

ZEISS HISTORICA

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The Zeiss Historica Society of America is an educational, non-profit organization dedicated to the exchange of information on the history of the Carl Zeiss optical company and its affiliates, people and products from 1846 to the present.

Officers

Co-Founders	Thomas Schreiner Charles Barringer, Jr.
President	Lawrence J. Gubas
Treasurer	John T. Scott

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Front cover: This camera had to be specifically designed for use with the 6 cm short focal length Goerz Hypergon lens since most cameras of that period could not be made to accept a lens of such a short focal length. Unfortunately, there is no makers mark on this camera.



Back cover: The back cover of this issue is a collage of interesting color Zeiss Ikon photographic displays.



President's letter

First of all, I would like to personally thank all of you who have contacted me with regard to the publication of my book. Your encouragement means a lot to me. The fact that it took 3 years to bring it to the market was exhausting but your kind words have made it all worthwhile.

This issue will look much like the last in that I seem to have hogged most of the space myself. While the table of contents will prove that, it is not out of personal greed that this has occurred but rather that I have had but one submission from the Society and I had no choice but to fill the space with material that I have created.

I am not sure that I can continue this although I am going to try. This is because my health has not improved but rather the reverse. The cancer that I have dodged for the past 24 years seems to be gaining the upper hand. Surgery is no longer an option and the chemotherapy that I have been taking since January has become ineffective. I will begin a new clinical trial in early May but a clinical trial is the use of a new unproved treatment and so we must begin to prepare for the worst.

After this issue comes from the printer, we must begin to prepare for the possible demise of the Zeiss Historica Society since there are no more worker bees should I disappear. I suspect that I will have a better handle on that in a few weeks and so I will accept any input on the subject for a month after the distribution of this issue and discuss alternatives with our Treasurer and retired Editor, John Scott.

None of this means that I have any intention of giving up either on survival of the Society or myself. My clinical trial is going to be an immunologic medication and there is a chance of some success but preparation and communication are necessary to be fair to those who have paid for this year. I intend to be persistent and continue publication.

The situation that caused suspension of payment in 2015 was based on the lack of an issue in that year due to another medical situation and the transfer of the editorship to me at least temporarily. However,

some members have been confused. Please check your label for the last year of payment and a membership form insert. If there is an insert, you are behind in paying and should forward that page and payment as noted on that page. While we are sound financially as an organization, we do need to continue to seek membership fees. If you have a 2013 or 2014 notation after our name on the address label, you are delinquent in your dues.

This year is the 200th anniversary of the birth of Carl Zeiss and the firm is planning numerous celebrations. The firm will be presenting a biography of Carl Zeiss in the form of a book in mid-June. It will be available in German and English in commercial book stores and is being written by Dr. Wolfgang Wimmer (Head of the Zeiss Archives) and Stephan Paetrow.

Information on other celebratory events will be listed on www.zeiss.com where you can search for "Carl Zeiss Year 2016." Many will be centered in the town of Jena where the firm was founded.

In response to the Teleplast binocular article in the last issue, I received a note from Thomas Antoniadis informed me that the modern equivalent price for a Teleplast would have been \$2,800.

In this issue, Stefan Baumgartner has contributed an especially significant article which addresses the Contax lenses that have been found in the Zeiss Lens Collection. He not only shows models not addressed elsewhere but also clarifies what happened to the collection after the US military placed it into storage with the Chicago firm of Burke and James which had been purchased by an American distributor, Burleigh Brooks.

Those who have been with the Society for a longer time will recall many articles written by our first President, Nicholas Grossman. Nick was a mentor to me in my transition from a camera collector to someone interested in the wider world of binoculars, microscopes and Zeiss history. Nick left this world behind in mid-March at the age of 94 and his spirit and contributions will be missed.



Zeiss Ikon - The Early Years

Marking Time

Lawrence J. Gubas, Las Vegas, Nevada

Zeiss Ikon A.-G. Dresden
Vereinigte Werke: Contessa-Nettel, Ernemann, Goerz, Ica.

(Zeiss Ikon A.G. Dresden, United Plants: Contessa Nettel, Ernemann, Goerz, Ica.)

The merger of the predecessor firms into Zeiss Ikon was a very complicated process in that it involved the personal fortunes of the Nagel, Goerz and Ernemann families, entangling relationships with other firms (Ernemann with Krupp and Goerz with Hahn), photographic dealers with exclusive contracts around the globe and the desperate financial situation of the depression and currency failures of the 1920s. On top of this was the oversight of the German government whose interests were strongly represented in the negotiations. The strongest interest of the government was the fact that they insisted that none of the locations of any of the firms would suffer the loss of any jobs.

Some of these firms had earlier taken expensive steps to counter the influence of the Carl Zeiss Stiftung. Since the firm of Schott and Genossen was a property of the Carl Zeiss Stiftung and the world leader in the manufacture of optical glass, Goerz and Ernemann had come together to create their own glass manufacturer when they purchased the firm of Sendlinger Glassworks GmbH from Steinheil in Munich and moved it to the Goerz site in Berlin. This was an effort to lower their support of their competition but ended up being an added cost instead. Of course, both of those firms were dedicated to the manufacture of their own lines of photo lenses although Ernemann would also offer the lenses of other firms including Zeiss.

Ernemann had also been manufacturing their own camera shutters for years but it was a portion of the business that did not

compete technically or financially with the Zeiss owned firms of Deckel (Compur) and Gauthier (Prontor). Hubert Nerwin told me that the assembly line for the Ernemann cameras had to be paused regularly to re-calibrate those shutters which were trademarked Chronos. Both did manufacture their own shutters for their box cameras although Ernemann seems to have enjoyed making many different varieties.

Some of these firms also diversified their product lines beyond the Photographic world. Dr. Nagel dabbled in the world of automobile accessories while Goerz broadened the lock and key based security business, early mechanical adding and business machines and some medical testing equipment. Where those products would go will be a determinant of where the jobs would be located and it would be a mixture until the emergence of Zeiss Ikon as the photographic power of the 1930s. Some would be a part of Zeiss Ikon while others would be manufactured by that predecessor firm and location but given over to Carl Zeiss Jena for the sales and marketing while still being manufactured inside Zeiss Ikon. However, others (mostly located at the Goerzworks in Berlin) would stay with the combined firms under the mark of Zeiss Ikon.

As a consequence, the locations for the jobs would significantly hold back the use of new designs since there was both a large inventory of folding and plate cameras at hand and the current active employees still had to manufacture something that they were trained to do and were capable of doing well. So, the firms

would continue to manufacture the catalog of the predecessor firms for years to come. There were only minor changes until 1930 when the Ikonta design changed the body design of the folding roll film cameras and the 1931 Kolibri 127 format miniature camera came to the marketplace. Until then, the catalog of 1043 different combinations of camera models with different shutter and lens combinations remained active. The firms were divided into the following examples: Contessa Nettel 323, Ica 302, Ernemann 249 and Goerz 169. This was clearly a bad situation with little change but the watchful eye of the German government was dominant.

So, little would change until 1931 and 1932 when new designers and new designs would begin to appear. That meant that 5 years of unchallenged Leica cameras, making the same old items with a few at a time being eliminated slowly and the existence on the same device of the old predecessor logo appearing with a Zeiss Ikon tag on the body or the shutter.

It is clear that the lens manufacturing of the older firms would cease much earlier but a few lens trademarks would persist in Ernemann and Goerz form but rarely. This makes for a few tantalizing collectibles due to rarity and a mixed text within the trademark itself.

One is found on the Ermanox trademark about which Hubert Nerwin once remarked to us that he saw several examples sitting on his boss' drafting table and which he desired greatly but never got the courage to ask to work upon.



Zeiss Ikon

ERMANOX No. 858

For plates only

Two Sizes:

No. 858, 2 $\frac{3}{8}$ " $\times$ 1 $\frac{1}{4}$ " No. 858.3, 3 $\frac{1}{2}$ " $\times$ 2 $\frac{1}{2}$ "

THE FOCAL PLANE CAMERA WITH
THE WORLD'S FASTEST ANASTIGMAT
—ERNOSTAR F1.8.

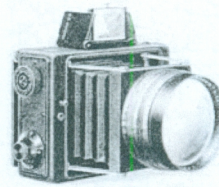
THE optical equipment in this camera fulfils all the requirements demanded in a first-class extreme aperture anastigmat, for making instantaneous exposures in artificial light. The full aperture, F1.8, is over six times as fast as F4.5, so the magnitude of the optical achievement can be appreciated. The ERNOSTAR, as reference to the illustration indicates, is large in proportion to the size of the camera, but the camera nevertheless presents a handsome appearance. It is used mostly by professional and Press photographers for theatre work, i.e., instantaneous photographs by ordinary stage lighting, and for all classes of work under adverse lighting conditions.

SPECIFICATION:

Body: Light aluminium alloy, bushed for tripod.
Bellows: Leather bellows are fitted to the 3 $\frac{1}{2}$ " 2 $\frac{1}{2}$ " size, but the 2 $\frac{3}{8}$ " $\times$ 1 $\frac{1}{4}$ " has no bellows, as the lens itself gives the requisite extension.
Focussing: Micrometer movement on lens.
Focussing Screen: Leather bushed.
View Finder: Large direct, Newton pattern.
Accessories: 3 metal single slides in 2 $\frac{3}{8}$ " $\times$ 1 $\frac{1}{4}$ " size, 3 wooden double slides in 3 $\frac{1}{2}$ " $\times$ 2 $\frac{1}{2}$ " and leather case with lock and shoulder straps are included in price of camera sets.

Finish: Leather covered, black enamelled with nickelled fittings.
Lens Equipment: Ernostar F1.8, as described above.
Shutter: Focal plane, self-capping, speeds adjustable both before and after setting, from 1/10th (1/20th in No. 858) to 1/1000th second and time. Vibrationless, practically noiseless.

