HASSELBLAD

XPan lenses

– for medium format perfection on 35 mm film

The outstanding image quality provided by the Hasselblad XPan dual format camera is a result of the superb optical performance of its specially designed lenses. To cover the 24x65 mm XPan panorama format, the lenses feature image circles as large as medium format lenses, thus making medium format quality on 35 mm film possible.

All optical aberrations are well corrected, which means that colour fringing is virtually eliminated and that distortion is very low, even on the 30 mm aspherical lens despite its extreme wide-angle coverage. All lens elements are multicoated to provide superb image contrast and colour rendition.

To meet the highest requirements for even corner-to-corner illumination, the Hasselblad 5.6/30 mm Aspherical and Hasselblad 4/45 mm lenses can be fitted with a dedicated centre filter.

When mounting a lens to the camera its precise focusing mechanism is automatically coupled to the camera rangefinder.

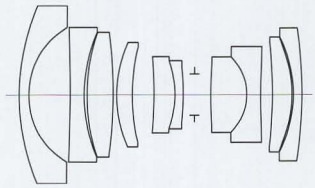
Hasselblad 5.6/30 mm Aspherical

Code 24013

When used for the 24x65 mm panorama format, this ultra-wide-angle lens provides a horizontal view of almost 94°, retaining its superb performance over the entire image field. Distortion is hardly noticeable.

The lens is supplied with a viewfinder with built-in spirit level and field markings for the regular and panorama formats. It attaches to the camera's flash shoe. The camera rangefinder is used for focusing only.

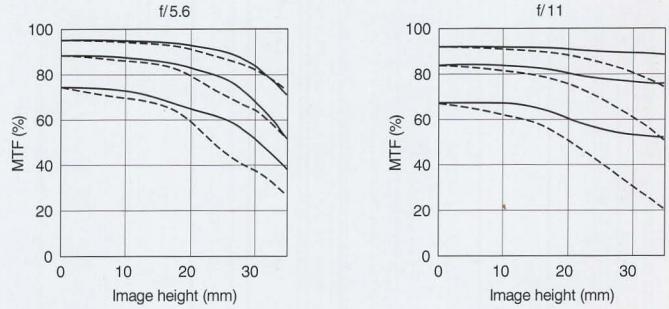
A lens shade and a dedicated 58 mm centre filter are also supplied with the lens.



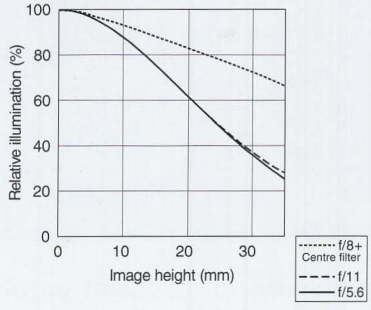
Technical specifications

Number of elements	10 (2 aspherical surfaces, all elements are multicoated)
Number of groups	8
Max. aperture	5.6
Min. aperture	22
Focal length	30.4 mm
Image size	24x36 mm and 24x64.5 mm
Angular field (24x36)	diagonal 71.4° horizontal 61.7°
Angular field (24x64.5)	diagonal 97.1° horizontal 93.6°
Spectral range	visible spectrum
Mount	Hasselblad XPan bayonet
Filter connection	Threaded filter 58 mm
Focusing range	0.7 m to infinity
Close range image scale	1:20
Entrance pupil	14.9 mm behind the first lens vertex Diameter 5.4 mm
Exit pupil	14.4 mm in front of the last lens vertex Diameter 7.5 mm
Principal plane H	23.4 mm behind the first lens vertex
Principal plane H'	2.7 mm in front of the last lens vertex
Back focal distance	27.7 mm
Distance between first and last lens vertex	50.3 mm
Length	53 mm (2.09")
Weight	310 g (10.9 oz)

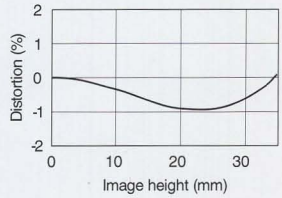
Modulation Transfer Factor – MTF



Relative illuminance



Distortion



The Hasselblad 5.6/30 mm Aspherical is supplied as a kit consisting of the lens, Viewfinder XPan 30, Lens shade 30 XPan and Centre filter XPan for 30 mm.

