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Where to look for information on lenses (primarily large format)?

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Links are ephemeral. There's no guarantee that any of the links below still works. If a link doesn't work, look for it at www.archive.org. I point out links that are not archived. None of the links to <https://onedrive.live.com> is archived.

Information given on the sites listed is, in general, incomplete and inconsistent. If you can't live with ambiguity and confusion, hide under your bed.

A number of lens types were made for many years, some with periodic major redesigns, others without. Either way, coverage claims change over time. "Fast" tessar types' coverage has grown with redesigns. Dagor types' coverage has shrunk with reconsideration of what coverage means. Be skeptical of all catalogs' coverage claims, older catalogs in particular are optimistic.

All sorts of lenses:

<https://www.cameraeccentric.com/catalogs> cameraeccentric.com vanished for a while, recently came back. The most recent useful save of the old site on archive.org is <https://web.archive.org/web/20170120193805/http://www.cameraeccentric.com/info.html> Many catalogs, some listed below: Bausch & Lomb, Busch, Cooke-TTH, Dallmeyer, Fujinon, Goerz American, Graf, Horseman, Ilex, Kodak, Komura, Gundlach, Meyer, Oscar Zwierzina, Pinkham & Smith, Rodenstock, Ross, Schneider, Staebble, Steinheil, Voigtländer, Wollensak, Zeiss. Also camera catalogs and instruction manuals. Look here before asking a question on a bulletin board.

<http://savazzi.freehostia.com/photography/default.htm>

<http://www.dioptrique.info/> More than 1,000 lens prescriptions, most taken from patents, with calculated performance

<http://www.graflex.org/lenses/lens-spec.html> Michael Gudzinowicz' list.

<http://www.largeformatphotography.info/> Read the lens FAQs.

<http://cnum.cnam.fr/> Cnum, Bibliothèque numérique en histoire des sciences et des techniques (digital library of the history of science and techniques) contains much material on photography including lens makers' catalogs. Most of the documents it holds

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are in French. It is well worth rooting around in. Hint: when you find a link to an interesting document, clicking on it will take you to a page with an Exports or Exportation du Document button. Clicking on that button will take you to another page with “Télécharger ce document au format PDF” Clicking on this will download the document as a pdf. Cnum’s front page is archived, the contents aren’t.

A Lens Collector’s Vade Mecum. A book originally published on CD ROM, now available as a download from <https://www.antiquecameras.net/lensvademecum.html> ~ 700 pp. Idiosyncratic, incomprehensible, inconsistent, sometimes incorrect, often infuriating, invaluable.

<http://www.marcocavina.com/sommario.htm> Interesting site, well worth exploring. Most pages are in Italian.

<http://www.globalmatter-lab.net/catalog.htm> Tables of specifications for some LF Schneider, Topcor, Nikkor, Rodenstock and Fujinon lenses (in that order). Gives flange-focal distances. Much the same table is also at <http://www.ebonycamera.com/articles/lenses.html>

http://books.google.com/books?id=rzH31j84pn8C&source=gbp_all_issues_r&cad=1
Popular Photography magazine, 1/81 – 12/99

<http://www.pacificrimcamera.com/r1/r1index.htm> Pacific Rim Camera’s reference library. Very mixed bag. The front page is archived, inner pages with useful information are, for the most part, not. I’ve archived a few that I think are important.

<http://www.largeformatcameras.net/> has many catalogs, most quite old, including all of the catalogs on <http://www.cameraeccentric.com>. I haven’t archived them or checked to see whether they’ve been archived. I also haven’t listed everything on the site. They include:

Berthiot, Lacour Berthiot and SOM Berthiot: 1892 [actually 1908], 1912, 1915, 1922, 1926, 1950, no date
Busch 1909
Dallmeyer 1881, 1896, 1900, 1910, 1915, 1930
Derogy 1892, 1905, 1910, no date
Français 1887, 1889
Krauss 1901, 1906, 1908, 1926
Goerz [a mixture, Berlin, London and New York] 1895, 1907, 1914, 1916, no date
Hermagis 1886, 1900, 1919, 1930, 1931, no date
Ross 1930, 19302, 1937, 1940, no date
Staeble 1911

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Steinheil 1892, 1931

Voigtländer 1903, 1906, 1910, 1910s, 1913, 1914, 1920, 1925, 1930, 1931, 1936,
no date

Zeiss 1891, 1892, 1910, 1927, 1932, no date

Ancient lenses:

<http://www.antiquecameras.net/> This site is well worth exploring. A Lens Collectors' Vade Mecum can be bought through it.

<http://piercevaubel.com/cam/catalogsall.htm> There's a lot to wade through. There are lens catalogs and lenses are mentioned in camera catalogs; the site is strongly focused on U.S. wooden field cameras. Brought to my attention by Louis Pacilla, to whom much credit is due. **Links to the site's lens catalogs**, mainly from US lens makers, are at <http://piercevaubel.com/cam/catalogslenses.htm>

Fabre, Charles - Traité encyclopédique de photographie. In French.

<http://cnum.cnam.fr/CGI/redir.cgi?8KE304> links to a page that offers all eight volumes. Not archived, alas.

Vol. 1 – 1889 Optics, lenses, shutters, cameras and more

Vol. 2 – 1890 Phototypes Négatives (no lenses)

Vol. 3 – 1890 Phototypes positifs. Photocopies. Photocalques. Phototirages (no lenses)

Vol. 4 – 1890 – Agrandissements – Applications de la Photographie (no lenses)

Vol. 5 – First supplement A 1892 General update, many lenses

Vol. 6 – Second supplement B 1897 General update, many lenses

Vol. 7 – Third supplement C 1902 General update, many lenses

Vol. 8 – Fourth supplement D 1906 Update, primarily lenses

<http://www.suaudeau.eu/memo/Fabre/Fabre.html> has Fabre's 1889 Vol. 1 with 1892, 1897, 1902 and 1906 supplements. Much harder to use than the version on cnum but the scans are much better.

<http://www.thedallmeyerarchive.com/index2.html> Information on Dallmeyer lenses made between 1860 and 1900.