Optical Equipment	Code No.	Focus of Lens	2 $\frac{3}{8}$ " $\times$ 1 $\frac{1}{4}$ "	Code No.	Focus of Lens	3 $\frac{1}{2}$ " $\times$ 2 $\frac{1}{2}$ "
Ernostar F1.8 Anastigmat in focussing mount	858Y	32"	$\frac{5}{8}$ 12 6	858.3Y	5"	$\frac{66}{66}$ 0 0
Accessories:						
Extra dark slides (single metal for 2 $\frac{3}{8}$ " $\times$ 1 $\frac{1}{4}$ ", double wooden for 3 $\frac{1}{2}$ " $\times$ 2 $\frac{1}{2}$ ") .. each	430	—	5 0	1453	—	1 15 0
Dimensions	—	—	3 $\frac{1}{2}$ " $\times$ 3 $\frac{1}{2}$ " $\times$ 4 $\frac{1}{2}$ "	—	—	3 $\frac{1}{2}$ " $\times$ 4 $\frac{1}{2}$ " $\times$ 5 $\frac{1}{2}$ "
Weight	—	—	36 oz.	—	—	66 oz.



3 $\frac{1}{2}$ " $\times$ 2 $\frac{1}{2}$ " type

Ernemann Ermanox

with F1.8 Ernostar

(German and For. Patents) For Plates and Filmpacks
2 $\frac{3}{8}$ " $\times$ 1 $\frac{1}{4}$ ", 3 $\frac{1}{2}$ " $\times$ 2 $\frac{1}{2}$ ", 4 $\frac{1}{4}$ " $\times$ 3 $\frac{1}{4}$ ", 5 $\frac{1}{2}$ " $\times$ 3 $\frac{1}{2}$ "
and 6 $\frac{1}{2}$ " $\times$ 4 $\frac{3}{4}$ " ins.

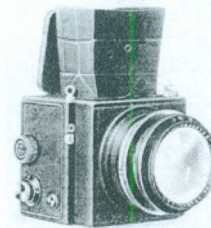
The most efficient Camera in existence
fitted with F1.8 lens

for night and indoor pictures without flashlight, stage scenes, children, daylight work of the most rapid character, snapshots in natural colors, &c.

This camera has no equal anywhere.
Specification: Body and lens tube of light metal, leather-covered. Lens in focussing motion for focussing by scale and infinity stop. Ernemann precision focal plane shutter of the safety blind type.

	2 $\frac{3}{8}$ " $\times$ 1 $\frac{1}{4}$ "	3 $\frac{1}{2}$ " $\times$ 2 $\frac{1}{2}$ "	4 $\frac{1}{4}$ " $\times$ 3 $\frac{1}{4}$ "	5 $\frac{1}{2}$ " $\times$ 3 $\frac{1}{2}$ "	6 $\frac{1}{2}$ " $\times$ 4 $\frac{3}{4}$ "
Focal length	3 $\frac{3}{8}$ "	5"	6 $\frac{1}{2}$ "	195.—	300.—
Ernostar F1.8 incl. 3 dark slides, leather case and shoulder strap	4	—	—	187.50	550.—
Ernostar F2.0, otherwise as above	—	—	—	10.—	35.—
Yellow Screen, light, medium or dark, in cham. leather bag, each	—	—	—	—	—
Extra dark slides, filmpack adapters, changing boxes as stated under "Focal Plane Cameras"	—	—	—	—	—

Ermanox Cameras in 5 $\frac{1}{2}$ " $\times$ 3 $\frac{1}{2}$ " and 6 $\frac{1}{2}$ " $\times$ 4 $\frac{3}{4}$ " ins. sizes. Prices on application



Ermanox Reflex

Reflex Camera with Ernostar F1.8

2 $\frac{3}{8}$ " $\times$ 1 $\frac{1}{4}$ " ins. — For Plates and Filmpacks

The superiority of "Ermanox" is enhanced by adding the advantages of a Reflex Camera.

Ernemann Reflex is the most perfect camera to be found!

Its features are: constant readiness, focussing up to the moment of exposure and the most rapid lens in the world.

Ermanox Reflex with Ernostar F1.8, 4 $\frac{1}{4}$ " ins. foc., incl. 3 dark slides, leather case and shoulder strap 275.—

Yellow Screen, light, medium or dark, in bag, each 14.—
Metal changing box for 12 plates 39.—

The **Ermanox** (also sometimes called the Er-nox) came to the market in 1924 with an unusually fast F/2 Ernostar 8.5 cm lens that was computed by Ludwig Bertele. It was a huge objective lens and dominated the front of the camera. It was also available in 10.5 cm size and later opened to F1.8 which permitted candid photography. Above left shows the June 1931 catalog page but to the right is the December 1926 catalog which shows the camera in the form of a reflex which made its first appearance in a September 1926 catalog which was just before the announcement of the formation of Zeiss Ikon at the end of the month.

No. 1405

The Dignified Hobby!

For Sale at:

Herbert & Huesgen Co.
18 E. 42nd St.
New York City

ERNEMANN

This would indicate that it was an important new product. That catalog cover is shown to the left but another near identical catalog appeared in December with the announcement on the cover of "Zeiss Ikon A.G. formerly Ernemann." That catalog is shown to the right.

The English language catalog also bears the stamp of a New York City camera store (Herbert & Huesgen) which was the exclusive marketer for Ernemann in the United States.

The relationship with that firm would have to be re-negotiated with the new firm of Carl Zeiss Inc. which was the newly formed subsidiary in the United States which was just a few blocks to the south on the other side of the NY Public Library. It was similar with Contessa Nettel and Goerz firms which were also located in New York.

Nr. 14E

Zu beziehen durch:

Zeiss Ikon A.G. bisher

ERNEMANN



The life of the Ermanox Reflex would be fairly short. One version with a 9.5 cm Ernststar lens would endure until October 1927 but the 10.5 lens would remain in the salesroom until February 1930. Seen in the example to the left is a unique lens that shows that it was manufactured by Carl Zeiss Jena and named Ernemann-Ernostar.

The serial number (917001-100) of the lens indicates it was constructed in mid-1928 and it seems to have been limited to this single limited run. Some other Ernststars were made at Zeiss Jena but they were for internal use except for a small run of 60 (F/1.9 5 cm) for the Kinamo movie camera but the hugeness of the lens would have made that camera very front heavy and difficult to use.

This lens is shown here and across the page. I have noted four of these lenses in my diary and they end in 01, 02, 42, and 99 and so it seems that the full run was executed. This seems to indicate that there was quite a rush to bring this lens to the manufacturing site in Jena because it was a much more difficult technical project because of the size of the glass components.



Typically, The Ermanox cameras were not heavily marked. There were very few locations on the camera with the firm's trademark because of the limited space on the surface of the camera due to the controls and size of the lens. The original Ermanox was marked on the viewfinder with the name of the firm and on the flat surface of the top knob seen on the side of the camera. With the merger, the surface of that knob would be covered with a circle of leather. The Ermanox reflex would not have a viewfinder of the type of the parent camera but rather a pop-up bellows with a mirror inside the camera to view through the lens. The cover for that reflex housing did not have a trademark but rather had a guide on how to set the shutter as on most such focal plane cameras.

The tried and true use of a button tag such as the one to the left which had appeared on the earlier Hüttig and Ica cameras was put into service. The lens had a typical marking with the company name and the lens' trademark: Ernemann Anastigmat Ernststar or Ernemann-Ernostar.

So, it would seem that there was a fairly large supply of lenses on hand at Ernemann for use on the Ermanox cameras but because the new Ermanox Reflex was a totally new camera with an ultra fast lens, I believe that Zeiss wanted to have their name on the new product and to develop the expertise in manufacturing this extremely large and sophisticated lens. This does not mean that there were not Ernemann lenses available for the camera but for this one example, Zeiss was interested in eclipsing Leitz where it could even if the Kolibri was three years into the future and the Contax four.

The Ermanox was a plate film camera only with no provision for the use of roll film in any of its models and so there was usually a ground glass or film carrier provided for use on the camera but this was considered an interchangeable accessory and, if it carried a trademark it was not a part of the camera.



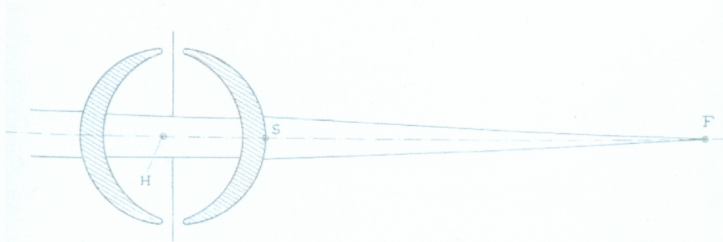
There were many other lenses manufactured by Ernemann and the image to the right shows two different Ernostar variants that could be interchanged with the Ermanox cameras and while it was not a big selling point, the image to the right shows a 10.5 cm and a 15 cm pairing on a very pristine model of the Ermanox Reflex, it shows that things do move in the manufacturing process as well as in the after-market. These were all focusing models and whether you used the reflex or a ground glass, focussing and setting the camera was still a time consuming process.



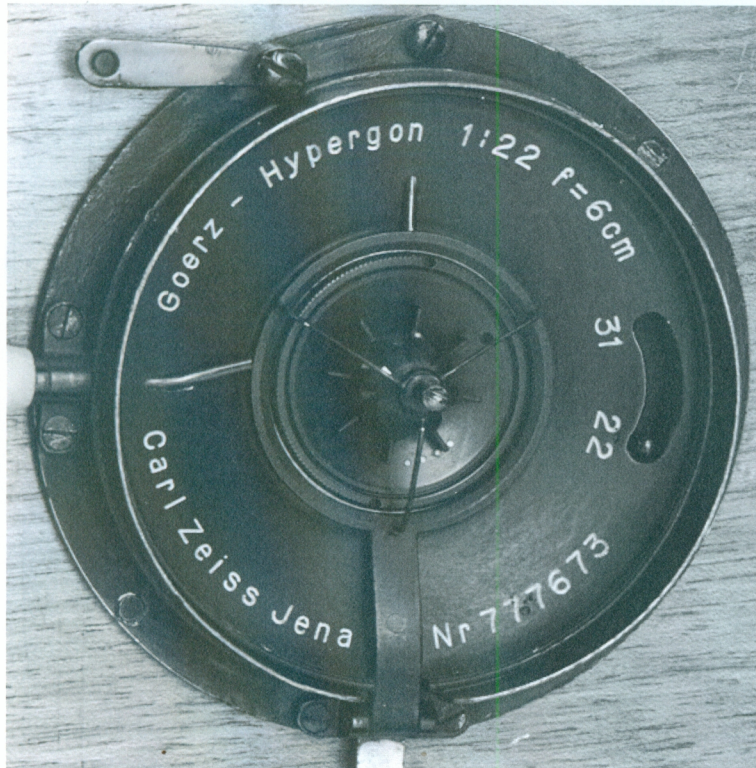
At or about the same time, Zeiss was digesting the products of CP Goerz who was famous for their Dagor lenses but whose cameras were in the same state as they were in 1911 since the firm had concentrated on war related products for a long time and those products would be the first to disappear from the catalog. However, they did manufacture (although in small numbers) a unique super wide angle lens designed by Emil von Höegh in 1900 under the trademark of **Hypergon**. It was the first such lens to cover a field of 135° on a flat field. As a result of the drastic fall off in illumination at the limits of the extremely wide field, it was found necessary to hold back the central exposure by means of a little cog wheel with long teeth (See the image across the page.) mounted in front of the lens and spun by an air bulb during exposure. With the smallest wide aperture of F/22, the exposure was not usually accomplished with a shutter but rather by removing and replacing the lens cap and, after five-sixth of the exposure,

the cogwheel was swung out of the way and then the lens cap replaced. This lens was made from 1900 until the 1926 merger in small numbers. Zeiss would immediately make a small batch for continuity sake. It is my considered opinion that it was for two reasons. First, was to have a practice run because it was a difficult glass to grind and to continue to have the prestige of having it in their catalog. The table to the left is from a Goerz catalog and shows six different focal lengths at F/22. The format of the plate ran from 13 x 18 cm to 60 x 70 cm which is truly large format.

