



# PHOT ARGUS

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## EXAKTA VX 1000

TRAVEMAT  
EXAMAT



**a full  
report**

by

Gérard BOUHOT

The EXAKTA (the first of the single lens reflex camera) is in production since 1936, and has become a reference in its class. Many models have appeared in succession, the latest one is the EXAKTA VX 1000.

It is a 35 mm single lens reflex camera, with instant return mirror, that can receive a TTL exposure meter, not linked and integrating with diaphragm open or closed.

As for most top class reflexes, it is the association of various features that makes sense to the user. This add-on system enables also the EXAKTA to follow the progress of photographic equipment.

The shape of the case has been modernized, into a trapezoidal pattern, with transformed rounded edges.

The opening of the back is released by a lock lever imbedded into the left edge of the case, well protected against accidental operation. The old opening button, located at the bottom back of the case, is now only used as a memory dic of the type of film in use: half white/half black circle for black and white film; red circle for universal colour film for day-

light and artificial light; sun for daylight colour film; bulb for artificial light colour film. These symbols appear in front of a fixed red point, and a black blank permits to signal the emptiness of the camera.

The sensitivities are displayed in front of a mark on the dial located in the center of the slow speeds knob (9 to 36 DIN, in 3 DIN steps, and 6 to 3200 ASA in double figures progression).

The back can be opened on 190 degrees, and gives complete access to the film compartments. The sliding shaft that enables the back to be discarded has been suppressed in order to make the set up more rigid.

When loading, it is better to get in the shadow; pull the rewind knob located on the right side of the base, drop the film cartridge into its compartment, and push the knob back in, while turning it if necessary, to have it mesh with the cartridge shaft. Grip the film leader, remove the take up spool. Engage the leader under the spring of the take up spool (because of the position of the cartridge on the right side, the leader is being held by the

right hand and the take up spool by the left hand, which is very practical and more logical than the more often used opposite configuration). The catch spring permits the use of indifferently shaped leaders, or even of film that has just been cut.

Put the tongue of the take up spool into the fork of the drive shaft by presenting it slightly tilted; while setting in, it gets into the right position. Check that the teeth of the sprocket are properly meshing with the film perforations and begin to cock (up at least to the time when the perforations are engaged on both sides). The film bears then on the machined slides rails of the case. Close the back by simple pressure. Surfaces on the back insure the proper guiding of the film.

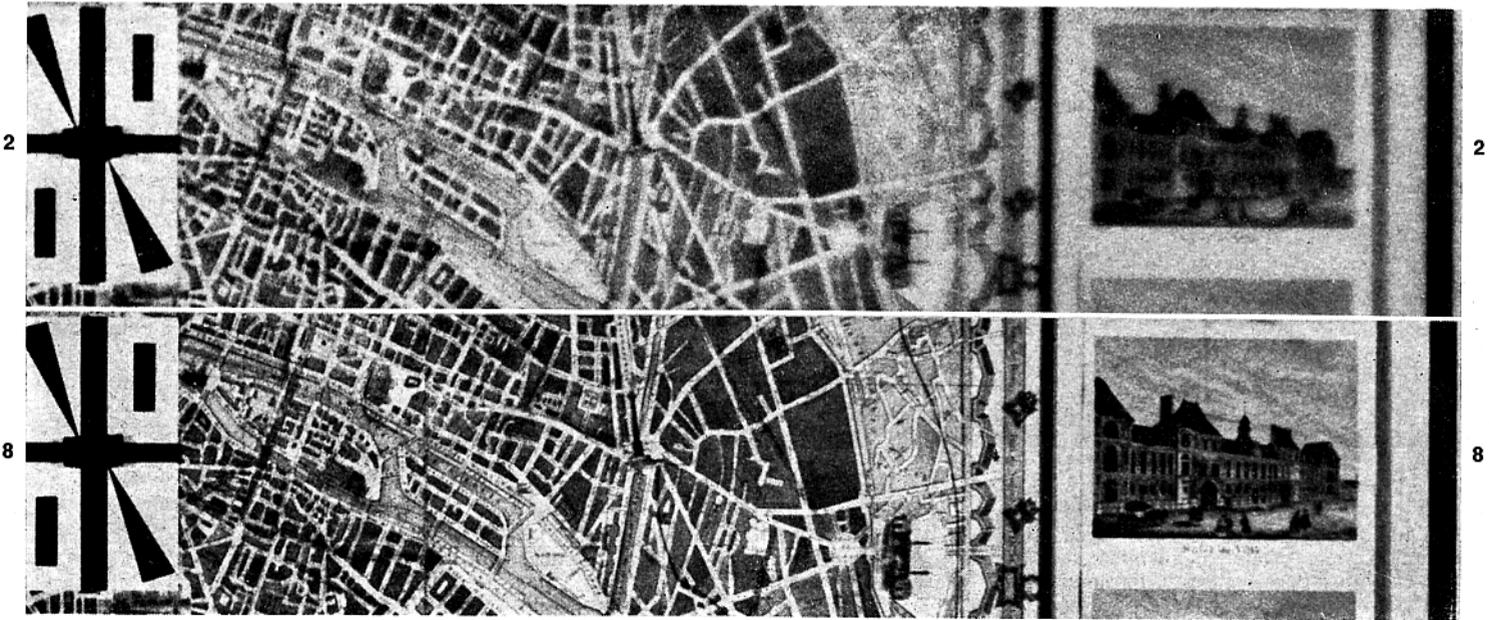
As the removable take up spool can be replaced by a cartridge, and as the body incorporates a mobile cutter, one may, after threading the film into a take up cartridge, shoot the desired number of pictures, cut the film to develop it and remove, or thread-in again, the remaining film. One may then easily achieve exposure trials.

