10'	2 73' 3 63'	2 33' 2 103'	1 103' 2 23'	1 53' 1 7'	1 113' 1 3'
11	11 8' ∞	8 6' ∞	6 9' 16 1'	4 63' 16 1'	3 73' 8 2'	2 53' 3 93'	2 23' 3 3'	1 93' 2 33'	1 43' 1 73'	1 113' 1 3'
16	8 4' ∞	6 8' ∞	5 6' 3 113'	3 113' 35 10'	3 33' 11 1'	2 43' 4 33'	2 3' 3 43'	1 83' 2 5'	1 43' 1 83'	1 113' 1 3'
22	5 113' ∞	5 1' ∞	4 5' ∞	3 43' ∞	2 103' 23 8'	2 13' 5 1'	1 113' 3 103'	1 73' 2 73'	1 33' 1 93'	1 113' 1 3'

65 mm f/3.5

Aperture	Distance (in feet)									
	∞	30	15	7	5	3	2	1.75	1.5	1
3.5	50 23' ∞	18 113' 73 13'	11 8' 21 1'	6 23' 8 3'	4 73' 5 53'	2 103' 3 13'	1 113' 2 32'	1 83' 1 93'	1 53' 1 63'	1 23' 1 33'
4	43 113' ∞	17 113' 92 13'	11 33' 22 43'	6 13' 8 23'	4 63' 5 63'	2 103' 3 2'	1 113' 2 33'	1 83' 1 93'	1 53' 1 63'	1 23' 1 33'
5.6	31 53' ∞	15 63' 155 9'	10 33' 27 11'	5 93' 8 93'	4 43' 5 93'	2 93' 3 93'	1 11' 2 1'	1 83' 1 93'	1 53' 1 63'	1 23' 1 33'
8	22 1' ∞	12 103' ∞	9 1' 44 53'	5 53' 9 11'	4 2' 6 3'	2 83' 3 43'	1 103' 2 13'	1 8' 1 53'	1 53' 1 63'	1 23' 1 33'
11	16 13' ∞	10 73' 175 8'	7 113' 11 93'	5 33' 11 93'	3 113' 6 11'	2 73' 3 63'	1 103' 2 23'	1 73' 1 103'	1 53' 1 73'	1 23' 1 33'
16	11 13' ∞	8 3' ∞	6 63' ∞	4 53' 17 23'	3 73' 8 5'	2 53' 3 103'	1 93' 2 33'	1 73' 1 113'	1 43' 1 73'	1 23' 1 33'
22	8 2' ∞	6 63' ∞	5 53' ∞	3 113' 39 3'	3 3' 11 5'	2 4' 4 33'	1 83' 2 5'	1 63' 2 3'	1 43' 1 83'	1 23' 1 33'
32	5 83' ∞	4 103' ∞	4 3' ∞	3 33' ∞	2 103' 29 33'	2 13' 5 53'	1 73' 2 83'	1 53' 2 23'	1 33' 1 93'	1 23' 1 33'

80 mm f/2.8

Aperture	Distance (in feet)									
	∞	30	15	10	7	5	4	3	1.5	1
2.8	102 7' ∞	23 43' 42 33'	13 2' 17 5'	9 2' 11	6 73' 7 53'	4 93' 5 23'	3 103' 4 13'	2 113' 3 3'	1 53' 1 63'	1 3'
4	71 103' ∞	21 4' 50 93'	12 63' 18 83'	8 103' 11 53'	6 53' 7 8'	4 83' 5 33'	3 10' 4 23'	2 11' 3 13'	1 53' 1 63'	1 3'
5.6	51 5' ∞	19 13' 70 4'	11 9' 20 93'	8 53' 12 23'	6 3' 7 113'	4 73' 5 53'	3 93' 4 33'	2 103' 3 13'	1 53' 1 63'	1 3'
8	36 33' ∞	16 7' 167 53'	10 93' 24 113'	7 113' 13 53'	5 113' 8 53'	4 53' 5 8'	3 8' 4 43'	2 10' 3 23'	1 53' 1 63'	1 3'
11	26 33' ∞	14 23' ∞	9 83' 33 33'	7 5' 15 63'	5 8' 9 23'	4 33' 5 113'	3 63' 4 63'	2 93' 3 33'	1 53' 1 63'	1 3'
16	18 13' ∞	11 6' ∞	8 5' 76 33'	6 73' 20 103'	5 23' 10 93'	4 33' 6 63'	3 43' 4 103'	2 8' 3 5'	1 53' 1 63'	1 3'
22	13 33' ∞	9 43' ∞	7 3' 35 8'	5 103' 13 7'	4 93' 13 7'	3 93' 7 53'	3 23' 5 4'	2 7' 3 73'	1 53' 1 7'	1 3'
32	9 23' ∞	7 23' ∞	5 103' ∞	5 ∞	4 23' 24 23'	3 53' 9 73'	2 113' 6 33'	2 5' 4'	1 43' 1 73'	1 3'

