

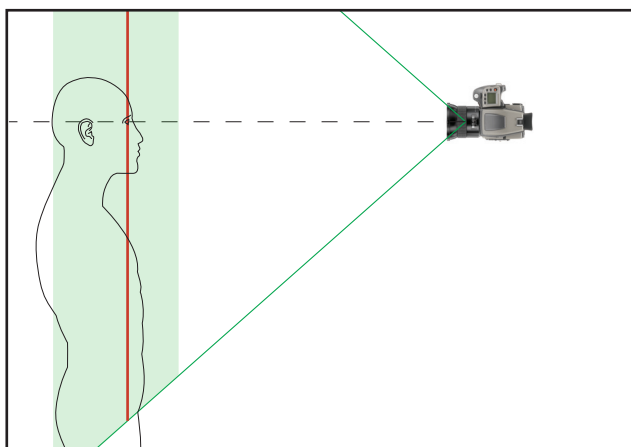
## WHEN TRUE FOCUS MAKES A DIFFERENCE

### INTRO

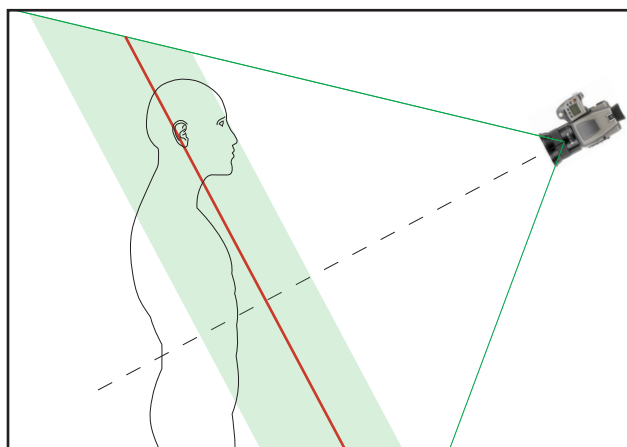
The True Focus mode in the H4D camera is a refinement of an already very precise autofocus system. It will allow focus to be locked at a part of the subject and if the photographer decides to re-compose the image, the camera will calculate a necessary focus correction to keep the area of interest still in focus. This mode will allow the photographer to use the shallow depth-of-field of the medium format camera in a more flexible way.

The effect of focus shift as a function of camera movement is more apparent with short focal length lenses at close distances. E.g. a HCD28 used at 1m will show a much larger focus shift than a HC150 used at 15m.

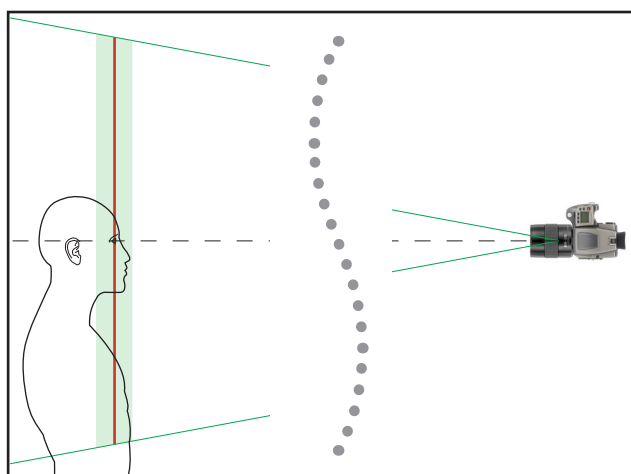
As the camera can only detect rotational movement, care must be taken when re-composing to make sure there are no or very little, movement closer or further away from the subject.



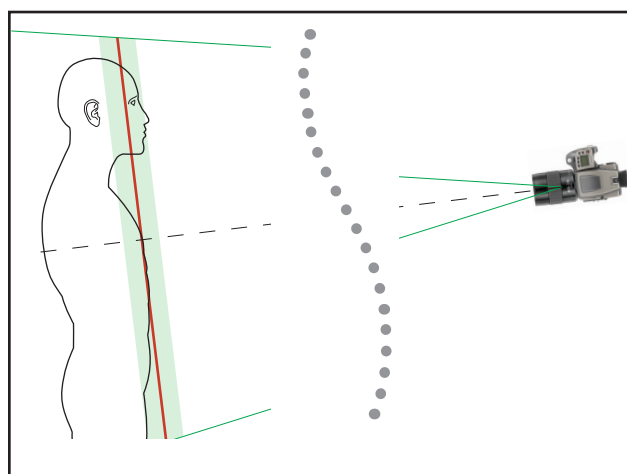
HCD 28mm at 1m. Green area shows the depth-of-field (DOF) at  $f/4$



When the camera is tilted for composition, the point of maximum sharpness falls on the ears instead of the eyes. However, the DOF is almost large enough to render the eye sharp. At the edge of the DOF the eye will be unsharp at large image magnifications.

