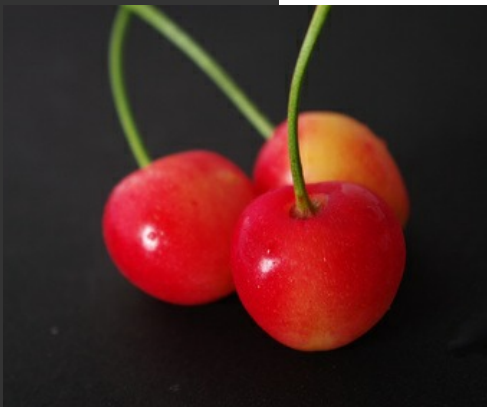




**“Providing
Photographers with a
Brighter View”**



Beattie Intenscreen bright focusing screens dramatically enhance what you see through your camera viewfinder

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CAMERASCREENS

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General Information



When Intenscreen™ are used in 35mm SLR's, Medium Format, or View Cameras, the user can expect an increase of viewing brightness of 1½ to 4 f-stops depending on the camera used. With the increased brightness it will become easier to focus in low light or poor contrast conditions, indoors or outdoors. Intenscreen helps the user achieve fast and accurate focusing while preserving detail and a brighter image. Intenscreen™ bright focusing screens is a combination of a specifically designed imaging surface and a fresnel lens. This reduces the amount of light required for image-forming and transmits the bulk of the light to your eye. Not only does this improve your depth of field, but it increases the sharpness of your own vision. The Intenscreen™ is custom-tailored for each type of camera to work best with it's features and optics.



Olympus Original Screen



Intenscreen for the Olympus

The bright image produced by Intenscreen begins with Beattie's precision fresnel lens design. Made from high quality optical grade acrylic, Beattie fresnel lenses are optically engineered to concentrate and redirect light (and the image) to the exact position of your eye. Traditional ground glass focusing screens simply act as a surface for viewing the image and don't efficiently utilize all of the available light. The result is usually a dim image with very little contrast and dark corners where light "fall-off" is particularly evident.

In addition to the precision optical design, each Beattie Intenscreen goes through a special chemical coating and curing process adding even more brightness. The start-to-finish manufacturing process is so innovative that it has received two U.S patents!

A Beattie Intenscreen for Every Application

To accommodate the diverse needs of the photographer, there are several varieties of Beattie Intenscreen available within each camera product category. Most 35mm and medium format Beattie focusing screens are available with either a plain matte focusing surface, or with split-image focusing.

Plain focusing screens, which are similar in appearance to traditional ground glass screens, offer an unobstructed viewing image and are ideal for outdoor and landscape photography.

In most cases, both plain and split-image screens are available with optional grid pattern for architectural and other precision photography. (Further information can be found in the individual product sections to follow).

Installation is Simple

In camera models with interchangeable screens installation of the Intenscreen™ is as simple as removing the present viewing screen and replacing it with the Intenscreen. For some models of camera Intenscreen comes in component form, in which case installation instructions are included with the screen. The Pentax 6 x 7 and the Hasselblad 500C are the only cameras that require a technician to install.

Brightness Gains & In-Camera Light Metering

Depending on the camera, optics and accessories gains range from 1½ f-stops to 4 f-stops. Small format cameras gain approximately 1½ f-stops; Medium format cameras 2 - 3 f-stops; and 6 x 9, 4" x 5", 5" x 7" and 8" x 10" 3 - 4 f-stops. Metering systems that read off the screen (see your user's manual) are affected by the Intenscreen™. The following methods can be used to compensate. Using your existing screen, set the camera lens at infinity and looking at an even light, such as a grey card or blue sky, note the meter reading. Install the Intenscreen™ and turn the ASA index dial until the meter needle returns to the old screen reading. Record this offset and tape to the back of your camera.

Changing the Exposure Value (EV) 1 EV = 1 f-stop

In modern cameras there is a button that can manually change the amount of exposure. Using your existing screen set the camera at infinity and looking at an even light, such as a grey card or blue sky, note the exposure reading. Install the Intenscreen™ and push the exposure button until the exposure needle returns to the old screen reading. Record this offset and tape to the back of your camera. An essential part of the design of the Intenscreen™ bright focusing screen is that a very small proportion of the light is used through scattering to form the image and provide focus contrast. The remainder is transmitted through the screen and collected in a narrow cone by the special fresnel lenses used. The meter sensor cannot be in your line of sight and so is slightly off axis. This means that it may be in the "boundary layer" at the edge of the light cone and will therefore not record a significant change even though your eye may see major brightness changes.

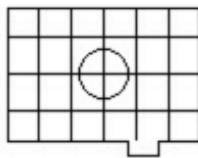
35mm Intenscreens



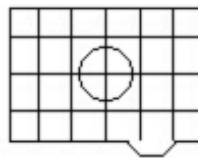
Many sports, nature and astro-photographers use 35mm cameras because the wide selection of telephoto lenses make it easy to get close to the subject. However, longer telephoto lenses, particularly zoom lenses, often have a smaller maximum aperture making them slow and difficult to focus in low light. A Beattie Intenscreen bright focusing screen will increase image brightness by 1 - 1½ stops making it easier to focus on distant subjects, even when using a telephoto lens.