Linear enlargement  $\times 10$  approximately

Center

PANCOLAR :  $f = 50 \text{ mm} - f/2 \text{ n}^\circ 8 \text{ 062 866}$

Edge



Center

FLEKTOGON :  $f = 20 \text{ mm} - f/4 \text{ n}^\circ 7 \text{ 192 076}$

Edge



Center

Edge

▼ maximum vertical shifting



without shifting ▲

Center

MACRO TELE QUINAR : f = 135 mm - f/2.8 n° 2 333 312

Edge



Center

TAMRON ZOOM : f = 95 to 250 mm - f/5.6 Test at 135 mm - n° 800 000

Edge



When the back is closed, cock and release twice. The film advance lever is on the top left of the body, its movement is relatively smooth and silent at the beginning, getting stiff at the end of the stroke when reaching the mechanism for the instant return mirror. The total stroke is swept in 230 degrees. One should cock in a single stroke, but if one stops in the way, the lever remains in the position where it has been left.

If one cocks again just after having cocked, which can be checked through the viewfinder by the cocking indicator, the lever moves again all the way and returns to zero. One avoids then to force on the lever as is too often the case with other cameras. From rest, it is very easy to grasp this redesigned lever with the soft part of the left thumb; the overall stroke imposes a slight hand displacement on the body.

The frame counter has black figures and is located coaxially with the film advance lever. At the beginning of the film, one brings with the left forefinger the 36 or 20 (or any figure if one has made a cartridge of a different capacity) figures into the magnifying window, according to the cartridge in use. At each release, the counter proceeds by one step (the dial shows values every second step). This type of counter must be reset manually, because the mechanism cannot forecast how many frames the cartridge will allow (standard cartridges do not have this kind of indexing), but it is the only type of counter that does not pose any problem when using the camera intermittently, or when using several cameras: the figure on the dial indicates the remaining number of frames. One need not remember whether the cartridge had 20, 36 or X frames.

After loading, stretch the film by slowly

winding the rewind knob. By doing so, the red knurled disc, located on the top right of the body, will advance at each cocking and indicate normal transport of the film.

The picture is always visible in the viewfinder, whether the shutter is cocked or not, since the mirror is of the instant-return type. A red signal is visible on the top right corner of the picture when the shutter is not cocked.

This shutter has textile blinds. The fast speeds are set before or after cocking on the knob located on the left of the prism. The knob must be lifted and wound in the arrow sense (which is a slight operation constraint) to bring in front of the mark the selected fast speed, from 1/1000 to 1/30 (in standard progression ... 1/125, 1/60, ..., no intermediate step is available), or B or T time exposure. This knob rotates during release; therefore one should

avoid to touch it during shooting, but the reference red mark is on the front side when the camera is cocked and on the rear side when it is released.

The EXAKTA is one of the very few reflex cameras on the market to have a T time exposure position (opening the shutter upon release, and closing upon a second release). One must in this case use the automatic diaphragms in their manual position so that they do not reopen between the 2 successive releases.

When one wishes longer exposure times than  $1/30$ , one sets, before or after cocking, the fast speed knob on the B or T position, and one then arms fully clockwise, until it hits a stop, the slow speed knob located on the right side of the body. The stroke of this knob varies according to the preceding use. At the end of the stroke, the knob becomes hard to turn. It is noisy upon release.

One may, after this double cocking:

- either dial a slow speed  $1/8$ ,  $1/4$ ,  $1/2$ , 1, 2, 3, 4, 6, 8, 10 or 12 seconds by bringing in front of a black figure the white mark engraved on the ring which one lifts, and then lets down. The figures for the seconds are engraved in large size, and the denominators for the fractions—8, 4, 2—in small size. In the case of slow speed use, put the diaphragm in manual, or, if it is left in automatic, leave the finger on the release button during the whole exposure to keep it closed;
- or dial a slow speed  $1/4$ ,  $1/2$ , 1, 2, 3, 4 or 6 seconds with delay, by bringing the white mark on the ring in front of a red figure (the total: exposure + delay is then always equal to 12 seconds;  $11\ 1/2$  seconds delay +  $1/2$  second exposure, or 8 seconds delay and 4 seconds exposure ...);
- if, on the fast speed knob, one dials a speed like  $1/125$  instead of B or T, and after arming the slow speed knob, one dials any red figure, one gets a 12 seconds delay followed by the fast exposure selected, here  $1/125$ ;
- if, after arming a slow speed, or a slow speed with delay, one wants to use a fast speed, it is enough to dial it again instead of B or T on the fast speed knob; during release, the fast exposure is followed by disarming of the slow speed timer.

This two step arming of the slow speeds and delayed exposures is rather complex, but provides a shutter with 17 speeds from  $1/1000$  to 12 seconds! (only the  $1/15$  is not engraved on the knobs). On the other hand, this system provides a unique combination for a reflex camera: one may, by a special operation, rearm without film transport... one can achieve voluntary double exposures.

