

Horseman SW-D Professional

HORSEMAN
SW-D Pro

System Chart

Specifications



WIDE, WIDER, HORSEMAN SW-D PRO



Super wide angle lenses were not commonly usable with digital camera backs in the past, because of physical limitations of the camera body. But now, with the Horseman's new design, you can use a 24mm lens unit with any digital back equipped with a Hasselblad V® mount.

More than that, the Horseman SW Pro gives you the freedom of bellows-like movements and adjustments for work that benefits from rise, fall or image plane shift.

Here are some details about this camera that opens up possibilities not generally accessible for digital photography in the past.

Super Wide

SW-D Lens Unit 24mm

Super Wide Angles Lenses down to 17mm

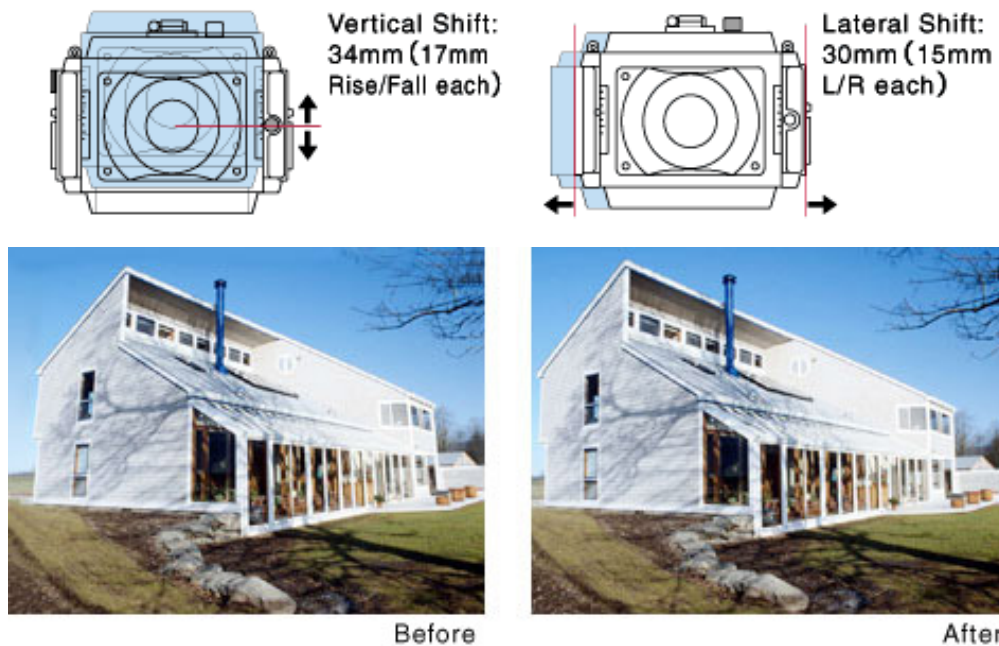
The 24mm lens unit in combination with a 38 x 48mm image sensor gives you the same wide angle as a 17mm lens with the 35mm format. You will find this super wide angle especially useful in interior architecture and landscape photography, but other applications abound.



Camera Movements

Bellows-like Movements Including "Stitching" of Images

Similar to a professional view camera, the Horseman SW-D Pro permits bellows type movements including rise, fall and shift. Maximum rise and fall are 17mm in either direction or (with a 24mm lens unit), 10mm. Sideward shift of the image plane is possible by 15mm in either left or right direction. By combining shift with several exposures, images can be "stitched", resulting in maximum image sizes of up to 48 x 66mm or 36 x 78mm (depending on image sensor orientation).



Smooth Bellows Type Movements

The secret behind the accurate, smooth 'bellows' adjustment lies in the camera's super-slim precision frame. Machined from a solid block of aluminum, it slides on lightweight and gracefully moving cross roller bearings. Despite its light weight, it can cope with the rigors of professional use. The big, handy precision dial lock and scale show exactly how much bellows adjustment has been applied, helping to save time and guesswork.



Digital CameraBack

Large Choice of Camera Backs

The Horseman SW-D Pro can be combined with any digital camera back that is equipped with a Hasselblad V type mount.



Lens Units

Four Types of Lens Units

The Horseman SW-D Pro lens units come quipped with German Schneider and Rodenstock digital lenses. The shortest focal length, the Schneider Apo-Digitar XL24, is one of four available lens units that include Rodenstock Apo-Sironar digital lenses of 35, 45 and 55mm focal lengths. What's more, Horseman SW series (originally for film cameras) lenses can also be used.