Hasselblad 5.6/30 mm Aspherical + Centre filter for 30 mm 97.1°/93.6°

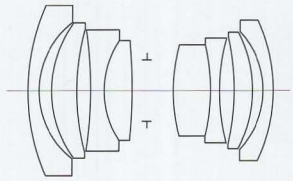
The three panorama images show the angles of view and perspective obtained with the Hasselblad XPan lenses. The figures state the diagonal/horizontal angle of view.

Hasselblad 4/45 mm

Code 24015

The very compact design and high image quality make the Hasselblad 45 mm perfect as standard lens for the Hasselblad XPan camera. Used for panorama images the lens has a true wide-angle horizontal coverage of 71°.

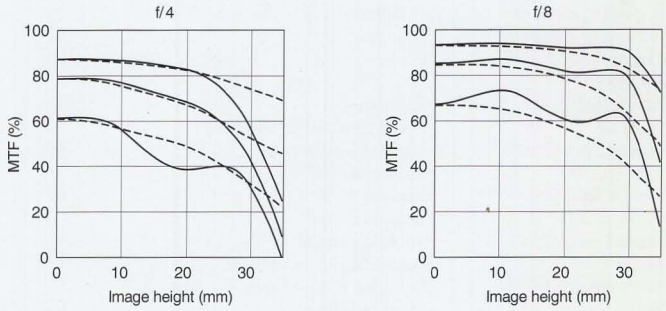
The dedicated 49 mm centre filter is recommended in critical situations when transparancy film is used. With negative film, the centre filter is normally not required if the lens is stopped down to f/8 or smaller aperture.



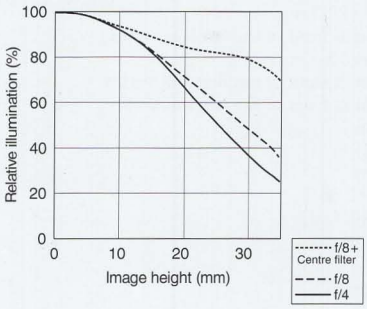
Technical specifications

Number of elements	8 (multicoated)
Number of groups	6
Max. aperture	4
Min. aperture	22
Focal length	45.0 mm
Image size	24x36 mm and 24x64.5 mm
Angular field (24x36)	diagonal 51.4°
	horizontal 43.7°
Angular field (24x64.5)	diagonal 74.4°
	horizontal 71°
Spectral range	visible spectrum
Mount	Hasselblad XPan bayonet
Filter connection	Threaded filter 49 mm
Focusing range	0.7 m to infinity
Close range image scale	1:13
Entrance pupil	15.9 mm behind the first lens vertex
	Diameter 11.4 mm
Exit pupil	17.3 mm in front of the last lens vertex
	Diameter 11.6 mm
Principal plane	16.7 mm behind the first lens vertex
Principal plane H'	16.5 mm in front of the last lens vertex
Back focal distance	28.5 mm
Distance between first and last lens vertex	43.4 mm
Length	47 mm (1.85")
Weight	235 g (8.23 oz)

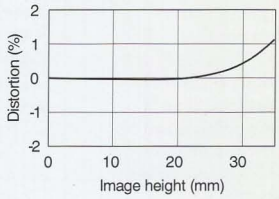
Modulation Transfer Factor – MTF



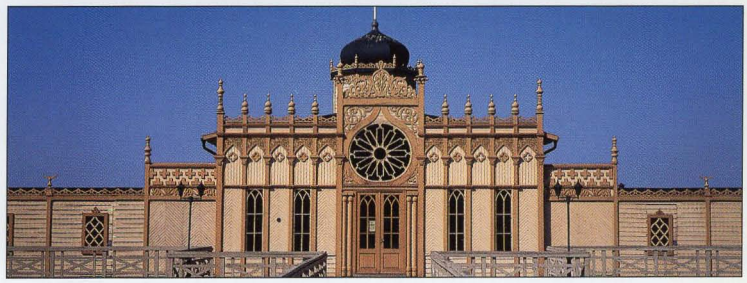
Relative illuminance



Distortion



Hasselblad 4/45 mm + Centre filter for 45 mm 74.4°/71°



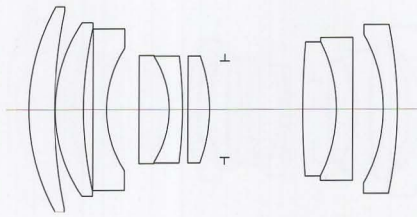
Hasselblad 4/90 mm 41.8°/39.4°

All pictures were taken on the same roll of transparancy film and from the same camera position.