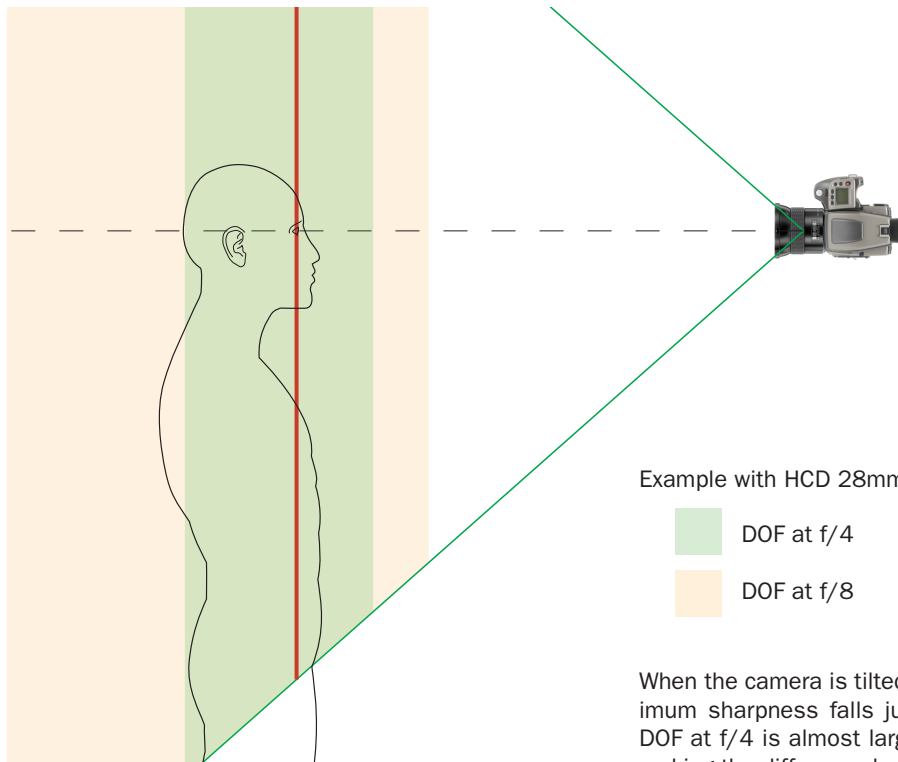


HC 150mm at 3m. Green area shows the DOF at  $f/3.2$



When the camera is tilted for composition, the point of maximum sharpness falls just behind the eyes. However, not enough to be visible in the image.