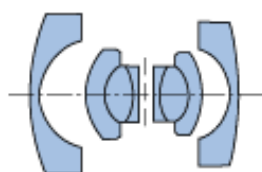
•Equivalent Focal length to 35mm format

Image sensor	Lens unit 24mm	Lens unit 35mm	Lens unit 45mm	Lens unit 55mm
24x36mm	24mm	35mm	45mm	55mm
36x36mm	20mm	30mm	38mm	47mm
36x48mm	17mm	25mm	32mm	40mm

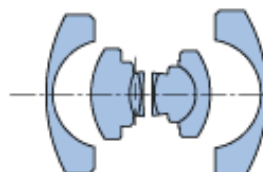
What Is A 'Digital Lens' ?

Digital photography -- as opposed to conventional film or "chemical" processes, makes its own demands on the camera lens. A lens optimized for digital should fulfill these conditions:

1. The image circle can be smaller, but inside that circle optical resolution and contrast should be as high as possible.
2. In conventional large format cameras, optical resolution was considered good if it resulted in about 20 lines per millimeter. In view of the high resolution of today's digital sensors, lens resolution should be several times higher, up to 100 lines per mm.
3. Resolution of the digital image drops visibly at stopped-down apertures (f-stops). For digital photography, a lens should be designed to provide optimum MTF at relatively wide apertures.