105 mm f/3.5

Aperture	Distance (in feet)									
	∞	30	15	10	7	5	4.5	4	3	1.5
3.5	131 53' ∞	24 7' 38 63'	13 63' 16 93'	9 43' 10 83'	6 83' 7 4'	4 103' 5 2'	4 43' 4 73'	3 11' 4 1'	2 113' 3 3'	1 3'
4	115 33' ∞	23 113' 40 2'	13 43' 17 1'	9 33' 10 103'	6 73' 7 43'	4 10' 5 23'	4 43' 4 73'	3 103' 4 13'	2 113' 3 3'	1 3'
5.6	82 33' ∞	22 23' 46 63'	12 93' 18 13'	9 33' 11 23'	6 63' 7 63'	4 93' 5 3'	4 33' 4 83'	3 103' 4 13'	2 113' 3 3'	1 3'
8	57 83' ∞	19 113' 60 113'	12 1' 11 103'	8 73' 11 103'	6 4' 7 93'	4 83' 5 43'	4 3' 4 93'	3 93' 4 23'	2 103' 3 13'	1 3'
11	42 33' ∞	17 93' 100 33'	11 3' 22 73'	8 3' 12 93'	6 13' 8 23'	4 63' 5 63'	4 2' 4 11'	3 83' 4 33'	2 103' 3 13'	1 3'
16	28 113' ∞	15' ∞	10 13' 29 7'	7 73' 14 73'	5 93' 8 103'	4 43' 5 93'	4 33' 5 13'	3 73' 4 53'	2 93' 3 23'	1 3'
22	21 23' ∞	12 8' ∞	9 33' 38 63'	7 33' 17 9'	5 53' 9 103'	4 23' 6 23'	3 103' 5 5'	3 6' 4 8'	2 83' 3 33'	1 3'
32	14 8' ∞	10 1' ∞	7 83' 5180 33'	6 23' 27 93'	4 113' 12 23'	3 113' 6 113'	3 73' 5 113'	3 4' 4 3'	2 73' 3 53'	1 3'

Depth-of-Field Table

www.orhancameras.com

135 mm f/4.5

Aperture	Distance in feet								
	∞	30	15	10	7	6	4	3.5	3
4.5	159 3/4 ∞	25 4/4 36 8	13 9/4 16 5/4	9 5/4 10 7	6 9/4 7 3/4	5 10 6 2/4	3 11/4 4 1/4	3 5/4 3 6/4	2 11/4 3 1/4
5.6	128 3/4 ∞	24 5/4 38 9/4	13 6/4 16 10	9 4/4 10 9	6 8/4 7 4	5 9/4 6 2/4	3 11/4 4 1	3 5/4 3 6/4	2 11/4 3 1/4
8	89 8/4 ∞	22 8/4 44 4/4	13 17 9	9 1/4 11 1/4	6 7 7 5/4	5 8/4 6 4	3 10/4 4 1/4	3 5 3 7	2 11/4 3 1/4
11	65 4 ∞	20 9/4 54 1/4	12 4/4 19 1	8 9/4 11 9	6 5/4 7 8/4	5 7 6 5/4	3 10/4 4 2/4	3 4/4 3 7/4	2 11/4 3 1
16	45 1/4 ∞	18 3/4 85 6/4	11 5/4 21 9/4	8 4/4 12 5/4	6 2/4 7 5/4	5 5 6 8/4	3 9/4 4 3/4	3 4 3 8/4	2 10/4 3 1/4
22	32 10 ∞	15 11/4 286 2/4	10 6/4 26 3/4	7 10/4 13 9/4	5 11/4 8 6/4	5 2/4 7 1/4	3 8/4 4 4/4	3 3/4 3 9/4	2 10/4 3 2
32	22 8 ∞	13 2/4 40 2/4	9 3/4 20 2/4	7 2/4 16 8	5 6/4 9 6	4 11/4 7 8	3 6/4 4 7	3 2/4 3 10/4	2 9/4 3 3/4
45	16 2/4 ∞	10 9/4 132 8	8 1 23 1/2	6 5/4 11 2	5 1/4 8 8/4	4 7/4 5 10/4	3 5 4 3/4	3 1/4 4 3/4	2 8/4 3 4/4