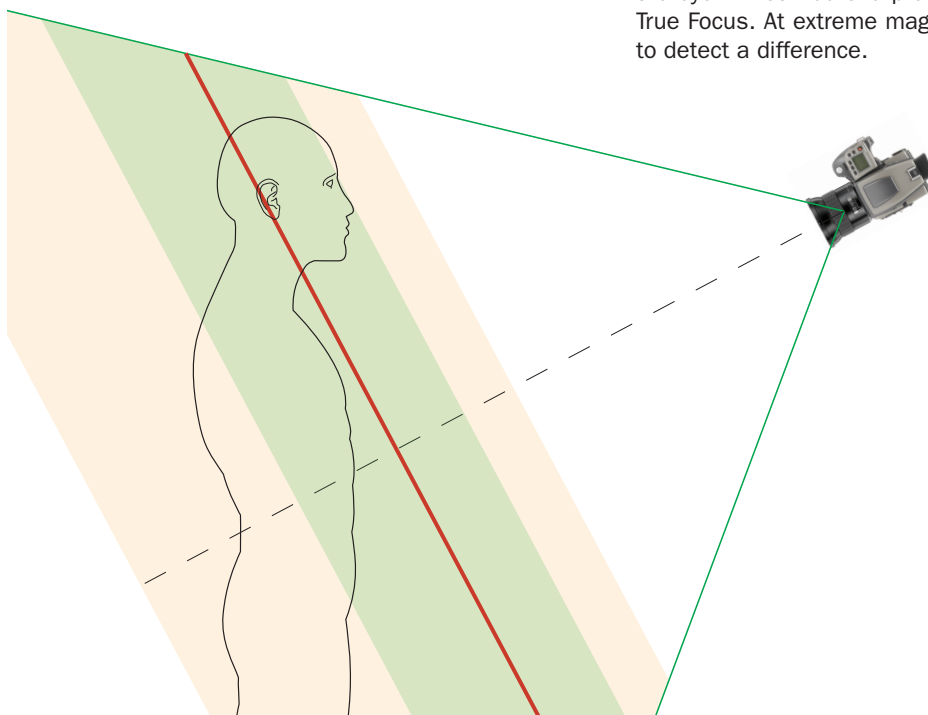
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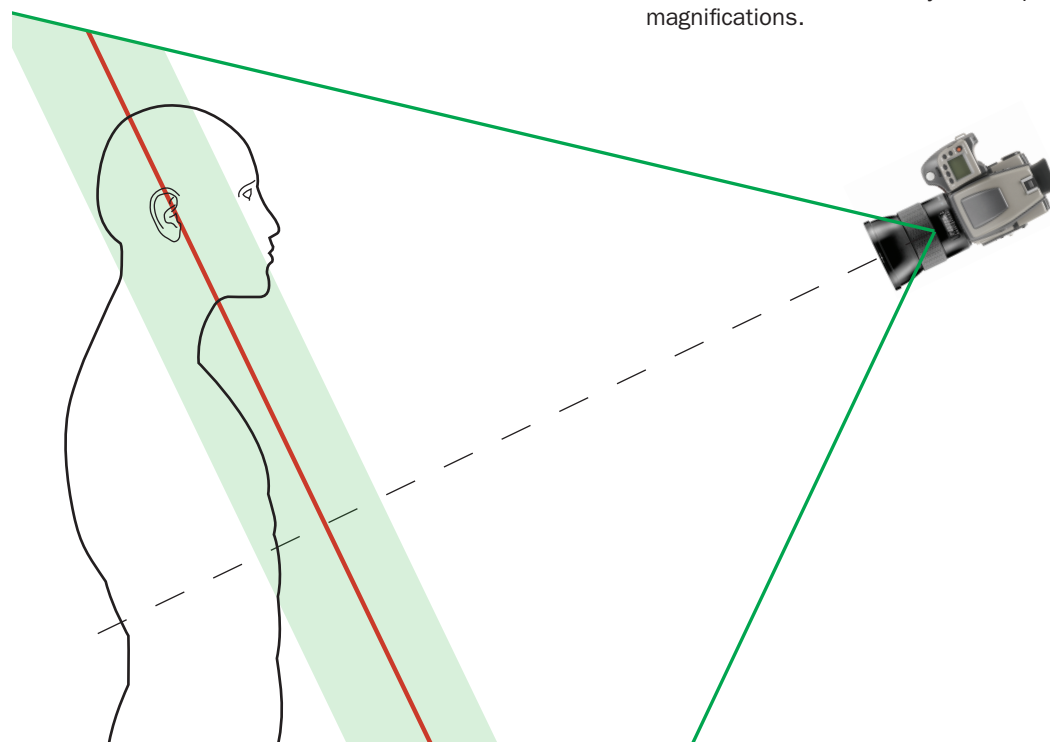
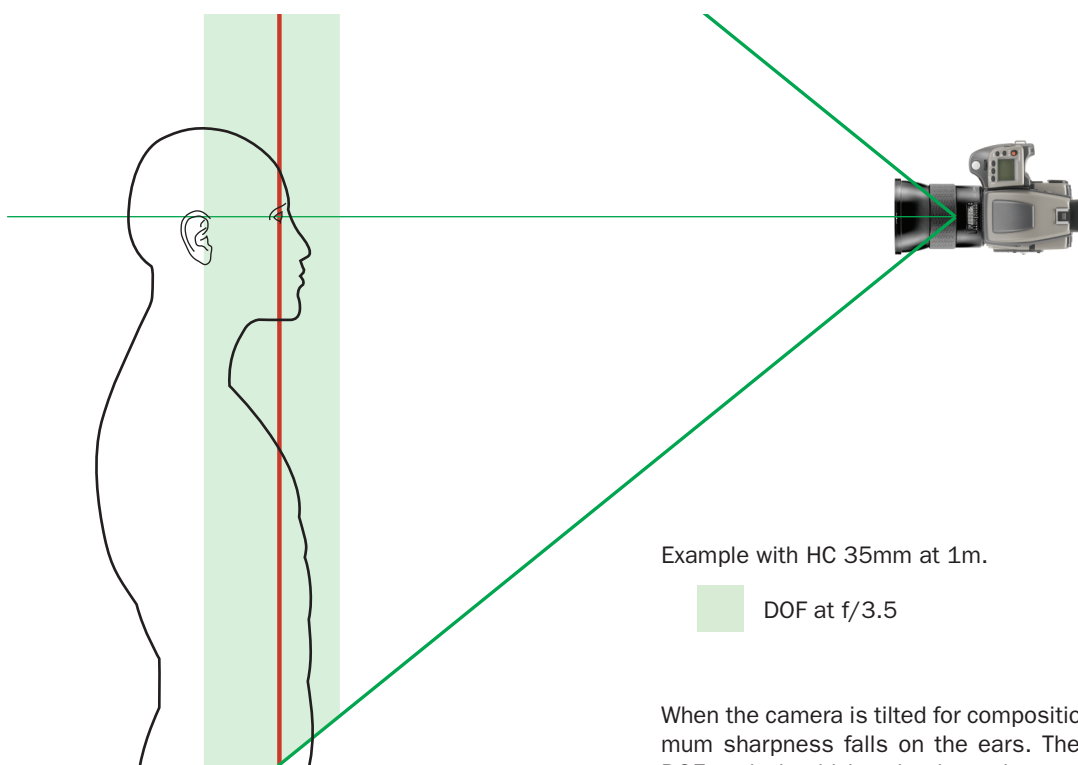
Example with HCD 28mm at 1m.

