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■ Mamiya Sekor Lenses

Lens	Composition	Picture angle	Minimum aperture	Hood	Weight
Fisheye 37mm f/4.5C	9 element 6 group	180°	32	—	48.3 oz (1370g)
50mm f/4.5C	11 element 8 group	82°	32	Slip-on type 80mm ϕ Common use	32.2 oz (915g)
65mm f/4.5C	8 element 7 group	69°	32		29.4 oz (835g)
90mm f/3.8C	7 element 5 group	52°	32	Screw-in type 77mm ϕ Common use	28.3 oz (805g)
127mm f/3.8C	5 element 3 group	38°	32		26.4 oz (750g)
Macro 140mm f/4.5C	7 element 4 group	35°	32		31.0 oz (880g)
Soft focus 150mm f/4C	5 element 3 group	33°	32		29.6 oz (840g)
180mm f/4.5C	5 element 3 group	28°	45		30.6 oz (870g)
250mm f/4.5C	5 element 4 group	20°	45		36.0 oz (1020g)
360mm f/6.3C	8 element 5 group	14°	45	Screw-in type 77mm ϕ	42.8 oz (1215g)
500mm f/8C	6 element 6 group	10°	32	Slip-on type 105mm ϕ	68.1 oz (1930g)

When using the 50mm f/4.5 and 65mm f/4.5 lenses, be sure to read the specific instructions described on page 7.

The specific instructions for the Fisheye 37mm f/4.5, Macro 140mm f/4.5, Soft focus 150mm f/4, and 500mm f/8 lenses are accompanied with the respective lenses.



Fisheye
37mm f/4.5C



50mm f/4.5C



65mm f/4.5C



90mm f/3.8C



127mm f/3.8C



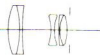
Macro
140mm f/4.5C



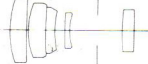
Soft focus
150mm f/4C



180mm f/4.5C



250mm f/4.5C



360mm f/6.3C



500mm f/8C





■ Attaching the Lens

1. Cock the mirror by fully pushing down the shutter cocking lever (1) toward the front of the camera.
2. Remove the rear cap of the lens.
3. Cock the lens shutter.

Firmly turn the shutter cocking pins (2) with your fingers, to the red cocking position marks (3). When removing your fingers from the pins, the cocking pins will turn back to the green marks, and the shutter blade will be left opened. The shutter will not be cocked perfectly if turned only to the green marks.

When removing the lens from the camera body, the shutter is always in a cocked condition.

4. Turn the bayonet ring and align the red mark (4) on the bayonet ring with the triangular mark at the center.
5. Mount the lens keeping the triangular mark aligned with the red lens mounting mark (5) on the camera body, then firmly twist the bayonet ring clockwise.



■ Removing the Lens

1. Press the shutter cocking lever down fully.
2. Turn the bayonet ring counterclockwise, aligning its red mark (4) with the lens mounting mark (5) on the body, and remove the lens.

If you attempt to remove the lens with the mirror in the up position, the camera safety interlock mechanism is engaged which does not permit the lens bayonet ring from turning fully to the dismount position. Cocking the camera, which lowers the mirror and protects the film plane from accidental light leak, disengages this safety mechanism permitting lens removal easily.

It is advisable to release the shutter when the lens is not to be used for several days or longer.

How to Release the Shutter

To release a lens shutter which is removed from the camera body, turn the cocking pins (2) clockwise, while pressing the shutter lock pin (6) with a finger. The cocking pins should be turned all the way, do NOT leave the pins turned only halfway.



- *Always set the shutter speed to the click stop position. In-between shutter speeds cannot be used.
- *After cocking the shutter, do not turn the shutter speed ring rapidly.
- *The fully automatic diaphragm can be set at full and half click stops.

■ Switching the M-X Selector

The M-X selecting lever is internally locked to prevent unintentional switching of the mode.

When switching the synchronization mode, push the lever against the lens barrel. While pressing, turn it right or left until it reaches the end.

The letter X or M, which indicates the contact type, should appear in the window.

When not using flash, the M-X selector lever can be set to either M or X; however, never set the lever between M and X.

■ Time Operation

When releasing the shutter by setting the shutter speed scale on T (time) the shutter will remain open for effecting an extended time exposure.

To close the shutter, turn the shutter speed ring toward the 1 second marking or press down the shutter cocking lever about 30°; however, do not move the shutter cocking lever until just before closing the shutter.