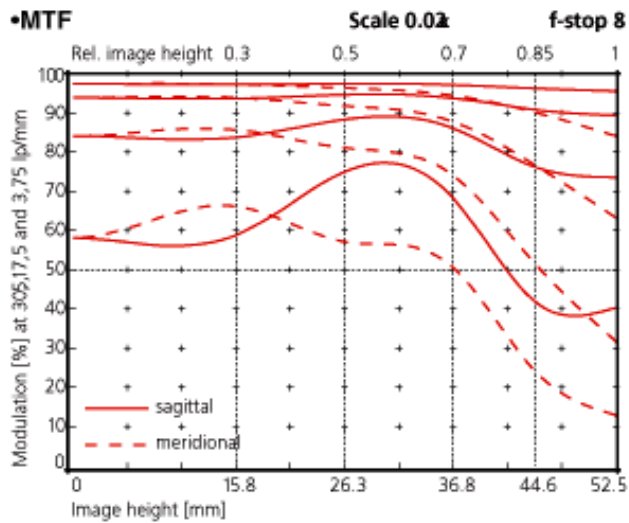
Apo-Digitar



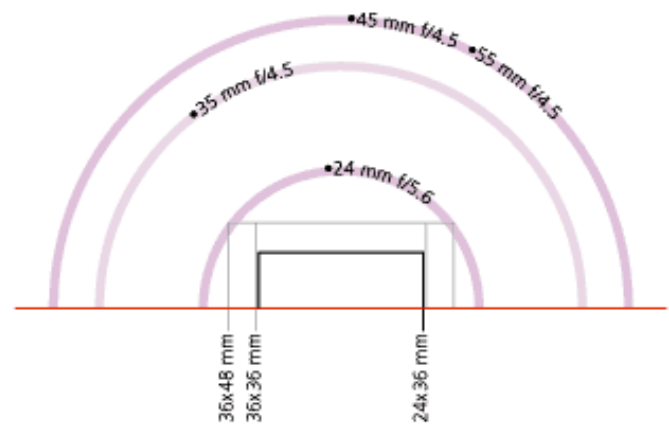
Apo-Sironar Digital

Apo-Sironar digital 35 mm f/4.5

•MTF



•Image circle



The Horseman Original Helicoid Mount

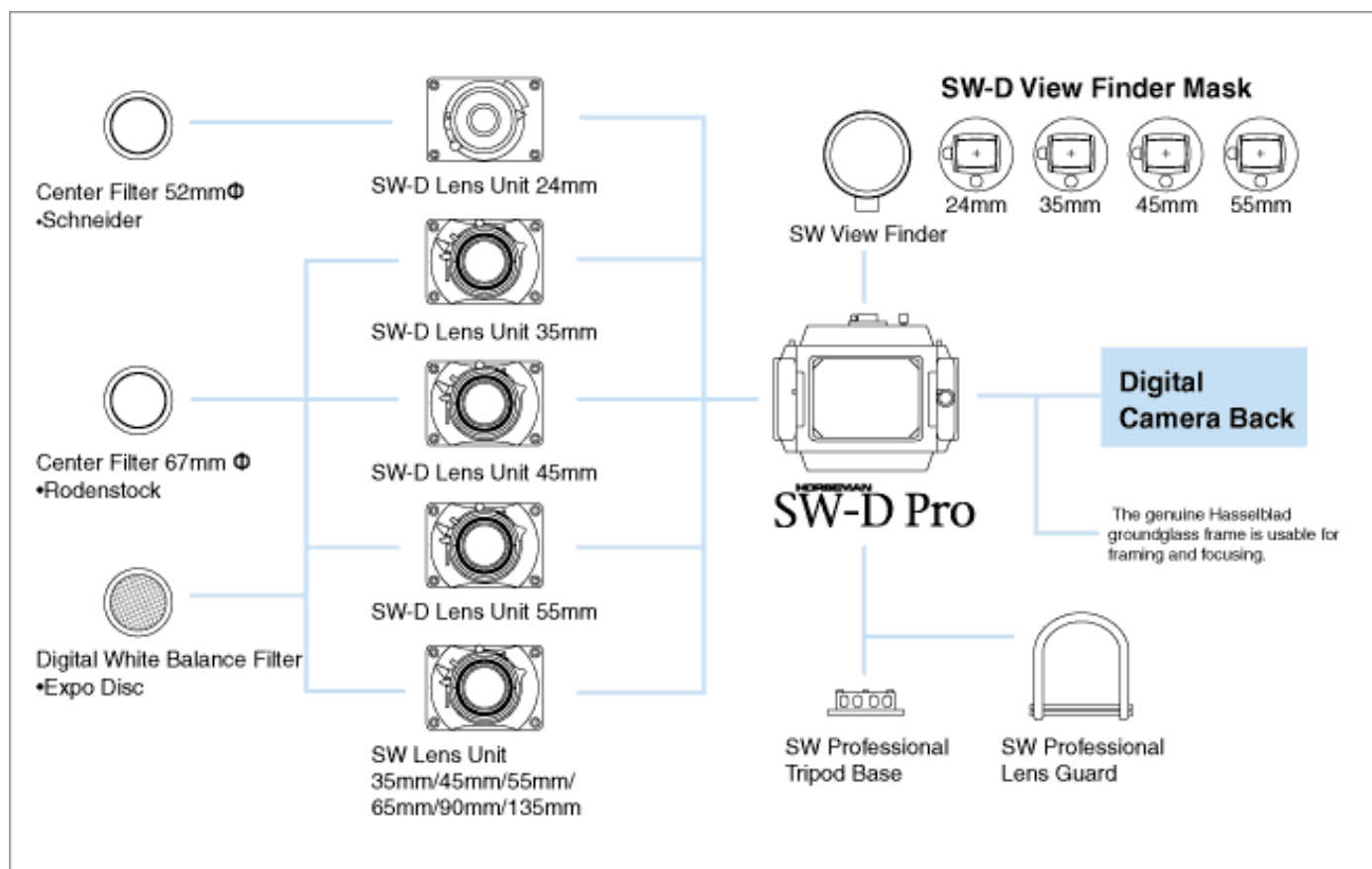
The helicoid mount used in the SW-D lens units is a new and original Horseman development designed for highest possible precision. Each model is equipped with a distance scale and a depth-of-field scale for the lens it is used on.

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System Chart



Specifications

TYPE	Interchangeable Lens Wide-angle Camera with Vertical and Lateral Shift movements
FOCUSING	By Focus Ring (Visual Focusing or Ground Glass Focusing)
CAMERA MOVEMENTS	Vertical Shift 34mm (Rise 17mm + Fall 17mm), Lateral Shift 30mm (15mm L/R each)
SPIRIT LEVELS	3 for all demensions
DIMENSIONS	164 (W) x133 (H) x 77 (D) mm (Camera Body)
WEIGHT	750g

	SW-D 24mm Lens Unit	SW-D 35mm Lens Unit	SW-D 45mm Lens Unit	SW-D 55mm Lens Unit
Lens	Apo-Digitar 24mm F5.6	Apo-Sironar digital 35mm F4.5	Apo-Sironar digital 45mm F4.5	Apo-Sironar digital 55mm F4.5
Lens construction	4 : 8	4 : 8	4 : 8	4 : 8
Image circle	60mmΦ	105mmΦ	125mmΦ	125mmΦ
Vertical Shift	max 20mm (10mm Rise/Fall each)*	max 34mm (17mm Rise/Fall each)	max 34mm (17mm Rise/Fall each)	max 34mm (17mm Rise/Fall each)
Lateral Shift	max 30mm (15mm L/R each)*	max 30mm (15mm L/R each)	max 30mm (15mm L/R each)	max 30mm (15mm L/R each)
Closest Focusing Distance	0.4m	0.3m	0.4m	0.6m
Filter Diameter	52mm	67mm	67mm	67mm
Weight	350g	460g	520g	570g

*Maximum displacement is limited by the size of the image sensor used.

•ACCESSORIES



[21511]
SW View Finder



[21463]
SW Professional Lens Guard

*Cannot be used together with SW Professional Tripod Base.
*Cannot be used together with 24mm lens unit.



[21465]
SW Professional Tripod Base



[29225]
Center Filter E67 +2.5

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