- DOF at f/4
- DOF at f/8

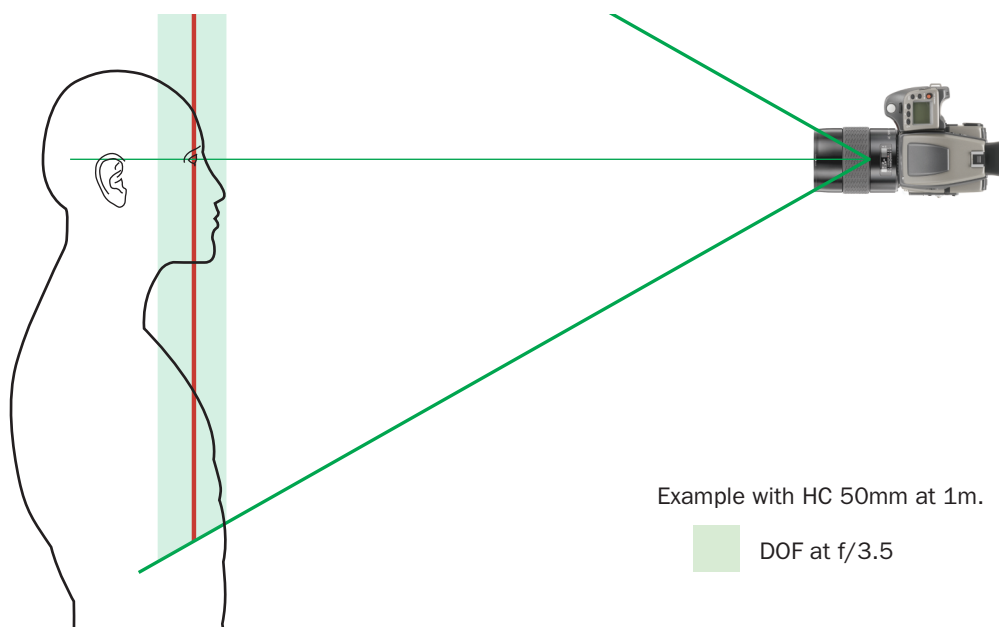
When the camera is tilted for composition, the point of maximum sharpness falls just behind the eyes. However, the DOF at f/4 is almost large enough to render the eye sharp making the difference hard to see. However, when using f/8 the eye will still be sharp after recomposition even without True Focus. At extreme magnifications, it might be possible to detect a difference.