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Anthony, E. & H. T. & Co: Illustrated catalogue of photographic equipments and materials for amateurs. <http://cnum.cnam.fr/CGI/redire.cgi?M11161> Cameras, lenses and much more. Not archived, alas.

<http://www.lulu.com/shop/paul-lipscombe/the-use-of-historic-lenses-in-contemporary-photography/ebook/product-17528593.html> I don't have this e-book and haven't read it but it has been reviewed well and is probably worth getting.

Eder, J. M. Ausführliches Handbuch der Photographie. Band I. Heft 1. Geschichte der Photochemie und Photographie vom Alterthume bis in die Gegenwart. 1893. In German. <http://cnum.cnam.fr/CGI/redire.cgi?8KE362.1.2> Not archived, alas.

ANSI film holder specifications:

<http://home.earthlink.net/~eahoo/page8/filmhold.html> Yes, I know, no lenses involved. This page is on a site on building an LF camera. The site's front page is <http://home.earthlink.net/~eahoo/camera.html>

Aperture scales:

<http://1drv.ms/x/s!AggQfcczvHGN0xsB4NcsdXPBYZGU> The spreadsheet has two sheets, Scales and Formulas.

Berthiot lenses:

Berthiot anastigmats for large format cameras, contains links to all of the on-line Berthiot catalogs I'm aware of. I don't recommend going to the catalogs because the lenses' specifications and designations changed over time. The article reports on this. Its easy to go to the wrong catalog.

http://www.galerie-photo.com/berthiot_anastigmats_fr.pdf (in French)

http://www.galerie-photo.com/berthiot_anastigmats_en.pdf (in English)

Books on closeup photography and photomacrography:

Angel, Heather. 1987 (revised, originally published in 1983). Book of Close-Up Photography. Originally published by Ebury, London. Revised edition published by A. A. Knopf Inc. 168 pp. ISBN 0394532325. A much better book than John Shaw's Closeups In Nature. If nothing else, she uses and discusses more than Nikons. Angel does the John Shaw thing better than he does.

Blaker, Alfred A. 1976. Field Photography. W. H. Freeman & Co. San Francisco, CA. 451 pp. ISBN 0-7167-0518-4. A deep discussion of all aspects of photography, with considerable emphasis on close-up. Discusses getting the magnification, lighting, and

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exposure. Weaker than Lefkowitz on working above 1:1, stronger on lighting, especially flash. Extensive bibliography.

Bracegirdle, Brian. 1995. Scientific PhotoMACROgraphy. Bios Scientific Publishers. Oxford. 105 pp. ISBN 1 872748 49 X. A terse drier updated version of Lefkowitz. Very useful bibliography, unfortunately scattered into small sections after most chapters.

Gibson, H. Lou. Close-Up Photography and Photomacrography. 1970. Publication N-16. Eastman Kodak Co. Rochester, NY. 98+95+6 pp. The two sections were published separately as Kodak Publications N-12A and N-12B respectively. Republished in 1977 with changes and without the 6 page analytic supplement, which was published separately as Kodak Publication N-15. 1977 edition is ISBN 0-87985-206-2. Gibson is very strong on lighting, exposure, and on what can and cannot be accomplished. His books, although relatively weak on getting the magnification with lenses made for modern SLR cameras, provide a very useful foundation for thinking about working at magnifications above 1:10 and especially above 1:1. Extensive bibliography.

Lefkowitz, Lester. 1979. The Manual of Close-Up Photography. Amphoto. Garden City, NY. 272 pp. ISBN 0-8174-2456-3 (hardbound) and 0-8174-2130-0 (softbound). A thorough discussion of getting the magnification, lighting, and exposure. Especially good on working above 1:1. Extensive bibliography.

Books on LF photography:

Adams, Ansel. 1980. The Camera. Little, Brown and Company. New York. 203 pp. ISBN 0-8212-1092-0, 0-8212-2184-1
https://kupdf.net/download/the-camera-ansel-adams-df_590f343ddc0d608b78959ecf_pdf
Not archive, possibly a pirated copy. If so, liable to be taken down at any time. Not the most highly recommended, but if its free ...

Simmons, Steve. 2015. Using the View Camera: A Creative Guide to Large Format Photography. Echo Point Books & Media. 146 pp. ISBN 1626540772, 978-1626540774. There are many editions. Highly recommended on the US large format forum.

Stone, Jim. 2003. A User's Guide to the View Camera. Pearson. 166 pp. ISBN 0130981168, 978-0130981165. There are many editions. Highly recommended on the French large format forum even though it is in English.

Stroebel, Leslie D. 1999. View Camera Technique. Focal Press. 376 pp. ISBN 0240803450, 9780240803456. There are many editions. Highly recommended on the US large format forum.

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Boyer lenses:

<http://www.galerie-photo.com/boyer-lens-optic.html> (English)

<http://www.galerie-photo.com/boyer-optique-objectif.html> (French)

<https://1drv.ms/u/s!AggQfcczvHGNzi2r5KNS4RrpMpv-?e=eBdp0f> CEDIS-Boyer fiches techniques. In French. Boyer made many lenses that do not fit shutters as described here.

Camera manuals

>5,500, mainly small format, and catalogs of all sorts:

<http://www.butkus.org/chinon/index.html>

Cameras (MF, Stereo, LF), accessories, and more, primarily in French:

<https://galerie-photo.com/mode-emploi-appareil-photo.html>

Center filters for large format lenses:

<http://www.galerie-photo.com/center-filters-for-large-format-lenses.html> (English)

<http://www.galerie-photo.com/filtres-concentriques-pour-objectifs-grand-format.html> (French)

Chronologies: lenses, cameras and shutters

Pont, Patrice-Hervé. 2000. Les Chiffres Clés. Éditions de Pécar. ISBN2-912848-14-8. Out-of-print, perhaps available from www.fnac.com. Make sure you get the 3d edition. I believe it is the latest. Take it all with a healthy dose of skepticism.

Computar f/9 lenses:

<http://www.largeformatphotography.info/forum/showthread.php?10255-The-Computar-lens-and-ULF-coverage/page10> See post # 97. Read it carefully. Coverages claimed in text are much larger than coverages claimed in the tables.