Brennweite mm	Fassung mit Sternblende			Fassung ohne Sternblende		
	Für Plattenformat cm	Telegrammwort	Preis K.	Für Plattenformat cm	Telegrammwort	Preis K.
60	13×18	Hydrat	144.—	9×12	Hias	126.—
75	18×24	Hyla	162.—	12×16	Hiebe	146.—
90	24×30	Hymne	174.—	15×20	Hilde	158.—
120	30×40	Hyperbel	204.—	18×24	Himmel	180.—
150	40×50	Hyperian	240.—	24×30	Hinten	204.—
200	60×70	Hyrta	300.—	30×40	Hippe	264.—



The drawing to the left is copied from an early Goerz catalog and shows the onion like quality of the Hypergon's two elements. The severe curvature of the optical glass made it difficult to shape by grinding and also to seat in its mount. It would not change over the life of the product and Zeiss had no near equivalent until the invention of the Hologon by Dr. Glatzel in the 1970s.



The Zeiss presentation of the Goerz Hypergon's housing was identical to the earlier Goerz example with only a more highlighted whitening placed in the engraving of the trademarks.

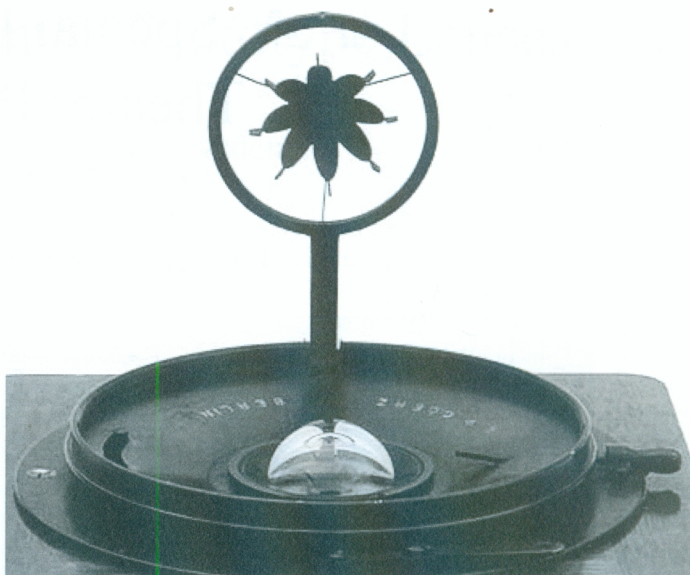
Neither Goerz or Zeiss seemed to have made an effort to make a camera body that was intended for use with this lens, it would be left to the purchaser to couple it to an existing large format wooden camera or find a specialty manufacturer. On the cover of this issue is such a camera that seems to have been custom made for this lens as it has only a small space between the lens and the film plane. It is similar in construction and brass appointments to cameras that I have seen that were manufactured by Ernemann under the trademark of Globus which they had purchased from the firm of Herbst & Firl in Görlitz. These lenses are quite highly prized and rare and command very high prices when found today.

To the right is an example of the cog wheel or spinner that was placed over the lens that distributed the light out of the center of the image and was swung out of the way after five sixths of the exposure time. the air bulb would spin the star like covering for that period of time but be flicked away by the camera operator.

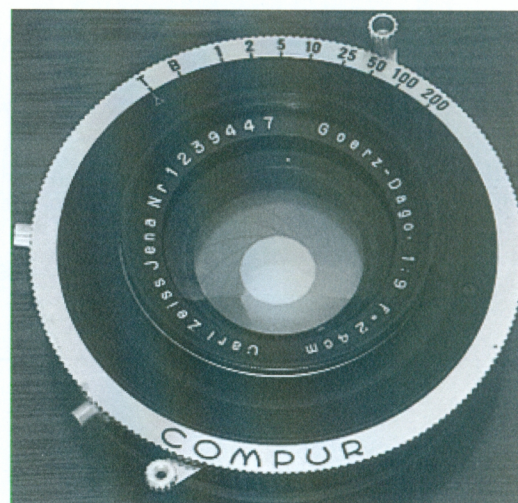
The pictured example is from a Goerz lens so that you can see the near exact similarity to the Zeiss version. As you can see, there were but two aperture settings on the lens. Goerz made examples in the course of its activity from 1900 to 1926. However, there is no data on Goerz production other than personal observation. So there is no way to project a reasonable estimate of how many and which type were made. However, it was made throughout that period of time.

Zeiss would make this immediate batch but the documentation of the later are difficult to trace except by observation. It would seem a batch was made in 1935 but the entry in Thiele only shows one example but a slot for as much as many as 16 of the 7.5 cm example. Data for the 1927 batches are similarly fragmentary and so no deduction can be made except this is an exceptional and rare lens in both Goerz and Zeiss examples.

There is one more lens that survived the transition into Carl Zeiss Jena/Zeiss Ikon. It was the **Goerz Dagor**. Remember that it was the main goal of Zeiss to be the major supplier of photo lenses to the trade and the merger eliminated both major competitors (Ernmann and Goerz). Goerz had a much wider portfolio of diverse lenses than Ernemann but the new Ernostar was going down an entirely new road and, by merging, designer Ludwig Bertele was drawn into the Zeiss community. Many different focal lengths and apertures of the Dagor fell into the Zeiss catalog and they would be an active member of the catalog through the period of World War II. However, it would seem to be a bit of an anomaly since when the Americans took the lens collection in 1945, there were entire batches of the lenses in storage.



This view of the lens shows the extremely rounded external surface of the Hypergon as well as the construction of the spinner.



Above is a typical example of a 1930 Zeiss construction of a Dagor lens. They came in various Compur shutters as well as fixed and helical mounts. Notice that the trademark is "Goerz-Dagor" which is by far the most common version but the example to the left is from September 1945 was made under Russian supervision and the Goerz part of the trademark has disappeared.

Zeiss made Dagor lenses are now quite collectible and fetch a pretty price when fewer and fewer active cameras are capable of making use of such lenses.

See the back cover for a color tidbit with regard to the Zeiss Ikon Ermanox camera.



A Special Instrument for Theater Photography

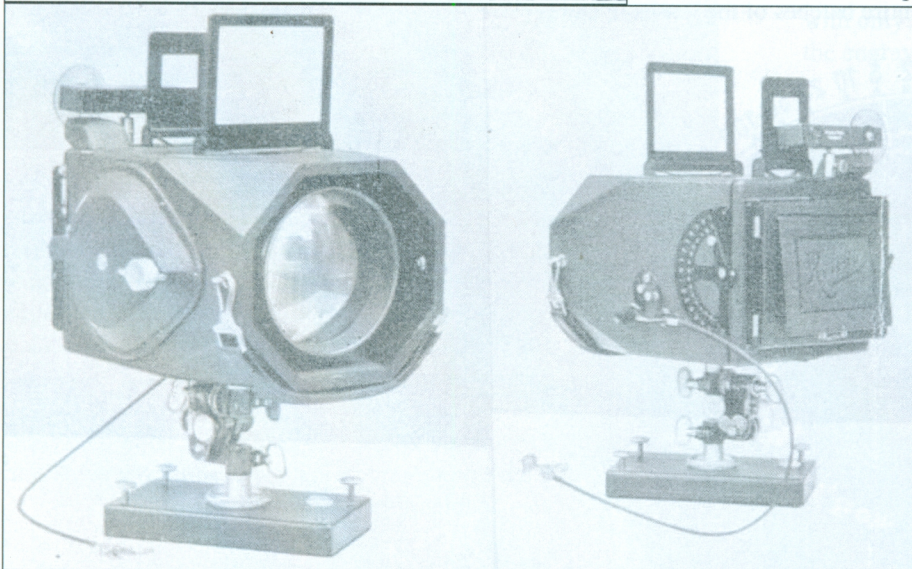
“Bühnen Ermanox”

Lawrence J. Gubas, Las Vegas, Nevada



One of my “bad habits” is leafing through various old Photography magazines and from time to time, I stumble onto something interesting or rare. It happens more often in the few German language magazines which forces me to resort to a German to English dictionary. This is such a case and I was able to scan two pictures of this device and my title above is a direct translation of that article. It is based on the Ermanox camera of the mid-1920s and uses the F/ 1.8 Ernostar lens in the 16.5 cm format and the title of “Bühnen-Ermanox” translates to “Theater Ermanox.” It is shown in the first picture in the box of a theater with the photographer sort of hidden behind the decorative curtain but the size of the format (9 x 12 cm) makes it difficult to be inconspicuous.

Photography of live theater has always been difficult with inconsistent light across the stage and often results in blurred motion even with the use of a focal plane shutter at high speed. It is clearly the wide open speed of the Ernostar lens that made the idea of this camera possible but there would still be disadvantages with the sound of the shutter distracting both the actors and the audience but it would perform well in the atmosphere of a dress rehearsal when the actors would be informed of the activity. The large size of the film format would also enable cropping in an enlarger.



