WHY YOU NEED A PRECISION-MADE SHUTTER

A watch measures time in seconds. A shutter must go a step further; it must measure time in fractions of a second. Thus, you can see that a good shutter must be made with the greatest care by artisans.

Whether a professional or amateur, your work is affected critically by the accuracy of the shutter you use. If you set your shutter for a given speed, you want to feel certain you will get that same speed every time... today, next week... as often as you expose. If your shutter does not give uniform speeds, your black and white negatives will be under or over-exposed. Chances are your color transparencies will be ruined.

That's why it is imperative that you choose your shutter with care. A good lens does not compensate for an unreliable shutter. Only a precision-made shutter that gives you uniform exposures will do if you are serious about the quality of your photography.

WHY YOU'LL WANT A RAPAX

- Accuracy... dependability... these are the benefits of owning a Wollensak Rapax shutter. These, plus ease of operation. Originally designed during the war for rigorous combat duty, the Rapax has since proved its superiority in practically every field of photography.

The Rapax is a between-the-lens, rim-set shutter. It is designed with an accurately fitted train of gears and pinions, working in conjunction with a series of levers and carefully tempered springs. Nine speeds—1 second to 1/1000 second—plus Bulb and Time—are offered on all but the largest size; here the top speed is 1/150 of a second. Speeds are set by turning the outside knurled ring until the desired figure on the speed scale is opposite the pointer at the top of the shutter.

Simple to use, the Rapax has only two operating levers. The setting lever "locks" the shutter; that is, it pulls the springs under proper tension for the desired speed. The release lever, when depressed, trips the shutter and makes the exposure. A socket is supplied for a cable release.

PRESS-FOCUS LEVER
for quick ground-glass focusing

You do not have to resolve the speed ring to Time to open the shutter blades for focusing. Support, with the shutter cocked, you wish to quickly check your focus before exposing. Whether or not you are using flash, you merely depress the press-focus lever and the blades open. This can be done at any speed. After focusing, you lift the press-focus lever to close the blades. Your shutter is still cocked and ready for the exposure.
THE STANDARD RAPAX SHUTTER

- This shutter is for use with a solenoid, preferred by some photographers who like the convenience of tripping the shutter from a push-button on the battery case, or by means of a remote control cord. If you already have flash equipment for battery-operated synchronization with a solenoid, this shutter will give you excellent performance. However, if you feel you may use one of the increasingly popular high-speed lamps in the future, you will be wise to choose the "X" Synchronatic-Rapax shutter.

THE "X" SYNCHROMATIC-RAPAX

- This shutter offers built-in electrical contacts for flashing the "X" type (also known as "trigger" type, "O" type, and thyatron trigger type) electronic high-speed lamps at any shutter speed. For ordinary flash lamps, the "X" Synchronatic Rapax is operated with a solenoid in the same manner as the Standard Rapax. Using the "X" Synchronatic for high-speed lamps is simplicity itself. With the cord connected from the circuit of the flash unit to the contact points on the shutter, it is only necessary to cock the shutter and shoot. The electrical contacts within the shutter automatically close at the proper split second to synchronize the lamp at any shutter speed. You are assured of positive, assured synchronization.

CONSTRUCTION DETAILS

A. Diaphragm indicator
B. Release lever
C. Ranging device
D. Cable release housing
E. Setting gear
F. Main lever
G. High-speed spring
H. Main spring
I. Press-focus lever
J. Connector posts
K. Point of contact
L. Time-delay indicator
M. Synchronizer housing mechanism

THE FULL SYNCHROMATIC-RAPAX

- This shutter offers the same completely automatic synchronization as the "X" Synchronatic Rapax for high-speed lamps, plus automatic synchronization of Class M (20 millisecond) and Class F (5 millisecond) lamps. The advantages of built-in synchronization over external synchronization, using a magnetic tripper, are: (1) more consistently accurate synchronization; (2) less current drain from the battery; (3) convenience; (4) compactness.