To do so, one cocks the shutter by rotating the fast speed knob in the arrow sense. One turns it by a fraction of a turn with two fingers of the right hand, and one blocks it with one finger of the left hand to avoid its back winding under the powerful return spring; one can turn it again by a fraction of a turn, and so on until the stop where it locks. One may

Pictures with uncompensated anamorphosis when printing :



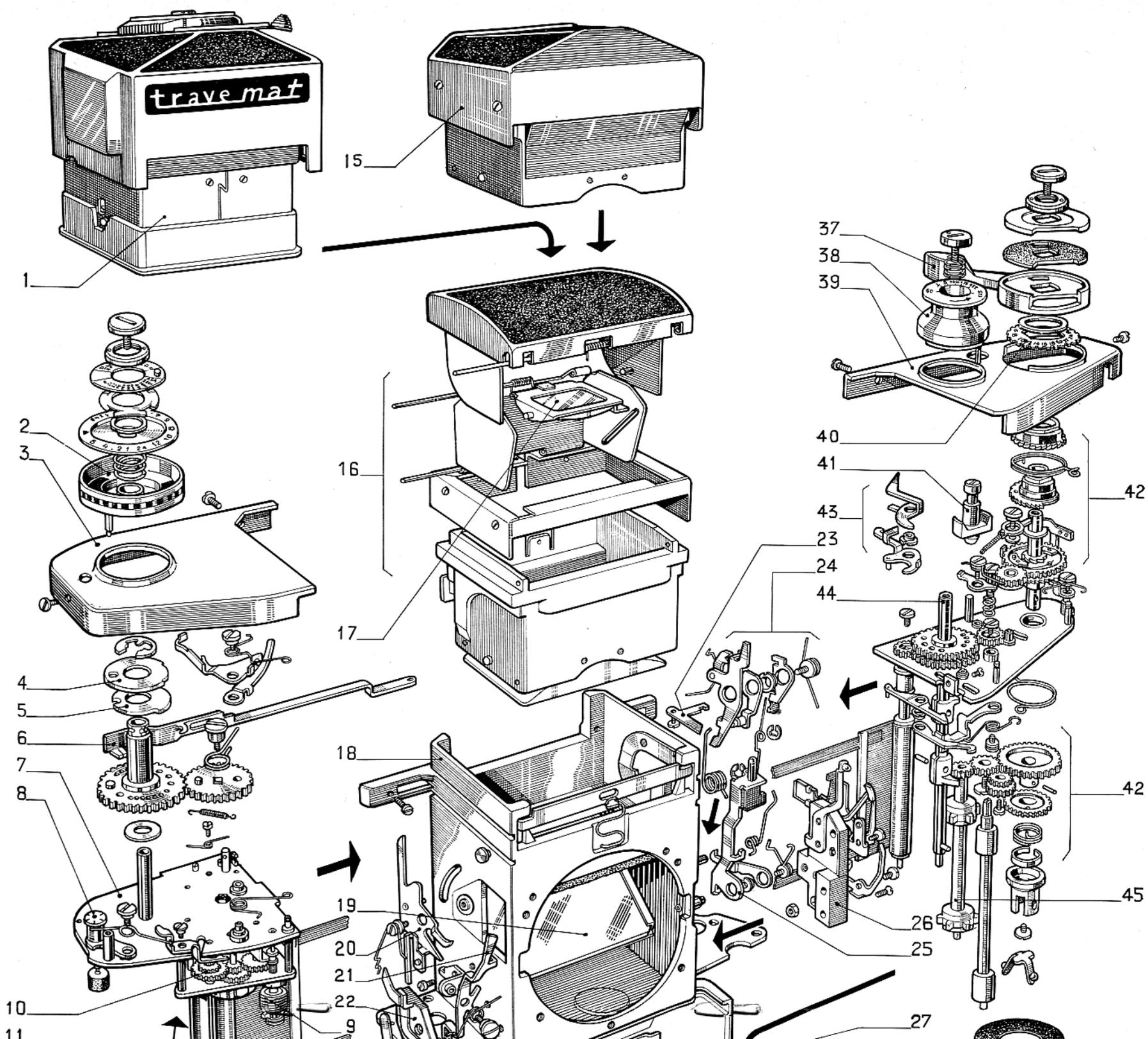
ISCO-ISCORAMA, anamorphosis lens in the ratio  $1/2.25$ , used in horizontal anamorphosis

