XH CONVERTER 0,8

DATASHEET

The XH Converter 0,8 is an accessory for using HC/HCD lenses on X System cameras. It reduces the focal length of the attached lens by a factor of 0,8x as well as increases the maximum and minimum aperture with 2/3 stops. As an example, the HC 100, f/2,2 when used together with XH Converter 0,8, will be equivalent to an f/1,8 80mm lens. It is designed to be used with all HC/HCD lenses (see Compatibility) but it is optimized for the lenses shown on page 2. The attached lens retains its full functionality, including AF [1]. An added bonus when using the XH Converter 0,8 is that it increases lens performance as lens aberrations are reduced by the same factor as the focal length. The HC/HCD lenses will, thanks to the larger max aperture, produce a shallow depth of field with super smooth bokeh. The XH Converter 0,8 can also be combined with other H System lens accessories, such as the HTS 1.5 Tilt and Shift Adapter. The CF Lens Adapter (requires the electronic shutter function) gives access to all V System lenses. Lens corrections for all compatible HC/HCD lenses will be applied automatically when images are processed in Phocus (When the HTS, extension tubes, Macro Converter or the converter H1,7X are used, only the corrections for the lens are applied).

GENERAL DATA

Focal length conversion factor	0,79x
Aperture conversion factor	+2/3 Stop
Close range	Same as for the lens
Length/diameter	51,5 / 84,6 mm
Weight	430 g
Product number	CP.HB.00000627.01



COMPATIBILITY

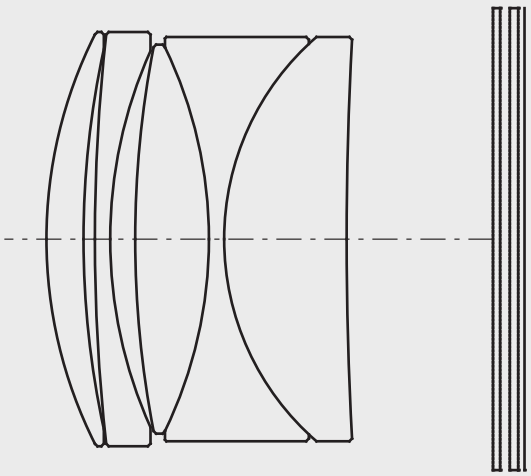
- Hasselblad X System cameras, X1D with firmware 1.25.0 or later, or X1D II 50C/907X/CFV II with firmware 1.4.0 or later.
- All Hasselblad HC and HCD lenses, except HC120 and HC120-II with firmware older than 18.0.0.
- Lenses with firmware 18.0.0 to 19.0.3 must be upgraded to 19.1.0 or later. Lenses with firmware older than 18.0.0 will have manual focus only.
- HCD lenses were originally designed for a smaller format than HC lenses. Therefore some reduction of performance in extreme corners can occur.

LENS DESIGN

5 elements in 3 groups

ENTRANCE PUPIL POSITION

HCD 24:	134 mm in front of image plane
HCD 28:	132 mm in front of image plane
HC 35:	150 mm in front of image plane
HC 50-II:	132 mm in front of image plane
HC 80:	77 mm in front of image plane
HC 100:	66 mm in front of image plane
HC 120-II:	147 mm in front of image plane
HC 150N:	66 mm in front of image plane
HC 210:	66 mm in front of image plane
HC 300:	11 mm in front of image plane
HC 50-110 @50:	162 mm in front of image plane
HC 50-110 @110:	171 mm in front of image plane
HC 35-90 @35:	185 mm in front of image plane
HC 35-90 @90:	191 mm in front of image plane



The entrance pupil position is the correct position of the axis of rotation when making a panorama image by combining individual images of a scene.

[1] Not the HC 120 and HC 120-II.

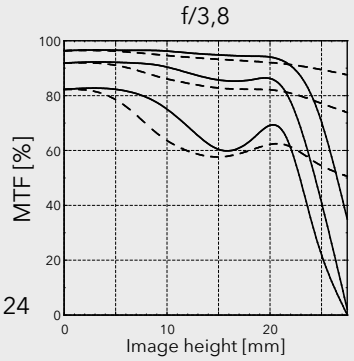
XH CONVERTER 0,8

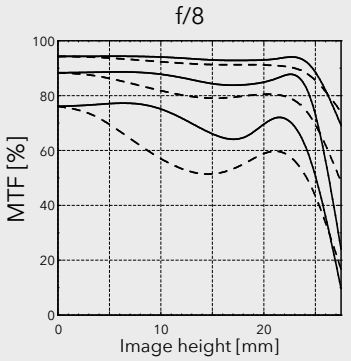
MTF – H SYSTEM LENSES

Modulation Transfer as a function of image height at infinity setting.