Proper delay for each class of lamp is provided on an easy-to-read, easy-to-set dial at the bottom of the shutter. On this dial are a white "M", a red "M", a red "F" and white "X" combination, and a white "OFF". The white "M" is used with shutter speed settings of 50 and faster for synchronizing Class M (20 m.s.) lamps. These speed settings are marked in black on the speed ring. The red "M" and the red "F" are used with shutter speed settings of 50 and slower to synchronize the Class M (20 m.s.) lamps and the Class F (5 m.s.) lamps respectively. These speed settings are marked in red on the speed ring. The white "X" setting is used at any shutter speed setting to synchronize the "X" type (or trigger type) electronic high-speed flash units.

A great advantage of this shutter is that there is no separate cocking lever for the synchronization mechanism. COCKING THE SHUTTER AUTOMATICALLY COCKS THE SYNCHRONIZER. This greatly simplifies flash picture taking, and eliminates the possibility of neglecting to cock the synchronizer.

"M-F" SYNCHROMATIC-RAPAX

- Made for manufacturers of small cameras and by Nos. 1 and No. 2 sizes, this shutter offers a simplified type of internal synchronizer which is preset at the factory and has no external synchronizer selector lever or the two connector posts. It synchronizes Class F lamps at all speed settings and the Class M lamps at speed settings of 25 and slower. It is not synchronized for high-speed instantaneous-firing lamps.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Speed</th>
<th>Maximum Diaphragm Opening</th>
<th>Lens Mount Diameter</th>
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SYNCHRONIZER
ALWAYS IN OPERATION

- Professional photographers no longer need to fuss with external synchronizers. The No. 4 and No. 5 Synchronic-Alphax offer a built-in mechanical delay mechanism which assures positive automatic synchronization of most any popular type flash lamp.

There is no separate cocking lever to reset the delay mechanism. The synchronizer automatically operates when the shutter is tripped. In fact, there is no cocking lever on the shutter at all. The operating lever is depressed by hand or cable release; the flash lamp peaks at the widest opening of the shutter blade before the picture is taken. It's so simple as operating a box camera.

The synchronizer lever, which determines the proper delay for each type lamp, is conveniently located on the rim of the shutter for easy checking before exposure. The "M" setting is used for all Class M (20 millisecond) lamps at any shutter speed. The "N" setting is used for trigger type high-speed electronic flash units at any shutter speed. If Class F (5 millisecond) lamps should be used, they will be in synchronization at speed settings of 25 and slower where the synchronizer lever is at "N."

THE STANDARD ALPHAX

- The Standard Alphax, without built-in synchronization, is available for those who do not expect to do flash work. This shutter is identical to the Synchronic-Alphax in every other respect.

"M-F" SYNCHROMATIC-ALPHAX

- This shutter in the No. 0 and No. 1 size is furnished to manufacturers of smaller sized hand-held cameras. Synchronization is pre-set at the factory eliminating the need for an external synchronizer selector lever and the two connector posts. Class F lamps are in synchronization at all shutter speeds, and Class M lamps as speed settings of 25 and slower. No provision is made for synchronization of high speed instantaneous-firing lamps.

<table>
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WOLLENBAK LENS BARRES

- Here again "precision" is the watchword. Perfect concentricity is guaranteed to assure the best results from the photographic objective. Each barrel is supplied with 4" dia. diaphragms of non-warping metal to give long life and trouble-free performance.
STANDARD FLANGES

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<tr>
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LENS CAPS

- Wollensak lens caps are made to fit any Wollensak lens. They are of rigid chromed metal, lined with a velvet felt material. The cap fits snugly over the lens to keep out dust and moisture, and prevents accidental injury to the lens surface when not in use.

ACCESSORIES

- The following Wollensak accessories are available:
  - Diaphragm Scales
  - Wollensak Cleaning Tissue
  - Wollensak Lens Cleaner
  - Electrical connecting cords for Synchronamic Rapax Shutters

ADVISORY SERVICE

- Your Wollensak dealer will be glad to demonstrate any Wollensak product and answer your questions. If there are any optical or shutter problems, however, which you wish to send to a Service Department, we will give them our prompt attention. This service involves no obligation.

TWO-YEAR GUARANTEE

- If, with proper care, any Rapax Shutter fails to give complete satisfaction within two years after leaving our factory, repair or replacement will be made free of charge.