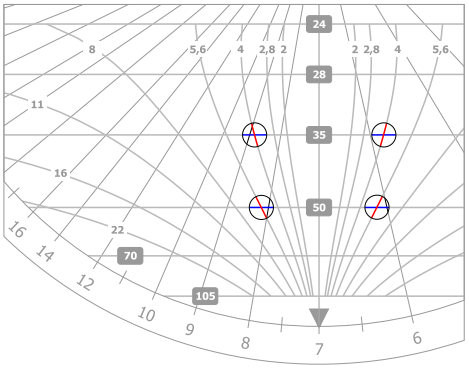
Depth-of-Field Calculator for 35mm, Medium Format and DSLRs

Version 1.1 "imperial" as of 10/24/2004

Assembly:
Print the distance discs (sheet 1+2) on cardboard or print on paper and glue on cardboard and cut out.
Likewise print the aperture discs (sheets 3-8) by choice on overhead transparency foil and cut out.
Connect one aperture and one distance disc with a clamp in the center.

To determine the depth-of-field, set the arrow to the subject's distance.
The point where the focal length line (blue) intersects the aperture line (red) marks the range in front of resp. behind the subject in which the image will appear sharp. Since perception of sharpness is subjective, this only holds true for normal requirements.



Example:
The subject of choice is 7 ft away, so adjust the arrow to 7.
For the 35mm standard focal length of 50mm and the aperture f/5.6 we get a range of acceptable sharpness from about 6'2ft to 8'2ft, in real it is from 6'1¾ to 8'1¾.
For a focal length of 35mm and the aperture f/4 we get a range of accepable sharpness from about 5'9ft to 8'9ft, in real it is 5'9¾ to 8'9¾.

The discs show distances from the film plane.
On the discs, the circles of confusion have been marked with σ, the 35mm conversion factors with υ.

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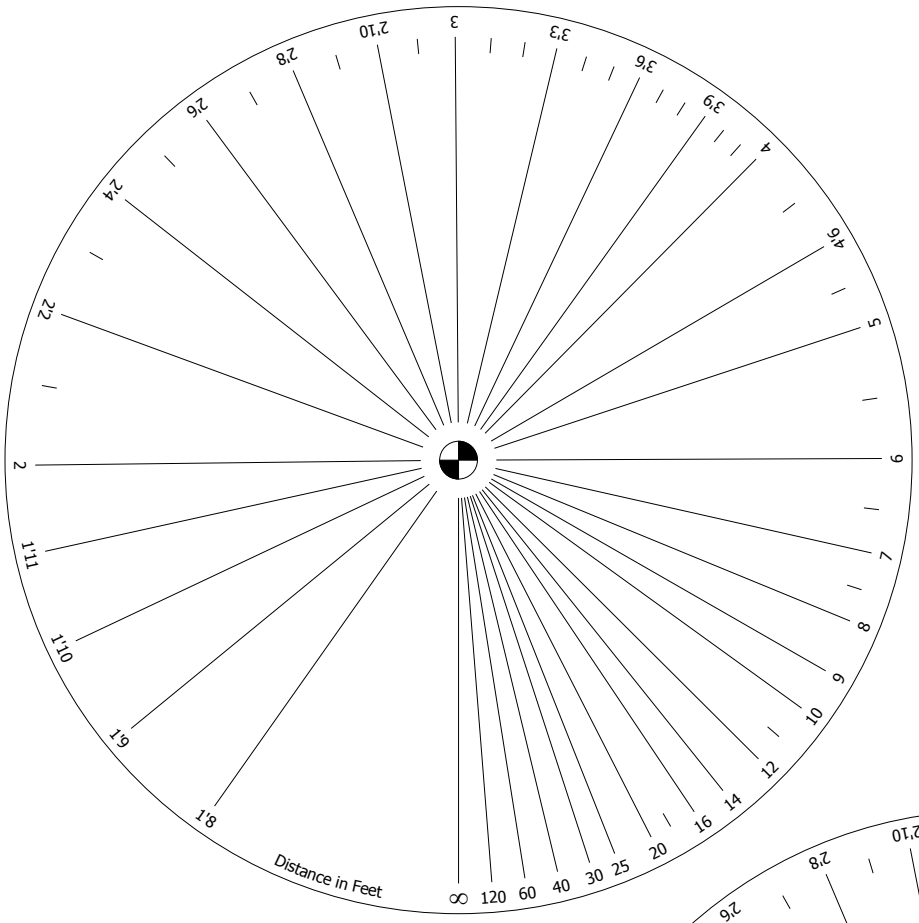
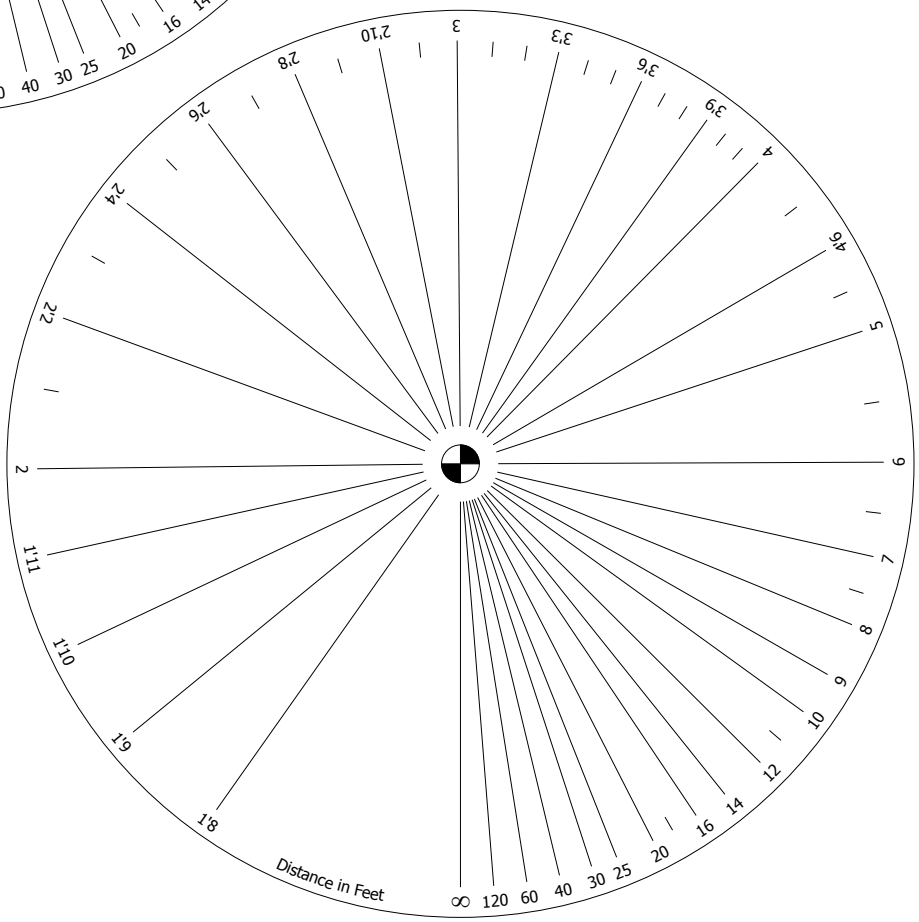
E-Mail: info@silverimages.de