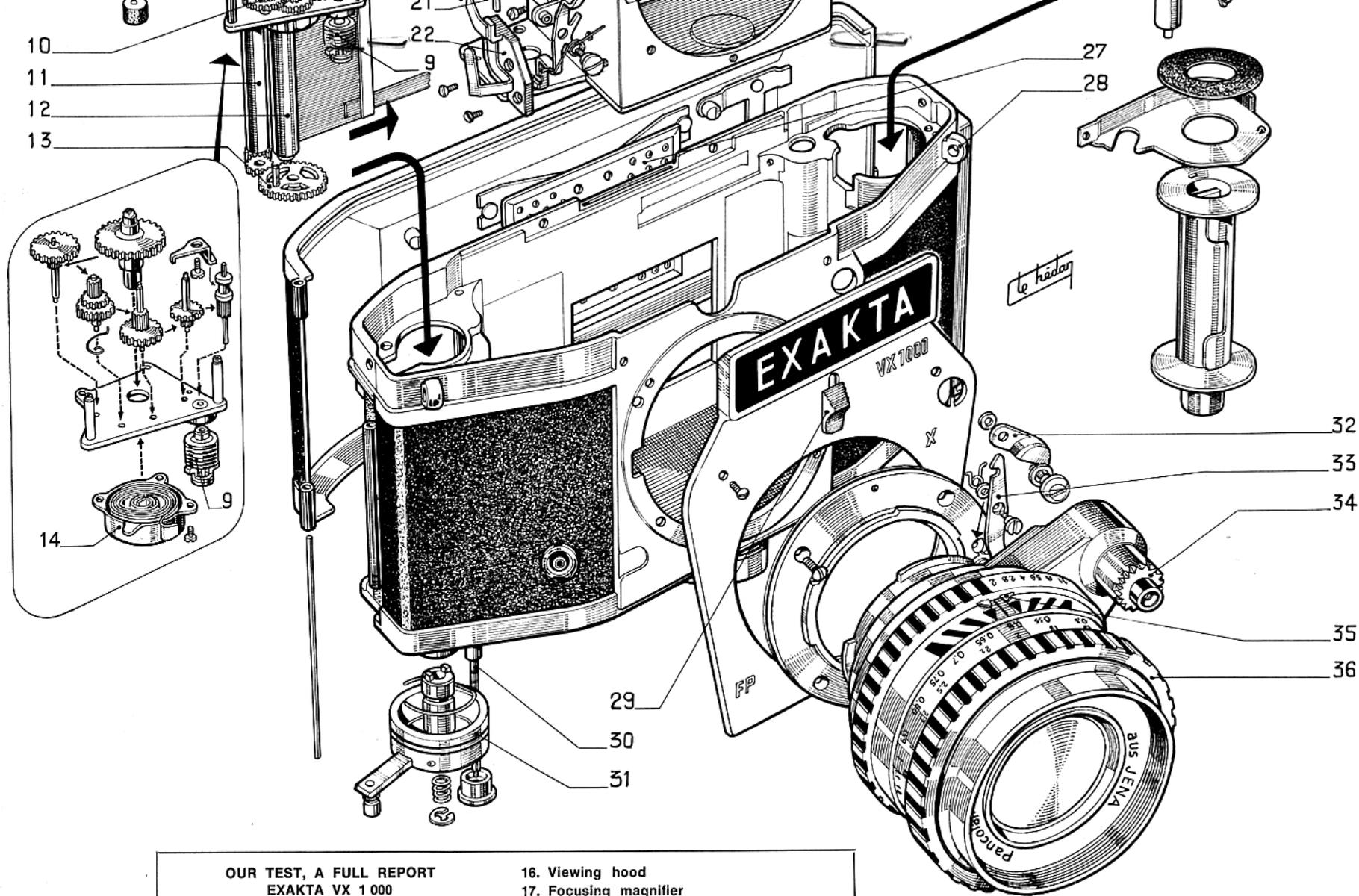


Vertical anamorphosis



Oblique anamorphosis





**OUR TEST, A FULL REPORT  
EXAKTA VX 1000**

1. Exposure meter prism TRAVEMAT
2. Slow speeds and self-timer knob
3. Right cover
4. Acceleration cam
5. Slow speeds and self-timer cam
6. Disengaging link
7. Slow speeds and self-timer base plate
8. Film transport indicator
9. Speed regulator
10. Slow speed and self-timer mechanism
11. Small blind drive shaft
12. Large blind drive shaft
13. Continuous reflex return cam
14. Spring motor for slow speeds and self-timer
15. Viewing prism

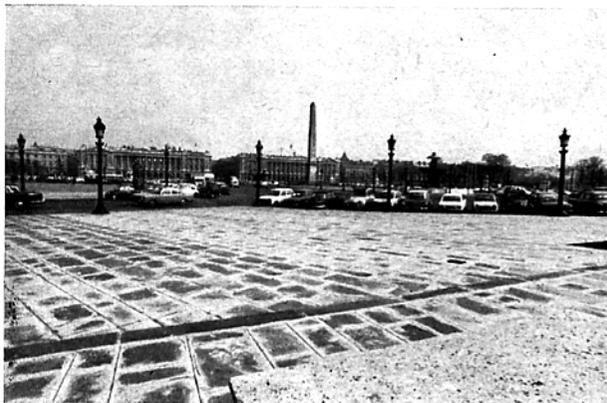
16. Viewing hood
17. Focusing magnifier
18. VX 1000 chamber
19. Mirror
20. FP synchro contact lever
21. Disengagement of continuous reflex viewing
22. FP synchro
23. Red « cocked » signal
24. Mirror release mechanism
25. Release
26. X and M synchro block
27. Film pressure plate
28. Carrying strap eyelets
29. Lock control for : prism, hood, TRAVEMAT or EXAMAT prisms
30. Film cutter
31. Rewind crank

32. Safety lock for release
33. Lens lock
34. Preview and release button
35. Mobile depth of field indexes
36. 50 mm Pancolar f/2 lens
37. Film-advance lever
38. Fast speeds knob
39. Left cover
40. Counter
41. Disengaging button for rewind
42. Shutter cocking and film transport mechanism
43. B and T exposure cam
44. Shutter shaft
45. Film drive sprocket

Pictures shot from the same location :



EXAKTA fitted with a 12 mm Sigma Fish-Eye f/8  
(with spherical perspective)



EXAKTA fitted with a 20 mm Flektogon f/4  
(with normal perspective)



EXAKTA fitted with a 50 mm Pancolar f/2  
(standard focal length)

then, if one so desires, arm normally the slow speed knob. One may thus achieve on the same frame several superimposed pictures (for special effects), or expose the frame in several parts (solia effect), or expose it in several vertical bands, etc...

The release button is located on the top left of the front face. It is threaded in order to mate with a cable release. Its operation is smooth. The shutter is rather quiet, but the mirror return is noisy. When the lens has automatic diaphragm preselection, its release button, also threaded, comes in front of the shutter release button on the body and replaces the latter. A safety lock can block these two release buttons at will.

This position of the cocking lever and of the release button on the left side makes the use of this camera very easy, the right hand being free for the distance and diaphragm settings. This is not a camera for left handed operators, as one may believe it.

The shutter is synchronized at 1/60, X socket, for electronic flash. For magnesium long duration flash bulbs, PF 45 type, use the FP socket and any speed between 1/1000 and 1/60. For short burning magnesium lamps, use the F socket and 1/30. In case of doubt, one may use all magnesium bulbs on the X socket at 1/8 (the exposure is given by the combustion time and not the set speed). These 3 sockets have a standard 3 mm diameter and are located around the lens.