■ Lens Hood

50mm f/4.5, 65mm f/4.5	Square, slip-on type 80mm ϕ
90mm f/3.8, 127mm f/3.8, 140mm f/4.5, 150mm f/4, 180mm f/4.5, 250mm f/4.5	Round, screw-in type 77mm ϕ
360mm f/6.3 Exclusive use	
500mm f/8 Exclusive use	Round, slip-on type 108mm ϕ

Square type lens hood



This hood can be attached by slipping it to the lens front ring. By pushing the hood from the front, it can be folded flat. A filter can be screwed in the lens front ring.

Round type lens hood (for 90mm to 250mm lens)

This hood can be attached by screwing it into the lens front ring. When using it as the hood for the 127mm, 180mm, and 250mm lenses, pull the folded rubber hood straight out. For the 90mm lens, fold the hood back halfway.



For 90mm lens



For 127, 180,
and 250mm
lenses



Folded lens hood

By pushing the extended hood from the front, the hood is easily folded.

By pushing back and turning out the hood while it is attached to the lens, you can also leave the hood on the lens so that the lens barrel is protected.

A filter can be screwed in between the lens and the hood, or in front of the lens hood.

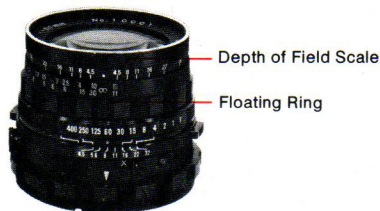
(for 360mm lens)

This hood can be attached by screwing it into the lens front ring.

When using a filter, first attach the filter to the lens, and then screw the lens hood into it.

■ Instructions for the 50mm and 65 mm Lenses

These lenses have a built-in floating system which move a portion of the lens system to the front or rear, according to the photographing distance, in order to obtain sharp resolution down to the picture circumference.



Focusing and photographing method

1. As with a standard lens, adjust focusing by turning the focusing knob on the camera body.

- Merely turning the floating ring will not produce accurate focusing.

2. Next, read the distance to subject, set the distance scale of the floating ring to the center index mark (red dot), and then take a picture.

- The floating ring may be turned to set the distance scale either before or after focusing.

- When turning the floating ring, a portion of the lens system is shifted to the front or rear; however, no variations can be observed on the ground glass focusing screen.

3. Note the depth of field by observing the depth of field scale on the front frame of the lens, or on the ground glass focusing screen by depressing the depth of field preview lever.

When placing emphasis on spur-of-the-moment snapshots, set the infinity ∞ mark (red) of the floating ring to the center index mark (red) when the distance to subject is from infinity ∞ to approximately 7 ft. (2m.), and if the distance to subject is less than approximately 7 ft. (2m.), a sufficiently sharp image can be obtained merely by setting 3.3 ft/1m (red) to the index.

- In the case of close-up photography nearer than 3.3 ft. (1m.), set the floating ring to 3.3 ft/1m, then stop down the lens as much as possible.

- The distance to subject implies the distance from the film plane to the subject.

50^{mm}

Depth of Field Table

Aperture	Distance in Feet									
	∞	30	15	10	8	7	6	5	4	3
4.5	20' 5"	12' 3"	8' 9"	6' 10"	5' 10"	5' 3½"	4' 8¾"	4' 1¼"	3' 5"	2' 8"
	∞	∞	54'	19'	12' 9"	10' 4"	8' 3"	6' 5½"	4' 10¼"	3' 5¼"
5.6	16' 3"	10' 8"	7' 11"	6' 3½"	5' 5½"	5'	4' 5¾"	3' 11"	3' 3½"	2' 7¼"
	∞	∞	∞	24' 9"	15' 1"	11' 10"	9' 2"	6' 11½"	5' 1½"	3' 6¾"
8	11' 7"	8' 5½"	6' 8"	5' 6"	4' 10¼"	4' 5¾"	4' ¾"	3' 7¼"	3' ¾"	2' 5⅝"
	∞	∞	∞	65' 2"	24' 2"	16' 8"	11' 9"	8' 4"	5' 10"	3' 10¼"
11	8' 2½"	6' 6½"	5' 5"	4' 7¾"	4' 2¼"	3' 10¾"	3' 7"	3' 2¾"	2' 9¾"	2' 3⅝"
	∞	∞	∞	∞	∞	39' 10"	19' 10"	11' 8"	7' 2½"	4' 4¾"
16	5' 10½"	4' 11¾"	4' 3¾"	3' 9¾"	3' 6"	3' 3¾"	3' 1"	2' 10"	2' 6"	2' 1¼"
	∞	∞	∞	∞	∞	∞	∞	26' 11"	10' 11"	5' 5½"
22	4' 2¼"	3' 8¾"	3' 4¼"	3' ¾"	2' 10½"	2' 9"	2' 7"	2' 4⅞"	2' 2⅞"	1' 10½"
	∞	∞	∞	∞	∞	∞	∞	∞	∞	8' 6"
32	3' ¼"	2' 9¼"	2' 7"	2' 4⅞"	2' 3½"	2' 2½"	2' 1⅜"	2'	1' 10⅞"	1' 7⅝"
	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞

When using the 50mm lens closer than 3 ¼ feet (1 meter) it is necessary to use a lens aperture of f/16, or smaller, in order to obtain satisfactory lens performance.

50^{mm}

Depth of Field Table

Aperture	Distance in Meter									
	∞	10	5	4	3	2.5	2	1.5	1.2	1
4.5	6.22	3.87	2.81	2.47	2.06	1.81	1.54	1.23	1.03	0.88
	∞	∞	24.04	10.77	5.61	4.06	2.87	1.92	1.45	1.16
5.6	4.96	3.35	2.53	2.25	1.91	1.70	1.46	1.18	0.99	0.85
	∞	∞	∞	19.23	7.25	4.84	3.23	2.08	1.53	1.21
8	3.52	2.63	2.10	1.91	1.66	1.50	1.31	1.08	0.92	0.81
	∞	∞	∞	∞	17.92	7.97	4.35	2.48	1.73	1.33
11	2.51	2.03	1.70	1.58	1.40	1.29	1.15	0.97	0.85	0.75
	∞	∞	∞	∞	∞	∞	8.65	3.42	2.13	1.55
16	1.79	1.53	1.35	1.27	1.16	1.08	0.98	0.85	0.76	0.68
	∞	∞	∞	∞	∞	∞	∞	7.49	3.17	2.01
22	1.28	1.15	1.04	1.00	0.93	0.88	0.82	0.73	0.66	0.60
	∞	∞	∞	∞	∞	∞	∞	∞	10.90	3.57
32	0.92	0.85	0.80	0.77	0.73	0.70	0.66	0.61	0.56	0.52
	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞

When using the 50mm lens closer than 3 ¼ feet (1 meter) it is necessary to use a lens aperture of f/16, or smaller, in order to obtain satisfactory lens performance.

65^{mm}

Depth of Field Table

Aperture	Distance in Feet									
	∞	30	15	10	8	7	6	5	4	3.5
4.5	35' 4"	16' 6"	10' 9"	7' 11½"	6' 8"	5' 11½"	5' 3"	4' 5¾"	3' 8¼"	3' 3¼"
	∞	186'	25' 2"	13' 6"	10'	8' 5½"	7'	5' 7½"	4' 4½"	3' 9¼"
5.6	28' 2"	14' 9"	10'	7' 7"	6' 5"	5' 9"	5' 1"	4' 4½"	3' 7¼"	3' 2½"
	∞	∞	30' 7"	14' 10"	10' 9"	8' 11½"	7' 4"	5' 10"	4' 6"	3' 10¼"
8	20' 1"	12' 3"	8' 10"	6' 11"	5' 11"	5' 4½"	4' 9½"	4' 2"	3' 5¾"	3' 1¼"
	∞	∞	54' 8"	18' 8"	12' 6"	10' 2"	8' 1"	6' 3½"	4' 8¾"	4' ¼"
11	14' 4"	9' 11"	7' 7"	6' 1½"	5' 4½"	4' 11¼"	4' 5¼"	3' 11"	3' 3½"	2' 11½"
	∞	∞	∞	29' 9"	16' 6"	12' 6"	9' 6"	7' 1"	5' 1½"	4' 3½"
16	10' 3"	7' 10"	6' 4"	5' 3½"	4' 9"	4' 5"	4' ¼"	3' 7"	3' 1"	2' 9¾"
	∞	∞	∞	∞	30' 8"	19' 1"	12' 8"	8' 7½"	5' 10"	4' 9"
22	7' 4"	6' 1"	5' 2"	4' 6"	4' 1¼"	3' 10¼"	3' 6¾"	3' 2¾"	2' 10"	2' 7¼"
	∞	∞	∞	∞	∞	∞	24' 10"	12' 8"	7' 4"	5' 7½"
32	5' 4"	4' 7¾"	4' 1½"	3' 8½"	3' 5½"	3' 3½"	3' 1"	2' 10¼"	2' 6½"	2' 4½"
	∞	∞	∞	∞	∞	∞	∞	41'	11' 8"	7' 9"

When using the 65mm lens closer than 3¼ feet (1 meter) it is necessary to use a lens aperture of f/16, or smaller, in order to obtain satisfactory lens performance.