Congo lenses (Yamasaki Optical):

http://web.archive.org/web/20120419205958/http://www.cosmonet.org/congo/index_e.html The company has been wound up and its site is gone but archive.org has many vintages of it.

<https://www.largeformatphotography.info/forum/showthread.php?165616-Congo-Lenses> More of the same, easier to use.

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Coverage closer than infinity given coverage at infinity:

See post #3 in this <http://www.largeformatphotography.info/forum/showthread.php?67361-Calculating-lens-coverage> discussion.

Dagors' coverage:

<https://www.largeformatphotography.info/forum/showthread.php?13109-Lousy-Dagor> A wide-ranging and very funny discussion, with an exaggerating eBay seller tripped up by his own claims.

Depth of field and Scheimpflug's rule:

www.largeformatphotography.info/scheimpflug-DOF-bigler-english.pdf

Dimensions of 120 & 220 film, ISO 732-2000:

<https://vdocuments.mx/download/bs-en-iso-732-2000>

DIY:

DIY discussions on the US LF Forum:

<http://www.largeformatphotography.info/forum/forumdisplay.php?31> Not archived, and you'll have to look through the topics to find what you might want.

Jon Grepstad's DIY 4x5 camera:

<https://jongrepstad.com/building-a-large-format-camera/>

Another DIY 4x5:

<https://www.instructables.com/4x5-Film-View-Camera/>

Simple bag bellows (mine):

<http://www.galerie-photo.com/bag-bellows.html>

Another bag bellows, more elegant:

<http://colinflanarygraham.com/darkshop/?p=4353>

A large shutter:

<http://www.galerie-photo.com/construire-obturbateur-grande-taille.html> (in French)

Ground Glass:

<https://www.lomography.com/magazine/52936-grinding-your-own-focus-screen>
Well-illustrated step-by-step instructions. And a tip of the hat to Ian Grant.

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Colin Graham's site:

<http://colinflanarygraham.com/darkshop/> Many, many good things and ideas. If you're thinking of making camera, bellows, tripod, film holders, ... explore it.

Wiki on handmade emulsions:

<http://www.filmlabs.org/wiki/en/start> with thanks to Philippe Ayrat.

An 8x10 field camera:

<http://www.noahhuber.com/wp-content/uploads/construction-of-an-8-x-10-field-view-camera.pdf>

LED Enlarger light source:

<https://www.largeformatphotography.info/forum/showthread.php?159164-My-LED-enlarger-lightsource-instructions-Complete-parts-list-and-build> Not archived

Docter Optic LF lenses 1991-6

<http://www.arnecroell.com/docter.pdf>

East bloc LF lenses:

<https://www.arnecroell.com/eastern-block-new.pdf> Meyer Görlitz. Meopta, Czechoslovakia. PZO, Poland. Lenses from the former Soviet Union.

For more on lenses from the former Soviet Union, see [Soviet lenses](#)

Elcan lenses for aerial cameras:

https://onedrive.live.com/redir?resid=8D71BC33C77D1008!406&authkey=!AE0e-Q_z03YkaQc&ithint=file%2cpdf

Enhanced focusing screens:

<http://www.largeformatphotography.info/gg.html> Most of the links are dead. If you want the information they contain, use archive.org to find archived versions.

Enlarging lenses (a few):

<http://ctein.com/booksmpl.htm> Really a book on printing, but it reports on tests of a number of enlarging lenses.

<http://www.khbphotografix.com/Used/Omicron.htm> Omega Omicrons.

http://web.archive.org/web/20160326041241/http://www.savazzi.net/photography/old_literature.htm Has El-Nikkor catalogs and more.

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[Schneider](#) and [Rodenstock](#), see those sections below.

Entrance Pupil and how to properly measure Lens Speed:

<http://www.largeformatphotography.info/forum/showthread.php?114769>

Exposure compensation for magnification/bellows compensation:

<https://www.largeformatphotography.info/forum/showthread.php?150304-Bellows-compensation-for-S-K-300mm-f5-5-Tele-Xenar> See posts 4 and 13.

Exposure meters:

see [Light meters](#):

Filter sizes:

Go to the lens manufacturer's catalog.

http://www.bhphotovideo.com/FrameWork/Product_Resources/SourceBookProPhoto/Section04LgFormatLenses.pdf has an incomplete list for Nikon, Schneider and Rodenstock LF lenses

Fujinon LF lenses:

<http://www.subclub.org/fujinon/index.htm> look here first, it is the most complete

<http://www.thalmann.com/largeformat/fujinon.htm> Brochures are buried a bit deep, they're here: <http://www.thalmann.com/largeformat/brochure.htm>

http://web.archive.org/web/20170123102058/http://cameraeccentric.com/html/info/fujinon_1.html 1979 catalog

<https://www.pacificrimcamera.com/rl/00886/00886.pdf> Fuji Fujinon Professional Lens Sales Brochure. Might be from 1977.

<http://www.ebonycamera.com/articles/lenses.html>

Glossary of terms in photographic optics:

https://galerie-photo.com/glossaire-optique_en.html (English)

<https://galerie-photo.com/glossaire-optique.html> (French)

By Emmanuel Bigler and Yves Colombe

Goerz American lenses:

<http://web.archive.org/web/20170606145746/http://www.pacificrimcamera.com/rl/00268/00268.pdf> Red dot Artar brochure

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<http://web.archive.org/web/20170606150221/http://www.pacificrimcamera.com/rl/00276/00276.pdf> Undated catalog. Downloadable, easier to read than the version on <http://web.archive.org/web/20161018062941/http://www.cameraeccentric.com/info.html>

<https://web.archive.org/web/20170726133932/http://www.pacificrimcamera.com/rl/00574/00574.pdf> 1916 Goerz American catalog. Earliest mention I've seen of the Gotar.

Goerz American Optical Company associated with American Optical Company?

Not according to this semi-official AO history:

<http://opticalheritagemuseum.org/pdfs/AO%20History%20DianeMatuckArticleForMAOpticians%20Nov%202010.pdf>

Goerz American serial numbers:

<http://www.largeformatphotography.info/classic-experts.html> I'm not at all sure that these are correct or even make sense.