Sheet 1: Distance discs “infinity”.
Caution: do only use with sheets 3 to 6!





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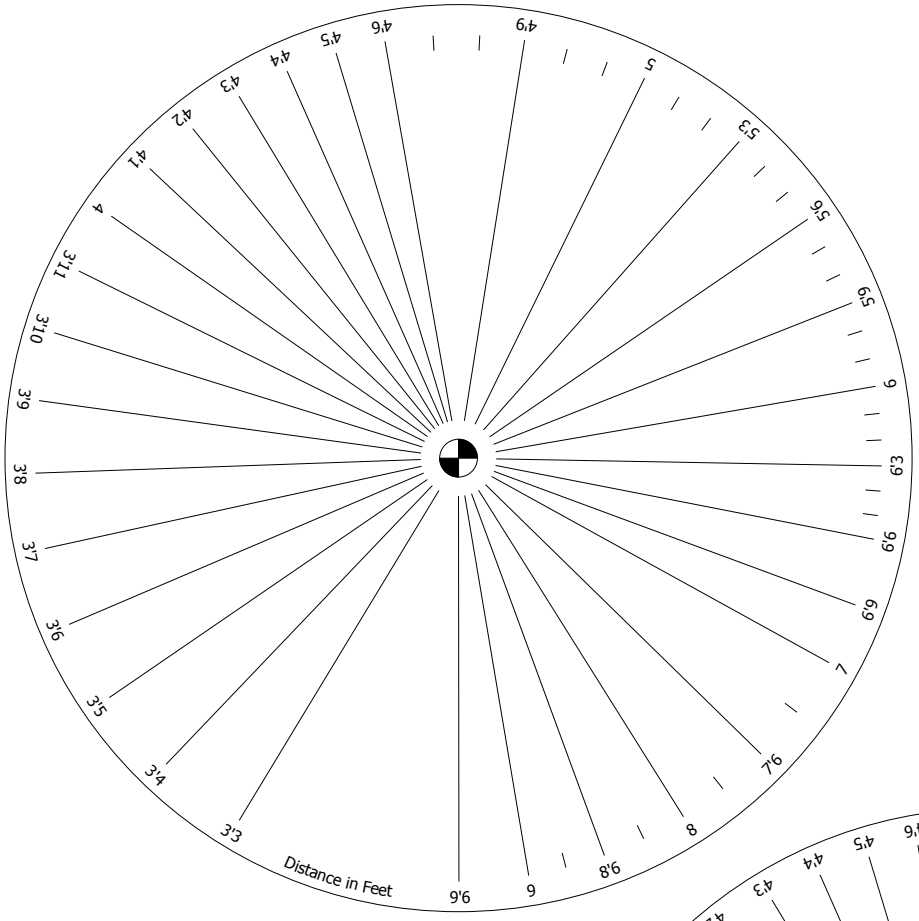
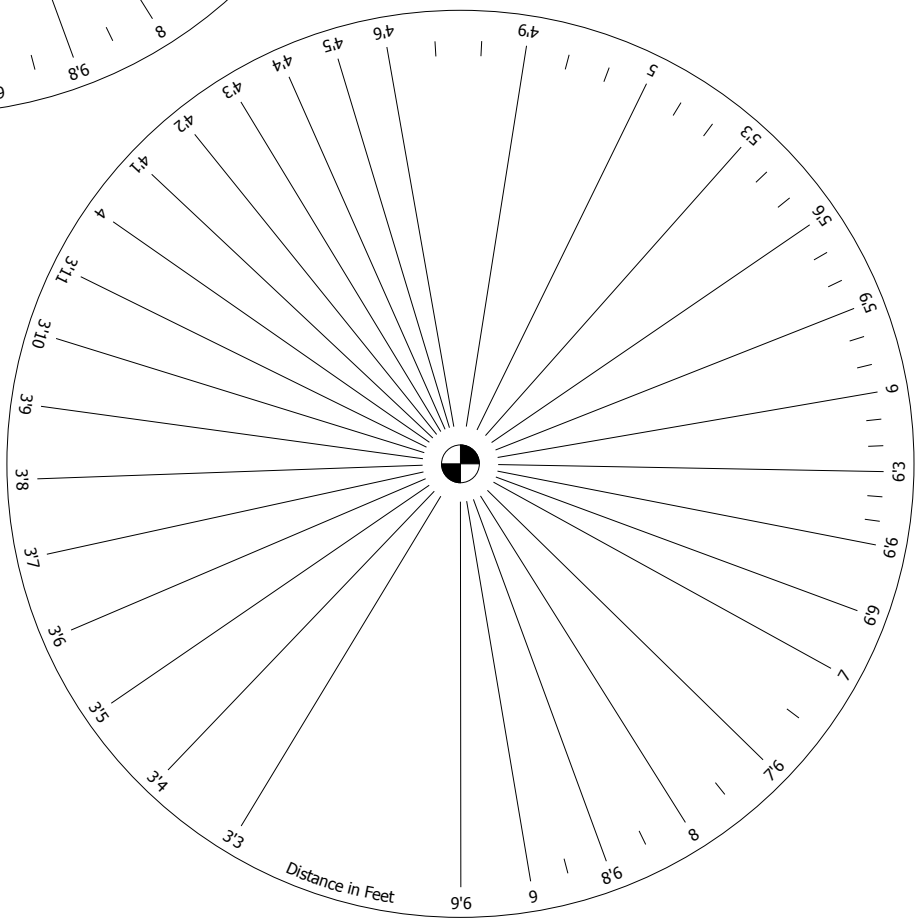
Sheet 2: Distance discs “portrait”.
Caution: do only use with sheets 7 and 8!