65^{mm}

Depth of Field Table

Aperture	Distance in Meter									
	∞	10	5	4	3	2.5	2	1.5	1.2	1
4.5	10.8	5.27	3.48	2.98	2.40	2.08	1.73	1.35	1.11	0.939
	∞	∞	9.01	6.15	4.03	3.16	2.38	1.69	1.31	1.071
5.6	8.60	4.70	3.24	2.80	2.29	1.99	1.67	1.32	1.09	0.925
	∞	∞	11.4	7.16	4.42	3.39	2.51	1.75	1.34	1.091
8	6.12	3.87	2.83	2.50	2.08	1.84	1.57	1.26	1.05	0.898
	∞	∞	24.8	10.8	5.53	3.98	2.81	1.88	1.42	1.134
11	4.36	3.10	2.41	2.17	1.86	1.66	1.44	1.18	0.99	0.862
	∞	∞	∞	38.5	8.64	5.33	3.39	2.11	1.53	1.203
16	3.12	2.44	2.00	1.83	1.61	1.47	1.30	1.08	0.93	0.817
	∞	∞	∞	∞	∞	10.4	4.84	2.56	1.74	1.317
22	2.24	1.88	1.62	1.51	1.36	1.26	1.14	0.97	0.85	0.762
	∞	∞	∞	∞	∞	∞	12.8	3.70	2.16	1.529
32	1.62	1.44	1.29	1.22	1.13	1.06	0.97	0.86	0.77	0.697
	∞	∞	∞	∞	∞	∞	∞	10.8	3.37	2.001

When using the 65mm lens closer than 3¼ feet (1 meter) it is necessary to use a lens aperture of f/16, or smaller, in order to obtain satisfactory lens performance.

90^{mm}

Depth of Field Table

Aperture	Distance in Feet									
	∞	30	15	10	7	5	4	3	2	1.5
3.8	80' 7"	22' 1"	12' 9"	9'	6' 6"	4' 9 1/4"	3' 10 1/4"	2' 11"	1' 11 1/4"	1' 5 7/8"
	∞	47' 1"	18' 2"	11' 3"	7' 7"	5' 3"	4' 1 3/4"	3' 3/4"	2' 1/4"	1' 6 1/8"
5.6	54' 3"	19' 7"	11' 11"	8' 7"	6' 3 1/2"	4' 8"	3' 9 1/2"	2' 10 3/4"	1' 11 5/8"	1' 5 7/8"
	∞	65' 4"	20' 3"	12'	7' 10 1/2"	5' 5"	4' 2 3/4"	3' 1 1/4"	2' 1/2"	1' 6 1/8"
8	38' 6"	17' 1"	11'	8' 1 1/2"	6' 1/2"	4' 6 1/4"	3' 8 1/2"	2' 10 1/4"	1' 11 3/8"	1' 5 3/4"
	∞	129'	23' 10"	13' 1"	8' 3 1/2"	5' 7"	4' 4"	3' 2"	2' 5/8"	1' 6 1/4"
11	27' 4"	14' 7"	9' 11"	7' 6 1/2"	5' 9"	4' 4 1/4"	3' 7 1/4"	2' 9 1/2"	1' 11 1/8"	1' 5 3/4"
	∞	∞	31' 7"	15' 1"	9'	5' 10 1/2"	4' 6"	3' 3"	2' 7/8"	1' 6 3/8"
16	19' 5"	12'	8' 8 1/2"	6' 10"	5' 4"	4' 1 3/4"	3' 5 1/2"	2' 8 3/4"	1' 10 5/8"	1' 5 5/8"
	∞	∞	59' 2"	19' 2"	10' 3"	6' 4"	4' 9"	3' 4 1/4"	2' 1 3/8"	1' 6 1/2"
22	13' 10"	9' 8 1/2"	7' 5 1/2"	6' 1/2"	4' 10 3/4"	3' 10 1/2"	3' 3 1/2"	2' 7 1/2"	1' 10 3/8"	1' 5 3/8"
	∞	∞	∞	31' 6"	12' 10"	7' 2"	5' 2"	3' 6 1/4"	2' 1 3/8"	1' 6 5/8"
32	9' 10 1/2"	7' 7 1/2"	6' 2 1/2"	5' 3"	4' 4 1/4"	3' 6 3/4"	3' 3/4"	2' 6"	1' 9 9/8"	1' 5 1/8"
	∞	∞	∞	∞	20'	8' 9 1/2"	5' 11"	3' 9 3/4"	2' 2 7/8"	1' 7"

