

# Phase One Digital Lens Range

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## **Phase One Digital Lenses, part of a complete solution**

The Phase One Digital lenses are designed for maximum image quality and freedom of choice – using digital back or film, using full frame 645 sensor like Phase One P65+ or less than full frame digital sensors.

When used with the Phase One P+ digital backs, the image quality is further enhanced through advanced digital optimization in Capture One – the professional raw processing software supplied from Phase One.

Not only have all lenses been measured and profiled for automated enhancement in Capture One, also data regarding the specific position of the lens elements are captured and used for image optimization. This leads to absolute leading image quality with unique replication of the true colors, details and lightning of the captured moment.

Phase One Digital lenses uses eco-glass, which contains no lead or arsenic, securing both better image quality and a nature-friendly policy.

All Phase One lenses are supplied with a 3 year warranty.

The lenses can be used with both the Phase One 645 Camera and Mamiya 645 AFD.

## Phase One Digital AF 28mm f/4.5 Aspherical



This full-frame ultra wide angle lens is the world's first medium format 28mm lens that can be used for film and digital backs. The use of aspheric lens elements produces outstanding optical performance.

The 28mm f4.5 D is a full-frame, ultra wide lens that utilizes the latest aspheric lens technology to produce high resolution and large image circle coverage for film and digital backs. Since wide angle lenses can cause color shift problems with digital backs (due to the extreme angle at which light rays hit the sensor), the Phase One Digital 28mm f/4.5 D has been designed to direct light rays so that they are parallel when they hit the sensor – producing maximum sharpness, color accuracy and contrast.

Unlike conventionally designed digital lenses, the 28mm f/4.5 D Aspherical was designed with the requirement that it works with digital and film systems. It is the world's first 28mm medium format lens with this capability. The Phase One Digital AF 28mm f/4.5 D is ideal for a wide range of applications, including commercial, architectural and outdoor photography.

Optical Construction	14 elements /10 groups
Angle of View	102°
Aperture Range	f/4.5 – f/32
Minimum Focusing Distance	1.15 ft. / 0.35 m
Maximum Magnification Ratio	0.15 x
Area Covered	372 x 276 mm
Equivalent 35mm Focal Length	17 mm
Filter	Sheet filter on the rear mount
Lens Hood	Built-in
Dimensions (L x W)	5.35 x 3.54 " / 136 x 90 mm
Weight	1.9 lbs. / 886 g /31.01 oz.

## Phase One Digital AF 45mm f/2.8



With an angle of view of 74 degrees, this lens is equivalent to a 29mm lens in 35mm format. Its wide angle of view and deep field make the lens appropriate for any situation, from snapshots to scenics. Low-dispersion glass minimizes chromatic aberration. A floating mechanism lends uniformity to image resolution, from center to periphery. This lens is also suitable to architectural photography and other subjects dominated by straight lines, and it offers sharp and crisp rendering.

Optical Construction	9 elements / 7 groups
Angle of View	74°
Aperture range	f2.8 – f/22
Diaphragm	Automatic
Focusing System	Auto Focus / Manual
Minimum Focusing Distance	1.4 ft. / 45 cm
Maximum Magnification Ratio	0.13 x
Area Covered	12.2 x 16.5 " / 310 x 418 mm
Equivalent 35mm Focal Length	29mm
Filter Size	67mm
Lens Hood	Bayonet
Dimensions (L x W)	1.9 x 3 " / 49.5 x 77mm
Weight	1.1 lbs. / 492g / 17.35 oz.

## Phase One Digital AF 80mm f/2.8



The 80mm f/2.8 D lens which comes standard with the Phase One 645 camera system is equipped with an auto/manual focus ring that allows fast one-touch selection of auto or manual focus mode. The lens barrel is precision manufactured of turned aluminum treated with black alumite.

The lens is tack sharp edge to edge and provides you every detail in the captured scene in much more details than the eye will ever catch. Try it with the Phase One 60.5 megapixels full frame P65+ camera and you'll be convinced.

The rubberized focusing ring makes manual focusing fast and easy and the 16 bit CPU in the lens allows easy firmware upgrading, finer optimization of lens characteristics in Capture One and faster, more reliable communication between the lens, camera body and digital back.