GRIDS ON 35mm SCREENS

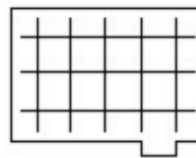
Line thickness - 0.001" - 0.002" and grid spacing 0.20" - 0.25"



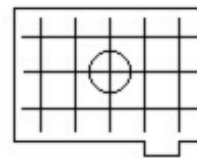
OLYMPUS



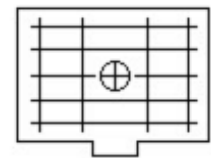
NIKON



CONTAX



PENTAX



LEICA

SCREEN TYPES

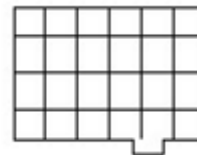
Following are the 4 types of Intenscreen. Plain (some plain screens have a centre circle), Split-image Plain, Grid only, & Grid and Split-image.



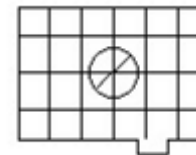
PLAIN



SPLIT-IMAGE

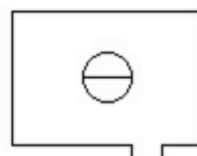


GRID

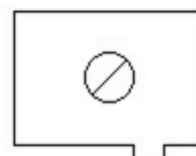


GRID &
SPLIT-I MAGE

If you choose split-image you have the option of choosing a 90° split-image (horizontal) or a 45° split-image (diagonal).

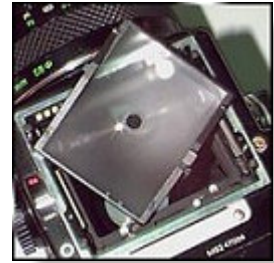


90°
SPLIT-I MAGE



45°
SPLIT-I MAGE

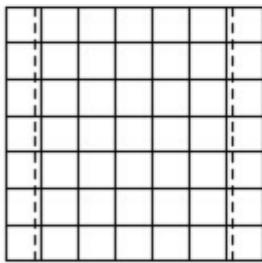
Medium Format Intenscreens



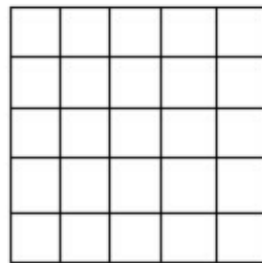
If you've ever shot a wedding you know that dark churches and poorly lit reception halls can make focusing a nightmare. With a brightness gain of 2 - 2½ stops, Beattie Intenscreen makes a world of difference in medium format shooting.

GRIDS ON MEDIUM FORMAT SCREENS

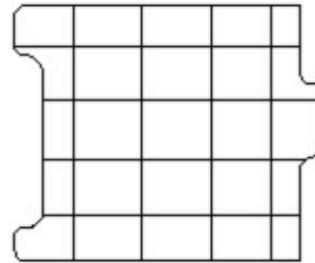
Line thickness - 0.003" - 0.005" and grid spacing 0.30" - 0.40"