90^{mm}

Depth of Field Table

Aperture	Distance in Meter									
	∞	10	5	3	2	1.5	1	0.8	0.6	0.5
3.8	24.57	7.17	4.20	2.70	1.87	1.43	0.973	0.784	0.593	0.496
	∞	16.60	6.19	3.37	2.15	1.58	1.029	0.816	0.607	0.504
5.6	16.54	6.31	3.90	2.58	1.82	1.40	0.960	0.777	0.590	0.494
	∞	24.59	7.01	3.59	2.23	1.62	1.044	0.825	0.611	0.506
8	11.73	5.48	3.57	2.44	1.75	1.36	0.945	0.768	0.586	0.492
	∞	63.09	8.43	3.91	2.34	1.67	1.064	0.835	0.615	0.508
11	8.33	4.62	3.20	2.27	1.66	1.31	0.924	0.756	0.580	0.489
	∞	∞	11.84	4.48	2.52	1.76	1.093	0.851	0.622	0.512
16	5.92	3.79	2.79	2.06	1.56	1.25	0.896	0.739	0.572	0.485
	∞	∞	28.05	5.67	2.84	1.89	1.138	0.875	0.632	0.517
22	4.22	3.04	2.37	1.83	1.43	1.17	0.860	0.717	0.561	0.479
	∞	∞	∞	9.12	3.45	2.13	1.208	0.911	0.646	0.524
32	3.02	2.38	1.96	1.59	1.28	1.08	0.814	0.688	0.547	0.470
	∞	∞	∞	∞	5.03	2.60	1.327	0.968	0.668	0.536

127^{mm}

Depth of Field Table

Aperture	Distance in Feet									
	∞	30	15	10	7	5	4	3	2.5	2.25
3.8	157'	25' 4"	13' 9"	9' 5½"	6' 9"	4' 10½"	3' 11¼"	3' 0"	2' 5¾"	2' 2⅞"
	∞	36' 9"	16' 5"	10' 0"	7' 3"	5' 1½"	4' ¾"	3' ½"	2' 6¼"	2' 3⅞"
4	149'	25' 2"	13' 8"	9' 5"	6' 9"	4' 10½"	3' 11"	2' 11½"	2' 5¾"	2' 2⅞"
	∞	37' 2"	16' 6"	10' 7"	7' 3½"	5' 1½"	4' 1"	3' ½"	2' 6¼"	2' 3⅞"
5.6	106'	23' 7"	13' 3"	9' 8"	6' 7½"	4' 10"	3' 10¾"	2' 11½"	2' 5½"	2' 2¾"
	∞	41' 4"	17' 3"	10' 11"	7' 5"	5' 2"	4' 1¼"	3' ½"	2' 6¼"	2' 3¼"
8	74' 11"	21' 8"	12' 8"	8' 11½"	6' 6"	4' 9"	3' 10¼"	2' 11"	2' 5½"	2' 2⅝"
	∞	49' 0"	18' 5"	11' 4"	7' 7"	5' 3"	4' 1¾"	3' 1"	2' 6½"	2' 3⅜"
11	53' 1"	19' 5"	11' 11"	8' 7"	6' 3½"	4' 8"	3' 9½"	2' 11"	2' 5¼"	2' 2½"
	∞	66' 8"	20' 4"	12' 0"	7' 10½"	5' 4½"	4' 2¾"	3' 1¼"	2' 6¼"	2' 3½"
16	37' 8"	17' 0"	11' 0"	8' 1"	6' 1"	4' 6½"	3' 8¾"	2' 10½"	2' 5"	2' 2¼"
	∞	137'	23' 11"	13' 1"	8' 3½"	5' 7"	4' 4"	3' 1¾"	2' 7"	2' 3¾"
22	26' 9"	14' 5"	9' 10"	7' 6"	5' 9"	4' 4½"	3' 7½"	2' 9¾"	2' 4⅝"	2' 2"
	∞	∞	31' 11"	15' 1"	9' 0"	5' 10"	4' 5¾"	3' 2½"	2' 7½"	2' 4⅝"
32	19' 0"	11' 11"	8' 7½"	6' 10"	5' 4½"	4' 2"	3' 6"	2' 9"	2' 4⅝"	2' 1⅝"
	∞	∞	61' 3"	19' 3"	10' 2"	6' 3½"	4' 8½"	3' 3¾"	2' 8¼"	2' 4½"