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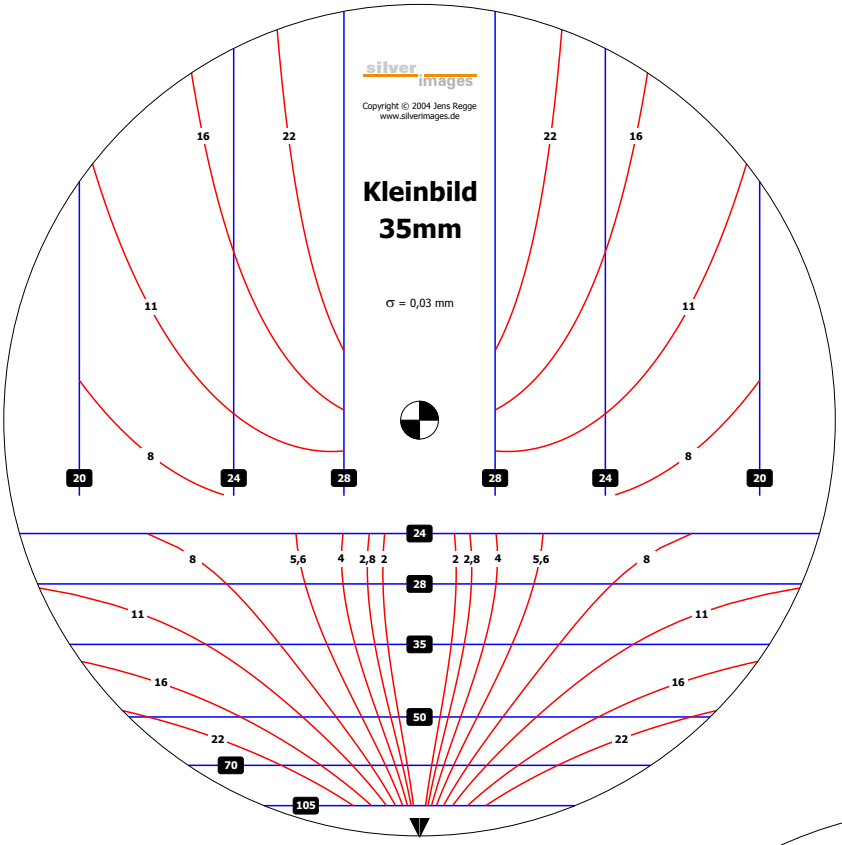
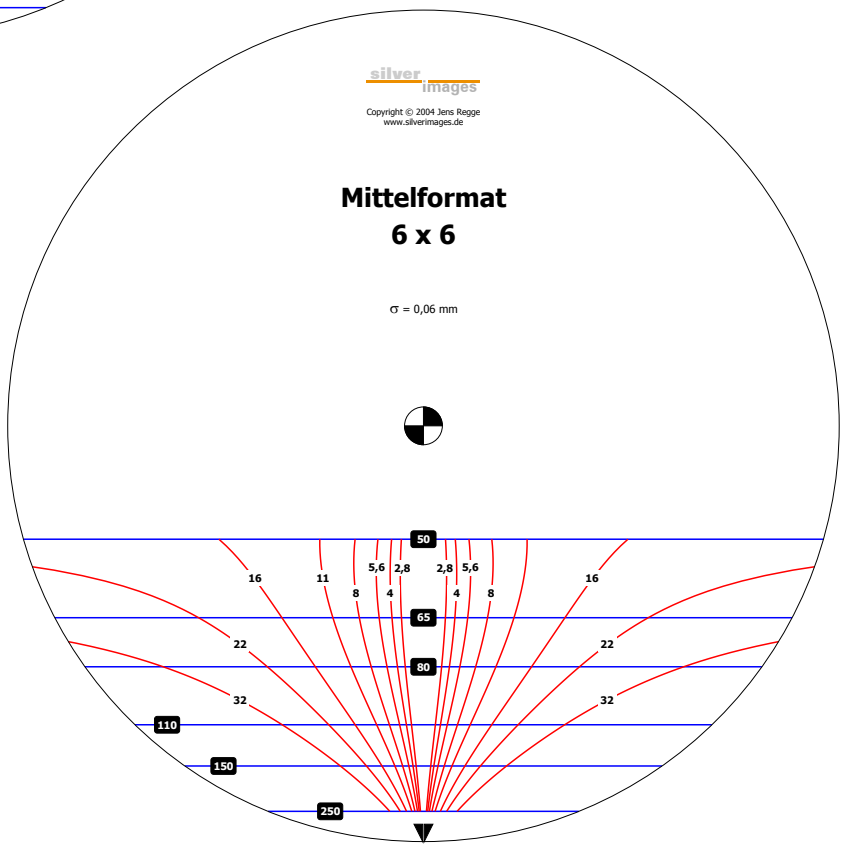
Sheet 3: Aperture discs “infinity” for 35mm and 6x6 medium format.
The discs are based on a circle of confusion of 0.03mm for 35mm and 0.06mm for medium format.
Caution: do only use with sheet 1!