The black cased camera has two eyelets for a carrying strap, on the upper part of the front face. The serial number is still engraved close to the film slides, one must open the back to read it.

The threaded small pitch hole for a tripod is located near the center of gravity, in the middle of the bottom side. The three bumps (threaded hole/rewind knob/film memory disc) insure a perfectly stable stand when one lays the camera on a surface.

Towards the end of the film, the counter successively steps through 2, 1, 36 (corresponding to zero) and carries on in the event the film is longer than expected. At the end of the film, the cocking lever gets blocked part way in its stroke; do not force on it, push on the film rewind button, complete the cocking, let the lever return back, then push it slightly forward in order to lock the film rewind button in its working position, unfold the rewind crank attached to the knob located on the right of the bottom, and rewind the film.

The rotation of the red knurled control disc witnesses the proper rewind of the film. The film rewind button, which is only locked in its disengaged position by the cocking lever, springs back at the next cocking operation.

Open the back, pull out the rewind knob, and remove the cartridge.

As with all cameras with a rewind crank, one must rewind the film slowly to avoid charging it with static electricity, the discharge of which would generate sparks, and would give dendrite type patterns on the pictures.



35 mm P.A. Curtagon tilttable f/4, used not tilted as a normal 35 mm



Picture taken from the same location, P.A. Curtagon tilted at maximum to correct the perspective.

If you have used a take up cartridge, rewinding is not necessary. At the last cocking, when the lever gets blocked, operate the mobile knife. To do so, grasp its knob and pull it out over 4 cm. One feels the film cutting readily, complete the cocking, release, open the back to remove the cartridge, and push the knife shaft back in.

The standard lens of the EXAKTA VX 1000 is the 50 mm Pancolar f/2, manufactured in lens. The focusing ring is knurled with a wide pitch, and is located on the front of the lens (focusing is down to 50 cm). The diaphragm ring is located at the rear of lens, and is graduated from 2 to 22; it turns over approximately 60 degrees, and has full—and half—stop indexing. An infrared mark is engraved on the depth of field scale which is located on the center of the mount. Two indexes move during the operation of the diaphragm ring, indicating the depth of field available for the opening selected. The diaphragm may be used manually (which is very useful for long, retarded, or slow exposures as we saw previously that the linkage is external). It is enough to push the button, then turn it 1/5 of a turn to the left and release it, and the diaphragm operates manually.

In general, one uses automatic preselection, because the focusing achieved then at f/2 is more accurate and faster (short depth of field and bright image). To check the depth of field at the preselected aperture, one only has to push the release button partially in, until it closes the diaphragm. If the setting is satisfactory, one only completes the push on the release button to achieve exposure (no double buttons for these manoeuvres as on most reflexes; a counter-features is the obligation to use the diaphragm manually for the above—mentioned cases). A screw located under the lens release button can be adjusted according to individual tastes for the lag between the closure of the diaphragm and the release.

The lenses are interchangeable; push on the lever located on the left of the mount, rotate the lens 45 degrees to the left, and remove it. Locate the new lens with its red point in front of the red mark, and turn it to the right until it locks. This

bayonet mount has been adopted by other manufacturers, in particular Topcon. It is here manufactured with a slightly different cut as compared to the previous mount, insuring a very firm locking of the lens. In the EXAKTA version, an external bayonet, concentric to the inner one, is foreseen for the fitting of long telephotos or Novoflex bellows equipped with the Auxa rear ring, which avoids angle vignetting on the film.

All manufacturers make lenses for this mount. There are hundreds of them. To mention only a few very special ones.

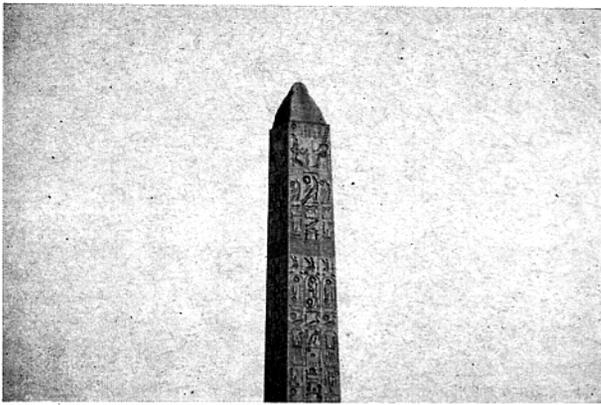
- Sigma Fish-Eye f/8 of 12 mm focal length and spherical perspective.
- lens Flektogon f/4 of 20 mm (field 93 degrees), used in reflex viewing, normal perspective and close focusing down to 15 cm.
- Isco Iscorama f/2.8. The basic 50 mm lens takes a screw—in front piece achieving an anamorphosis in the ratio 1/2.25—this anamorphosis can be done horizontally, vertically, or in any intermediate position—this same front piece screws on the projection or enlarging lens to reconstitute the normal perspective panoramic picture.
- Schneider Variogon: f/2.8 zoom from 45 to 100 mm; f/4 zoom from 80 to 240 mm. Both have automatic diaphragm preselection and cover a particularly useful range of focal lengths.
- Tamron zoom f/5.6, covering 95 to 250 mm (indexed manual diaphragm preselection).
- Steinheil, close focusing lens; 35 mm Macro-Quinaron f/2.8 down to a ratio of  $\times 2$ ; 55 mm Macro-Quinon f/1.9 down to a ratio of  $\times 1.4$ ; 100 mm Macro-Quinar f/2.8 down to  $\times 0.76$ ; and 135 mm Macro - Tele - Quinar f/2.8 down to  $\times 0.55$ . These lenses can also be used as normal, wide-angle or telephotos at the beginning of their focusing ranges. The photomacrography ratios can be increased by making use of adapter rings.
- 35 mm Schneider P.A. Curtagon of f/4. This lens has been designed specifically for architecture photography and has a 7 mm off centre feature which,

in conjunction with a rotating ring indexed at the two horizontal and vertical settings (therefore, total off centre of 14 mm relatively to the optical axis), enables to correct perspective effects inherent to the use of all wide angle lenses.