Optical Construction	6 elements / 5 groups
Angle of View	47°
Minimum Aperture	22
Diaphragm	Automatic
Focusing System	Auto Focus / Manual
Minimum Focusing Distance	2.3 ft. / 70 cm
Maximum Magnification Ratio	0.15 x
Area Covered	11 x 14.8 " / 279 x 377 mm
Equivalent 35mm Focal Length	50 mm / 58 mm with ZD Back
Filter Size	67 mm
Lens Hood	Bayonet
Dimensions (L x W)	2 x 3.2 " / 51.5 x 80.5mm
Weight	0.7 lbs / 330 g / 11.6 oz.

## Phase One Digital MF (Manual Focus) 120mm f/4 Macro



With an angle of view of 33 degrees, this lens is equivalent to a 73mm focal length in 35mm format. Pinpoint sharpness with manual focus is confirmed from infinity to 1:1 magnification, without additional adapters, by a green diode in the finder. This lens provides a flattering perspective suitable for tight portraits, and permits good working distances in or out of the studio. It can be used for anything from extreme detailed close-ups to full-length portraits. The lens is manually focused (MF) and utilizes the digital focus confirmation in the Phase One 645 AF body plus auto-diaphragm operation.

Anomalous dispersion optical glass is employed to reduce chromatic aberrations, which results in APO-quality lens performance when focused from infinity to 1:2 magnification, and significantly reduces chromatic aberration from 1:2 to 1:1 magnification. The optical engineering and multi-coatings of this lens achieve excellent color balance, high contrast and high resolution over the entire focusing range, which is an extraordinary accomplishment for a Macro lens. The barrel design reduces flare significantly.

Optical Construction	9 elements / 8 groups
Angle of View	33°
Aperture range	f/4 – f/32
Diaphragm	Automatic
Focusing System	Manual (digital focus confirmation)
Minimum Focusing Distance	1.3 ft. / 40 cm
Maximum Magnification Ratio	1:1
Area Covered	1.65 x 2.25 " / 42 x 56 mm
Equivalent 35mm Focal Length	73mm
Filter Size	67mm
Lens Hood	Built-in
Dimensions (L x W)	4.4 x 3.25 " / 111 x 83 mm
Weight	1.8 lbs / 835g / 29.2 oz.

## Phase One Digital AF 150mm f/2.8 IF



The Phase One Digital AF 150mm f/2.8 IF D is an auto focus medium-telephoto lens with an angle of view of 26 degrees, equivalent to a 93mm telephoto lens in the 35mm format. By using low-dispersion glass, most chromatic aberration is corrected, and high contrast images can be obtained from infinity to the closest distance. The minimum focusing distance is 1m, which is 0.5m shorter than the existing AF 150mm F3.5 Lens. The use of inner focusing system and its well balanced weight make this lens perfect for hand-held photography. The focusing ring allows for front to back switching between auto and manual focus. With shallow depth of field of a faster lens, this lens works well especially in portrait photography.

Optical Construction	8 elements / 7 groups
Angle of View	26 degrees
Aperture range	f/2.8 – f/22
Minimum Focusing Distance	100 cm
Maximum Magnification Ratio	0.19 x
Area Covered	218 x 295mm
Equivalent Focusing Length for 135 format	93mm
Filter Diameter	72mm
Lens Hood Type	Bayonet
Dimensions (L x W)	4.7 x 3.3 " / 120 x 85 mm
Weight	1.7 lbs / 780 g / 27.3 oz.
CPU	16 bit (rewritable)

## Phase One Digital Zoom AF 75-150mm f/4.5



This zoom range is ideal for use in a diverse range of photographic scenes, from portraits to landscapes to candid. This versatility makes it indispensable in portrait studios since it lets you “crop” in the camera without changing camera position.

The Phase One Digital Zoom AF 75-150mm f/4.5 D Lens is a medium telephoto zoom lens, with an angle of view of 50 to 26 degrees. The equivalent focal length for a 35mm format is 47 - 93mm.

Its minimum focusing distance is just 3.3 feet, which allows use in a diverse range of photographic scenes, from portraits to landscapes to candid.

Optical Construction	11 elements / 10 groups
Angle of View	50° - 26 °
Aperture Range	f/4.5 – f/32
Minimum Focusing Distance	3.3 ft. / 100 cm
Maximum Magnification Ratio	0.09 ~ 0.16 x
Area Covered	545 x 409 mm (at 75mm) / 293 x 220 mm (at 150mm)
Equivalent in 35mm	47 – 93 mm
Filter Diameter	77 mm
Lens Hood	Bayonet type
Dimensions (L x W)	5.7 x 3.4 " / 145 x 86 mm
Weight	2.5 lbs. / 1,114 g / 38.99 oz.