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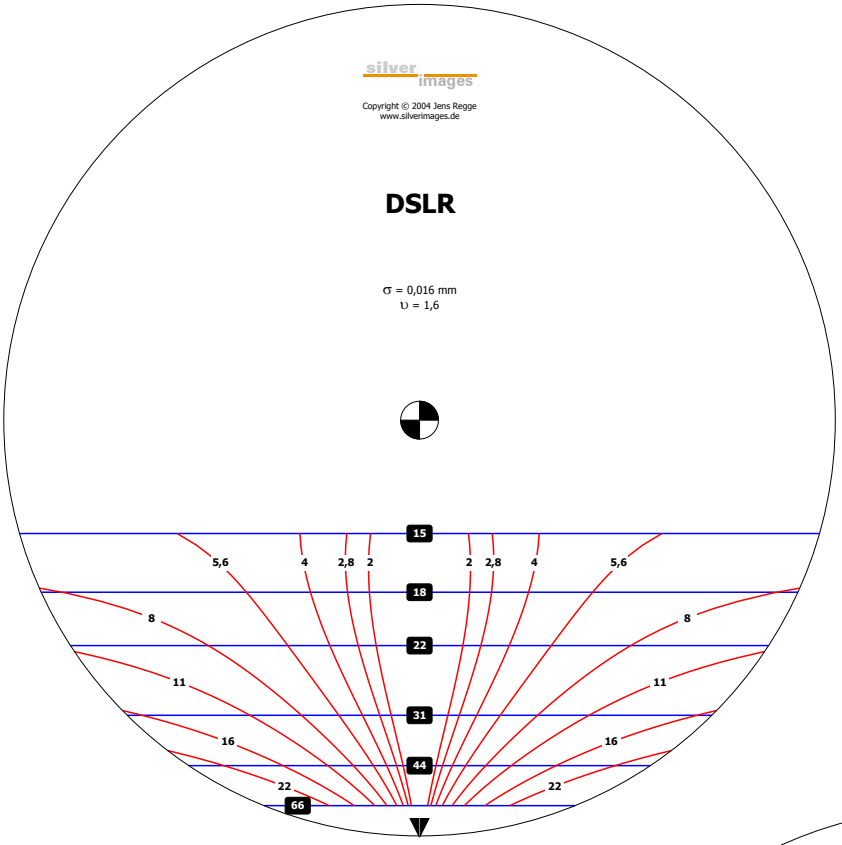
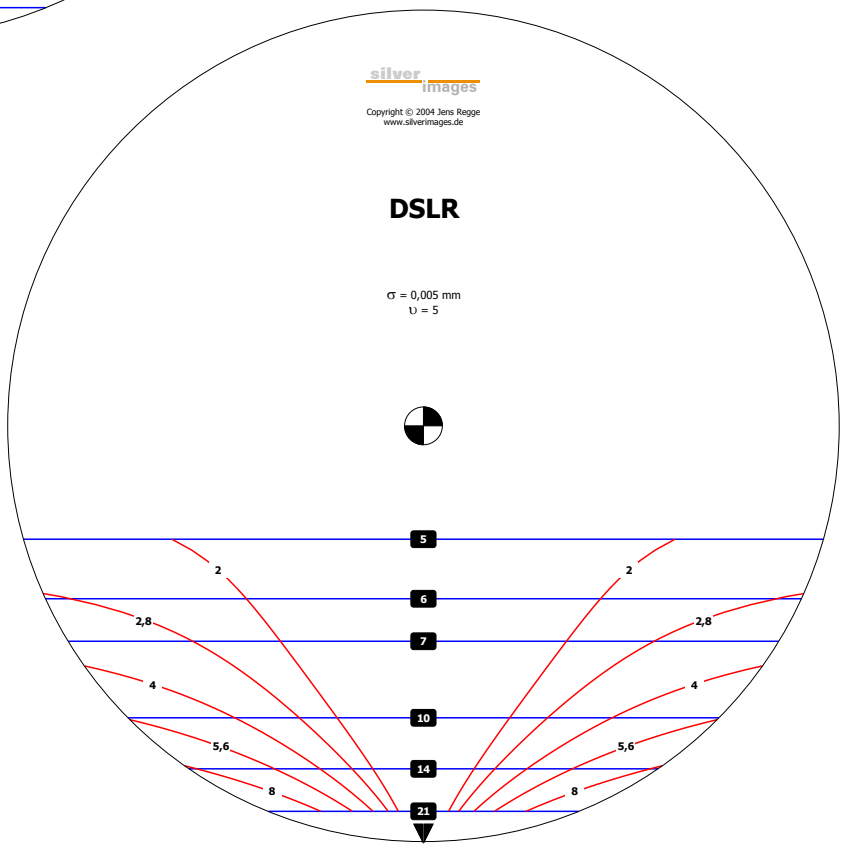
Sheet 4: Aperture discs “infinity” for DSLR.
The discs are based on circles of confusion of 0.016mm and 0.005mm. The conversion factors to 35mm have been assumed as 1.6 and 5. Caution: do only use with sheet 1!





