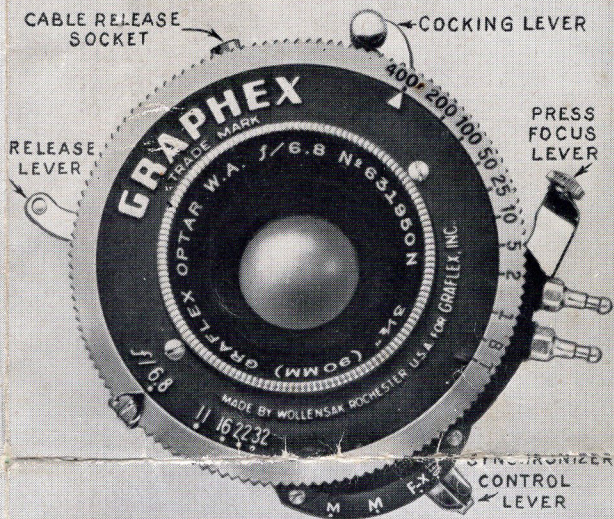


# GRAFLEX OPTAR

## f/6.8 Wide Angle Lenses



65mm { 75° Angle of View on 2¼ x 3¼  
88½° Angle of View on 3¼ x 4¼

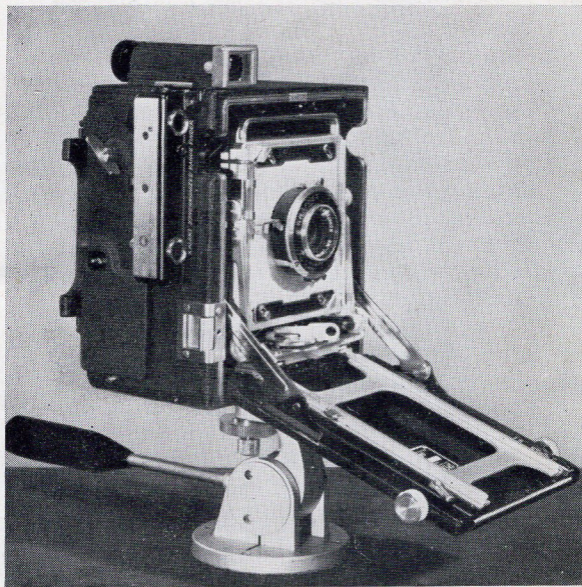
90mm { 74° Angle of View on 3¼ x 4¼  
84° Angle of View on 4 x 5

- COATED LENS ELEMENTS
- SHUTTER SPEEDS 1 SEC. TO 1/400 PLUS TIME AND BULB
- PRESS FOCUS LEVER
- BUILT IN FLASH SYNCHRONIZATION

A wide-angle lens is a very valuable accessory item in any photographic kit and in many cases it will make the difference between a good picture and a poor picture. The extra coverage obtained by the use of such a lens will enable a photographer to get pictures in crowded or cramped quarters which might otherwise be impossible to obtain with a normal focal length lens. Its greatest advantage is for architectural exteriors, interiors, etc., where the conditions involved make it impossible to obtain a good shot with a normal focal length lens. Police photographers have found that the wide-angle lens is an indispensable piece of equipment for their photographic requirements. With it, they have solved many of their photographic problems in the making of evidence pictures that would otherwise be impossible to obtain.

The GRAFLEX Wide-Angle Optar f./6.8 lenses with elements coated have been developed to combine optimum photographic performance together with convenience of use. They are intended to cover a generous negative area with a good sharp image, and the data appearing on the front of this folder indicates the angle of view covered by both the 65mm. and 90mm. GRAFLEX Wide Angle Optar lenses. However, like all extreme wide-angle lenses of large maximum aperture, best results will be obtained only when using a diaphragm opening of f./11 or smaller. The larger apertures are provided to facilitate visual focusing of the ground glass image. The diaphragm should then be closed to the desired aperture for making the exposure. Although this lens is of the extreme wide-angle type, the image at the edges of the film is remarkably free from distortion.

The Graphex shutter in which the 90mm. GRAFLEX W. A. Optar f./6.8 lens is fitted is a rimset shutter with pre-set speeds from 1 to 1/400 second, plus Time and Bulb. It is cocked for all exposures, including Time and Bulb, by means of the Cocking Lever at the upper right side of the shutter. It is released by depressing the Release Lever at the center left side of the shutter or by pressing a cable release screwed into the



4 x 5 Speed GRAPHIC with front bed lowered for wide-angle work.

cable release socket. When set for T (Time) the first pressure on the shutter release lever will open the shutter, and a second pressure will close it. When set at B (Bulb) a pressure on the shutter release lever will open the shutter blades and relieving the pressure will permit the blades to close.

The Press-Focus Lever, protruding from the right side of the shutter, may be used for opening the shutter to permit ground-glass focusing with the shutter set and cocked at any speed. Move the Press-Focus Lever down and in toward the shutter to open the blades; pull it up and out to close them. This lever functions only after the shutter is cocked, and does not interfere in any way with the normal operation of the shutter.

Special built-in mechanism allows synchronization with flash lamps without the use of an external tripper. The built-in gear train producing this synchronization is controlled by a special dial setting arrangement extending downward from the lower portion of the shutter. The control lever ad-

justs the delay of the operation of the shutter to correspond with the correct ignition lag of the lamp being used.

In the newer GRAPHEX Shutters provision has been made for utilizing more effectively the light produced by flash lamps. Wire and foil filled type flash lamps have a characteristic of building up quickly and strongly to their peak efficiency, after which they fade out more slowly and with considerably less intensity. Two "M" settings have been provided to utilize the more useful portion of the flash by advancing the ignition point at the slower speeds. The shutter then catches more of the useful build up light and less of the weaker fade-out portion. When the black shutter speeds (faster speeds) are used the black "M" setting is used and the red shutter speeds (slower speeds) are used together with the red "M" setting.

The "X" setting provides instantaneous contact for Class "X" high speed electronic flash units, which are those with a vacuum tube in the triggering circuit. The built-in shutter contacts may not satisfactorily operate those electronic high speed flash units with an electrical-mechanical relay. Note too, that any attempt to pass high current with high voltage through the shutter may damage the contact points.

When extreme wide-angle lenses are used they will sometimes include in their angle of view part of the camera bed. The Pace-maker Speed and Crown GRAPHIC cameras have provisions for dropping the bed and locking it into position for wide-angle use. This desirable feature prevents the front of the camera bed from cutting into the field of view and it still permits rack and pinion focusing by the dual focusing control operated on either side of the camera bed.

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