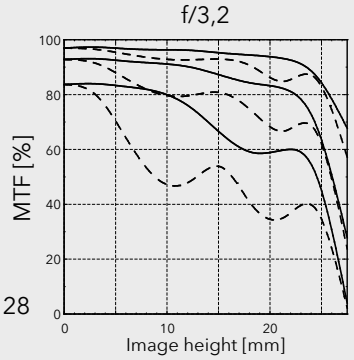
Sagittal slit orientation drawn with continuous line and tangential with dashed. White light. Spatial frequencies 10, 20 and 40 lp/mm

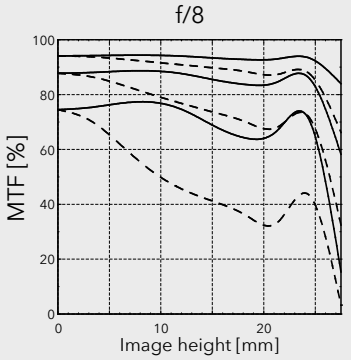
HCD 24



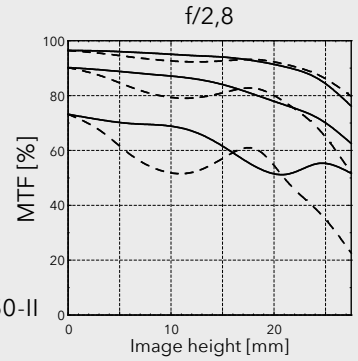


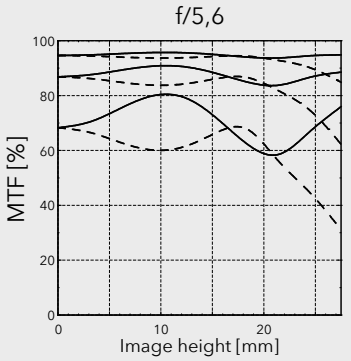
HCD 28



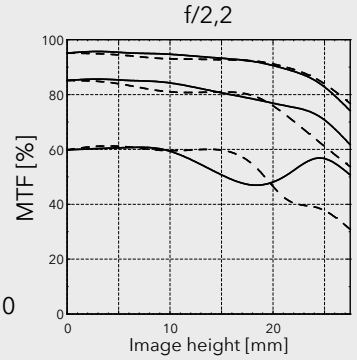


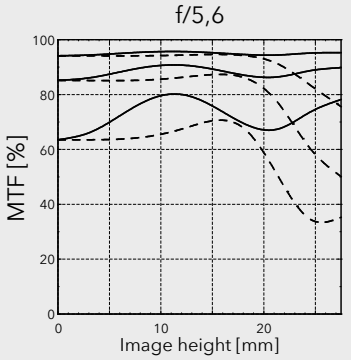
HC 50-II



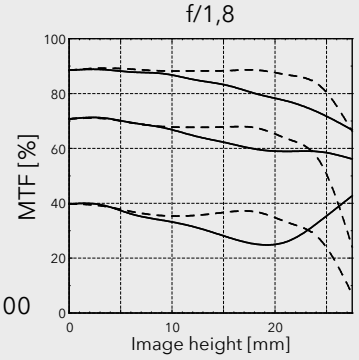


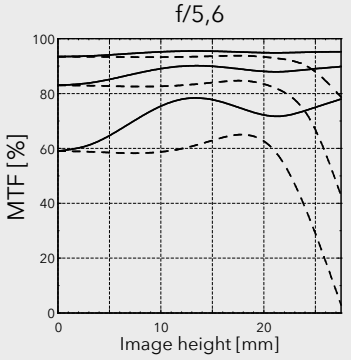
HC 80





HC 100





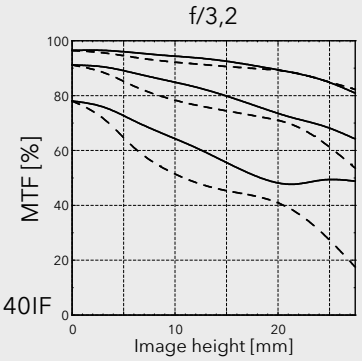
XH CONVERTER 0,8

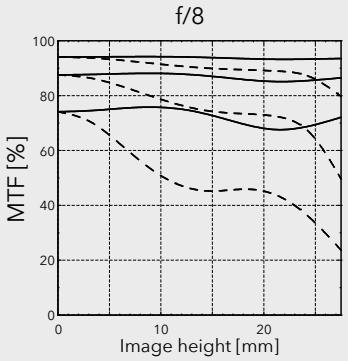
MTF – V SYSTEM LENSES

Modulation Transfer as a function of image height at infinity setting.