Goerz Berlin:

<https://www.largeformatcameras.net/> has 1895 (New York Office, a subsidiary of Goerz Berlin), 1907 (in French, still from Berlin), and 1914 (London, still Berlin) catalogs

Graflex stuff:

Graphic press cameras, Graflex SLRs and accessories, mainly post-WW II

<https://1drv.ms/f/s!AggQfcczvHGN7QPLzcnfQqi0-7pf> Charles Monday kindly posted these on his Google Drive. He's announced that his Google Drive may soon go away so I've taken the liberty of posting them all to my OneDrive. Not archived. Manuals, parts lists, ...

Graflex manuals:

<http://www.southbristolviews.com/pics/Graphic/graphicmanuals.html> I'm not sure these are properly archived.

<http://www.butkus.org/chinon/graflex.htm> Not archived.

http://www.butkus.org/chinon/graflex/graflex_service_parts/graflex_service_parts.htm repair manuals for Graflex XL, roll holders. Not archived.

Grafmatic user manual:

<http://graflex.org/speed-graphic/grafmatic/>

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<http://www.graflex.org/>

Always look here.

<https://www.pacificrimcamera.com/rl/rlgraflexmisc.htm>

Links to catalogs, brochures and manuals. **Worth exploring.**

Graphics' minimum & maximum extensions:

<https://1drv.ms/x/s!AggQfcczvHGN2SQA6nudVURbcUFI>

<https://www.facebook.com/Miollis/>

Laurent de Miollis' site. He's in Sainte-Marie-de-Ré , buys, sells and services Graphics. Site in French but Laurent speaks English.

1960 and later date codes:

<https://www.graflex.org/helpboard/viewtopic.php?t=3321&highlight=date+code>

Gundlach lenses:

<http://web.archive.org/web/20170606151409/http://www.pacificrimcamera.com/rl/00248/00248.pdf> Also Turner-Reich lenses and Korona cameras.

Horseman cameras and accessories:

http://www.bnphoto.org/bnphoto/LFN/CamProf_Horseman1.htm

<http://www.kenko-pi.co.jp/horseman/e/index.html>

Horseman Teleconverter:

<http://www.galerie-photo.com/horseman-2x1f-teleconverter.html>

Horseman/Topcor lenses (some cameras too):

https://www.cameraeccentric.com/static/img/pdfs/horseman_2.pdf 1988 catalog.

How sharp can you get?

<https://www.flickr.com/photos/nesster/4424744296/sizes/o/>

<https://www.flickr.com/photos/nesster/4424744224/sizes/o/>

Terrifying articles from Modern Photography magazine. They make the point that getting 100 lp/mm on film is extremely difficult.

Ilex lenses:

<http://www.galerie-photo.com/ilex-lenses.html> Primarily post-1965

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<https://www.pacificrimcamera.com/rl/00375/00375.pdf> Burke & James Acu lenses catalog. Ilex' last gasp.

Ilex/Melles-Griot electronic shutters, DIY controller

<http://www.chemie.unibas.ch/~holder/shutter/>

Kodak lenses:

<http://www.bnphoto.org/> This site is hard to navigate, is worth the effort.

<https://web.archive.org/web/20181014102442/http://home.earthlink.net/~michaelbriggs/aeroektar/aeroektar.html> Aero-Ektars and radiation hazards therefrom.

<https://www.pacificrimcamera.com/rl/01539/01539.pdf> Aero , Cathode Ray Tube, and High Resolution Ektars. Specialized lenses not of general interest.

Kodak roll film numbers, sizes and formats

<http://bvipirate.com/Kodak/>

Komura lenses:

allphotolenses.com/public/files/pdfs/9c85de281eee10b265e9aa77511316ab.pdf 35 mm and Bronica lenses too.

Three data sheets on LF lenses. They don't cover all of the teles, may miss others.

90/5.6: https://live.staticflickr.com/65535/50957777636_3ffc7162f0_k.jpg

“regular:” https://live.staticflickr.com/65535/50957079213_9706d42126_k.jpg

telephoto: https://live.staticflickr.com/65535/50957884582_b4cd930b5a_k.jpg

Thanks to Jim Heath for making them available.

E. Krauss:

1906 catalog (lenses, cameras, and more): <http://cnum.cnam.fr/CGI/redir.cgi?M11120> In French. Not archived, alas.

1924 catalog (lenses, cameras, and more): <http://cnum.cnam.fr/CGI/redir.cgi?M12208> In English. Not archived, alas.

1926 catalog (lenses, cameras, and more): <http://cnum.cnam.fr/CGI/redir.cgi?M12207> In French. Not archived, alas.

Lens board dimensions:

<http://www.skgrimes.com/products/lens-boards> Not archived.

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Lens tests:

<http://www.hevanet.com/cperez/index1.html> Selected LF lenses, some medium format, tested using a USAF 1951 target.

<http://www.arnecroell.com/lenstests.pdf> Resolution (sagittal, tangential) center, intermediate and corners at 10% and 50% MTF for selected LF lenses. Includes a number of process lenses.

<https://www.arnecroell.com/mf-lenstest.pdf> Tests of selected, mainly old, medium format lenses.

Light meters:

Horseman Exposure meters:

<http://www.galerie-photo.com/horseman-4x5-exposure-meter.html>

Many:

<http://www.jollinger.com/photo/meters/>

Weston:

<http://www.westonmeter.org.uk/> See Manuals & Repair for Weston Rating-ASA/ISO comparison

Linhof wide angle device:

<http://www.largeformatphotography.info/forum/showthread.php?141390-Linhof-wide-angle-device-what-s-the-scoop/page3> post 30 explains 'em

Measuring focal length:

<http://www.largeformatphotography.info/forum/showthread.php?61880-Petzval-nodal-point&p=584863#post584863>

<http://www.largeformatphotography.info/forum/archive/index.php/t-16692.html>

Mercury batteries, substitutes for:

discussed in <http://www.galerie-photo.com/horseman-4x5-exposure-meter.html>

Meyer Plasmal lenses:

www.ihagee.org/Lenzen/HMG3-1938E-PlasmalLenses.pdf Primarily LF. 1938 catalog.