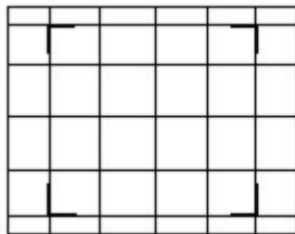
RB67



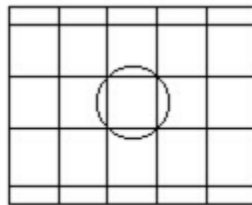
C330S



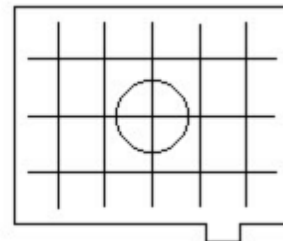
C330/ C330F



BRONICA ETRS

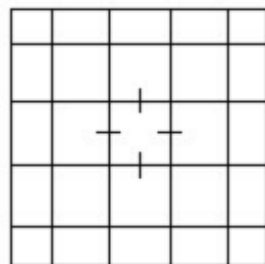


MAMIYA 645

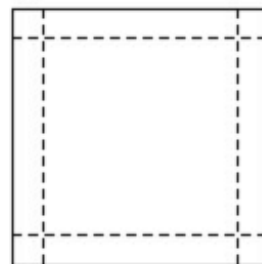


PENTAX 645

GRID TYPES FOR HASSELBLAD SCREENS



STANDARD
HASSELBLAD



8x10 FORMAT
GRID

Large Format Intenscreens



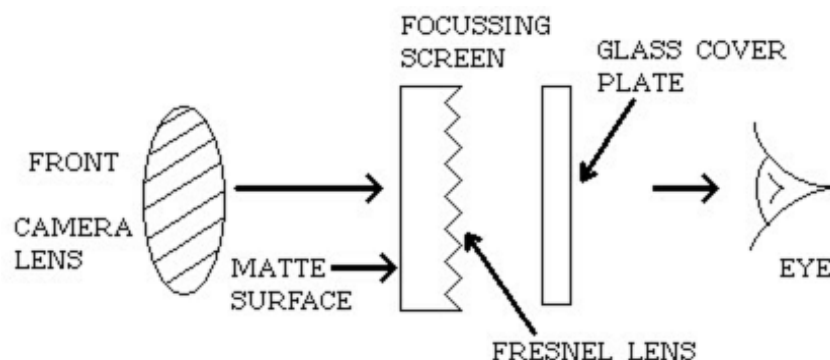
Large format ground glass focussing screens are notoriously dark and difficult to focus. The Beattie Intenscreen combination of a fresnel lens and an anti-reflective glass cover plate increases the view through your 6 x 9cm, 4" x 5", 5" x 7", and 8" x 10" camera by up to 4 stops! You'll never have to hide under a focusing cloth again.

The brightness gain is remarkably uniform from centre to corner, about 5 times better than ground glass at f22. The focusing screen common to all types of large formats, is heavy duty warp free acrylic matte surface with a high quality fresnel lens on the other surface cast in one piece. The glass cover plate is scratch resistant and anti-reflective coated on both sides. This gives maximum light transmission and back light reflection suppression. This choice is ideal for studio and location work, greatly reduces the eyestrain on complex set ups and long working hours.



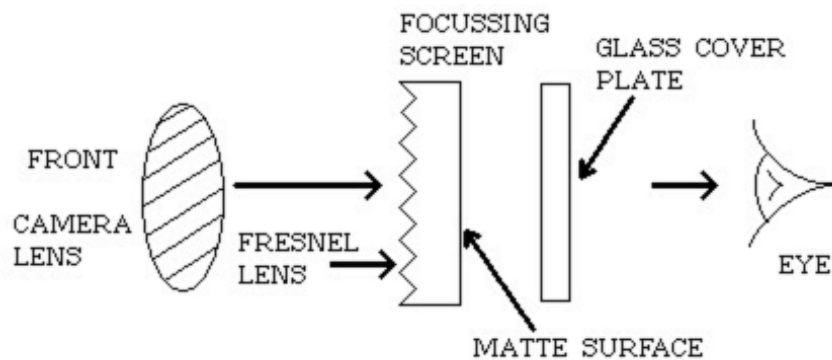
The above description fits what we call Type 1 cameras, i.e those cameras that originally had a ground glass screen only, or a ground glass screen plus a separate fresnel between the glass and the eye. The Type 2 cameras (for 10cm x 12.5cm cameras only) are those having a fresnel lens between the taking lens and the ground glass originally. We provide a part called Acrylic Set Back for these type cameras. This clear acrylic part substitutes for the original fresnel and provides the necessary mechanical thickness and optical set back to focus the image to correspond with the film plane in the film holder. The focusing screen and cover plate are then used as described.

TYPE 1 Cameras - Calumet, Sinar, Deardorff, Zone VI, Graflex, Speed Graphics, Dr. Phillips, Linhof, Cambo, Graphic View, Techihara, Nord I & II, Inka, Wisner & Plaubel.



TYPE 1 Installation

TYPE 2 Cameras - Toyo, Horseman & Polaroid MP 3, 4, 5



TYPE 2 Installation

Almost any camera can be fitted provided accurate dimensions are taken for the acrylic set back, the focusing screen, and any cover plate. As a rule, a minimum of 1/32" clearance between the wood or metal holder and the screen is necessary for expansion and contraction.

View Screen Grids

Intenscreens can be ordered either plain (no markings) or with grids. At present the most popular are:

1. 1cm grid with open centre plus format rectangles - (6 x 7 and 6 x 9)
2. Standard Sinar Grid : 1cm grid with special Sinar rectangle

The main grid lines are .006" to 0.010" wide. Lines appear black when viewing

Extra Fresnel



A final optional part can be provided for short wide angle lenses such as the "Superangulon" by Schneider series. This extra fresnel lens, when attached in place of the outer cover plates or on top of them, will give a clear corner to corner view of these lens images. This part is shatter resistant. This part is recommended when using these wide angle lenses, especially if the Schneider centre filter is in use to compensate for the light fall off inherent in this type of lens.

When a wide-angle taking lens is used in a view camera - 4" x 5", 5" x 7", 8" x 10"- a clear fresnel lens must be used to remove the vignetting at corners. For a 4 x 5 view camera, a clear fresnel (0.060" thick) will be needed. For a 5" x 7" or 8" x 10" view camera, a clear fresnel (about 0.080" thick) will be needed. The clear fresnel lens will replace the anti-reflective cover glass. The size of a clear fresnel lens is the same as that of the AR glass cover.

1. Any lens with a focal length shorter than 150mm (6") is considered as a wide angle lens in 4 x 5 cameras.
2. Any lens with a focal length shorter than 200mm (8") is considered as a wide angle lens in 5 x 7 cameras
3. Any lens with a focal length shorter than 250mm (10") is considered as a wide angle lens in 8 x 10 cameras.

Installation Position of an Extra Fresnel Lens