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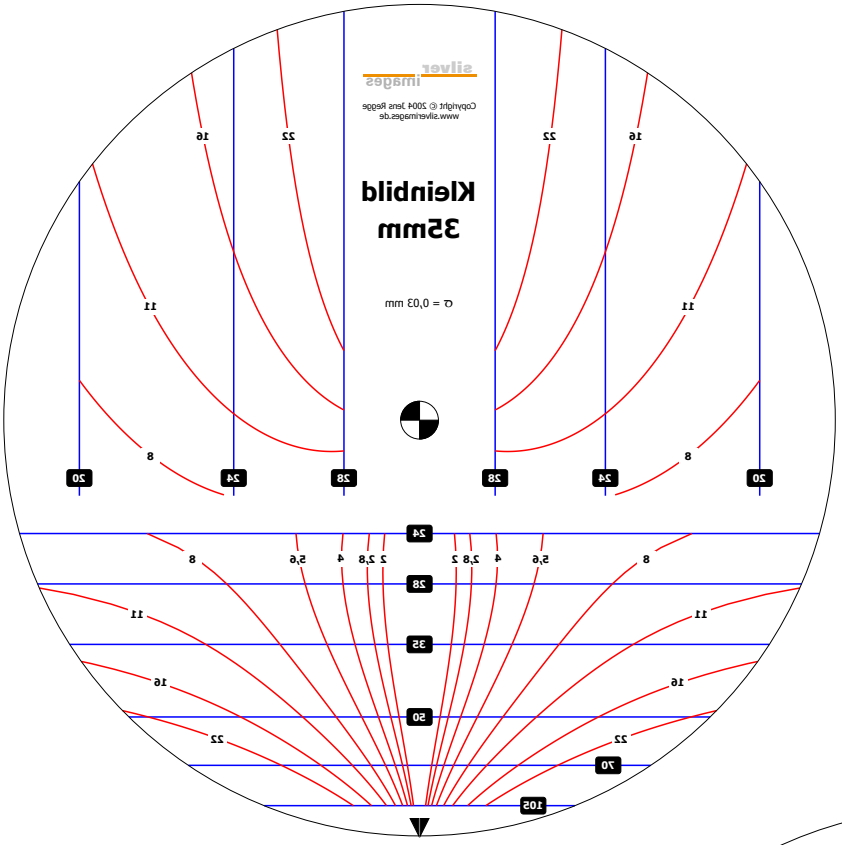
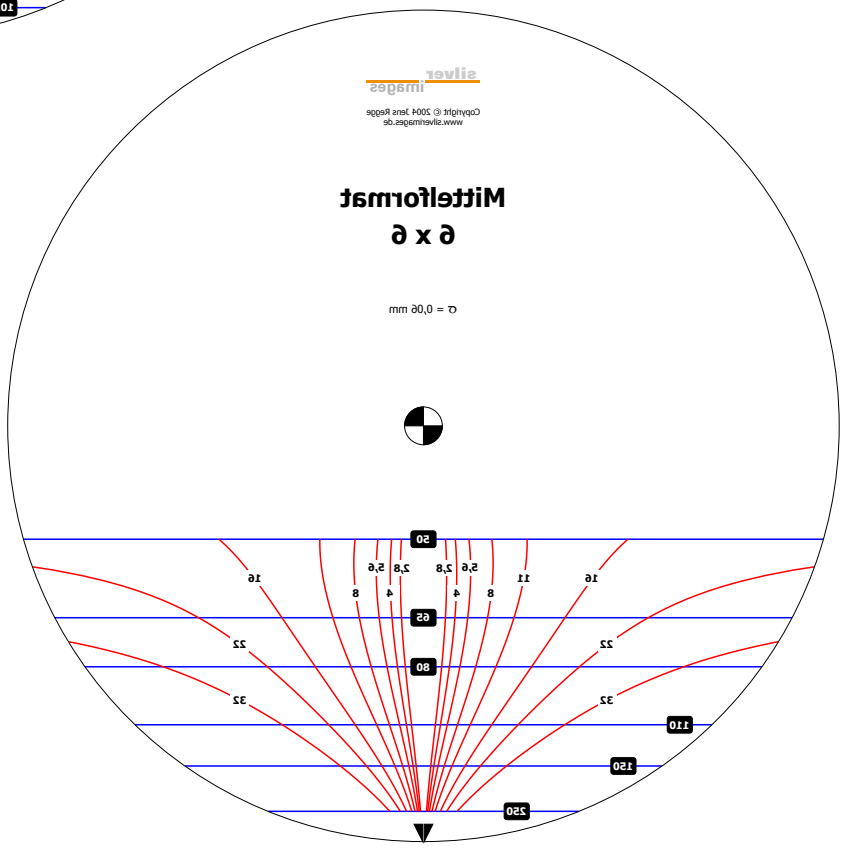
Sheet 5: Aperture discs “infinity” for 35mm and 6x6 medium format.
Mirrored for backside print on the foil.
Caution: do only use with sheet 1!