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Modern (relatively) LF and medium format gear:

https://static.bhphotovideo.com/FrameWork/Product_Resources/SourceBookProPhoto/Pro-Photo-SourceBook.pdf First edition, 1998, 603 pp.

Nikon LF lenses:

http://web.archive.org/web/20160326041241/http://www.savazzi.net/photography/old_literature.htm LF lenses catalogs and more. His list of Nikon process lenses is incomplete.

http://www.kenleegallery.com/pdf/Nikkor_LargeFormatLenses.pdf for the 2004 LF lenses catalog.

<https://onedrive.live.com/redir?resid=8D71BC33C77D1008!348&authkey=!ALorNvMYL0EZupo&ithint=folder%2cpdf> for 1982 and 2004 LF lenses catalogs

Nikon process lenses:

<http://www.galerie-photo.com/apo-process-nikkors-en.html> All of 'em.

http://web.archive.org/web/20160326041241/http://www.savazzi.net/photography/old_literature.htm Catalog listing dialyte type Apo-Nikkors, has dimensions.

<https://1drv.ms/b/s!AggQfcczvHGNm2ZWk2BtnZa4MHJG> Older catalog with information on tessar type Apo-Nikkors, part of a larger collection of Nikon literature given to me by Vivek Iyer, to whom all credit is due.

Older modern view cameras:

Arca-Swiss (Oswald era):

<http://www.galerie-photo.com/manuels/catalogue-arca-swiss-oswald.pdf> In French and German.

<http://www.galerie-photo.com/manuels/depliant-arca-swiss-oswald-allemand-A3.pdf> In German.

Calumet CC-400, -401 and -402:

https://www.cameraeccentric.com/static/img/pdfs/calumet_2.pdf These instructions also apply to the “shorty” CC-402. Clicking on the link downloads the pdf.

https://www.cameraeccentric.com/static/img/pdfs/calumet_3.pdf

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Cambo SC (none archived):

https://static.cambo.com/Files/SC2_Manual.pdf -- assembling the Cambo SC

<https://static.cambo.com/Files/Handbook-SC.pdf> -- using the Cambo SC

https://static.cambo.com/Files/accessories_view.pdf -- accessories for the Cambo SC. Nearly all fit newer Cambos.

<https://www.cambo.com/en/downloads/user-manuals-photo-products/> – user manuals for newer products including roll holders

Ebony:

<https://jeff-keller.com/wp-content/uploads/4/2018/12/hi-res-catalog.pdf> SV45, 45SU, 45S, 23S, SV23, SV57, SV810, SW810, SW45/SW23, RW45 and accessories

<https://web.archive.org/web/20010602131244/http://www.ebonycamera.com:80/cam.html> many captures, you may have to look at several to find what you're looking for. The latest captures have digital camera, ideal for short lenses.

Linhof:

<http://www.laflexcamera.com/catalogs> 1969, 1974, 1982 and 2003-4 catalogs. Not archived.

www.pacificrimcamera.com/rl/00459/00459.pdf 1957 catalog. Not archived.

Linhof lens boards' dimensions:

<https://1drv.ms/x/s!AggQfcczvHGNgZkWsE-tK8FsI-AOAQ?e=44u6fs>

Meridian:

<https://www.manualslib.com/manual/1001061/Meridian-45b.html#product-45B> Not archived.

M.P.P.

<http://mppusers.co.uk/wordpress/> Most of the site is behind a paywall. I haven't paid, can't see the technical information so can't evaluate. Reading the forum, which has little activity, is free. An old version of the site is accessible at <https://web.archive.org/web/20140107165017/http://mppusers.com/> If you're desperate for information about an MPP press or view camera, go to the new site, ante up and hope that what you want is there.

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Nagaoka:

https://www.cameraeccentric.com/static/img/pdfs/nagaoka_1.pdf

Sinar:

Look in the B&H sourcebook at [Modern \(relatively\) LF and medium format gear:](#)

<https://web.archive.org/web/20140728034706/http://www.philipmorgan.net/wp-content/uploads/2009/RoughGuideSinarNormaCLA.pdf> Sinar Norma CLA guide

Toho Shimo FC-45x:

<http://www.thalmann.com/largeformat/toho.htm> Cute little thing.

Toyo:

<https://www.pacificrimcamera.com/rl/00273/00273.pdf> VX 125/B/R, 45C/CX/G II/GX, 810GII, 57GII, Field 45A II/II L, 810M II

Wista:

https://www.wista.co.jp/e_wista/english.htm

Tachihara (in Japanese, Google Translate helps a little):

<https://web.archive.org/web/20130927104529/http://www.netlaputa.ne.jp/~tachi-ss/sub1.html>

Wooden view cameras' dimensions:

<http://www.subclub.org/toko/4x5table.htm>

Omera aerial cameras:

<https://www.dropbox.com/sh/kjt0s3x12k2oe8k/AABzWGIMEMwt1rUaq-Cpcm7Xa?dl=0> In French. Not all LF. Can't be archived, sorry.

One-shot color cameras:

<http://www.largeformatphotography.info/forum/attachment.php?attachmentid=174312&d=1517510862> Curtis One-Shot Color Cameras. Not archived.

<http://www.butkus.org/chinon/devin/devin.htm> The Devin TriColor Camera.

Optics (basic):

<https://web.archive.org/web/20141229200841/http://toothwalker.org/optics.html> Paul Van Walree's old site, now gone. He has a new site, says the old site's optics info will eventually be put up on it.

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https://galerie-photo.com/un-objectif-photo_en.html Emmanuel Bigler and Yves Colombe on thick lenses

Process lenses as taking lenses for general photography:

<https://1drv.ms/b/s!AggQfcczvHGN3mZFEC0TkEroL5G>

Puyo-Pulligny:

<http://cnum.cnam.fr/CGI/redire.cgi?8KE464> All about their anachromatic soft focus lenses from the horses' mouths. In French. Not archived, alas.

Radiation, effects on glasses:

<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10569/105691R/Radiation-impact-on-the-characteristics-of-optical-glasses-test-results/10.1117/12.2307918.full?SSO=1> In a high radiation environment (space) so for us largely theoretical, but still interesting. Not archived, sorry.