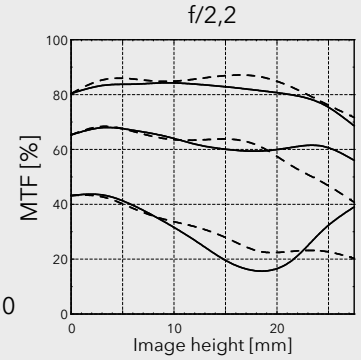
Sagittal slit orientation drawn with continuous line and tangential with dashed. White light. Spatial frequencies 10, 20 and 40 lp/mm

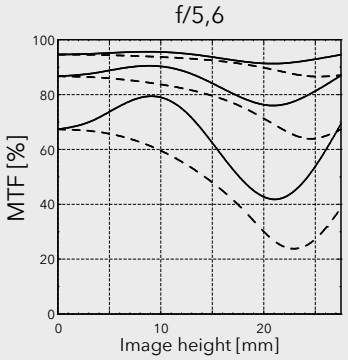
CFE 40IF



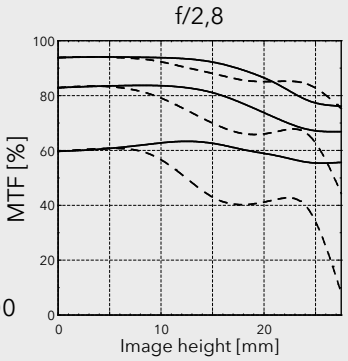


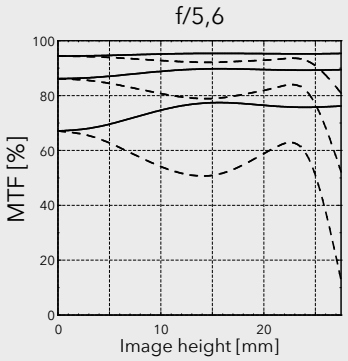
CF 80



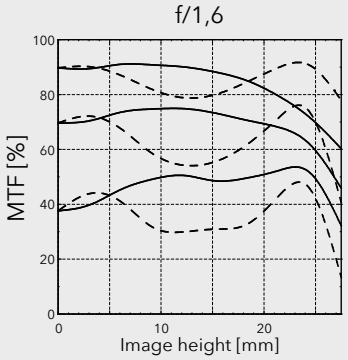


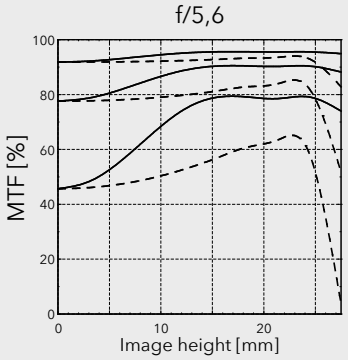
CF 100



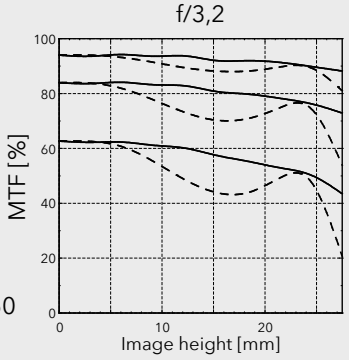


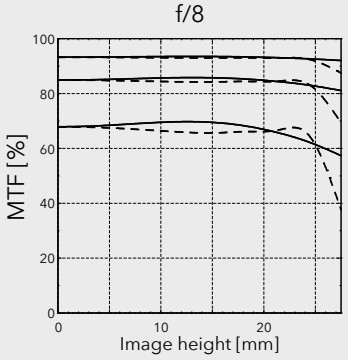
F 110





CF 150





XH CONVERTER 0,8

EQUIVALENT LENS DATA

The table shows the equivalent lens data when combined with the XH Converter 0,8

LENS	LENS WITH XH CONVERTER 0,8	ANGLE OF VIEW DIAG/HOR/VERT
HCD 4,8/24	3,8/19,5 mm	110°/99°/83°
HCD 4/28	3,2/23,2 mm	100°/89°/73°
HC 3,5/35	2,8/28,7 mm	88°/76°/61°
HC 3,5/50 II	2,8/40,6 mm	69°/58°/45°
HC 2,8/80	2,2/66 mm	45°/37°/28°
HC 2,2/100	1,8/80,2 mm	38°/31°/23°
HC 4/120-II	3,2/95,2 mm	32°/26°/20°
HC 3,2/150N	2,5/121 mm	26°/21°/16°
HC 4/210	3,2/169 mm	18°/15°/11°
HC 4,5/300	3,5/234 mm	13°/11°/8°
HC 3,5-4,5/50-110 @50	2,8/41,4 mm	68°/57°/44°
HC 3,5-4,5/50-110 @110	3,5/86,9 mm	35°/28°/21°
HCD 4-5,6/35-90 @35	3,2/29,1 mm	89°/76°/60°
HCD 4-5,6/35-90 @90	4,5/69,8 mm	43°/35°/27°
CFE 40IF	3,2/32,7 mm	82°/70°/55°
CF 80	2,2/65,1 mm	46°/38°/29°
CF 100	2,8/81,2 mm	37°/30°/23°
F 110	1,6/88,8 mm	35°/28°/21°
CF 150	3,2/121 mm	25°/21°/15°

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