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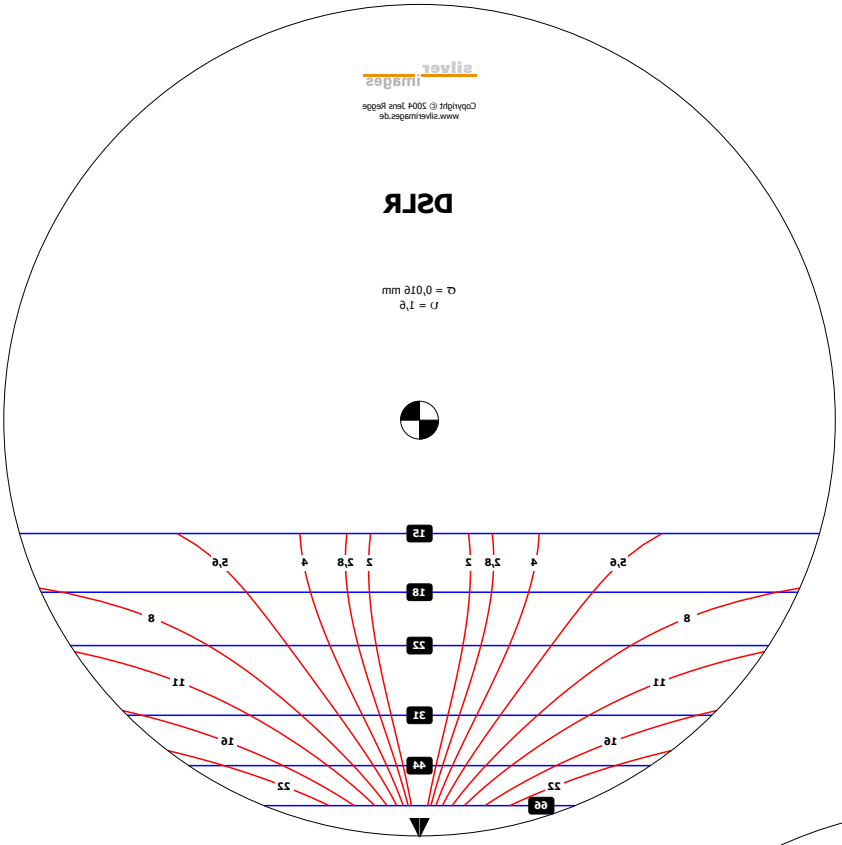
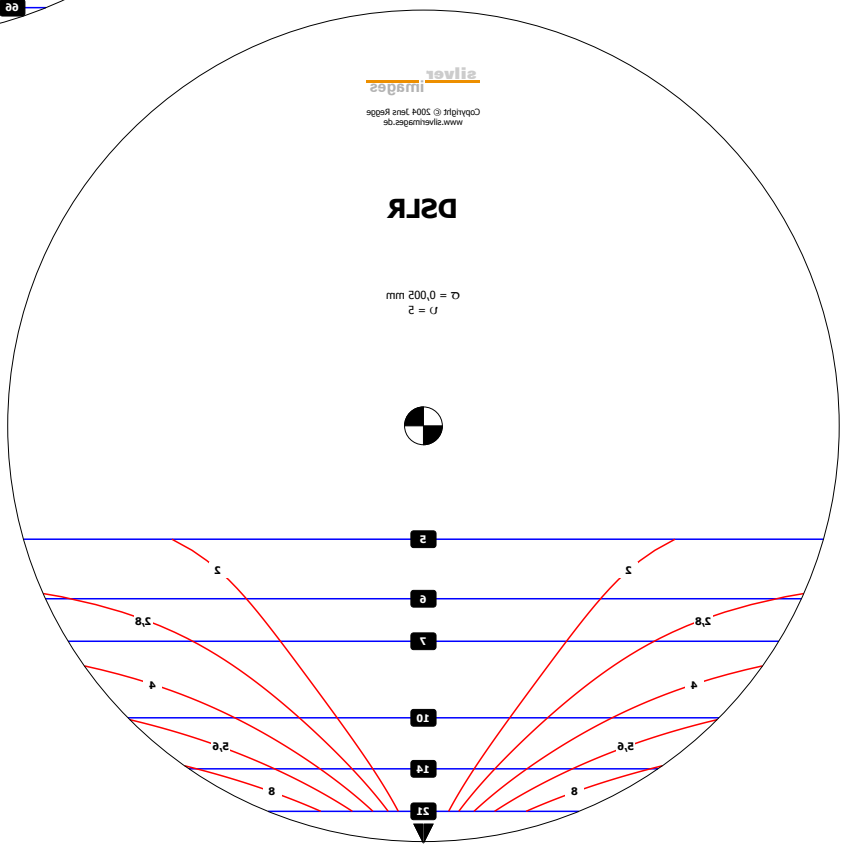
Sheet 6: Aperture discs “infinity” for DSLR.
Mirrored for backside print on the foil.
Caution: do only use with sheet 1!





