

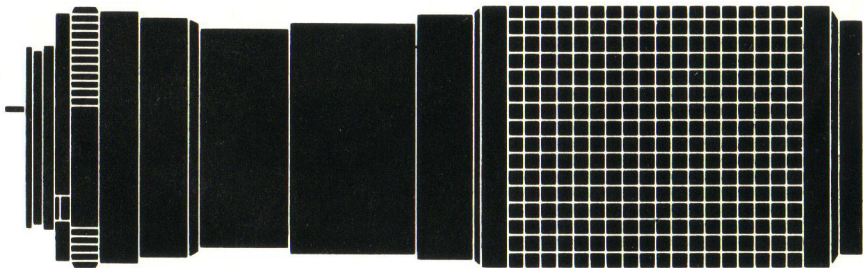
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MC ZOOM MINOLTA CELTIC LENSES DEPTH-OF-FIELD TABLES



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DEPTH OF FIELD

When a lens is focused at a given subject point, there is a certain distance range behind and in front of that point within which the photographic image will appear acceptably sharp. This distance is known as "depth of field" and may vary from paper thin to extremely deep in accordance with three factors: Depth of field decreases the longer the focal length of the lens, the larger the lens opening used, and the closer the lens is focused. It increases the shorter the lens focal length, the smaller the lens opening used, and the farther from the camera the lens is focused.

With Minolta single-lens reflex cameras, effective depth of field may be visualized by pushing the depth-of-field preview button and viewing the subject through the finder with the lens stopped down to the aperture at which the picture is to be taken. It may also be determined approximately from the depth-of-field scale on the lens barrel. The tables in this booklet provide precise data on near and far limits of acceptable focus at marked apertures at all scale-marked distances on MC Zoom Celtic Lenses. There is a table for each of several selected focal lengths within the infinite number available with each lens.

ZOOMING AND FOCUSING MC ZOOM CELTIC LENSES

Grasp the lens' waffle-textured rubber grip with the left hand.

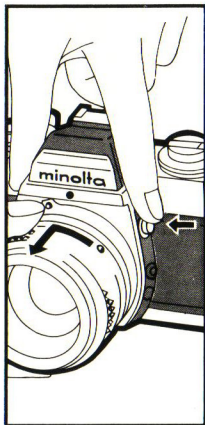
To zoom, slide grip forward or backward to the desired focal length.

To focus, turn the grip clockwise or counterclockwise.

CHANGING MC ZOOM CELTIC LENSES

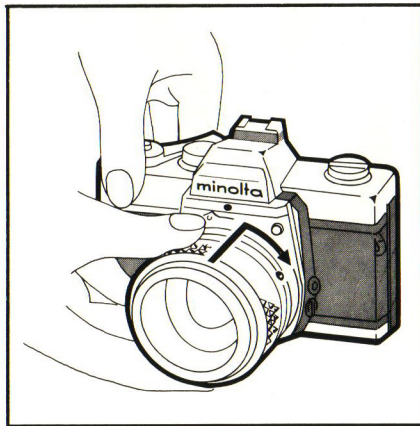
To Remove from Camera

While pushing lens-release button on camera, turn lens counterclockwise as far as it will go; then lift lens bayonet out of mount.



To Install Lens on Camera

Align red dot on lens barrel with red dot on camera lens-mount flange; insert lens bayonet into mount; and turn lens clockwise until it locks in place with a click.



100–200mm F5.6 MC ZOOM CELTIC LENS AT 100mm FOCAL LENGTH

Unit: METERS

F.No. Dist. (m)	5.6	8	11	16	22	32
∞	∞ 57.6	∞ 40.4	∞ 29.4	∞ 20.2	∞ 14.8	∞ 10.2
30	62.1 19.8	114.9 17.3	∞ 14.9	∞ 12.2	∞ 10.0	∞ 7.7
15	20.1 12.0	23.6 11.0	30.1 10.0	56.0 8.7	∞ 7.5	∞ 6.2
10	12.0 8.6	13.2 8.1	14.9 7.5	19.3 6.8	29.8 6.0	338.8 5.1
7	7.9 6.3	8.4 6.0	9.1 5.7	10.5 5.3	12.9 4.8	21.1 4.2
5	5.4 4.6	5.7 4.5	5.9 4.3	6.5 4.1	7.4 3.8	9.4 3.4
4	4.27 3.76	4.40 3.67	4.57 3.56	4.89 3.39	5.34 3.21	6.31 2.95
3	3.14 2.87	3.21 2.82	3.30 2.75	3.46 2.65	3.67 2.54	4.09 2.38
2.5	2.60 2.41	2.64 2.37	2.70 2.33	2.80 2.26	2.93 2.18	3.19 2.07

