

Mamiya 64

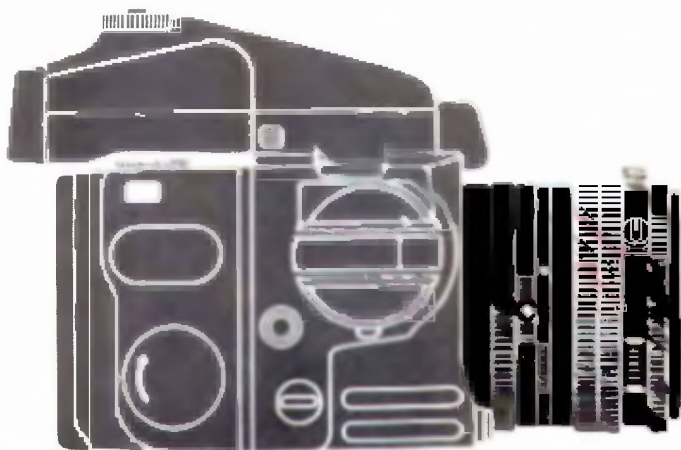
Mamiya

Leaf Shutter Lenses

A 55mm F2.8 N/L

A 80mm F2.8 N/L

A 150mm F3.8 N/L



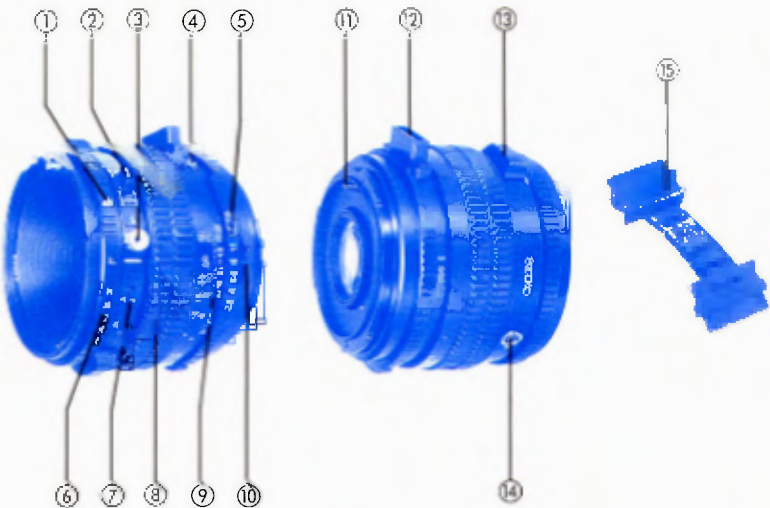
Instructions

Features

The Mamiya 55mm f/2.8 N/L, 80mm f/2.8 N/L and 150mm f3.8 N/L lenses have built-in leaf shutters with synchronization for electronic flash at shutter speeds from 1/30 to 1/500 sec. This is especially useful when mixing electronic flash with ambient exposure (synchro-flash photography).

The leaf shutter function of these lenses may also be disengaged, making it possible to utilize the focal plane shutter in the Mamiya M645 camera body at all shutter speeds. Flash sync of the focal plane shutter is 1/60 sec. With leaf shutter operation, automatic shutter cocking is performed by the optional Mamiya Power Drive WG401. The Power Drive WG401 also automatically advances the film. When using these leaf shutter lenses without the Power Drive WG401 manual shutter cocking is required.

- A special power cord is supplied with each lens to connect the lens to the Power Drive WG401 for motorized leaf shutter cocking.
- The lens can be attached or removed in the usual manner.
- The shutter speed dial on the lens has a green "F" setting and a green lock button. The "F" setting disengages the leaf shutter and is set when using only the focal plane shutter in the camera body.
- Once the dial is set to "F", it automatically locks. To unlock the ring from the "F" setting, the green lock button is depressed, and the ring is turned to the desired shutter speed.
- The Mamiya N/L lenses may be operated with either focal plane shutter or Leaf shutter.
- The leaf shutter in the Mamiya N/L lenses can be automatically cocked when using the Mamiya Power Drive WG401 on Mamiya M645 Super cameras.
- The leaf shutter can also be manually cocked when used on all Mamiya 645 cameras.
- Mamiya N/L lenses have a built-in depth of field preview sliding switch located on the front lens barrel to the left of the center. To preview depth of field, set the switch to "M".