Reflex cameras, primarily 4x5

<https://galerie-photo.com/reflex-moyen-grand-format.html> In French.

Reflex finders:

<http://www.bnphoto.org/bnphoto/LFN/ReflexFinders1.html> is a nice account of many.

http://web.archive.org/web/20070321091133/http://members.optusnet.com.au/~paulewins/resources/MP4_viewer.htm Paul Ewins adapts an MP-4 reflex viewer to a 4x5 Speed Graphic with Graflok back

Repair services:

<https://www.rolleigraphy.org/repair.php> Rollei specialists, but they do other things too. This list is actively maintained and repair shops come and go so I haven't archived it.

Rochester camera and lens companies:

<http://bvipirate.com/Kodak/Rochester.html> Kingslake's history. Not about lenses, about their makers.

Rodenstock LF lenses (mainly recent lenses):

<https://1drv.ms/f/s!AggQfcczvHGNgkRF8Zr2JUIW1Egq> Some current and discontinued lenses. Not perfect but the most complete. It has documentation on "new" center filters.

http://www.rodenstock-photo.com/Archiv/e_Rodenstock_Analog_Lenses_27-42_8226.pdf Contains documentation for "old (2.5x)" center filters.

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http://www.prograf.ru/rodenstock/largeformat_en.html Fewer lenses than the onedrive link above has, but has data on 300/5.6 Macro Sironar and on Imagons that the onedrive link lacks.

<http://www.rodenstock-photo.com/> Current production only.

www.pacificrimcamera.com/rl/00718/00718.pdf 1912 catalog.

<https://www.pacificrimcamera.com/rl/00817/00817.pdf> 1982 catalog, has Sironar-N and Geronar info

<https://www.pacificrimcamera.com/rl/00863/00863.pdf> before 1982, has jes' plain Sironar and Grandagon info

<http://www.rodenstock-photo.com/Archiv/Objektive%20digitale%20Fotografie%20e.pdf> Rodenstock's digital lenses: HR Digaron-S, HR Digaron-W/SW, Apo-Sironar digital, Apo-Macro-Sironar digital

https://web.archive.org/web/20141007140414/http://www.rodenstock-photo.com/mediabase/original/Production_Date_Rodenstock_Lenses_8452.doc Production dates of Rodenstock lenses through 2008.

Roll holders:

http://1drv.ms/f/s!AggQfcczvHGNmC0J8_On1nsD3l0F Horseman, Linhof Rapid Rollex, Linhof Super Rollex, Linhof Techno Rollex, Sinar (parts list too) and Toyo user manuals. Roll holder specifications and Rapid Rollex manual thanks to Oren Grad.

See [Graphic press cameras](#) for Graflex roll holders.

<http://graflex.org/speed-graphic/adapt-a-roll.html>

<http://mercurycamera.com/backs/complete-guide-to-graflok-23-backs-graflex-mamiya-rb67-horseman-and-mercury/> Like nearly everything that claims to be complete, it isn't. I can think of at least three roll holders it missed. In alphabetical order, Sinar, Toyo and Wista. Gives gate sizes for some roll holders. Well worth looking at.

https://www.central-manuals.com/instructions_manual_user_guide_camera/linhof.php Techno Rollex (6x12). Not archived.

See [Cambo](#) for Cambo roll holders.

Wista. <http://www.jollinger.com/photo/cam-coll/manuals/manuals.html> Visit, page down to "Flash (Strobes) and Everything Else" Not archived

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Ross lenses:

<http://www.cineressources.net/consultationPdf/web/o000/173.pdf> 1912 catalog

Schneider LF lenses:

<https://web.archive.org/web/20170208112545/https://www.schneideroptics.com/> For older lenses, click on “Photography,” then hover over the info tab. Many of this site’s links point to pages that no longer exist. If you click on one and get the dread 404 message, paste the link into archive.org. Not all of the lost pages have been archived, but looking in archive.org is usually worth the trouble.

<http://web.archive.org/web/20100922053809/http://www.schneiderkreuznach.com/archiv/archiv.htm> Mid-1950s to around 2000 or so. Brought to my attention by Oren Grad, to whom much credit is due.

<http://web.archive.org/web/20121115075344/http://www.schneiderkreuznach.com/service/serie.htm> The official serial number to date map

http://www.butkus.org/chinon/schneider_lenses/schneider_lenses_1937.htm 1937 catalog

<https://1drv.ms/b/s!AggQfcczvHGNjmAHEA-rmrikk98S> Possibly the last Schneider LF lens brochure. Downloaded from www.linhof.com

https://1drv.ms/x/s!AggQfcczvHGN0kIjB_63NhzcEsV5 Recognizing dagor type G-Clarons

A few people who haven’t read this section of the list have complained on at least one LF bulletin board that Schneider’s sites no longer have the information they want. I doubt any of them will see this, but here’s what has happened and how to cope:

Unfortunately Schneider has been removing pages from [schneiderkreuznach.com](http://www.schneiderkreuznach.com) for quite some time. Years, in fact. www.schneideroptics.com seems to be gone completely, redirects to www.schneiderkreuznach.com.

If you have an old link that gets a 404 error or redirects to www.schneiderkreuznach.com try using www.archive.org to find an archived version of the page. Most have been saved there, some many times. The best thing to do once in archive.org is to try a relatively old save. If it shows a 404 error -- I’ve seen them -- try an older one.

If you want to look around in Schneider documentation, use archive.org to find a backed up version of either site. Again, the older the back up the better.

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Searching in web sites:

The [Web sites/Forums](#) that are good sources for information and help with LF have search engines that work poorly. I don't use their search engines, instead use Google Advanced Search at https://www.google.com/advanced_search to search them. I put the search terms in the "Find pages with" section, put the domain name in the "Then narrow your results by ..." section's "site or domain" window.

Series filter sizes:

<https://www.apotelyt.com/photo-accessory/series-filters>

Shutters (ancient) described:

http://www.earlyphotography.co.uk/site/entry_S1.html figures and describes a number of ancient shutters. Its parent site <http://www.earlyphotography.co.uk/> is interesting and may be worth wandering through. Doesn't cover everything – what does? – and is quite idiosyncratic.