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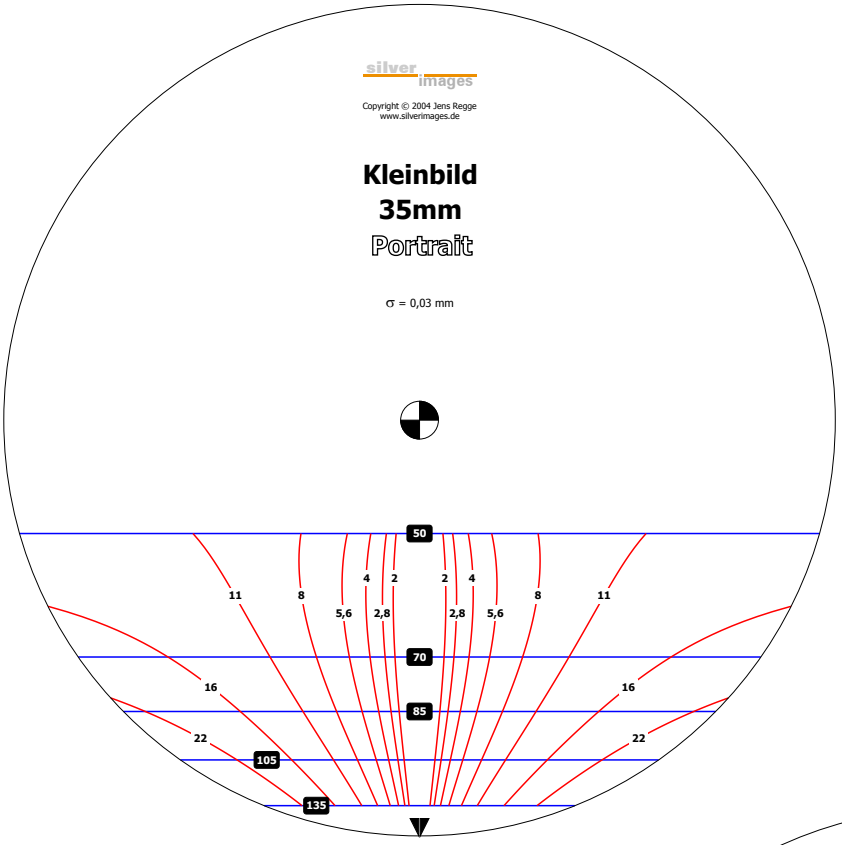
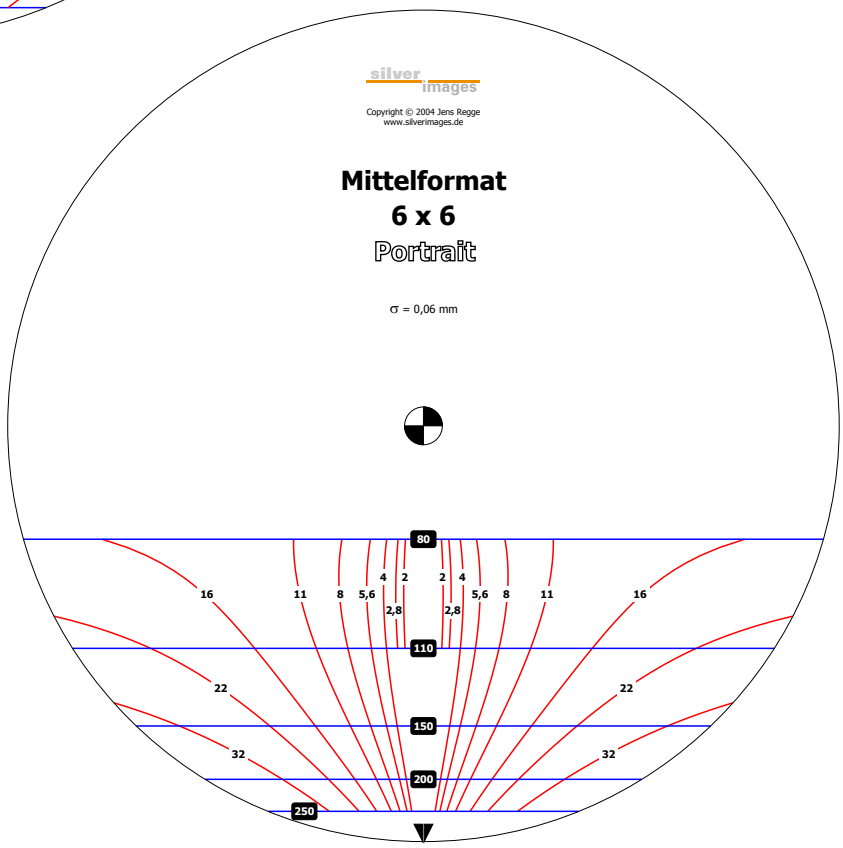
Sheet 7: Aperture discs “portrait” for 35mm and 6x6 medium format.
The discs are based on a circle of confusion of 0.03mm for 35mm and 0.06mm for medium format.
Caution: do only use with sheet 2!