Using the materials available in the mid-1920s, this was an effective but cumbersome device with a lot of special controls, a huge lens, large film carriers and accessories. It is handsome to look at but would be difficult to use.

The article is dated in August 1927 and uses the name of Zeiss Ikon and not Ernemann and says that as part of the camera's development several thousand test pictures were taken to see if the results were effective in newspapers, slide shows and books. You can see that the 9 x 12 cm format camera was nearly impossible to hide and used film or glass plates and the ground glass at the rear would have been cumbersome to use in performances. A portable rangefinder was deployed behind the view finder and the device would have been quite heavy. I have never seen a live example or a catalog reference and miniature cameras such as the Leica and later the Contax were smaller with interchangeable lenses and quiet shutters.

A Benchmark for Contax Prototype Lenses

Stefan Baumgartner, Lund, Sweden

Inspired by the beautiful Zeiss book by Larry Gubas that appeared recently, I have decided to open my archive and research files and complement his data with further information on the lenses for the Contax. In particular, I wish to present and discuss the following prototype lenses for the Contax system:

Trademark	Technical Data	Serial Numbers*	Approximate Date**
Sphaerogon	1:8/f=1.9 cm	1503373 and 1503382	January 1936
Perimetar	1:6.3/f=2.5 cm	1503342	January 1936
Goerz Dagor	1:9/f=2.5 cm	1389298	October 1932
Triotar	1:3.5/f=5 cm	1535879	June 1934
Biotar	1:2/f=5 cm	1364490	February 1932
Biotar	1:2.8/f=5 cm	1349677	October 1931
Sonnar	1:2/f=5 cm	1432018	May 1933
Tessar	1.4.5/ f=13.5 cm	2656187	January 1940

All the above lenses are shown in Figure 1 below. Few People have ever seen any of these lenses, as they were either prototypes or only produced in very few examples. The majority of them were found in the famous but badly documented Zeiss Collection (ZC). For almost all of the lenses, Zeiss constructed a special provisional, screwable adapter that allowed for test mounting on a Contax camera. However, with respect to the Sphaerogon and the Perimetar, none were available, so, I had to engage a precision machinist to design and create an adapter. This was necessary since my ultimate goal was to be able to use these lenses to take pictures and to compare the quality of these milestone lenses to more modern lenses. I will show the results later in this article.

The lenses in Figure 1 below are (from left to right) Sphaerogon 1503373, Biotar 1364490, Sphaerogon 1503382, Biotar 1349677, Perimetar 1503342, Sonnar 1432018, Goerz-Dagor 1389298, Tessar 2656187 and Triotar 1535879.



* These are serial numbers from actual lenses physically observed by the author.

** These dates are derived from design data cards discovered in the Carl Zeiss Jena Archives by Dr. Wolfgang Wimmer and placed into Excel spreadsheet form by Hartmut Thiele in multiple editions of his book "Fabrikationsbuch Photooptik II Carl Zeiss Jena." The editor used his Third Edition from 2005.

Sphaerogon 1.9 cm: I was fortunate enough to acquire two of these lenses with a bit of luck on eBay (and of course the necessary cash payment (see Figure 2 below - top half). The first one (serial number 1503373) was acquired in 2006 when a major portion of the ZC (originally containing roughly 2000 lenses) was put up for sale on eBay. These lenses were the legacy from the estate of American photographic businessman Burleigh Brooks (BB) who apparently was given the remainder of the collection to store and later when the Army decided to release control to his firm of Burke & James, a camera manufacturer and importer for lenses and cameras. Brooks was a major distributor in the pre and post war years. This included such firms such as Rollei, Plaubel, Foth, Kamerawerkstätten among others. At the same time, he had founded a second company, Burleigh Brooks Optics. Both companies were closed in 1981 or 1982. I still maintain contact with his grandson who was the source for the huge ZC eBay sale back in 2006 (still further sales were in 2008 and 2009), because he inherited all lenses from his grandfather. This first Sphaerogon is extensively discussed in the Gubas book. The other Sphaerogon was acquired in 2013, also via another eBay seller, and carries the



serial number 1503382, thus very close to the first one. So, at least two Sphaerogon lenses have survived, so the question remains whether there are more than just these two lenses out there.

The list of lenses documenting the ZC that were handed over to Colonel Tebov of the US Army on May 12, 1945 in Jena still exists. In that list, there were at least four 1.9 cm Sphaerogons (serial 1503352 and 1503373 referenced here), and numbers 1503381 and 1503382. In Thiele, he documents a series of 50 of these Sphaerogons (ranging from 1503351-400) being made in a series. It is my assumption that all of these must have been transported to the US with the collection. So, there is a chance that more just than these two Sphaerogons have survived.

I have also been able to locate and procure two other Sphaerogon-like design lenses from the ZC, although these are not marked Sphaerogon. Zeiss must have continued their research and designed a 1.6 cm lens (see Figure 2, bottom left). It carries the mark of "V.1936 no 3" (V = Versuch (Prototype) with serial 1799049. It is likely that it has a slightly wider angle of view than the two Sphaerogons in my collection. This lens was constructed on April 1, 1936 and was claimed to have an angle of view of 180°, compared to the Sphaerogon reported to have 165°. See the photos on the page to the left in the lower half. As far as the construction is concerned, it still had a flat front surface as the Sphaerogon. A few months later but still in 1936, Zeiss increased the angle of view to a stunning 210° by constructing a convex front lens surface. This lens is marked V.1936 no 18 and has serial number 2030705 (Figure 2, bottom right). This lens is again discussed in Gubas' book.



When mounted on a Contax (Figure 3 above), the Sphaerogon covers the majority of the middle part of the Contax camera body and thus makes focusing with the rangefinder rather difficult. I guess this fact, together with the understanding that the production would become rather expensive, led the Zeiss people to the conclusion that they would not want to go for a serial production. However, I do not think that it was a quality issue that led to discontinuation of the production, as the Sphaerogon is a superb and sharp lens, evidenced by the photos toward the end of this text.

The 2.5 cm Perimeter: This lens was also acquired via eBay in the 2006 BB sale and has serial number 1503342. This lens is the only example that has come to light so far and it is also discussed in Gubas' book. It shows an interesting feature: the



front lens is concave (Figure 4), a novel innovation for 1936 which also underlines how daring Zeiss was in 1936 regarding lens constructions. When mounted on a Contax (Fig. 5), it does not limp out as the Sphaerogon does, hence, rangefinder focusing would have been possible. Nevertheless, it appears that the manufacturing of a concave lens was expensive, therefore, the Perimeter never went into production. As a consequence, 3 examples of 2.5 cm Perimeters (1503335, 1503342 (this report) and 1503343) were placed in the Zeiss Collection and shipped to the US. Again, there is a chance that more than just one Perimeter survived. Where are the other two? Please help us to locate these lenses and send me an E-mail (baumgarts@yahoo.com).



Figure 5: Up until this point, I am showing these lenses with the full view of a Contax II body. It was important to do because of the potential large size of the lens but starting with the next image, I will be showing the lens only.

The 2.5 cm Goerz Dagor (Figure 6): this lens was acquired in a private sale and was reported by Thiele as one of two such lenses made for Contax. It has serial number 1389298. It is a very precious lens since the diameter of the frontal glass is less than 4 mm. Indeed, manufacturing must have been highly difficult if not problematic, as was noted by Larry Gubas for the 2.5 cm Topogon and its diameter of 8 mm, but how tedious must it have been with a diameter less than 4 mm! Since the serial number points to a production of October 1932, it must have been a follow-up construction of the planned production of a 3 cm

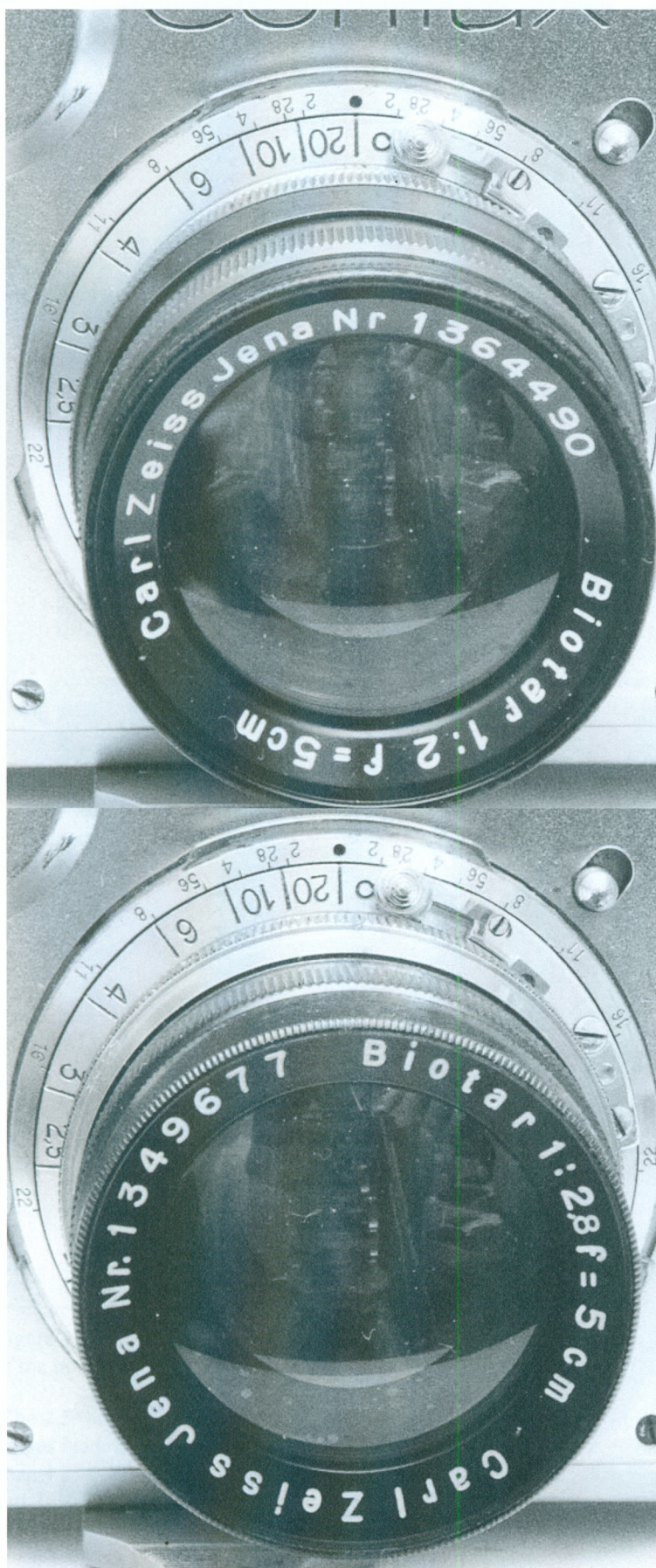
Dagor, as announced in the August 1932 catalogue and discussed in the Gubas book. Presumably, a 2.5 cm lens was more attractive, but these plans would probably be superseded by the arrival of the 2.8 cm Tessar which was manufactured in high numbers beginning only 2 months later, i. e. from Dec. 1932 forward. Possibly, the slightly larger lens (6 mm) of the Tessar caused fewer problems during the manufacturing process. Interestingly, this 2.5 cm example of the Dagor revealed considerable vignetting in the corners (not shown) which points towards that some optical problems were not solved yet. Conversely, the 2.8 cm Tessar had superb optical performance. We can speculate that, since in 1932 the next available focus length was 5 cm, the gap between 2.5 cm and 5 cm appeared too big. But why then was the 3 cm Dagor never produced upon its announcement, not even as a prototype?