<http://www.mikeeckman.com/2018/03/introducing-the-packard-ideal-shutter-company/> Packard shutter history and more. Thanks to Randy Sweatt for posting the link.

<https://1drv.ms/b/s!AggQfcczvHGN7GfjkkVoxlSuGaCV> Bernard Sulmon, who posts on galerie-photo.info as photo-collector, on air-powered shutters. In French, some catalog pages in English.

Shutters' dimensions etc:

<http://www.largeformatphotography.info/forum/showthread.php?23904-Compound-shutter-sizes> Ole Tjugen on Compound shutters

http://www.suaudeau.eu/memo/pratique/Les_obturbateurs_centraux.html Benoit Suaudeau's list of leaf shutters.

<http://www.skgrimes.com/products/new-copal-shutters> SKGrimes' list

<https://web.archive.org/web/19980703223256/http://www.skgrimes.com/prontor/index.htm> Prontor Professional shutters only, not the older less expensive ones

<http://www.packardshutter.com/> Packard shutters

<http://www.ground-glass.net/large-format/copal-shutters> What it says.

<http://www.apug.org/forum/index.php?threads/dial-set-compur-shutters.138914/> Fuller information on dial-set Compur's sizes. And more on early rim-set Compur, Vario,

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Pronto and Ibsor shutters: <http://www.apug.org/forum/index.php?threads/rim-set-compurs-and-gauthier-shutter.138945/> Incomplete information, tube lengths and threading not mentioned.

https://sizes.com/tools/shutter_photo.htm More complete information on Wollensak shutters' sizes than any of the sources above.

<http://www.bnphoto.org/bnphoto/KodakShutters.htm> Shutters for Kodak lenses.

Bernard Sulmon, who posts on galerie-photo.info as photo-collector, posted a downloadable pdf on Copal #3 shutters sizes, in French, on cjoint.com. I've mirrored it at <https://1drv.ms/b/s!AggQfcczvHGN30fHJeOkdIGWUzbz>

Bernard Sulmon posted a downloadable pdf on Sinar Sinar-Copal shutters. In French. I've mirrored it at https://1drv.ms/b/s!AggQfcczvHGN7RxjaN_f1WBIHm-2

<https://alphaxbetax.com/resources/> Alphax and Betax shutters. Gives required cable release throws and tube lengths (total thickness) as well as threading.

<http://www.galerie-photo.com/ilex-lenses.html> The article reports on Ilex shutters too.

Shanel #5 shutter: <https://www.largeformatphotography.info/forum/showthread.php?138340-Shanel-shutter-info-needed>

Shutters, repairing:

<https://drive.google.com/drive/fold...ourcekey=0-SnJHNz6-jHPO9l6HLI1mVQ&usp=sharing> Four manuals: Servicing Prontor shutters, Prontor Press, Prontor S-SV- SVS1, Prontor S-SV-SVS supplement. Kindly posted by Charles Monday. Not archived.

<http://pheugo.com/cameras/index.php> Sketchy illustrated directions for disassembling and cleaning a variety of leaf shutters.

<http://www.suaudeau.eu/memo/reparation.html> Extensive set of repair manuals, including some for leaf shutters. The shutter repair manuals range from sketchy illustrations of disassembly to complete factory service manuals. In a variety of languages including English, French and German.

<https://1drv.ms/b/s!AggQfcczvHGNkGB903fLIOftPx-f> Compur shutter repair manual. From the factory, this is the one to use.

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<https://drive.google.com/file/d/0B5FND3hVDS53THBhTlpWeGM1NmM/view> Seiko #0, from Minolta.

<https://drive.google.com/file/d/13WNwS6nkk9dEyORjnAeAP3IQ3HScWoFU/view>
Kodak Flash Supermatic shutter repair manual. Also at
<https://web.archive.org/web/20201101002252/https://learncamerarepair.com/downloads/pdf/Kodak-Flash-Supermatic-Shutter-Service.pdf>

<https://learncamerarepair.com/productlist.php?category=2&secondary=35> Downloadable repair manuals for Copal #0, Copal #1, Prontor Press and more. Not archived.

Sinaron lenses:

<https://books.google.com/books?id=kjvZBAAAQBAJ&pg=PA324&lpg=PA324&dq>
lenses for LF, not archived
<https://sinar.swiss/assets/Uploads/Sinaron-Digital-Lenses-Data.pdf> digital/MF lenses

SKGrimes' table of lenses fitted to shutters:

<http://www.skgrimes.com/lens-mounting/table-of-lenses-fitted-to-shutters> Doesn't list every possible adaptation, most of the adaptations require machining.

Small and medium format cameras and lenses:

Canon:

<http://global.canon/en/c-museum/> Not archived, too deep.

Fuji GX617:

<https://www.pacificrimcamera.com/rl/01325/01325.pdf> Brochure.

Fuji GX680 system:

<http://www.galerie-photo.com/fuji-gx-680-boitiers-et-accessoires.html> In French, with illustrations and tables that speak for themselves

Hasselblad:

<http://www.hasselbladhistorical.eu/> Hasselblad V system cameras and Zeiss lenses for them. Lenses at <http://www.hasselbladhistorical.eu/HW/HWLds.aspx>

Kodak:

https://mgroleau.com/catalogues_kodak/ Mario Groleau's collection of EKCo catalogs. Site in French, most catalogs in English. Not easy to navigate, worth the trouble. Not archived. Roll film cameras, in some years as large as 5x7.

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Leica:

Visit Erwin Puts' site: <http://www.imx.nl/photo/>

Download the first version of Puts' Leica Compendium:

<http://leicarumors.com/2011/12/22/download-the-old-version-of-leica-lens-compendium-by-erwin-puts-for-free.aspx/>

Mamiya modern digital and legacy film:

<http://www.mamiyaleaf.com/documentation.html>, includes lenses for the Mamiya Press system and Mamiya 7, excludes Mamiya 6 and lenses for the RB and RZ.

Mamiya RB and RZ lenses:

RB at http://www.mamiyaleaf.com/legacy_RB67.asp

RZ at http://www.mamiyaleaf.com/legacy_RZ80.asp

Click on "Lenses and Accessories." "Area covered" in the documentation is the size of the subject at the lens' close focusing distance. Counting on the lenses to cover much more than 6x7 doesn't seem safe.