● Name of Parts

- | | |
|---------------------------------|---|
| ① Speed ring lock button | ⑨ Depth-of-field scale |
| ② [M/A] lock selector | ⑩ Exposure meter coupler |
| ③ Mirror lock-up release socket | ⑪ Automatic diaphragm pin |
| ④ Index dot | ⑫ Power socket |
| ⑤ Aperture ring | ⑬ Shutter cocking ring |
| ⑥ Shutter speed ring | ⑭ X-sync terminal |
| ⑦ A-M lever (Depth of Field) | ⑮ Special power cord |
| ⑧ Focusing ring | ⑯ (for connection with the Power Drive GW401) |

A 55mm F2.8 N/L

A 80mm F2.8 N/L

A 150mm F3.8 N/L

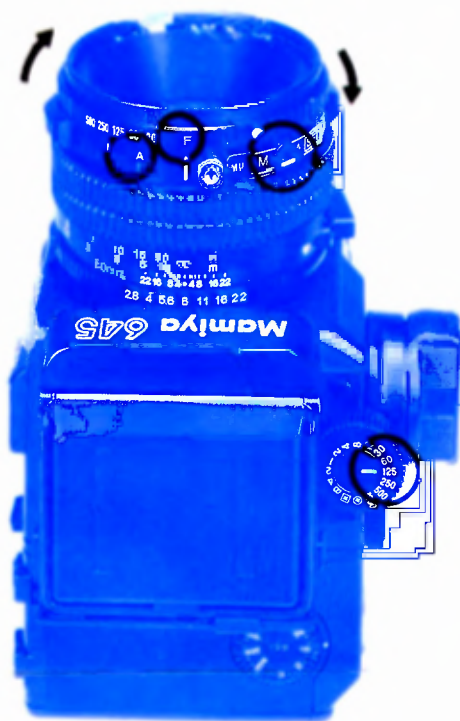


Interchangeable Leaf Shutter Lens for the M645

Type	Standard A2.8/80 N/L	Wide-angle A2.8/55 N/L	Telephoto A3.8/150 N/L
Leaf shutter	Seiko #0		
Angle of views	47°	65°	26°
Optical construction	6 elements, 5 groups	8 elements, 6 groups	5 elements, 5 groups
Minimum focusing distance	80cm	45cm	150cm
Magnification	0.12 ×	0.18 ×	0.12 ×
Area covered	345×452mm	231×312mm	344×465mm
Aperture scale	f/2.8~22		f/3.8~32
Aperture speed	1/30, 1/60, 1/125, 1/250, 1/500		
Shutter cocking	Automatic		
Sync terminal	X-sync		
Mirror lock-up release socket	Screw-in (with selector)		
Filter size	67mm Screw-in (2 filters cannot be used)	67mm Screw-in (2 filters can be used)	
Hood	Screw-in		
Dimensions Total length × Max. diameter	61.5×79.6mm		82.0×78.9mm
Weight	460g	520g	620g

Close-up Table • 80mm F2.8

Tube	Magnification	Subject Distance	Area Covered	Exposure Factor
No.1	0.15~0.27	70.0~46.4cm	27.7×37.3~15.2×20.5cm	1.3~1.6
No.2	0.29~0.42	44.2~37.3cm	14.0×18.9~ 9.9×13.3cm	1.7~2.0
No.3	0.44~0.56	36.5~33.5cm	9.3×12.6~ 7.3× 9.9cm	2.1~2.5
No.1+No.3-S	0.59~0.71	33.2~31.8cm	7.0× 9.5~ 5.8× 7.8cm	2.5~2.9
No.2+No.3-S	0.74~0.86	31.6~31.1cm	5.6× 7.6~ 4.8× 6.5cm	3.0~3.5
No.1+No.2+No.3-S	0.88~1.00	31.0~30.1cm	4.7× 6.3~4.15× 5.6cm	3.6~4.0



Photographing with the Focal Plane Shutter

1. Turn the mark on the rotating **M A SET** switch to the "M" setting.
2. Grasp the two grips of the Manual Shutter Cocking Ring and rotate counter-clockwise until it stops. When this is done, the shutter is cocked and the shutter blades will open completely.
3. Rotate the shutter speed ring and align the green "F" (focal plane) with the white index line in the center of the lens. This disengages the leaf shutter function.
4. Set the shutter speed dial on the camera to the desired shutter speed.
5. Select aperture in the usual manner.
6. Focus and release the shutter in the usual manner.
7. Advance the film when you are ready for the next exposure and repeat above steps.


Note:

- a) Once the leaf shutter has been cocked (automatically or manually), it will remain open for focal plane shutter operation.
- b) When photographing with electronic flash, connect the cord to the X-sync Terminal on the camera body.
- c) With the Power Drive N, the built-in leaf shutter must be cocked manually.