The 5 cm Triotar: It came as a quite a surprise for me to note that Zeiss had plans to produce a simple 5 cm Triotar normal lens for Contax (Figure 7). This lens, marked "R.v.17.4.34" (most probably standing for "Rechnung von 17. 4. 34", meaning "calculated on 17. 4. 34" (April 17, 1934) again was found on eBay and has serial number 1535879. Thiele mentions that the batch of lenses was intended for Super Nettel, but this one sits on a Contax mount, no doubt. Remains the question why Zeiss planned for an inferior lens, as the Contax already had a well-established, and still reasonably cheap 5 cm Tessar lens in its program. Price issues?

An afterthought: Thiele notes that there were two such lenses for the Super Nettel on April 17th 1934 and then notes that another two were constructed based on a Rechnung/Calculation on April 18th, 1934 -- The very next day. This is a calculation and not just a second batch. These four lenses were constructed on the same day (June 6, 1934) but with two different calculations and both for the Super Nettel.





The 1:2/f=5 cm Biotar: Biotar or Sonnar? I guess this was the question when Zeiss had to make a choice which one of the two top lenses would eventually become the standard lens for the Contax I? The Biotar with serial number 1364490 (Fig. 8) was part of the aforementioned BB-sale in 2006 and I was outbid, but I received the chance to buy it again three years later at lower price. Note: sometimes, the rule of thumb does not hold true that auctions are more expensive than eBay! This Biotar was also mentioned in the Gubas book. Interestingly, it contains an internally-mounted grid and thus appeared to be for optical measuring purpose. It is a quite bulky and, when mounted on a camera, it protrudes clearly more than a comparable fixed-mount 1:2/f=5 cm Sonnar (the difference is almost 1 cm), not to mention about the later-developed collapsible Sonnar. Was this the reason that Zeiss preferred the Sonnar and abandoned the Biotar? As far as optical performance is concerned, both lenses appeared similarly-well suited, so I presume that this fact did not play a major role.

The 1:2.8/f=5 cm Biotar: Biotar or Tessar? At the time when the Contax I would be launched, Zeiss probably aimed for a less expensive alternative. Remember: the major competitor Leica camera offered only 1:3.5 Elmar lenses, but the (notably ingenious) camera and the lens as a package was considerably cheaper than a Contax. By contrast, Zeiss offered a heavy and solidly-built Contax with a price tag that must have caused headaches to most buyers. How could one attract a potential buyer to the Zeiss system? Since the price tag for the camera was fixed, Zeiss could only respond by offering a less expensive lens and thus moving the package price closer to that of a Leica again. I presume that these were some thoughts when this 1:2.8/f=5 cm Biotar (Fig. 9) was designed. Again, as in the case of the aforementioned 1:2/f=5 cm Biotar (Fig. 8), it protruded quite strongly, taken its focal length and aperture into consideration, and had therefore a clear disadvantage. Optically, it may have been superior to the 1:2.8/f=5cm Tessar, but it was probably too expensive for its aperture, and therefore, the Tessar won the race. This lens has serial number 1349677 and was also acquired during the aforementioned 2006-BB sale.

The 1:2/f=5 cm Sonnar: a Contax I type Sonnar, but in chrome instead of black&nickel (BN) (Figure 10)? Here, I am a bit puzzled, as the serial number of 1432018 is within a batch of 500 lenses where another lens from the same batch that I also own is made of black and nickel (BN). A close comparison shows that both lenses are identical in construction, with the exception that this one is made in “all-chrome”. One could argue that a handy mechanic could eventually convert it to chrome, too, but if I dismantle the front lens, it turns out that even the interior surface is not BN which puts an enormous work load on a mechanic for only converting it from BN to chrome. Since the batch was made in mid 1933, it should be remembered that somewhat later, Zeiss began to abandon the BN lenses, as the Contax I was superseded by the arrival of the Contax II where, as we all know, chrome was dominant. Hence, it could have been a sample to test the look on a chrome Contax II. This lens was also found on eBay, but it is not listed as being part of the ZC.



The Panflex Tessar 1.4.5/ f=13.5 cm: I had the sheer luck to acquire this lens (Figure 11) from Moldavia, again via eBay, but the seller was unable to tell me the history of its provenance. The Panflex Tessar indeed is a rare find: so far, only nine lenses have come to light. Thiele does not mention any special batch, except that the lens was part of a batch of 5000 13.5 cm Tessar lenses, of which 150 lenses were claimed to be made for the “Spiegelkasten” (Mirror box). My own database documents the lowest number as 2656139 and highest at 2656462, a production run dated to 1940. The lens was specifically designed for use with the prewar Panflex reflex unit and is also shown in this combination in Figure 11. The back part was made of black enamel without indication of the distance, while the focusing part, absolutely untypical for Zeiss, consisted of a ring with 4 milled finger grip rows. The lens was kept simple: it had a pre-set aperture and no rangefinder cam, as with most of the Contax lenses. None of these lenses became part of the ZC. Moreover, it was never announced, so one wonders how the lenses came onto the “market.”



As mentioned before, my ambition was to shoot with some of these lenses, in particular with the Sphaerogon and the Perimetar. I used two Contax IIIa cameras and focused the lenses using a ground glass focusing screen. Kodacolor 100 films were exposed using the meter from the Contax IIIa (of course I tested their accuracy beforehand) and developed the way they should. Finally, the negatives were scanned at high resolution, i. e. at 2000 dpi. Most importantly, no cropping of the pictures occurred during all steps. I should also mention that these data were acquired back in 2006. Today, I would use a digital camera. A full-frame digital camera (with 24 x 36 mm sensor) such as the Sony Alpha7 and derivative models allows to mount virtually any lens that originally was made for 24 x 36 mm films, provided that you find an adapter. Rest assured that there are plenty of adapters available, but be aware that you will need to use a full-frame camera to test your lens, those cameras with a smaller sensor (such as AP-C cameras from the Sony Nex series) will change the focal length of your image. There are Contax/Nikon rangefinder adapters around. For example, the relatively cheap Fotodiox Nikon RF rangefinder adapter for outer bayonet lenses or the Kipon CRF-NEX adapter. Or then the hand-made adapters by amadeo.m at eBay which also allow focusing of the normal lenses, having its own focusing helicoid incorporated, apart



from the outer bayonet. Contarex adapters can also be found easily, so why not combine the past with modern technology? It will become a project for me in the future to evaluate the Contax lenses using a full-frame digital camera.

For the scenery, I used the park in front of the main building of my Alma Mater, Lund University where I am a researcher and teacher. The two main buildings in the background are in white and in brown with numerous windows that allow the photographer to monitor the sharpness, light abatement of the lenses at the edges, as well as distortion. All pictures were taken at fully open aperture, so it can be expected that the performance is even better when stepping down. For each lens, I took an area on the left and the right for 3 x enlargement to reveal the sharpness. At this magnification, the silver grains of the negative film can already be seen. For comparison with the Sphaerogon, I used a 15 mm Contarex Hologon camera (without correction filter which results in a slightly over-exposed area in the center of the picture) and the 18 mm Distagon for Contarex. The Perimeter was compared to a 25 mm Distagon made for the Contarex. Notably, all 3 aforementioned lenses are 30 years more advanced than the 2 prototypes. So, if progress in optical design occurred during this period, then one should be able to detect it.

Let me focus first on the Sphaerogon: the field of view might be around 165° , as was claimed by the literature, but only in the diagonal. Over the whole horizontal view, it will be around 140° . There is clear barrel distortion, best seen on the flags of the white building. In essence, it is a picture that we all know very well from today's 16 mm fisheye lenses. There is also a bit of vignetting. As a somewhat more critical test, I identified areas on either side which contain fine structures to evaluate the lens performance on the sides. These areas are depicted on the lower right corner. To my surprise, I found that the detail richness was remarkable, as well as sharpness, despite the fact the picture was taken at open aperture. When I compared the Sphaerogon to the 18 mm Distagon, then the difference is not huge. In general, the Distagon shows less distortion and vignetting, but sharpness is about equal. This came to me as a surprise. The Hologon, on the other hand, was slightly sharper and contrast-richer at the edges, compared to the Sphaerogon.

The Perimeter revealed a picture which was sharp over the whole area, with the exception of the lower right corner, presumably caused by a cement defect in the back lens group which occurred during the last 80 years. Surprisingly enough, there was hardly any distortion, and vignetting was also modest, so my conclusion was that this lens would have become a success if it was produced. Compared to the 25 mm Distagon, it performed very well and only minor differences were observed.

Taken together, these two lenses performed stunningly well. At the same time, it also shows how advanced and world-leading Zeiss was in the period between 1930 and 1940, so it does not come as a surprise for me that the US Army was highly interested to confiscate these lenses in Jena. As we all know, the Army soon lost interest in the Collection and it was sold in larger batches or as an individual lens to various buyers, and that is why we usually see the lenses coming to light only one-by-one.