100–200mm F5.6 MC ZOOM CELTIC LENS AT 100mm FOCAL LENGTH
Unit: FEET

F.No. Dist. (ft)	5.6	8	11	16	22	32
∞	∞ 189'	∞ 132' 5"	∞ 96' 5"	∞ 66' 5"	∞ 48' 5"	∞ 33' 5"
100	210' 7" 65' 8"	401' 6" 57' 3"	∞ 49' 5"	∞ 40' 2"	∞ 32' 11"	∞ 25' 3"
50	67' 6" 39' 9"	79' 6" 36' 6"	102' 2" 33' 2"	195' 6" 28' 10"	∞ 24' 11"	∞ 20' 4"
30	35' 5" 26'	38' 5" 24' 8"	42' 11" 23' 1"	53' 6" 20' 11"	76' 1" 18' 10"	259' 3" 16' 1"
20	22' 3" 18' 2"	23' 4" 17' 6"	24' 11" 16' 9"	28' 1" 15' 7"	33' 1" 14' 5"	47' 4" 12' 10"
15	16' 2" 14'	16' 9" 13' 7"	17' 6" 13' 1"	19' 12' 5"	21' 2" 11' 8"	26' 10' 7"
12	12' 9" 11' 4"	13' 1" 11' 1"	13' 6" 10' 9"	14' 4" 10' 4"	15' 6" 9' 10"	18' 9' 1"
10	10' 5 ¹ / ₈ " 9' 6 ⁵ / ₈ "	10' 8 ⁹ / ₁₆ " 9' 4 ¹ / ₂ "	11' 3 ³ / ₁₆ " 9' 1 ⁹ / ₁₆ "	11' 6 ⁵ / ₈ " 8' 9 ⁷ / ₈ "	12' 3 ¹ / ₄ " 8' 5 ¹ / ₂ "	13' 8 ¹ / ₂ " 7' 10 ¹⁵ / ₁₆ "
8	8' 3 ³ / ₈ " 7' 8 ³ / ₈ "	8' 5 ³ / ₁₆ " 7' 7 ¹ / ₄ "	8' 7 ³ / ₈ " 7' 5 ⁵ / ₈ "	8' 11 ¹ / ₈ " 7' 3"	9' 4" 7' 1 ¹ / ₈ "	10' 1 ³ / ₈ " 6' 7 ¹¹ / ₁₆ "

100–200mm F 5.6MC ZOOM CELTIC LENS AT 120mm FOCAL LENGTH
Unit: METERS

F.No. Dist. (m)	5.6	8	11	16	22	32
∞	∞ 78.2	∞ 54.8	∞ 39.9	∞ 27.5	∞ 20.6	∞ 13.8
30	48.4 21.8	65.7 19.5	118.9 17.2	∞ 14.4	∞ 12.1	∞ 9.5
15	18.5 12.6	20.5 11.8	23.8 11.0	32.4 9.8	57.8 8.7	∞ 7.3
10	11.4 8.9	12.1 8.5	13.2 8.1	15.5 7.4	19.5 6.8	34.5 5.9
7	7.6 6.5	8.0 6.2	8.4 6.0	9.2 5.6	10.5 5.3	13.7 4.7
5	5.3 4.7	5.5 4.6	5.7 4.5	6.0 4.3	6.5 4.1	7.6 3.7
4	4.19 3.82	4.28 3.75	4.40 3.67	4.61 3.53	4.90 3.39	5.46 3.17
3	3.10 2.90	3.15 2.86	3.21 2.82	3.32 2.74	3.46 2.65	3.72 2.52
2.5	2.57 2.43	2.60 2.41	2.64 2.37	2.71 2.32	2.80 2.26	2.96 2.17