Automatic Operation with the Power Drive WG401, When used with N/L Lenses, with built-in Leaf Shutter



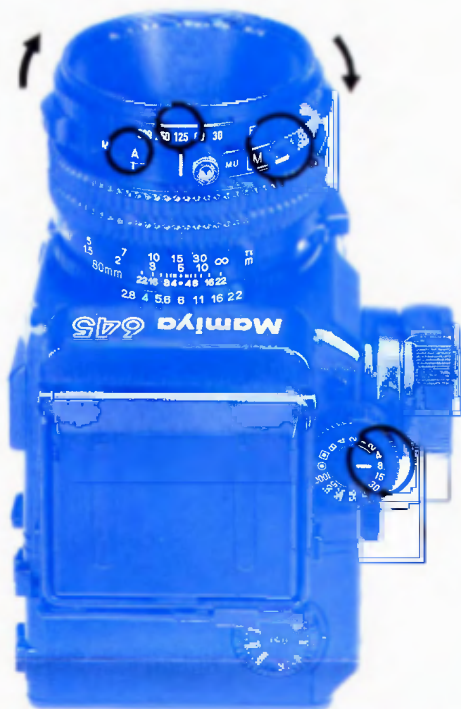
When using the Mamiya 55mm f/2.8 N/L, 80mm 2.8 N/L or 150mm 3.8 N/L leaf shutter lenses, the Power Drive WG401 can simultaneously cock the built-in leaf shutters of these lenses and advance the film.

1. Mount lens and Power Drive WG401 to camera according to instructions supplied with them.
2. Gently pull off the small black plastic protective cover on the lens to reveal the seven pin power socket. The sliding door at the front of the Power Drive WG401 conceals an identical seven pin power socket.
3. Plug either end of the seven pin power connector strip (supplied with the lens) into each socket to connect the Power Drive WG401 to the lens.
4. Set the shutter speed dial of the camera to 1/8 sec.
5. Turn the mark on the  rotating switch on the front of the lens to "A".
6. Push the control dial selector on the Power Drive WG401 to "start" to advance the film and cock the leaf shutter.
7. Select the desired speed on the lens shutter speed ring (1/30 second to 1/500 second).
8. Select aperture in the usual manner.
9. Focus and release the shutter in the usual manner.

The Power Drive WG401 automatically advances the film and cocks the leaf shutter when you are ready for the next exposure. The camera is now able to shoot continuously.

Note:

When photographing with electronic flash, connect the cord to the X-sync terminal on the lens.



Photographing with N/L Lens with built-in Leaf Shutter

1. Set the shutter speed dial of the camera to 1/8 sec.
2. Set the mark of the **M A SET** rotating switch on the front of the lens to "M".
3. Grasp the two grips of the Manual Shutter Cocking Ring and rotate counter-clockwise until it stops. When this is done, the leaf shutter is cocked, and the shutter blades will open completely.
4. Select the desired speed on the lens shutter speed ring (1/30 second to 1/500 second).
5. Select aperture in the usual manner.
6. Focus and release the shutter in the usual manner.
7. Advance the film when you are ready for the next exposure and repeat above steps.

Note:

When photographing with electronic flash, connect the cord to the X-sync terminal on the lens.



Mirror-Lock-Up Operation

When using Focal plane shutter operation with Mirror Lock-up, use the camera and lens according to normal mirror lock-up operation as described in the camera instructions. For leaf shutter operation, the following instructions apply:

When using leaf shutter operation, Mirror-up operation is accomplished by using the optional Mamiya Mirror-up Double Cable Release which is used with the optional Cable Release adapter 2.

1. Follow previous directions for leaf shutter operation with or without Power Drive WG401 so that leaf shutter is cocked and the shutter is ready to fire.
2. Set the shutter speed dial to "B". (Bulb)
3. Screw-in the black tipped cable to the cable release socket on the lens. Screw-in the white tipped cable to the camera via the Cable Release adapter 2 or alternatively into the cable release socket on the Power Drive GW401.
4. Set the N/L lens to desired shutter speed (1/30 second-1/500 second), as well as desired aperture and focus.
5. Press the Double Cable release in two steps:
 - a) The mirror will move up and the focal plane shutter will open.
 - b) Pressing the plunger further will release the leaf shutter.
6. Advance the film and repeat above steps.



Using the AE Prism Finder

1. With Focal Plane Shutter Operation, the camera may be used as usual with the AE Prism Finder in manual or automatic exposure modes.
2. With Leaf Shutter Operation, the AE Prism Finder may be used as a manual light meter to determine exposure. See AE Prism Finder instructions for exposure determination. Once correct shutter speed (between 1/30 second and 1/500 second) is determined,
 - a) Re-set the camera body shutter speed dial to 1/8 second,
 - b) Set the shutter speed ring on the lens according to the shutter speed indicated in the AE Finder, between 1/30 second-1/500 second.