* * * * *

A Mystery of Another Lens from the Zeiss Collection: An Early Orthometar

Stefan Baumgartner, Lund, Sweden

on the next page show this lens. It has obviously suffered somewhat during the years since there is ample dust appearing between the lens elements and currently the aperture control does not move. I have not attempted to undertake to service this lens yet.

Initially, this lens seemed to have the dimensions that would allow it to fit a Contax, but a comparison with an "ordinary" production Orthometar showed that the mounting end did not fit at all. What struck as well, was the fact that this lens construction used (presumably) brass that had corroded over the years to become darkened. This construction type is common to the other lenses shown in the above article (such as Sphaerogons, Perimeter, etc.) which suggests that this lens was also made as a prototype. A deeper look at Thiele's list indeed showed that this lens was put to the ZC (Figure below) and mentioned there in the comment field as from "Zeiss-Archiv").

Did you note that a total of only 1650 Orthometar 3.5 cm lenses were made for Contax? Therefore, it is one of the Contax System's rarer lenses. Interestingly, the Thiele list documented an initial batch of 100 lenses, starting from 1503451 until 1503550. These were dated November 1936 which was about two years before an actual production run started, dated as November 1938.

All the batches were based on the same calculation from 12. 9. 35. Also, note that this first batch resided extremely close to that of the documented run of 50 Sphaerogons and Perimeters. The Barringer database lists 8 lenses in this series, so Zeiss did not throw this first batch away and instead, these lenses somehow found their way to the user. But why were there two years between the first batch and the main bulk of lenses? Was the 1:2,8 f=3.5 cm Biogon simply better and it took a while to realize that it was relatively expensive and so this less expensive alternative could come back onto the market?

Curiously, the Orthometar presented here lies in between this first batch of 100 lenses and the start of the bulk of the Orthometars. Why? Did Zeiss calculate another better version of the Orthometar which we now see as a single lens? Unfortunately, in Thiele's list, the place where the calculation date is indicated is without an entry so we are left alone with no answer to this question.

	Optimat	1,7	10	mm		2.000	4.114.001	4.110.000	Projektor P0		Beleg fehlt
→	Orthometar	4,5	2,7	cm		2	2.025.791	2.025.792	Tenax II		Beleg fehlt
	Orthometar	4,5	2,7	cm		100	2.203.301	2.203.400	Tenax II	01 10.37	Karte fehlt
	Orthometar	4,5	2,7	cm		200	2.360.001	2.360.200	Tenax II		Beleg fehlt
	Orthometar	4,5	3,5	cm	12.09.35	100	1.503.451	1.503.550	Contax	30.11.36	Karte fehlt
US-B	Orthometar	4,5	3,5	cm		1	1.735.036				Zeiss-Archiv
	Orthometar	4,5	3,5	cm	12.09.35	200	2.035.501	2.035.700	Contax	01.11.38	Beleg fehlt
	Orthometar	4,5	3,5	cm	12.09.35	300	2.234.901	2.235.200	Contax		zT Contaflex
	Orthometar	4,5	3,5	cm	12.09.35	250	2.267.701	2.267.950	Contax		Beleg fehlt
	Orthometar	4,5	3,5	cm	12.09.35	700	2.391.701	2.392.400	Contax		Beleg fehlt
	Orthometar	4,5	3,5	cm	12.09.35	200	2.612.801	2.613.000	Contax		Beleg fehlt
	Orthometar	4,5	10,5	cm		2	2.613.594	2.613.595			Zeiss-Archiv
	Orthometar	4,5	13,5	cm		1	1.570.552				Zeiss-Archiv
	Orthometar	4,5	13,5	cm		1	1.589.948				Zeiss-Archiv
	Orthometar	4,5	13,5	cm		1	1.756.798				Zeiss-Archiv
	Orthometar	4,5	21	cm		20	972.871	972.890	RMK		Beleg fehlt
	Orthometar	4,5	21	cm	17.08.35	14	1.383.970	1.383.983	Aerotopograph		Beleg fehlt
	Orthometar	4,5	21	cm	17.08.35	100	1.453.501	1.453.600	Aerotopograph		Beleg fehlt
	Orthometar	4,5	21	cm	15.01.35	10	1.699.641	1.699.650	RMK		V 1935, Nr. 15
	Orthometar	4,5	21	cm	17.08.35	85	1.752.611	1.752.695	RMK S/1818		
	Orthometar	20	15	cm		1	2.759.423		Luftbild		Zeiss-Archiv
390	Orthometar	20	140	mm	05.06.56	10	4.870.011	4.870.020	Multiplex	12.03.57	
	Ortho-Protar	25	19	cm		36	2.799.426	2.799.461	Phototheodolit		Beleg fehlt

Figure 1 above is an extract from Thiele which shows all of the listed runs for Orthometar lenses by Carl Zeiss Jena. Except for the Contax and Tenax, all of the others were made for larger format aerial cameras or lack identification.



Contax Specialty Cases

Lawrence J. Gubas, Las Vegas, Nevada

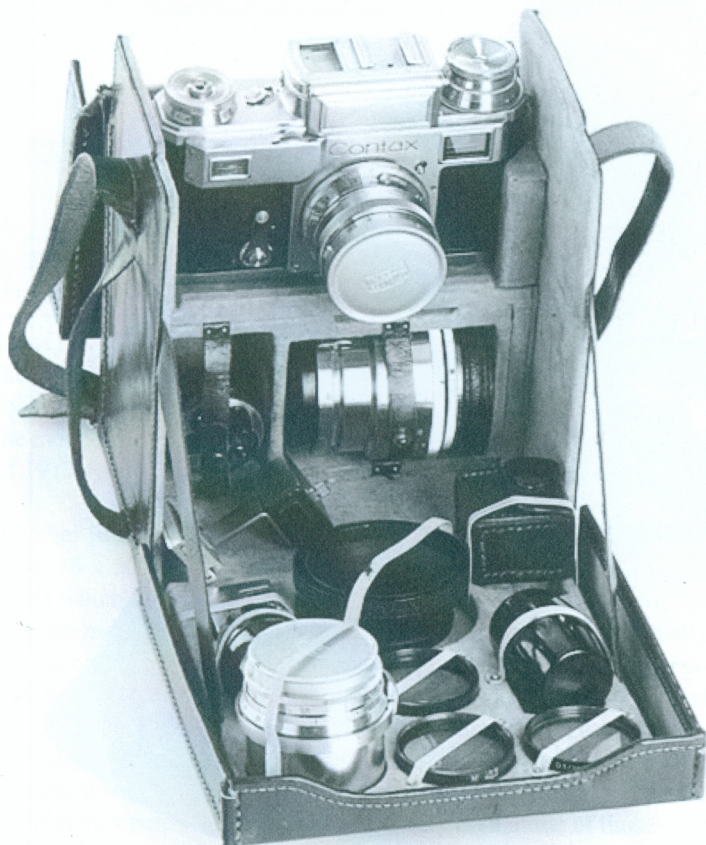
I recently came across the Instruction Books for the special Zeiss Ikon cases shown below for the Contax Rifle Stock with 18 cm Olympic Sonnar (top left) and the direct mount 18 cm Olympic Sonnar (top right). These lenses and accessories are difficult enough to find but I had never seen the cases or most of the accessories themselves, let alone these cases. It led me back to our early publication of the Zeiss Ikon catalog numbers and I was fascinated to note that there were 30 different cases under the original 1777/ catalog number for different camera and lens combinations which is an astounding number when you realize what depth there was to the number of lenses and accessories that could be paired with the Contax I camera.



**Ausrüstungs-
koffer Nr. 1777/45**
für die
**Contax-
Gewehr-
einrichtung**



**Ausrüstungs-
koffer Nr. 1777/42**
für
**Contax II
oder III**
Sonnar $f=18\text{ cm}$ und
Zubehör



These bottom two "Universal" cases were not a part of the 1777/series but rather were the 1787/3 for the Contax and the 1786/3 for the Contaflex Twin Lens camera. I once had the similar case for the Contax IIa but it was so well done in such fine leather that I decided that it was too nice for me to use even for display and so I sold it to another more adventurous friend.



The Elusive Bifort

Lawrence J. Gubas, Las Vegas, Nevada

Some 30+ years ago, I was contacted by a picker from California who wanted me to identify a strange Zeiss binocular and, since it was well before my Internet days, it was a discussion with small Polaroid pictures via snail mail and what was then long distance telephone. It was clear that he knew that he had something of value and he had heard that I was a researcher and would try to be helpful. By this time, I had a decent collection of Zeiss binocular catalogs and the writing on the prism covers was clear but I had very little luck finding a mention of a "Bifort" anywhere. I even searched my very few Zeiss astronomy catalogs since it would seem to be the little brother of the larger terrestrial telescopes (such as the Starmorbi, Assembi and others) that were documented there but with no success. After some time, I located a reference but one that was without an image to verify the features of the device. It was the large 1923 Zeiss catalog covering the full line of binoculars and the mention was exactly that - a mention. See the catalog page reproduced to the right. I have placed two arrows on the page to help you find it. In any case, I would not be a candidate to buy such an item as I was just married and unable to afford it.

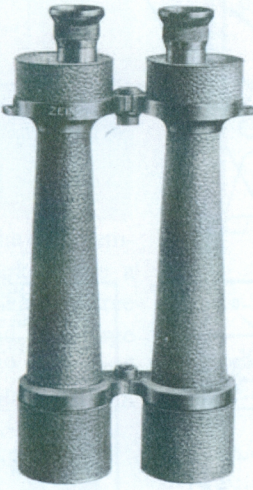
In the years since, I have only observed five Biforts. In the image below, you can see that the body of the binocular is the Abbe-Koenig or Porro Two roof prism model. To the right is the Delfort catalog page and the only discernable difference is the location of the loops for the carrying strap and the prism housing of the Delfort is flat while the Bifort is much stronger and arched or upwardly curved to allow for the two eyepieces which will swivel and lightly lock into place at the markings of 10x and 18x. The five Biforts that I have observed are serial numbers 359425●, 359413●, 418705●, 418727● and 418745●. The first two numbers span 12 numbers and the second batch of three span 41 examples. Without a larger sample, I would hesitate to estimate the production runs, However, using Dr. Seeger's books and charts with regard to this model, he estimates two production runs. The first of 30 and the second of 100. This is a unique and special glass which is a bit difficult to date and understand. Also, all of the versions that I have seen have the ● character after the serial number which I have seen used only on this model.