127^{mm}

Depth of Field Table

Aperture	Distance in Meter									
	∞	10	5	3	2	1.5	1	0.8	0.7	0.65
3.8	47.96	8.33	4.56	2.84	1.93	1.47	0.987	0.793	0.695	0.646
	∞	12.53	5.54	3.17	2.07	1.54	1.01	0.807	0.704	0.654
4	45.57	8.26	4.54	2.84	1.93	1.46	0.986	0.793	0.695	0.646
	∞	12.70	5.57	3.18	2.07	1.54	1.01	0.807	0.705	0.654
5.6	32.26	7.70	4.37	2.77	1.90	1.45	0.981	0.790	0.693	0.645
	∞	14.30	5.84	3.27	2.11	1.55	1.02	0.811	0.707	0.655
8	22.84	7.03	4.16	2.69	1.87	1.43	0.973	0.786	0.690	0.643
	∞	17.42	6.29	3.39	2.16	1.58	1.03	0.815	0.710	0.658
11	16.19	6.27	3.89	2.58	1.82	1.40	0.963	0.780	0.687	0.640
	∞	25.24	7.04	3.59	2.23	1.61	1.04	0.822	0.714	0.661
16	11.48	5.44	3.56	2.44	1.75	1.37	0.948	0.772	0.681	0.635
	∞	69.73	8.50	3.91	2.34	1.67	1.06	0.831	0.720	0.666
22	8.16	4.59	3.19	2.27	1.67	1.32	0.929	0.761	0.674	0.630
	∞	∞	12.04	4.49	2.52	1.75	1.09	0.845	0.729	0.672
32	5.80	3.76	2.78	2.06	1.56	1.26	0.903	0.746	0.664	0.622
	∞	∞	29.80	5.69	2.83	1.88	1.126	0.865	0.742	0.682

180^{mm}

Depth of Field Table

Aperture	Distance in Feet									
	∞	100	50	30	20	15	10	7	5	4
4.5	263' 0"	72' 10"	42' 3"	27' 1"	18' 8"	14' 3"	9' 8½"	6' 10½"	4' 11¼"	3' 11½"
	∞	160' 0"	61' 3"	33' 7"	21' 6"	15' 10"	10' 4"	7' 1½"	5' ½"	4' ½"
5.6	209' 0"	68' 1"	40' 8"	26' 5"	18' 5"	14' 1"	9' 7½"	6' 10"	4' 11"	3' 11½"
	∞	189' 0"	65' 1"	34' 8"	21' 11"	16' 0"	10' 5"	7' 2"	5' 1"	4' ½"
8	148' 0"	60' 2"	37' 9"	25' 2"	17' 10"	13' 9"	9' 5½"	6' 9"	4' 10¾"	3' 11¼"
	∞	301' 0"	74' 5"	37' 2"	22' 10"	16' 6"	10' 7"	7' 3"	5' 1½"	4' ¾"
11	105' 0"	51' 8"	34' 3"	23' 8"	17' 0"	13' 4"	9' 3½"	6' 8"	4' 10¼"	3' 11"
	∞	∞	93' 5"	41' 2"	24' 3"	17' 2"	10' 10"	7' 4½"	5' 2"	4' 1"
16	74' 5"	43' 1"	30' 4"	21' 9"	16' 1"	12' 9"	9' 0"	6' 6½"	4' 9½"	3' 10½"
	∞	∞	146' 0"	48' 10"	26' 8"	18' 4"	11' 3"	7' 6½"	5' 3"	4' 1½"
22	52' 9"	34' 11"	26' 2"	19' 7"	14' 10"	12' 0"	8' 8"	6' 4½"	4' 8½"	3' 10"
	∞	∞	∞	66' 2"	30' 11"	20' 2"	11' 11"	7' 9½"	5' 4"	4' 2¼"
32	37' 6"	27' 8"	21' 10"	17' 1"	13' 5"	11' 1"	8' 2½"	6' 1½"	4' 7¼"	3' 9¼"
	∞	∞	∞	135' 0"	40' 2"	23' 7"	12' 11"	8' 2"	5' 6"	4' 3"
45	26' 8"	21' 4"	17' 10"	14' 7"	11' 11"	10' 0"	7' 7½"	5' 10"	4' 5½"	3' 8¼"
	∞	∞	∞	∞	69' 11"	31' 1"	14' 9"	8' 9½"	5' 8½"	4' 4½"