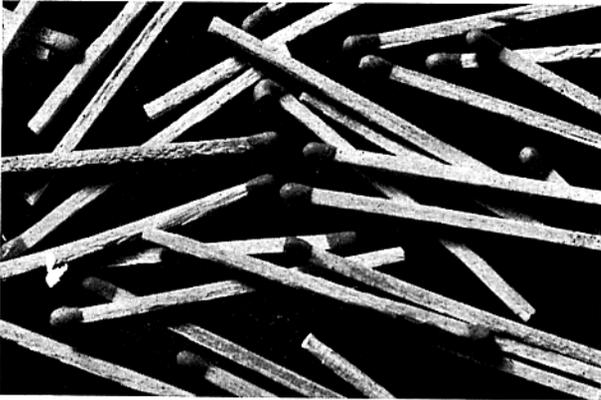
- 12.5 mm Angenieux J.1 of f/1.8 and Novoflex 135 mm Noflexar of f/4.5, automatic diaphragm and short mount, which are special lenses for photomacrography.

Viewing is done, either through a viewing hood, or with a prism, and the focusing screens are interchangeable. The standard screen has in its centre Dodin prisms usable up to about f/4, surrounded by a frosted ring without Fresnel lens; the rest of the screen is frosted and backed by a Fresnel lens with slightly visible pitch. The other focusing screens are:— an identical one to the first one mentioned, but with microprisms (usable up to about f/5.6), replacing the Dodin prisms (Schacht cell prism)—plain frosted screen—frosted screen with rectangular graticule and millimeter marks—5×5 mm squared frosted screen—frosted screen with graticule and 3 mm clear centre—frosted screen with clear 10 mm graticule centre, and clear graticule screen (these frosted or clear screens are used for photomacro or micrography and endoscopy).

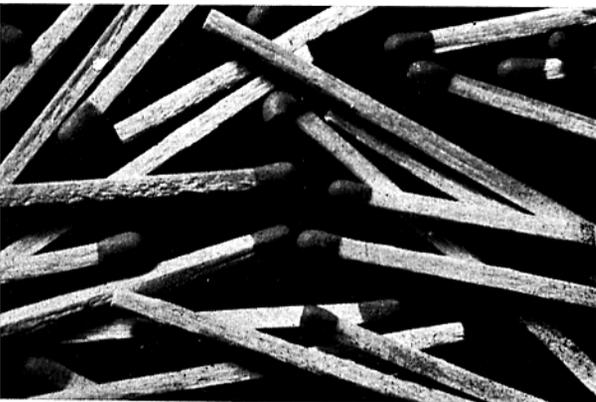
The viewing hood does not re-erect the image, and observation is lifesize with the magnifying glass unfolded and a 50 mm lens. It enables viewing overhead, at chest level, or with 90 degrees tilt for viewing of people. The operator can keep his glasses on. The prism straightens the image completely, and one views slightly more than lifesize with a 50 mm lens (magnification  $\times 4$ ). The prism features a slight cushion distortion but no colour distortion. The viewed field is equivalent to the opening of a slide mount: 23.5 × 35 mm. The eyepiece can be fitted with a flexible eye cup for stray light protection. The image is not entirely visible for people wearing glasses (they should use correcting lenses that can be fitted to the eye cup, and therefore remove their glasses). The magnifying viewing block, equipped with a 50 mm lens or with the block



EXAKTA fitted with a 95 to 250 mm Tamron Zoom f/5.6  
(picture taken at 250 mm focal length)



50 mm Pancolar f/2 fitted with a Variofocus Tamron Close-up  
lens used at maximum power at f/11



135 mm Macro Telequinar f/2.8 used at maximum slide  
(ratio of 0.55 on the negative, f/11)

magnifier, permits to view with a magnification of 6 in photomacro or micrography. The viewing system is undone by simultaneously pushing on the button located above the lens and pulling vertically. To put it back into place, bring it down vertically and push until it locks. The screens can be removed by simple pulling. The new screen is introduced by pressure, it pushes away the centering and holding springs. The screens are located in the viewing system and not on the camera, so one must always use one of the systems for viewing.

The EXAKTA cameras could soon be equipped with a prism having a built in exposure meter: the Schacht-Travemat prism. This prism mounts on the camera like the other viewing systems. The microprism screen mentioned above and which is standard with this prism cannot be removed by the user, but the Schacht Company can deliver upon request this setup equipped with the Dodin prisms screen. The sensitivity can be dialed in front of marks ranging from 6 to 400 ASA, that is 9 to 27 DIN. The power is delivered by a Mallory PX 13 or PX 625 type battery. The lid of the battery cell can be unscrewed by thumb pressure, and the + terminal is marked. The metering is done by integration. A parabolic semi-reflecting surface is located between the viewing screen and the prism. This surface bounces part of the light to a 6 mm diameter cell, and the rest of the light is used for viewing. This integration is relatively homogeneous and although done at the viewing glass level, seems to provide good results. The switch located on top of the prism has 3 positions: M—ON position, P—battery test, and a red dot—OFF position.