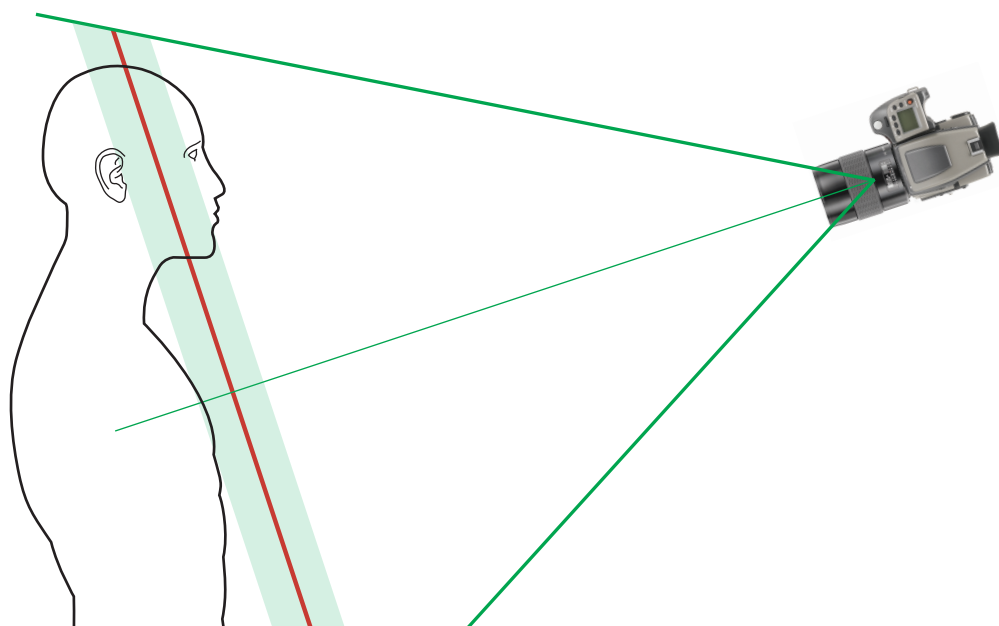
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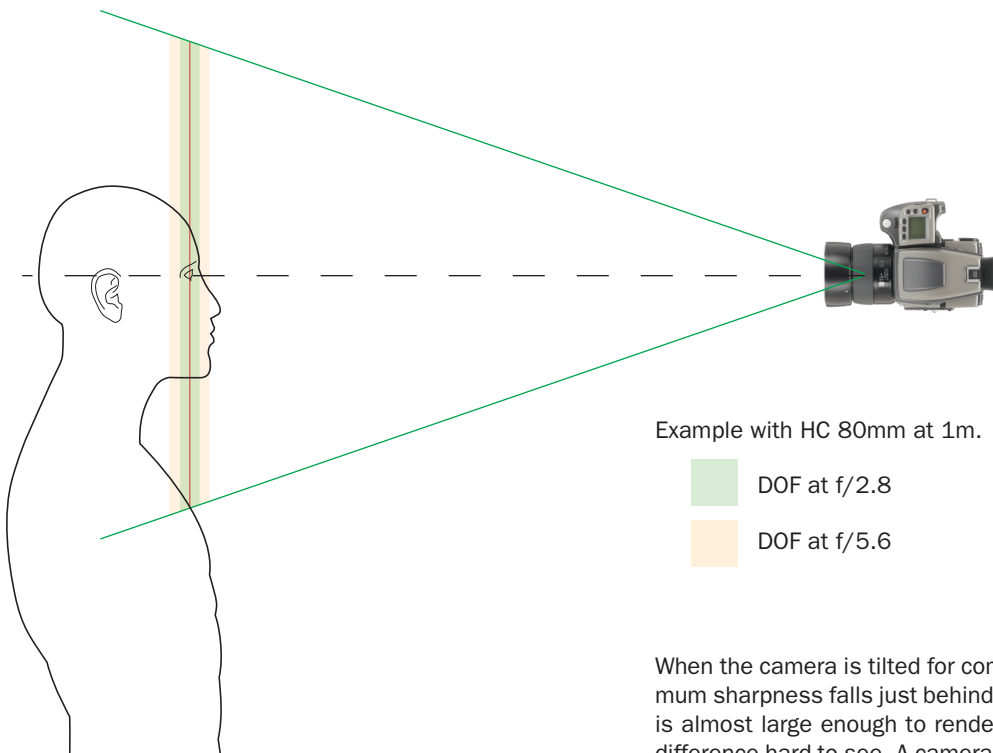
## WHEN TRUE FOCUS MAKES A DIFFERENCE



When the camera is tilted for composition, the point of maximum sharpness falls on the ears. The eye is outside the DOF and should be unsharp when viewed at high magnifications. However slightly less than for HC 35mm.



## WHEN TRUE FOCUS MAKES A DIFFERENCE



Example with HC 80mm at 1m.

- DOF at f/2.8
- DOF at f/5.6

When the camera is tilted for composition, the point of maximum sharpness falls just behind the eyes. However, the DOF is almost large enough to render the eye sharp making the difference hard to see. A camera movement closer or further away from the camera even as small as 1 cm will change the result and True Focus might not fully correct the focus.