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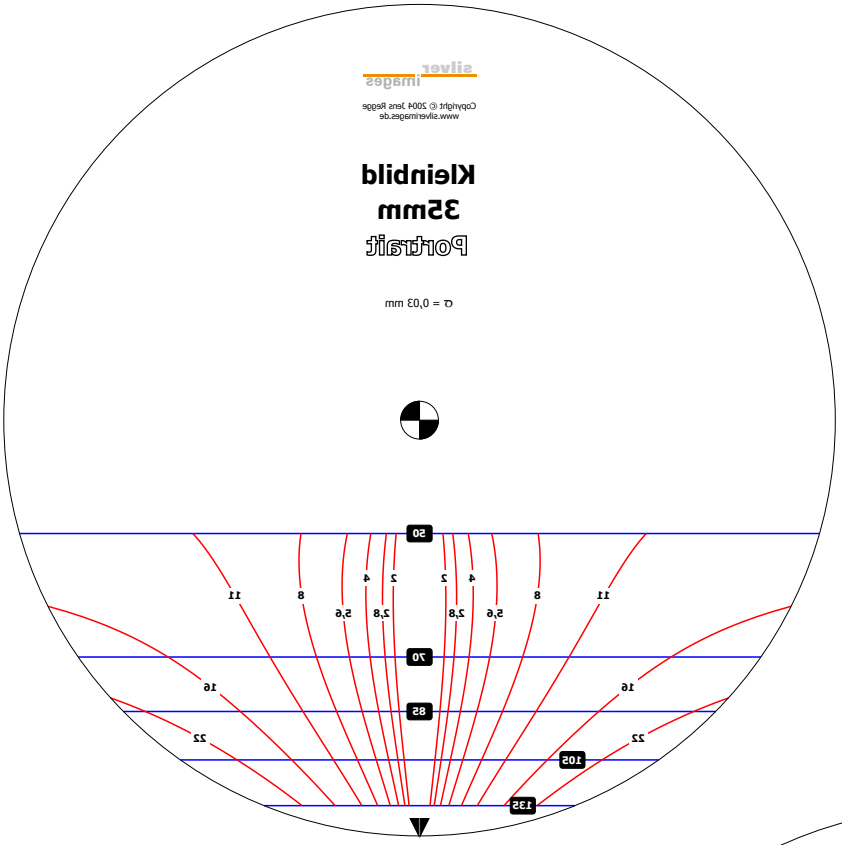
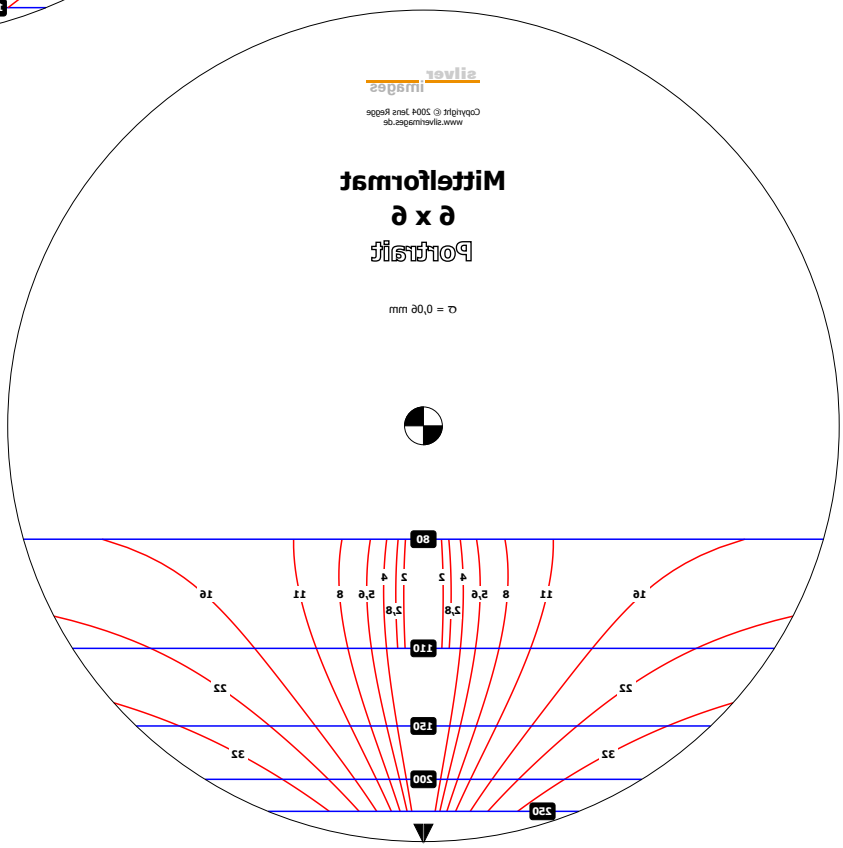
Sheet 8: Aperture discs “portrait” for 35mm and 6x6 medium format.
Mirrored for backside print on the foil.
Caution: do only use with sheet 2!





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