100–200mm F5.6 MC ZOOM CELTIC LENS AT 120mm FOCAL LENGTH
Unit: FEET

Dist. (ft) \ F.No.	5.6	8	11	16	22	32
∞	∞ 256' 7"	∞ 179' 9"	∞ 130' 10"	∞ 90' 1"	∞ 65' 8"	∞ 45' 3"
100	162' 11" 72' 3"	223' 3" 64' 7"	416' 2" 57'	∞ 47' 9"	∞ 39' 11"	∞ 31' 5"
50	61' 9" 42'	68' 9" 39' 4"	80' 36' 5"	110' 2" 32' 5"	202' 28' 8"	∞ 24' 1"
30	33' 10" 27'	35' 9" 25' 10"	38' 6" 24' 7"	44' 3" 22' 9"	53' 11" 20' 10"	85' 18' 4"
20	21' 7" 18' 8"	22' 4" 18' 1"	23' 4" 17' 6"	25' 4" 16' 7"	28' 2" 15' 7"	34' 7" 14' 2"
15	15' 10" 14' 3"	16' 3" 13' 11"	16' 9" 13' 7"	17' 9" 13'	19' 12' 5"	21' 9" 11' 6"
12	12' 6" 11' 6"	12' 9" 11' 4"	13' 1" 11' 1"	13' 8" 10' 9"	14' 5" 10' 4"	15' 10" 9' 8"
10	10' 4 ³ / ₁₆ " 9' 8"	10' 6 ¹ / ₈ " 9' 6 ⁷ / ₁₆ "	10' 8 ⁵ / ₈ " 9' 4 ⁷ / ₁₆ "	11' 1" 9' 1 ³ / ₈ "	11' 6 ¹¹ / ₁₆ " 8' 9 ⁷ / ₈ "	12' 5 ⁵ / ₁₆ " 8' 4 ⁹ / ₁₆ "
8	8' 2 ⁹ / ₁₆ " 7' 9 ¹ / ₂ "	8' 3 ³ / ₄ " 7' 8 ¹ / ₂ "	8' 5 ³ / ₈ " 7' 7 ¹ / ₄ "	8' 7 ¹³ / ₁₆ " 7' 5 ⁵ / ₁₆ "	8' 11 ¹ / ₈ " 7' 3 ¹ / ₁₆ "	9' 5 ¹ / ₈ " 6' 11 ⁹ / ₁₆ "

100–200mm F5.6 MC ZOOM CELTIC LENS AT 140mm FOCAL LENGTH
Unit: METERS

F-No. Dist. (m)	5.6	8	11	16	22	32
∞	∞ 106.3	∞ 74.4	∞ 54.2	∞ 37.3	∞ 27.2	∞ 18.7
30	41.6 23.5	49.9 21.5	66.5 19.4	149.4 16.7	∞ 14.4	∞ 11.6
15	17.4 13.2	18.7 12.5	20.6 11.8	24.7 10.8	32.8 9.8	71.7 8.4
10	11.0 9.2	11.5 8.9	12.2 8.5	13.5 8.0	15.5 7.4	20.8 6.6
7	7.5 6.6	7.7 6.4	8.0 6.2	8.5 6.0	9.3 5.6	10.9 5.2
5	5.2 4.8	5.3 4.7	5.5 4.6	5.7 4.5	6.0 4.3	6.7 4.0
4	4.14 3.87	4.20 3.82	4.28 3.75	4.43 3.65	4.61 3.53	4.96 3.36
3	3.07 2.93	3.11 2.90	3.15 2.86	3.22 2.81	3.32 2.74	3.49 2.64
2.5	2.55 2.45	2.57 2.43	2.60 2.41	2.65 2.37	2.71 2.32	2.82 2.25

100–200mm F5.6 MC ZOOM CELTIC LENS AT 140mm FOCAL LENGTH
Unit: FEET

F.No. Dist. (ft)	5.6	8	11	16	22	32
∞	348' 8"	244' 3"	177' 9"	122' 4"	89' 1"	61' 5"
100	139' 7" 77' 11"	168' 2" 71' 3"	226' 1" 64' 4"	532' 4" 55' 4"	47' 6"	38' 5"
50	58' 1" 43' 11"	62' 6" 41' 8"	68' 11" 39' 3"	83' 5" 35' 9"	111' 5" 32' 4"	254' 9" 27' 11"
30	32' 8" 27' 9"	34' 26' 10"	35' 9" 25' 10"	39' 3" 24' 4"	44' 5" 22' 9"	56' 11" 20' 6"
20	21' 2" 19'	21' 8" 18' 7"	22' 4" 18' 1"	23' 7" 17' 4"	25' 4" 16' 7"	28' 11" 15' 4"
15	15' 7" 14' 5"	15' 11" 14' 3"	16' 3" 13' 11"	16' 11" 13' 6"	17' 9" 13'	19' 4" 12' 3"
12	12' 5" 11' 8"	12' 7" 11' 6"	12' 9" 11' 4"	13' 2" 11' 1"	13' 8" 10' 9"	14' 7" 10' 3"
10	10' 3" 9' 9 ¹ / ₁₆ "	10' 4 ³ / ₈ " 9' 7 ¹ / ₈ "	10' 6 ¹ / ₈ " 9' 6 ¹ / ₁₆ "	10' 9 ¹ / ₈ " 9' 4 ¹ / ₁₆ "	11' 15 ⁵ / ₁₆ " 9' 1 ³ / ₈ "	11' 7 ¹ / ₈ " 8' 9 ³ / ₁₆ "
8	8' 1 ¹³ / ₁₆ " 7' 10 ³ / ₁₆ "	8' 2 ⁵ / ₈ " 7' 9 ¹ / ₁₆ "	8' 3 ¹ / ₁₆ " 7' 8 ¹ / ₂ "	8' 5 ¹ / ₂ " 7' 7 ¹ / ₁₆ "	8' 7 ³ / ₄ " 7' 5 ⁵ / ₁₆ "	8' 11 ³ / ₄ " 7' 2 ⁵ / ₈ "

