

Mamiya-Sekor SF C

145mm f/4 Lens

for Mamiya M645

Instructions



Features

This soft focus lens is of the highest quality and uses a unique mechanism for controlling the degree of softness and focusing. Designed especially to provide superb modeling, extremely important in a soft-focus lens, the effect produced by this lens is ideal with a sharp center surrounded by a soft halo.

Rotating the Softness Control Ring moves lens groups 1 and 5 symmetrically to continuously vary the degree of softness which is produced by a special type of spherical aberration.

All other forms of aberration have been fully corrected; therefore, when the lens is set for the least degree of soft-focus effect and stopped down to $f/8$, extremely sharp, high contrast photographs can be obtained as with an ordinary 145mm lens. Color balance is also outstanding due to careful selection of optical glass and multi-coating.

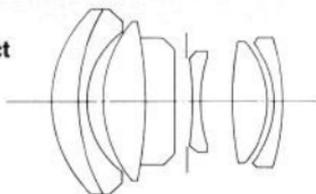
Specifications

Focal length: 145mm
Lens construction: 7 elements, 5 groups
Angle of view: 27°
Aperture range: $f/4 - f/32$
Filter: 77mm dia. screw-in type
Lens Hood: 77mm dia. screw-in type
Length: 4-9/16in. (116mm)
Maximum diameter: 3-7/32in (81.5mm)
Weight: 31.7oz. (900g)

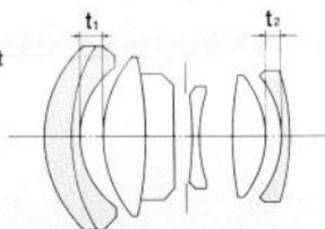
Names of Parts (Fig.1)

1. Softness Control Ring
2. Distance scale index mark
3. Distance scale
4. Focusing ring
5. Aperture ring
6. A-M (Automatic/Manual) lever

Minimum Soft-Focus Effect



Maximum Soft-Focus Effect



The degree of soft-focus effect is varied by changing distances t_1 and t_2 .

Adjustment of the Soft-Focus Effect

1. Softness Control Ring

There are five circles of different colors on the Softness Control Ring. The sizes of these colored circles indicate the degree of softness produced at that setting. The soft-focus effect is maximum when the largest circle (orange) is set at the red index mark in the center. And the effect is minimum when the smallest circle (blue) is set at the index mark. The degree of softness can also be varied continuously by setting anywhere between the circles.

2. Aperture Ring

The degree of softness is also affected by changing the aperture. The soft-focus effect is maximum at $f/4$ and decreases as the lens is stopped down. Intermediate aperture settings can also be used. When the smallest circle (blue) is set at the index mark, the soft-focus effect completely disappears at $f/8$ or smaller apertures.

The soft-focus effect can be varied continuously over a wide range by combining the Softness Control Ring and Aperture Ring settings.

How to Focus

When focusing, it is necessary to stop the lens down until there is no flare. When the Focusing Ring of this lens is pulled toward the camera, it automatically stops down to an aperture where focusing is easy.

The matte area of the focusing screen should be used when focusing with the lens stopped down because the split-image rangefinder spot and microprism tend to appear blurred which could prevent accurate focusing.

The No. 2 Matte or No. 3 Checker focusing screen is advised for easier focusing with this lens.

How to Take Pictures (Fig.2)

1. Set the A-M selector lever of the lens to A (auto).
 2. Rotate the Softness Control Ring and Aperture Ring until the desired degree of softness is obtained.
 3. Pull the Focusing Ring fully toward the camera and rotate it to focus accurately.
 4. After focusing, remove the fingers from the Focusing Ring. It will automatically return to its original position and the aperture will open fully. (Exposure will not be correct if the shutter is released with the Focusing Ring pulled toward the camera because the lens will stop down to the smallest aperture regardless of the setting.)
 5. Determine the correct exposure values and set the shutter speed; then release the shutter when ready.
- It is necessary to refocus each time the Softness Control Ring is rotated to adjust the degree of softness. This is not necessary when the softness is adjusted using the Aperture Ring.
 - To check the degree of softness or the depth-of-field before making an exposure, set the A-M Selector Lever to M (manual) and adjust the aperture ring while watching the subject through the viewfinder. The use of the waist-level finder is advised since the image appears larger.
 - When focusing with the lens set to M (manual), set the aperture ring to f/8. With these settings, do not pull the focusing ring toward the camera. The lens will stop down to the smallest aperture regardless of the aperture setting. Also, do not pull the focusing ring toward the camera when releasing the shutter.
 - Set the lens to A (auto) when measuring exposures with either the AE, PD or CdS Prism Finder. Correct exposure will not be obtained if set to M (manual).