To test the battery, put the switch on P, and bring the meter needle in coincidence with the upper part of the mark by rotating the speed index, located concentrically to the sensitivity scale on the prism. When the red bar on the index reaches the red dot mark within less than 1 division, the battery is in good condition. Keep the switch on the P position only during a very short time, because the battery drain is then high.

To meter the light, put the switch on M. One then has a choice between two methods. Select the speed and find the opening: one sets a speed on the camera and on the speed index of the cell, between 1/500 and 4 seconds, one focuses at full aperture, one then closes the diaphragm down manually until the meter needle in the viewer gets between the marks, and one releases. Select the aperture and find the speed; one focuses at full opening, one closes the diaphragm at the selected value, one views, one brings the meter needle between the marks by rotating the speed index, one reads the speed off the prism, one sets the camera speed to the corresponding value, and one releases. These sequences of operations are due to the fact that the cell is not coupled to the controls of the camera. The upper mark corresponds to an over-exposure of about 1/4 of an f stop, the lower one corresponding to an under-exposure of 1/4 of an f stop; furthermore, the meter needle is very free moving, which makes the

the reading very accurate, but one is almost bothered by the fast movements of this pointer.

With a lens opened at  $f/2$ , the exposure-meter covers the exposure indexes of 20 to 4, at 100 ASA. It is preferable to cover the eyepiece of the prism with the rectangular shaped flat plastic cap which protects the sensitive element of any stray light. This cap can take eyepiece correcting glasses, and is delivered with the prism. The use of the "1T" position is not explained in the instructions. The positions for 2 and 4 seconds have the same labelling as those for  $1/2$  and  $1/4$  of a second.

After use, put the switch back in the stop position (be careful not to push it too far, where it would be in the P position—nos safety lock is foreseen).

The **Exakta VX 1000** equipped with the Travemat prism and with the Pancolar is 153 mm long, 88 mm thick and 116 mm high; it weighs 953 grams. The instructions book is rather comprehensive. Several publications (as Photomacrography, Photomicrography, Stereoscopy) are available for the users.

This camera takes a great deal of accessories, besides those already mentioned:

- eveready bag;
- several hundreds of lenses readily available;
- lens hoods, filters and various close up lenses (one can here mention the Tamron Variofocus Close-up lens: magnifying lens of variable magnification from 1 to 5 diopters which is very handy to use);
- two other additional lenses; the Kenko Fish Eye and the monocular Steinheil  $\times 6$ ;
- 5 mm ring, and set of screw extension tubes from 10 to 60 mm (worth mentioning, the Soligor extension tubes set with bayonet mount and release prolongation);
- for photomacrography, small bellows: macro 125 bench (35 to 125 mm slide) and Novoflex; large monorail bellows (35 to 220 mm slide) and various automatic preselection short mount lenses;
- slide copying adapter Reprodia;
- copy stand (Universal set-up Ihagee);
- giant release button, double cable release, accessory shoe, external release extension to be used with tubes, inverting rings, adaptors for direct fitting of microscope optics, spectroscopy adaptors, endoscope adaptors, astrophotography adaptors...;
- stereo system Stereflex with 65 and 12 mm base;
- dismountable microscope adaptor;
- ring flashes RB.1, RB.2 and Kolpofot;
- many English and German books on the use of the EXAKTA camera.

All these accessories also fit:—the EXA 1 A,  $1/30$  to  $1/125$  of a second and B exposure (up to the 105 mm telephoto, and a below reproduction ratio of 1, because beyond that, the barrel shutter produces vignetting;—and the EXA 500,  $1/2$  to  $1/500$

of a second, B and T exposure, instant return mirror, cocking signal, same loading as the **Exakta VX 1000** (use of all the accessories of the EXA VX 1000 except the viewing ones, because the prism is fixed). These two cameras can be used to compose single lens reflexes more cheaply than the **Exakta VX 1000**, but also and primarily, they can serve as the second camera for the use of different films.

A very complete system, the EXAKTA progresses through the years and its manufacturer adapt it to the evolution of the photographic technology. Most optical manufacturers make lenses and accessories for it.

Its sturdiness and fame make it to—day the reference camera for single—lens reflex tests.

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*N. B.:* The principal differences between the VX 1000 model as compared to its predecessor, the Ilb are:

- more square shape;
- instant return mirror associated to a "cocked" signal in the viewfinder;
- opening lever located on the side;
- shorter stroke redesigned film advance lever;
- more readable markings on black background;
- film rewind button remaining disengaged during rewind.

Camera tested n° 1127102.

Indicated speeds	Measured speeds
12	11.5
10	9.5
8	7.5
6	6.4
4	4.2
3	3
2	2
1	1
$1/2$	$1/2$
$1/4$	$1/3.6$
$1/8$	$1/8.3$
$1/30$	$1/27$
$1/60$	$1/55$
$1/125$	$1/111$
$1/250$	$1/228$
$1/500$	$1/410$
$1/1000$	$1/850$

## BAD FEATURES:

- TTL exposure meter not coupled.
- Film advance lever to be operated in a single stroke, and necessitating the hand to move slightly, but with a free-wheel device avoiding to force or break the already cocked camera;
- Double arming for the slow speeds and delay release.
- Two speed setting dials.
- Manual reset of the frame counter, but automatic return of the film rewind button.
- Obligation to use the diaphragm manually for time exposure and retarded shots.
- Viewing screen not mounted in the body camera itself.
- Speed setting by lifting rings.
- Shutter speed dial rotating upon release.
- No  $1/15$  speed.
- Rather hard cocking, and noticeable noise upon release.
- All figures on the frame counter are black.
- Serial number engraved inside the camera.
- Advisable use of the external bayonet in photomacrography to avoid vignetting.