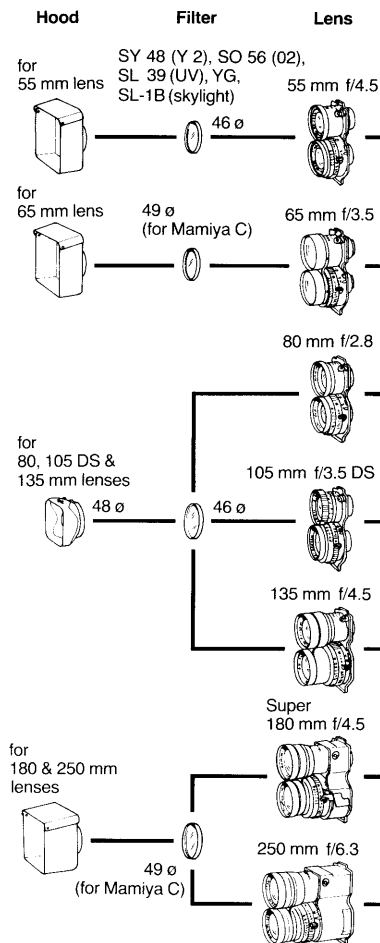
250 mm f/6.3

Aperture	Distance (in feet)									
	∞	200	100	50	30	20	15	12	10	8
6.3	412 ∞	135 385	81 131	44 11 56 5	28 2 32 1	19 2 20 10	14 7 15 5	11 9 12 3	9 10 10 2	7 11 8 1
8	325 ∞	125 513	77 143	43 8 58 6	27 8 32 8	19 21 1	14 5 15 7	11 8 12 4	9 9/4 10 2	7 10/4 8 1/4
11	230 ∞	108 1474	70 4 174	41 6 62 11	26 10 34	18 7 21 7	14 3 15 10	11 6 12 6	9 8/4 10 3	7 10 8 2
16	163 ∞	90 7 252	62 9 70 6	38 10 46 36	25 9 31 3	18 1 22 4	14 16 2	11 3 12 8	9 7 10 5	7 9 8 3
22	116 ∞	74 688	54 5 85 2	35 7 43 3	24 4 29 3	17 5 23 6	13 7 16 9	11 2 13	9 5 10 8	7 8 8 4/4
32	82 1 ∞	58 10 121	45 11 121	31 10 45 2	22 7 25 4	16 7 25 4	13 1 17 7	10 10 13 7	9 2/4 10 11	7 6/4 8 6
45	58 5 ∞	45 9 303	37 7 29 7	27 9 303	20 6 57 6	15 6 28 7	12 5 19	10 5 14 3	8 11/4 11 4	7 4/4 8 9
64	41 8 ∞	34 11 ∞	30 1 ∞	23 6 94 4	18 3 34 11	14 3 21 5	11 8 15 6	9 10/4 12 1	8 6/4 9 1/4	7 1/4 7 9

180 mm f/4.5

Aperture	Distance (in feet)								
	∞	60	30	15	12	10	8	7	6
4.5	299 ∞	50 2 74 8	27 4/4 33 2/4	14 4/4 15 8/4	11 7 12 5/4	9 8/4 10 3/4	7 10 8 2/4	6 10/4 7 1/4	5 11 6 1
5.6	240 ∞	48 3 79 5	26 9/4 34 3/4	14 2/4 15 10/4	11 6 12 6/4	9 8 10 4/4	7 9/4 8 2/4	6 10 7 2	5 10/4 6 1/4
8	168 ∞	44 6 92 3	25 7/4 36 2	13 10/4 16 3/4	11 3/4 12 9/4	9 6/4 10 6/4	7 8/4 8 3/4	6 9/4 7 2/4	5 10/4 6 2
11	122 ∞	40 7 115 7	24 4 39 2/4	13 6 16 10/4	11 3/4 13 1/4	9 4/4 10 9	7 7/4 8 5/4	6 8/4 7 4	5 9/4 6 2/4
16	84 2 ∞	35 5 260	22 4/4 45 6/4	12 11 17 10/4	10 8 13 8/4	9 1 11 1/4	7 5 8 8	6 6/4 7 6	5 8/4 6 4
22	61 3 ∞	30 8 1664	20 5/4 56 7	12 3/4 14 6/4	10 3 11 7/4	9 8/4 11 1/4	7 2/4 8 11/4	6 5 7 8/4	5 7 6 5/4
32	42 3 ∞	25 2 95 2	17 10/4 22 2/4	11 4/4 16 3/4	9 7/4 12 6/4	8 3/4 12 6/4	6 11/4 9 5/4	6 2/4 8 3/4	5 5 6 8/4
45	30 1 ∞	20 4 874	15 4/4 27 8	10 4/4 18 7/4	8 10/4 14 1/4	7 9/4 12 1/4	6 7 10 3	5 11 8 7/4	5 2/4 7 3/4

System Chart for Mamiya C220f



Diopter lens H3
(+2 to -3 diopter)



Focusing hood H3



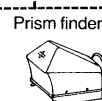
CdS
Magnifying
hood



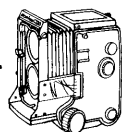
CdS
porrofinder



Eye correction lens
(+2.5 to -2 diopter)



Camera body



Camera soft case No. 3



Focusing knob adapter DSF-2
Focusing knob adapter DSM-2



Quick-shoe model 2



Soft lens case



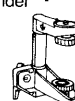
Pistol grip



Grip holder



Paramender
Model 2



Lens case

for 55 mm, 80 mm,
and 105 mm lenses



for 65 mm and
135 mm lenses



for 180 mm lens



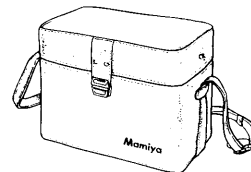
for 250 mm lens



Strap



Compartment case



Mamiya Aluminum Custom Case