CARL ZEISS JENA

DELFORT

Magnifying 18 times

Look-out Telescope  1/5 Full Size

High power binocular

In black hard leather case with shoulder strap Codeword: Delfort
 Stand with case (see page 46) Codeword: Delfortsta
 Stockhead for stand (see page 46) Codeword: Delfortaf
 Weight of Stand and Stockhead in case abt. 5 lbs

→ The same binocular, fitted with two pairs of eyepieces, magnifying 10 and 18 times respectively, is named BIFORT ←

For Prices see Price Slip

Magnification	Effective Diameter of Objective		Diameter of Exit Pupil	Light Transmitting Power	Field of View in terms of vds. at a distance of 1000 yds.		Weight	
	mm.	in.			mm.	in angular measure	of Field Glass	of Hard leather Case
18×	50	1.97	2.8	7.84	2.8°	49	36 1/2	23 3/8

I was never able to find a contemporary price list for the Bifort but the Delfort was the most expensive binocular by far in the price lists for the period at \$120 in the 1927 catalog and the serial numbers for the models that I have observed would indicate a manufacturing date of 1913/4.

Another little small note is that the text on the prism covers states 10 u. 18 x 50 with the "u." being the german abbreviation for and (und) which means that they may have been intended only for the German market or only for the military but such suppositions usually put me out on a limb and brings about a great deal further conversation with other knowledgeable people. However, it clear is a most desirable and rare item and could be the centerpiece of a collection. As a large glass weighing in excess of two pounds and having a long posture, it would require a sandbag to balance it or a tripod to operate it out in the open. While a probable military item, none of those seen have military markings.



CARL ZEISS JENA

OPTICAL PARTICULARS AND WEIGHTS

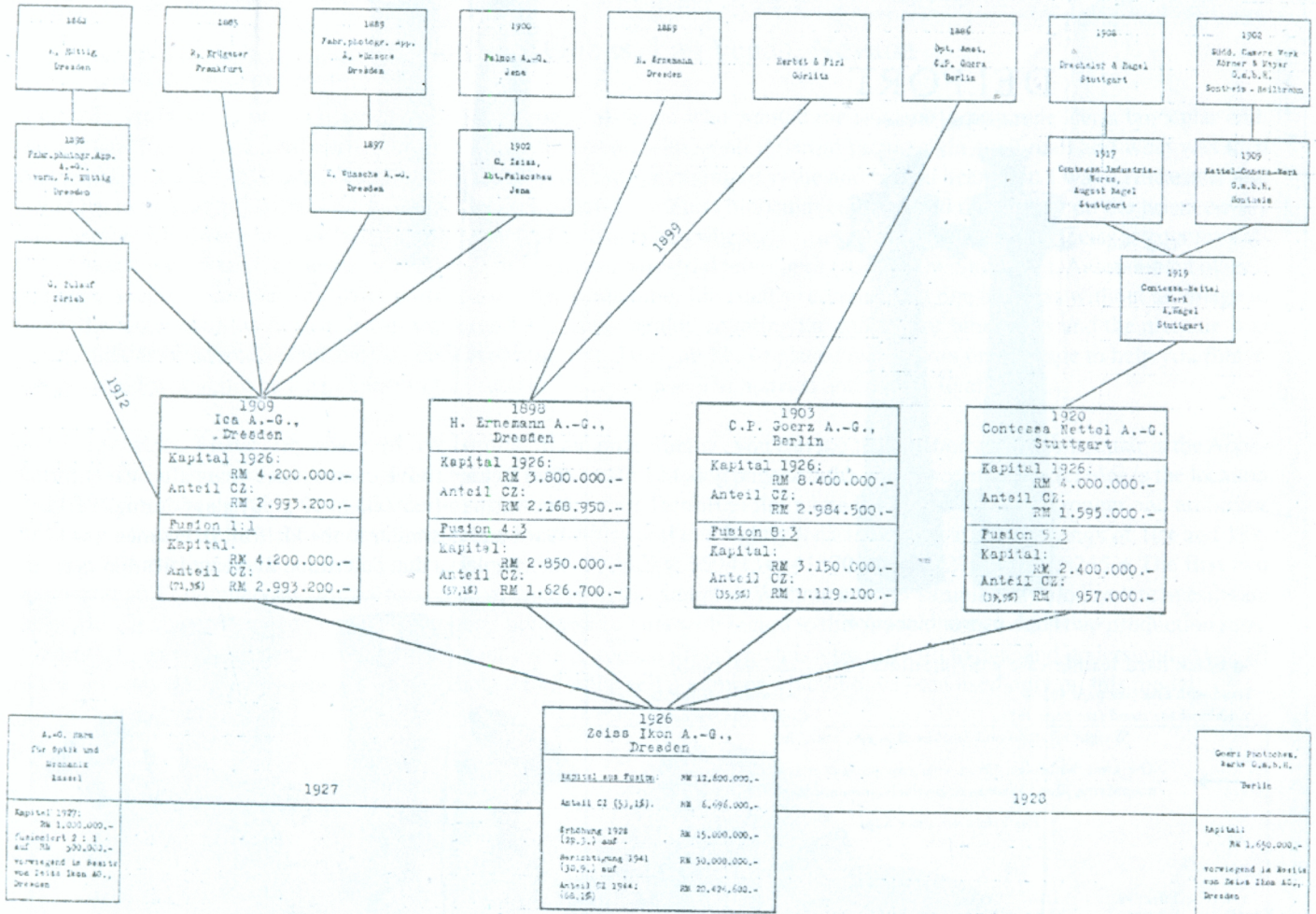
Model	Magnification	Effective Diameter of Objective	Diameter of Exit Pupil	Light transmitting power	Field of View in angular measure	Field of View linear at a distance of 1000 yds.	Weight of Field Glass	Weight of Hard leather Case	
DEKAR	10×	50	1.97	5	25	5°	87	40 1/4	22 1/4

The Dekar above comes some years after the Bifort but was a military (D.F. 10 x 50) glass during World War I and is similar to the Delfort. In essence it is the eyepieces that determine the magnification here.



Zeiss Ikon Family Trees

Stammbaum der Zeiss Ikon AG, Dresden



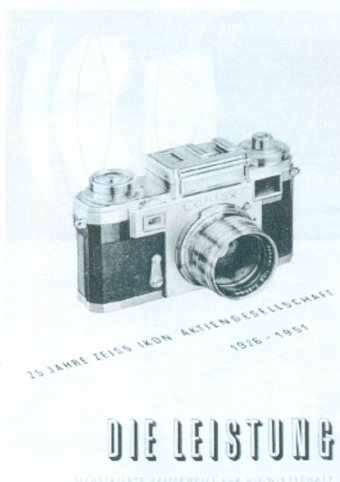
The world of advertising interprets history in ways that suit their need to publicize the products on sale at the moment. It is not to say that they interpret their dates or events wrongly but that there are different perspectives at different times. This presentation is indicative of those perspectives at Zeiss Ikon.

Above is a drawing from the archives of Carl Zeiss Jena which clearly states the predecessor firms that formed Zeiss Ikon in 1926. It includes the value of those firms at the joining and what portion of that firm's shares were already owned by Carl Zeiss Jena underneath the value of the total shares. Under "Fusion" you see the ratio of the number of shares of those firms that were exchanged for Zeiss Ikon shares and the total capitalization of that firm and the amount owned by Carl Zeiss Jena.

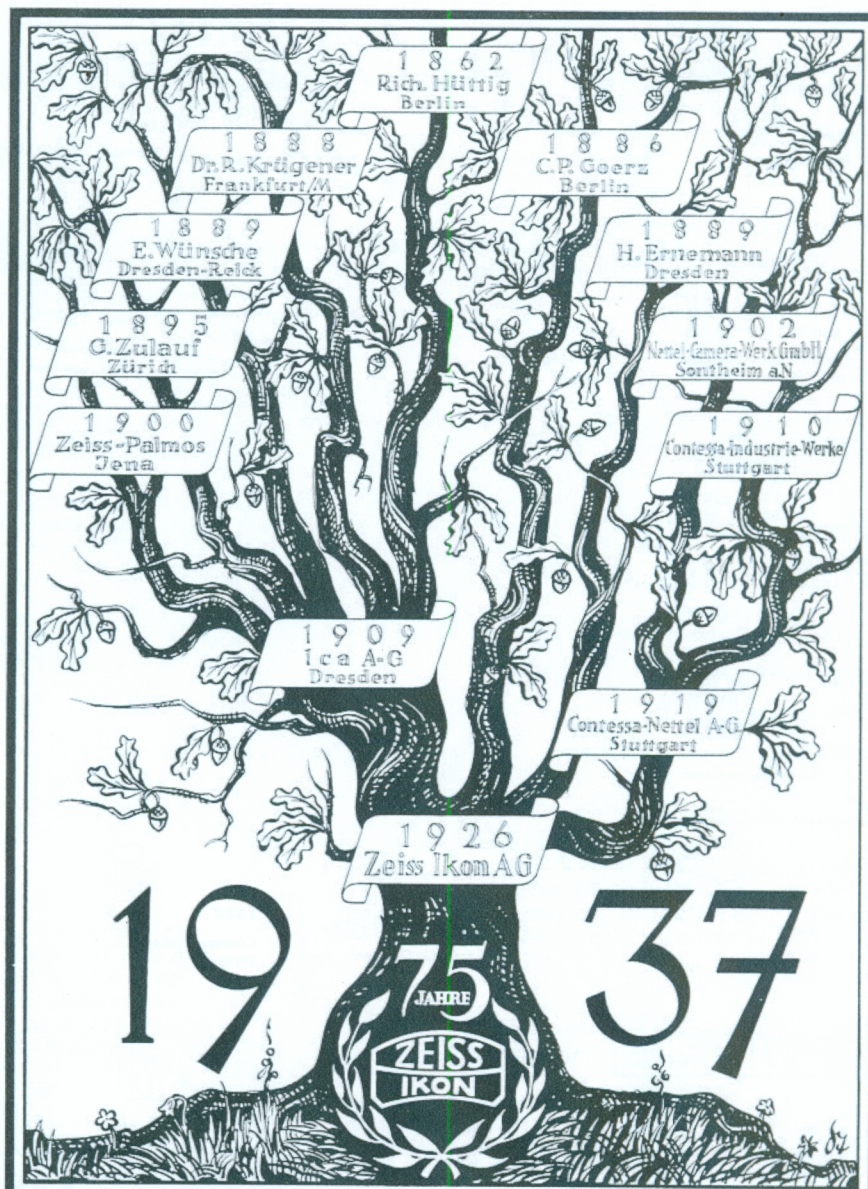
To the left is a celebratory advertisement showing the Ernemann tower in 1937 with a wreath and the number 75 based on the founding of Hüttig in 1862. The text translates as follows: "The basis of Zeiss Ikon, the camera workshop of R. Hüttig, was founded in 1862 with only 4 workers. Today - after 75 years, following the seven large Zeiss Ikon plants - set in Dresden, Berlin and Stuttgart collectively employ about 7000 people."