## GOOD FEATURES:

- Instant return mirror associated with a "cocked" signal in the viewfinder.
- TTL exposure meter.
- Film transport indication in forward or rewind directions.
- Textile focal plane shutter, with 17 speeds from  $1/1000$  of a second to 12 seconds, B and T time exposure.
- Accurate viewing. Many interchangeable screens and dismountable pentaprism.
- Very large number of special lenses available (Fish-eye; 20 mm; anamorphoser; perspective correction; close up lenses...).
- T time exposure and voluntary double exposures possible.
- Film advance lever and release on the left side, making the use of the camera very handy.
- Depth of field check very easy and coupled to the release.
- Down counting frame counter practical for intermittent use (see text).
- Equipment for photomacro and micrography—stereoscopy—endoscopy.
- Simplified complementary cameras EXA 1 A and EXA 500.
- Back opening tab well protected.
- Widely opening back, 190 degrees.
- Easy loading, possibility to use a take up cartridge.
- Mobile knife enabling to cut the film.
- Memory discs of the type of film in use.
- Disarmable self timer.

# THE EXAMAT

A new comer on the market, the prism/TTL exposure meter EXAMAT an accessory of the Exakta, is of a very close design to the one of the Schacht Travemat. It is a TTL exposure meter, not coupled to the camera which differs from the Travemat by the metering possible at full aperture and the use of the weighing principle.

The Examat fits on the cameras as all the viewing systems of the Exakta. It is delivered with a plastic focusing screen having 3 distinct zones; in the center, a 4 mm diameter patch of 4 sided microprisms, surrounded by a finely ground ring without Fresnel lens, the rest of the screen being frosted and backed with a Fresnel lens. The microprisms are usable up to about  $f/5.6$  with a 50 mm lens. The magnification and brightness of the viewed image are the same as the standard prism. The Examat can receive all the Exakta focusing screens, and they are fitted in the standard way. The positioning springs are strong. One must be careful not to scratch the upper side of the screen when mounting it. The correction factors, for the various screens are not indicated.

The exposure calculator is located above the prism. The film sensitivity is dialed in front of the marks, from 6 to 1600 ASA or from 9 to 33 DIN (there is no stop between the two scales, but the figures cannot be mistaken as the scales are very different). The PX 13 Mallory

type battery is located in a recess on the left side of the prism. The + terminal is marked on the lid. If the battery is mounted inverted, a safety feature prevents it to energize the circuit when connected: the needle does not move. One only has to put it back right. There is no battery test capability (battery lifetime 12 to 18 months). A sliding switch (with very strong indexing) is on when its pin faces the green dot, and is off when it faces the red one. In order to improve the battery life, it is better to switch off after each metering.

The measurement is taken by weighing. The exposure meter has only one sensitive element on the output face of the pentaprism above the eyepiece. The largest part of the metering information (about 80%) is picked off the zone defined by the microprisms and the frosted ring. This set up seems to be, at present, the best compromise, and avoids the effect of vignetting, because of too short a mirror, on the measurement. The sensitivity of this system goes, at 100 ASA and with a lens opening up to  $f/2$ , from  $1/8$  at  $f/2$  to  $1/1000$  at  $f/22$  (the coupling is maximum at 9 ASA— $1/1000$  to 4 seconds, and minimum at 1600 ASA— $1/1000$  to  $1/125$ ; the coupling limits are indicated by a blocking of the exposure calculator). When taking a reading the needle moves fast and willingly, perhaps even too easily. When at rest, the circuit being off, the

needle goes in front, of the triangular mark on the viewing screen, which one may wrongly interpret as a proper setting of the exposure time. This mark appears in the middle of a black stripe seen through a vertically placed yellow window on the left of the viewed picture. The direction of over and under exposure are not given (over up and under down). The metering is rather independent of the exposure meter tilt angle. Depending on the type of metering used, the needle tracking of the mark is achieved by diaphragm closing or by the rotation of the knurled meter knob:

- preselection of the exposure time; one sets a speed on the knob of the camera and of the exposure meter, and one closes manually the diaphragm until tracking is achieved.

- preselection of a diaphragm: use the diaphragm manually, set the wanted aperture on the lens, achieve tracking by turning the exposure meter knob, read the corresponding speed and dial it on the camera knob (do not account for intermediate speeds or correct with the aperture setting, as intermediate speeds are not usable).

- if one wishes to retain the automatic lens mode, the metering is done as with a hand held exposure meter, but this one is a TTL. Dial on the prism, in front of the white dot, the maximum opening of the lens used, achieve tracking with the meter knob; then select on the meter by direct reading the combination one wishes to use among all the diaphragm/speed combinations available, and set the camera accordingly.

The exposure meter has speeds from  $1/1000$  to 8 seconds (as the 2-4-8 figures of the fractions and of the seconds values are engraved in the same way, avoid confusing them) and apertures from  $f/1.4$  to  $f/22$ . The eyecup avoids stray light coming in (the accessory shoe cannot be used as the Examat is higher than the standard prism). The cap supplied with the Examat protects the focusing screen when the prism is not in use. The instructions manual is well done. This prism fits Exakta VX 1000, II b, II a, VX and V, and Exa I, Ia and Ib.

The Exakta VX 1000, fitted with the Examat prism and with the Pancolar lens, is 153 mm long, 88 mm thick, and 119 mm high, it weighs 955 grams.

The Schacht Travemat and the Examat only differ from each other by details and by the metering principle... every Exakta user will certainly purchase one or the other.



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