100–200mm F5.6 MC ZOOM CELTIC LENSES AT 160mm FOCAL LENGTH

Unit: METERS

F.No. Dist. (m)	5.6	8	11	16	22	32
∞	∞ 138.9	∞ 97.3	∞ 70.8	∞ 48.7	∞ 35.5	∞ 24.4
30	38.1 24.7	43.1 23.0	51.6 21.2	76.9 18.7	186.9 16.4	∞ 13.6
15	16.8 13.6	17.6 13.1	18.9 12.4	21.4 11.6	25.6 10.6	37.7 9.4
10	10.7 9.4	11.1 9.1	11.6 8.8	12.5 8.4	13.7 7.9	16.5 7.2
7	7.3 6.7	7.5 6.6	7.7 6.4	8.1 6.2	8.6 5.9	9.6 5.5
5	5.2 4.8	5.2 4.8	5.3 4.7	5.5 4.6	5.7 4.4	6.2 4.2
4	4.10 3.90	4.15 3.86	4.21 3.81	4.31 3.73	4.45 3.64	4.68 3.50
3	3.06 2.95	3.0 2.92	3.11 2.90	3.17 2.85	3.23 2.80	3.35 2.72
2.5	2.54 2.46	2.55 2.45	2.57 2.43	2.61 2.40	2.65 2.36	2.73 2.31

100–200mm F5.6 MC ZOOM CELTIC LENSES AT 160mm FOCAL LENGTH
Unit: FEET

F.No. Dist. (ft)	5.6	8	11	16	22	32
∞	∞ 455' 10"	∞ 319' 3"	∞ 232' 4"	∞ 159' 11"	∞ 116' 5"	∞ 80' 2"
100	127' 8" 82' 3"	144' 10" 76' 5"	174' 1" 70' 3"	263' 61' 11"	681' 1" 54' 2"	∞ 44' 11"
50	56' 45' 2"	59' 43' 5"	63' 3" 41' 4"	71' 11" 38' 4"	86' 2" 35' 4"	128' 10" 31' 2"
30	32' 28' 3"	32' 11" 27' 7"	34' 3" 26' 9"	36' 7" 25' 6"	39' 10" 24' 1"	46' 10" 22' 2"
20	20' 10" 19' 3"	21' 3" 18' 11"	21' 9" 18' 6"	22' 8" 17' 11"	23' 10" 17' 3"	26' 1" 16' 3"
15	15' 5" 14' 7"	15' 8" 14' 5"	15' 11" 14' 2"	16' 5" 13' 10"	17' 13' 5"	18' 1" 12' 10"
12	12' 3" 11' 9"	12' 5" 11' 7"	12' 7" 11' 6"	12' 10" 11' 3"	13' 2" 11'	13' 10" 10' 7"
10	10' 2 1/4" 9' 9 3/16"	10' 3 1/4" 9' 8 7/8"	10' 4 1/2" 9' 7 3/4"	10' 6 11/16" 9' 5 13/16"	10' 9 7/16" 9' 3 3/16"	11' 2 5/16" 9' 1/2"
8	8' 1 3/8" 7' 10 5/8"	8' 1 15/16" 7' 10 1/16"	8' 2 3/4" 7' 9 3/8"	8' 4 1/16" 7' 8 1/4"	8' 5 3/8" 7' 6 3/16"	8' 8 1/2" 7' 4 3/16"