180^{mm}

Depth of Field Table

Aperture	Distance in Meter									
	∞	30	15	10	7	5	3	2	1.5	1.2
4.5	80.18	21.94	12.71	8.94	6.48	4.74	2.91	1.96	1.48	1.19
	∞	47.55	18.32	11.34	7.62	5.30	3.10	2.04	1.52	1.21
5.6	63.82	20.53	12.23	8.71	6.36	4.67	2.89	1.96	1.48	1.19
	∞	55.99	19.43	11.75	7.79	5.38	3.12	2.05	1.52	1.21
8	45.18	18.16	11.36	8.27	6.12	4.55	2.85	1.94	1.47	1.18
	∞	87.53	22.14	12.68	8.18	5.55	3.17	2.07	1.53	1.22
11	32.00	15.62	10.33	7.72	5.82	4.39	2.79	1.91	1.46	1.18
	∞	∞	27.62	14.26	8.80	5.82	3.25	2.10	1.55	1.23
16	22.68	13.05	9.16	7.06	5.45	4.18	2.71	1.88	1.44	1.17
	∞	∞	42.59	17.35	9.85	6.25	3.37	2.14	1.57	1.24
22	16.09	10.60	7.90	6.30	4.99	3.91	2.60	1.83	1.42	1.15
	∞	∞	∞	25.08	11.88	6.98	3.56	2.20	1.60	1.25
32	11.43	8.39	6.62	5.47	4.47	3.60	2.47	1.77	1.38	1.14
	∞	∞	∞	68.63	16.80	8.37	3.86	2.30	1.64	1.27
45	8.13	6.49	5.40	4.62	3.90	3.23	2.30	1.70	1.34	1.11
	∞	∞	∞	∞	41.26	11.71	4.38	2.46	1.71	1.31

250^{mm}

Depth of Field Table

Aperture	Distance in Feet								
	∞	200	100	50	30	20	15	10	7
4.5	507'	144'	83' 10"	45' 9"	28' 5"	19' 4"	14' 8"	9' 10"	6' 11½"
	∞	328'	124'	55' 2"	31' 9"	20' 9"	15' 5"	10' 2"	7' 1"
5.6	404'	134'	80' 6"	44' 9"	28' 1"	19' 2"	14' 7"	9' 10"	6' 11"
	∞	393'	132'	56' 8"	32' 2"	20' 11"	15' 6"	10' 2"	7' 1"
8	286'	118'	74' 7"	42' 10"	27' 4"	18' 10"	14' 4"	9' 9"	6' 10½"
	∞	657'	152'	60' 1"	33' 3"	21' 4"	15' 8"	10' 3"	7' 1½"
11	202'	101'	67' 5"	40' 6"	26' 5"	18' 5"	14' 1"	9' 7½"	6' 10"
	∞	∞	195'	65' 6"	34' 9"	21' 11"	16' 0"	10' 5"	7' 2"
16	143'	84' 1"	59' 6"	37' 6"	25' 2"	17' 10"	13' 10"	9' 6"	6' 9½"
	∞	∞	321'	75' 3"	37' 3"	22' 10"	16' 5"	10' 7"	7' 3"
22	102'	67' 11"	51'	34' 1"	23' 7"	17' 1"	13' 4"	9' 3½"	6' 8½"
	∞	∞	∞	95' 5"	41' 5"	24' 3"	17' 2"	10' 10"	7' 4"
32	72'	53' 5"	42' 6"	30' 1"	21' 8"	16' 1"	12' 9"	9' ½"	6' 7"
	∞	∞	∞	154'	49' 3"	26' 8"	18' 3"	11' 2"	7' 6"
45	51' 2"	41' 2"	34' 5"	25' 11"	19' 6"	14' 11"	12' 1"	8' 8½"	6' 5"
	∞	∞	∞	∞	67' 6"	30' 11"	20' 1"	11' 9"	7' 8½"