Distance Scale (Fig.3)

Rotating the Softness Control Ring varies both the focal length of the lens and the distance at which it is focused; therefore, distance scale index marks in colors corresponding to those of the five circles are placed in accordance with the amount the focused distance changes.

The color of the index mark used corresponds to the color of the circle at which the Softness Control Ring is set. For example, when the large orange circle is set at the red index mark in the center, as shown in the photograph, the focused distance is indicated by the orange index mark to be 3m (approx. 9ft.). If the Softness Control Ring is then rotated so that the blue circle is set at the center red index mark, without moving the Focusing Ring, the focused distance will be ∞ (infinity) as indicated by the blue index mark.

When the Focusing Ring is set at the closest possible distance, the blue index mark indicates 1.5m (approx. 5 ft.). The other index marks will indicate closer distances, but this lens focuses only from 1.5m to infinity so the soft-focus effect is available only at the blue circle in this case.

Conversely, when the Focusing Ring is set at the maximum possible distance, the orange index mark indicates infinity while the others indicate in excess of infinity. When the Softness Control Ring is to be used at any of the other positions, the index mark of the same color must be set at the ∞ mark to focus the lens at infinity. Be sure to check through the viewfinder for accurate focusing.

As described above, with this lens the focused distance varies when the Softness Control Ring is rotated. Since the depth-of-field and infrared correction also vary, no index marks have been provided for these.

How to Use as a Normal Lens

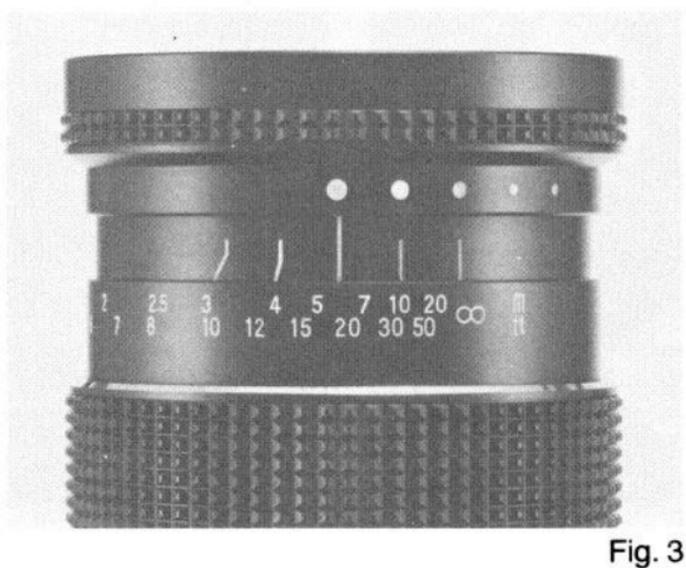
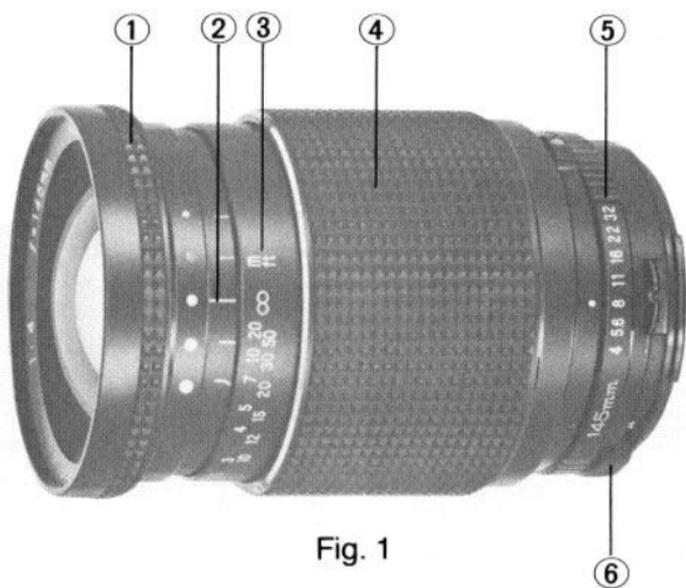
To take sharp pictures without any soft-focus effect with this lens, set the small blue circle at the red center index mark and stop the lens down to f/8 or more.

The Soft-Focus Effect

As described above, the soft-focus can be continuously varied by rotating the Softness Control Ring and Aperture Ring. There are also subtle differences in accordance with the focused distance, contrast between subject and background, lighting, degree of enlargement, print density, whether color or black and white, etc. These must therefore be considered in order to obtain a suitable degree of soft-focus effect.

Caution

When Auto Extension Rings or Auto Bellows are used, the soft-focus effect may change slightly at the extreme corners of the picture.



Comparison of the Soft-Focus Effect

f/4



f/5.6



Maximum (Orange dot)



Medium (Red dot)



Minimum (Blue dot)