Above is the cover of the commemorative 75th year book where a simpler version of the Family Tree to the left can be found. It is large at 8 1/2" x 11" with 129 pages and linen cover. It was available only in German in 1937.

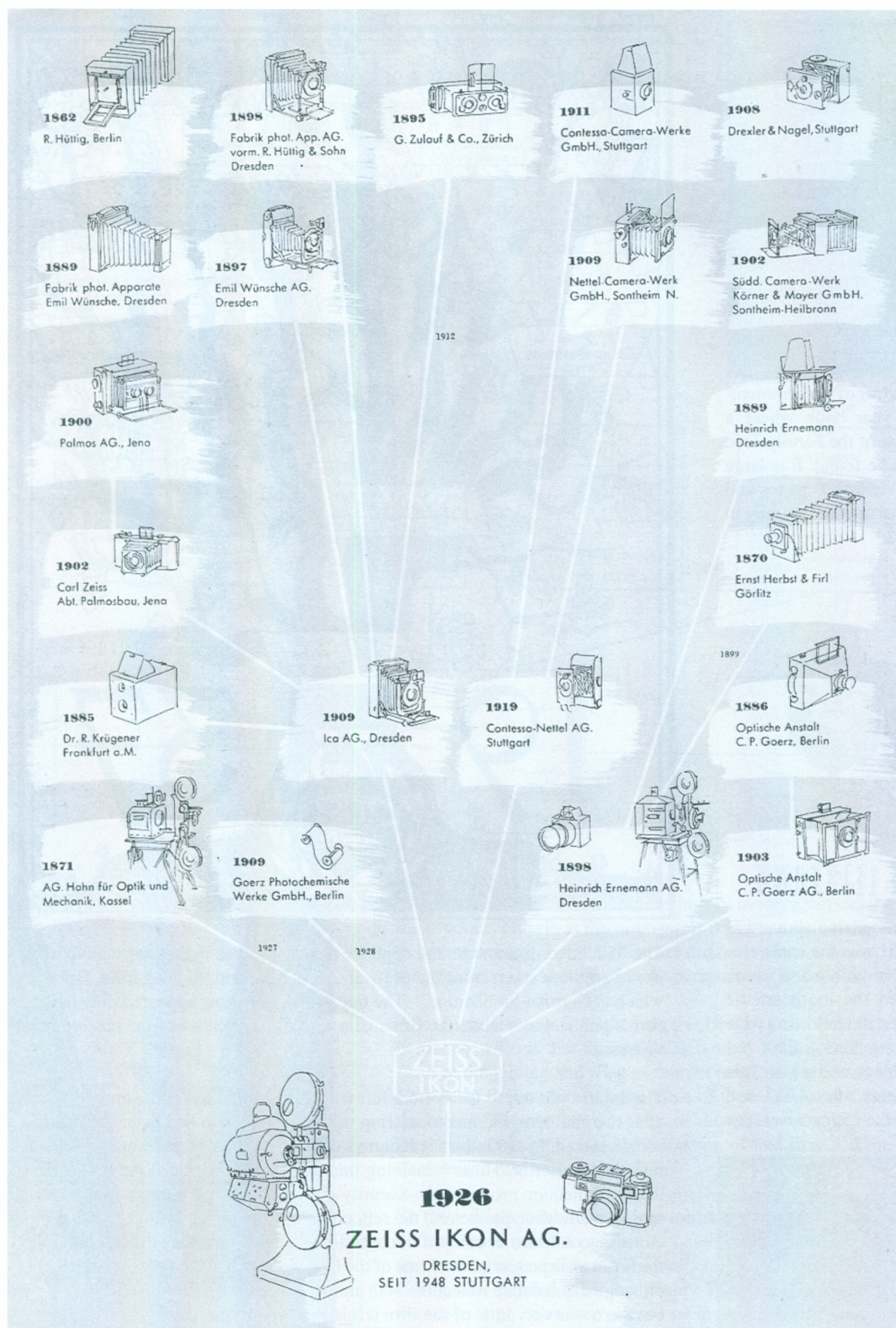


The special magazine above was issued in 1951 was the same size as the 75th but with a soft cover and contained the more artistic Family Tree on the following page on a blue-gray background but was largely black and white. It is nearly 15 years after 1937 and states it to be the 25th anniversary.

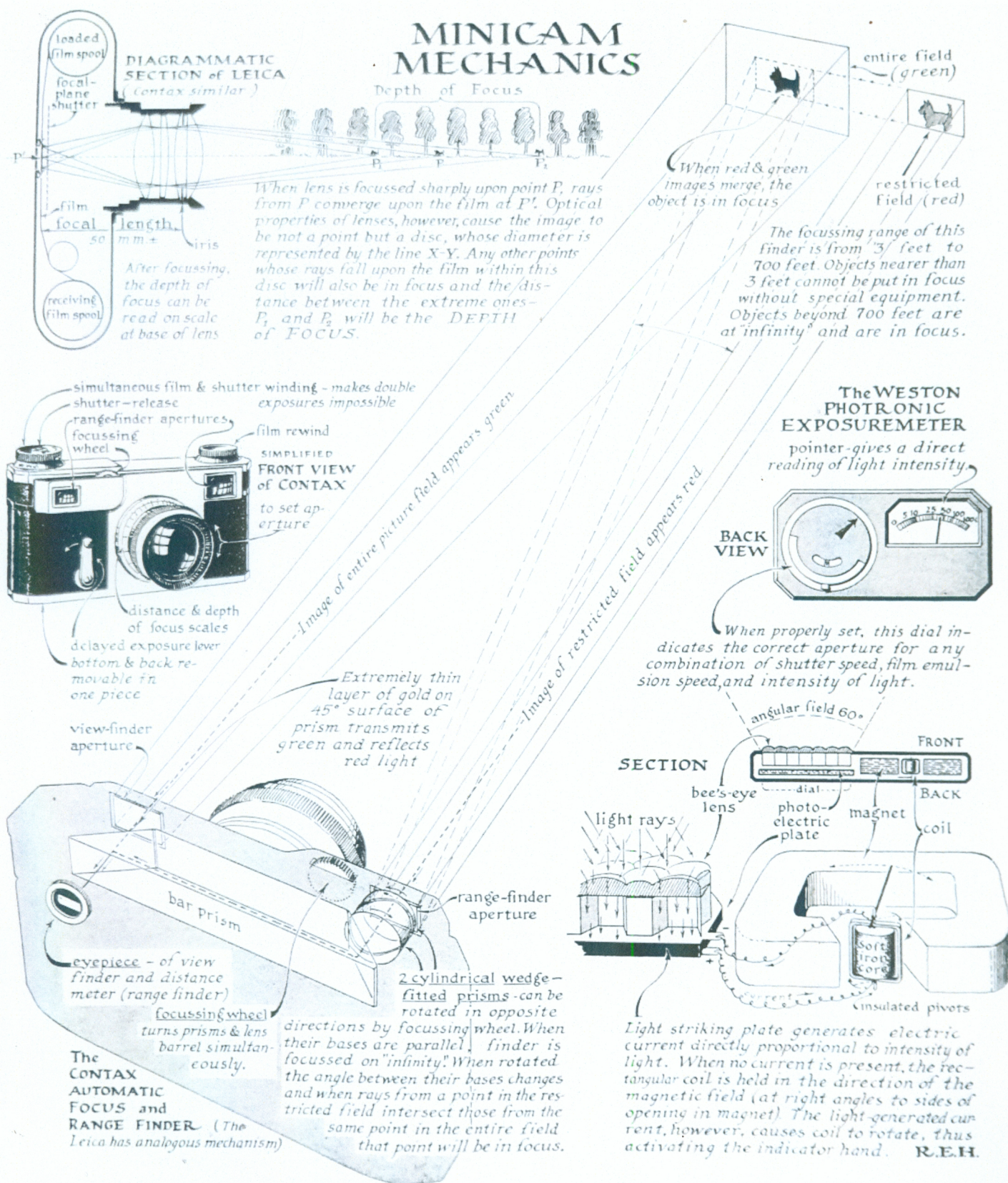


The 75th advertisement on the opposite page as well as the representative tree above are both taken from the pre-war Zeiss Ikon dealer's magazine, Brücke which is German for "Bridge." The tree, as far as I know appeared only in the firm's publications while the Ernemann tower also appeared in magazine advertising.

The small little tag to the bottom left was representing the firm some 4 years after the photographic manufacturing portion of the firm had been shut down and dissolved. In 1973, the headquarters of the remaining lines of business were relocated to Berlin. Those remaining lines of business included the Ernemann theater projection products, the Security and Key Systems, the Zett firm which mostly made slide projectors, the reflecting/mirror lighting products would be either discontinued or sold off in the following years since they did not fall into the areas of expertise of the firms of the Carl Zeiss Stiftung. So, this little logo or badge did accurately reflect the 50th anniversary of the founding of Zeiss Ikon but there was very little of the firm left in the eyes of the world wide customer.



This is the representation of Zeiss Ikon in 1951 as reconstituted in Stuttgart in 1948.



Color Collage



↑ Soon after the 1926 merger, this above tag appeared to place the Zeiss Ikon name on the camera for store display. Note that the serial number is still in the non-prefix and numbers only Ernemann sequence.

→ Above right is the pre-war Contax II in its display box and window tag. Directly right is the post-war Pocket Tenax I with box and tag but with a detached rewind knob. Below right is the cover of a Zeiss catalog for mirror reflected light from 1927.

↓ Directly below is the image of a store sign for the first new Zeiss Ikon camera, the Ikonette "The coat pocket camera for a gentleman and the Ladies purse"