250^{mm}

Depth of Field Table

Aperture	Distance in Meter									
	∞	50	30	20	15	10	7	5	3	2
4.5	155	37.9	25.2	17.8	13.7	9.44	6.73	4.87	2.96	1.98
	∞	73.5	37.0	22.9	16.5	10.6	7.30	5.14	3.04	2.02
5.6	123	35.7	24.2	17.3	13.4	9.30	6.66	4.83	2.95	1.98
	∞	83.6	39.4	23.7	17.0	10.8	7.38	5.18	3.06	2.02
8	87.1	32.0	22.5	16.4	12.9	9.04	6.53	4.77	2.92	1.97
	∞	116	45.3	25.7	18.0	11.2	7.54	5.26	3.08	2.03
11	61.6	27.8	20.3	15.2	12.2	8.69	6.36	4.68	2.89	1.96
	∞	257	57.5	29.2	19.6	11.8	7.80	5.37	3.11	2.04
16	43.7	23.5	18.0	13.9	11.3	8.25	6.12	4.56	2.85	1.94
	∞	∞	93.1	36.1	22.4	12.7	8.19	5.55	3.16	2.06
22	30.9	19.3	15.4	12.3	10.3	7.70	5.82	4.40	2.80	1.92
	∞	∞	∞	54.4	28.2	14.4	8.81	5.81	3.24	2.09
32	22.0	15.4	12.9	10.7	9.09	7.03	5.45	4.19	2.72	1.89
	∞	∞	∞	195	44.7	17.6	9.88	6.23	3.35	2.12
45	15.6	12.0	10.4	8.95	7.84	6.28	5.00	3.93	2.62	1.85
	∞	∞	∞	∞	∞	25.8	11.9	6.96	3.52	2.18

360^{mm}

Depth of Field Table

Aperture	Distance in Feet									
	∞	700	500	200	100	70	50	30	20	15
6.3	751'	363'	301'	159'	88' 7"	64' 4"	47' 1"	29'	19' 7"	14' 9"
	∞	∞	1484'	271'	115'	76' 10"	53' 4"	31' 1"	20' 5"	15' 3"
8	592'	322'	272'	150'	86'	62' 11"	46' 4"	28' 9"	19' 6"	14' 9"
	∞	∞	3172'	300'	120'	78' 11"	54' 3"	31' 5"	20' 7"	15' 4"
11	419'	263'	229'	136'	81' 3"	60' 5"	45'	28' 3"	19' 3"	14' 7"
	∞	∞	∞	379'	130'	83' 4"	56' 3"	32'	20' 10"	15' 5"
16	296'	209'	187'	120'	75' 5"	57' 2"	43' 3"	27' 7"	18' 11"	14' 5"
	∞	∞	∞	602'	149'	90' 5"	59' 5"	33'	21' 2"	15' 7"
22	210'	162'	149'	103'	68' 6"	53' 2"	40' 11"	26' 8"	18' 7"	14' 3"
	∞	∞	∞	∞	187'	103'	64' 5"	34' 5"	21' 9"	15' 10"
32	149'	123'	115'	86' 2"	60' 8"	48' 5"	38' 1"	25' 6"	18'	13' 11"
	∞	∞	∞	∞	293'	128'	73' 3"	36' 7"	22' 6"	16' 3"
45	106'	92'	87' 8"	69' 11"	52' 3"	42' 11"	34' 9"	24'	17' 4"	13' 6"
	∞	∞	∞	∞	∞	196'	90' 11"	40' 4"	23' 9"	16' 10"

360^{mm}

Depth of Field Table

Aperture	Distance in Meter									
	∞	100	50	30	20	15	10	7	5	4
6.3	228.93	69.83	41.20	26.64	18.47	14.14	9.62	6.82	4.92	3.95
	∞	176.51	63.64	34.35	21.81	15.97	10.41	7.19	5.09	4.05
8	180.36	64.58	39.33	25.85	18.10	13.93	9.53	6.78	4.89	3.94
	∞	222.55	68.71	35.76	22.35	16.26	10.52	7.24	5.11	4.07
11	127.64	56.34	36.15	24.46	17.42	13.52	9.35	6.69	4.85	3.91
	∞	453.28	81.36	38.85	23.50	16.85	10.76	7.34	5.16	4.09
16	90.36	47.74	32.44	22.73	16.54	13.00	9.10	6.57	4.79	3.87
	∞	∞	110.06	44.29	25.35	17.76	11.10	7.49	5.23	4.13
22	64.00	39.28	28.34	20.66	15.44	12.32	8.78	6.41	4.71	3.83
	∞	∞	220.31	55.25	28.53	19.23	11.64	7.72	5.33	4.19
32	45.36	31.44	24.06	18.32	14.11	11.48	8.36	6.19	4.60	3.76
	∞	∞	∞	85.18	34.71	21.80	12.50	8.07	5.48	4.28
45	32.18	24.55	19.84	15.80	12.59	10.47	7.83	5.91	4.46	3.67
	∞	∞	∞	∞	50.16	26.90	13.95	8.62	5.71	4.41



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