Hasselblad 4/90 mm

Code 24019

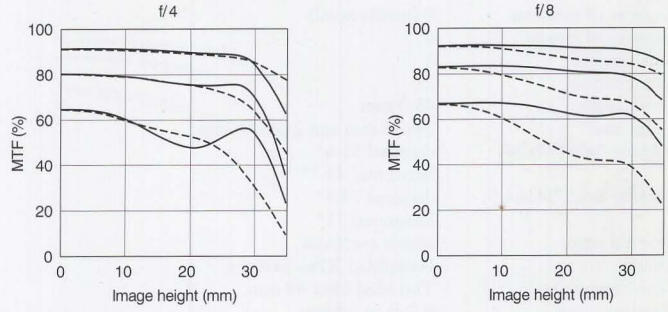
A lens suited for general-purpose photography when a wide-angle effect is not desired. Used for regular 24x36 mm images the Hasselblad 90 mm provides a telephoto perspective, used for panorama images the telephoto effect is moderate but clearly visible.



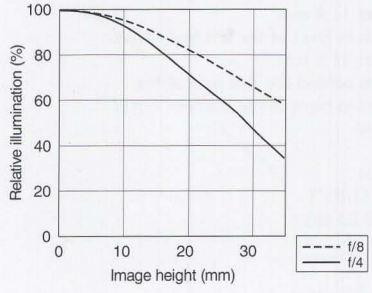
Technical specifications

Number of elements	9 (multicoated)
Number of groups	7
Max. aperture	4
Min. aperture	22
Focal length	89.6 mm
Image size	24x36 mm and 24x64.5 mm
Angular field (24x36)	diagonal 27.0°
	horizontal 22.7°
Angular field (24x64.5)	diagonal 41.8°
	horizontal 39.4°
Spectral range	visible spectrum
Mount	Hasselblad XPan bayonet
Filter connection	Threaded filter 49 mm
Focusing range	1.0 m to infinity
Close range image scale	1:9
Entrance pupil	40.1 mm behind the first lens vertex
	Diameter 22.7 mm
Exit pupil	19.9 mm in front of the last lens vertex
	Diameter 13.3 mm
Principal plane H	22.9 mm in front of the first lens vertex
Principal plane H'	56.9 mm in front of the last lens vertex
Back focal distance	32.8 mm
Distance between first and last lens vertex	65.2 mm
Length	73 mm (2.88")
Weight	365 g (12.7 oz)

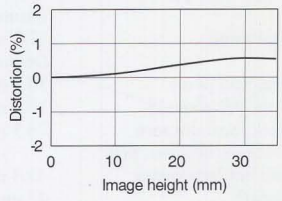
Modulation Transfer Factor – MTF



Relative illuminance



Distortion



How to read the diagrams

MTF diagram

The image height is entered in mm on the horizontal axis of the graph. The Modulation Transfer Factor is entered on the vertical axis. Parameters of the graph are the spatial frequencies lp/mm (line pairs per mm). The lowest spatial frequency corresponds to the uppermost pair of curves, the highest spatial frequency to the lowest pair. The performance data refer to large object distances.

Relative illuminance

The horizontal axis gives the image height in mm and the vertical axis the relative illuminance at full aperture and with the aperture stopped down. A third curve shows the relative illuminance when the dedicated centre filter is used. The illuminance value includes lens vignetting and natural light decrease.

Distortion

The image height is entered in the horizontal axis in mm. The vertical axis gives the distortion in % of the relevant image height. A positive distortion value means that the actual image point is further from the image centre than with perfect distortion-free images (pincushion distortion). A negative distortion value indicates barrel distortion.

We reserve the right to make changes without notice.

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