100–200mm F5.6 MC ZOOM CELTIC LENS AT 200mm FOCAL LENGTH
Unit: METERS

F.No. Dist. (m)	5.6	8	11	16	22	32
∞	∞ 204.3	∞ 143.1	∞ 104.1	∞ 71.6	∞ 52.1	∞ 35.9
30	35.1 26.2	37.8 24.9	41.9 23.4	51.1 21.3	69.5 19.2	174.8 16.5
15	16.1 14.0	16.7 13.6	17.4 13.2	18.8 12.5	20.8 11.7	25.3 10.7
10	10.5 9.6	10.7 9.4	11.0 9.2	11.5 8.8	12.2 8.5	13.6 7.9
7	7.2 6.8	7.3 6.7	7.5 6.6	7.7 6.4	8.0 6.2	8.5 5.9
5	5.1 4.9	5.2 4.8	5.2 4.8	5.3 4.7	5.5 4.6	5.7 4.4
4	4.07 3.93	4.10 3.91	4.14 3.87	4.20 3.82	4.28 3.75	4.43 3.65
3	3.04 2.96	3.05 2.95	3.07 2.93	3.11 2.90	3.15 2.87	3.22 2.81
2.5	2.52 2.48	2.53 2.47	2.55 2.45	2.57 2.43	2.60 2.41	2.64 2.37

100–200mm F5.6 MC ZOOM CELTIC LENS AT 200mm FOCAL LENGTH

Unit: FEET

F.No. Dist.(ft)	5.6	8	11	16	22	32
∞	∞ 670' 4"	∞ 469' 5"	∞ 341' 7"	∞ 235'	∞ 171' 1"	∞ 117' 10"
100	117' 2" 87' 3"	126' 6" 82' 8"	140' 6" 77' 8"	172' 4" 70' 6"	236' 11" 63' 6"	632' 3" 54' 7"
50	53' 11" 46' 8"	55' 9" 45' 4"	58' 3" 43' 10"	63' 41' 6"	69' 9" 39'	85' 2" 35' 6"
30	31' 4" 28' 9"	31' 11" 28' 4"	32' 8" 27' 9"	34' 1" 26' 9"	36' 25' 9"	39' 7" 24' 3"
20	20' 7" 19' 6"	20' 10" 19' 3"	21' 2" 19'	21' 8" 18' 7"	22' 5" 18' 1"	23' 8" 17' 4"
15	15' 4" 14' 9"	15' 5" 14' 7"	15' 7" 14' 5"	15' 11" 14' 2"	16' 3" 13' 11"	16' 11" 13' 6"
12	12' 2" 11' 10"	12' 3" 11' 9"	12' 4" 11' 8"	12' 7" 11' 6"	12' 9" 11' 4"	13' 2" 11' 1"
10	10' 1 $\frac{7}{16}$ " 9' 10 $\frac{1}{2}$ "	10' 2 $\frac{1}{8}$ " 9' 9 $\frac{15}{16}$ "	10' 2 $\frac{15}{16}$ " 9' 9 $\frac{3}{16}$ "	10' 4 $\frac{5}{16}$ " 9' 7 $\frac{5}{16}$ "	10' 6" 9' 6 $\frac{1}{2}$ "	10' 9" 9' 4 $\frac{3}{16}$ "
8	8' $\frac{7}{8}$ " 7' 11 $\frac{1}{8}$ "	8' 1 $\frac{1}{4}$ " 7' 10 $\frac{3}{4}$ "	8' 1 $\frac{3}{4}$ " 7' 10 $\frac{1}{4}$ "	8' 2 $\frac{9}{16}$ " 7' 9 $\frac{1}{2}$ "	8' 3 $\frac{9}{16}$ " 7' 8 $\frac{5}{8}$ "	8' 5 $\frac{1}{16}$ " 7' 7 $\frac{3}{16}$ "

LENS CARE

Never touch glass lens surfaces with the fingers.

Should a glass lens surfaces become dirty, gently whisk loose, dry matter off it with a bellows lens brush. If necessary, the glass surface may then be wiped gently with a circular motion from the center outward with a soft, clean cotton cloth or special photographic lens tissue.

Liquid lens cleaner should be used only when finger prints or other matter cannot be removed with a dry cloth or lens tissue. *Never drop lens cleaning fluid directly on lens surfaces.* Instead, apply only one drop of fluid to the cloth or tissue and wipe the glass surface gently from center to edge.

The lens barrel and other metal parts may be wiped with a silicon-treated cloth.

For all other service and repairs, contact your authorized Minolta repair facility.

STORAGE

When not in use, glass surfaces should be protected by attaching front and rear caps and the lenses stored in their cases. Do not store lenses where temperature or humidity is high or near corrosive chemicals or gases.

If a lens is to be stored for an extended period, it is best to place it in its case in an airtight container (such as a heavy or double plastic bag) along with a small bag of a drying agent (such as silica gel.)

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MINOLTA MASTERS PHOTOGRAPHY