Minolta:

<http://www.rokkorfiles.com/>

<http://www.subclub.org/minman/index.htm> Manual focus only.

Nikon, Canon and others:

<http://www.mir.com.my/rb/photography/photography.htm> Strongest on Canon and Nikon 35 mm bodies and lenses. I go here for information about Nikons. Not as easy to navigate as I'd like, worth the effort.

Nikon:

<http://imaging.nikon.com/history/> limited but interesting

<http://www.photosynthesis.co.nz/nikon/> easier to navigate than

<http://www.mir.com.my/rb/photography/photography.htm> but less informative

Pentax:

<http://kmp.pentaxians.eu/lenses/>

<https://www.pentaxforums.com/lensreviews/>

Thanks to Oren Grad for these two links.

<http://www.pentax-slr.com/>

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Silvestri:

<http://www.silvestricamera.com/index.html> cameras for roll film and digital

Registers:

Willem-Jan Markerink's list. <http://web.archive.org/web/20080224144706/http://www.markerink.org/WJM/HTML/mounts.htm>

Roll film formats:

<https://www.kenrockwell.com/tech/format.htm#120> Citing Ken Rockwell as an authority hurts, but he got these mostly right. 6X12 is usually 56x112, not 56x114 as he says.

Rolleiflex TLRs:

Charles Monday, who posts on photography forums as Shutterfinger, has very kindly compiled and posted a set of Rollei TLR service manuals on his Google Drive. Download from

<https://drive.google.com/file/d/1Kg50l0ttSdnWiXQWsNI1X3P5JfasLbOd/view>

He says that he may not leave it up for long. It can't be archived, so I've taken the liberty of mirroring it on my OneDrive:

https://1drv.ms/b/s!AggQfcczvHGN5l01CN0_0FtMY1-8

[http://www.alstonhand.com/ueditor/jsp/upload/](http://www.alstonhand.com/ueditor/jsp/upload/20140611/20411402479629342.pdf)

[20140611/20411402479629342.pdf](http://www.alstonhand.com/ueditor/jsp/upload/20140611/20411402479629342.pdf) The Rolleiflex – Model by Model (not archived)

Short lenses that cover 2x3:

<https://1drv.ms/x/s!AggQfcczvHGNgYhYGeQuOzsBIyw8Og?e=ulWOnL> A list of lenses with focal lengths 65 mm and shorter that cover 2x3 (= 6x9). Most concerned about whether they can be mounted on and focused to infinity on my 2x3 Graphics. Incomplete like all such lists but I don't think anything significant is missing.

Lenses for 2x3 Graphics:

<http://www.galerie-photo.com/telechargement/dan-fromm-6x9-lenses-v2-2011-03-29.pdf> My lens diary.

Soft-focus lenses:

<http://research-repository.st-andrews.ac.uk/handle/10023/505> and click to download. A doctoral dissertation on soft-focus lenses and pictorialism, not a lens catalog. People interested in pictorialism or soft-focus lenses might find it an interesting read.

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<http://www.galerie-photo.com/soft-focus-objectif-portrait-flou.html> Explanations, lens cross-sections, **example shots**. In French.

www.ens-louis-lumiere.fr Development of optical aberrations in photographic objectives for aesthetic ends. In French. With thanks to Matthieu Thouvard for posting the link on the French LF site.

<http://www.galerie-photo.com/flou-photo.html> Henri Peyre on softness in painting and in photography. In French, with examples by Henry Peach Robinson (1830 – 1901).

Soviet lenses:

<http://www.lallement.com/pictures/files.htm> Download the 1963 GOI and 1970 and '71 Yakovlev catalogs. In Russian.

<http://www.photohistory.ru/index.php> Covers fewer lenses but includes newer ones than the GOI and Yakovlev catalogs. In Russian.

<http://www.zenitcamera.com/catalog/lenseslist.html> The Zenit archives. Primarily lenses for small format. I think – haven't verified – that the lenses on the list are a subset of the ones discussed on photohistory.ru

Also see [East bloc LF lenses](#).

Targets for evaluating lenses' performance:

<http://www.aoassocies.com/mire-de-foucault-petite-mise-au-point> In French. Thanks to Henri Gaud for posting the link on the French LF forum.

Taylor, Taylor & Hobson lenses

<https://cookeoptics.com/t/compendium.html> A mindless compilation of propaganda from TTH catalogs. It is riddled with errors so use it very carefully. The lens-making part of TTH is still active as Cooke Optics. Perhaps because of that the compendium presents the fiction that all of TTH's lenses were branded Cooke.

Terminology:

(optics, trilingual glossary):

https://galerie-photo.com/glossaire-optique_en.html Emmanuel Bigler's and Yve Colombe's glossary of technical terms in photographic optics. Trilingual: English (US), French, German

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Photographic terms:

English to French:

<https://galerie-photo.com/vocabulaire-photographique-anglais-francais.html>

French to English:

<https://galerie-photo.com/vocabulaire-photographique-francais-anglais.html>

Tiffen® filters' transmissions:

http://www.tiffen.com/userimages2/Filters/Tiffen_BFILT_Broch_0413.pdf

Turner-Reich lenses:

See [Gundlach lenses](#):

USAF lenses:

https://archive.org/stream/USAF_lens_datasheets/ Datasheets. No coverage of lenses after the late 1960s.

<http://home.earthlink.net/~michaelbriggs/aeroektar/aeroektar.html> Aero-Ektars and radiation hazards therefrom.

US Army and Navy photography manuals

<https://1drv.ms/b/s!AggQfcczvHGNgZAdsLBna7VzHr3-2A?e=Hil174> With thanks to the person who posts on photrio.com as Kino for posting them there.

Voigtländer large format lenses:

<http://www.arnecroell.com/voigtlaender.pdf> 1949-1972

<https://www.pacificrimcamera.com/rl/00725/00725.pdf> 1914 US catalog

<https://www.pacificrimcamera.com/rl/00476/00476.pdf> more recent catalog, mainly hand cameras but some lens cross-sections

https://web.archive.org/web/20190404182944/https://www.cameraeccentric.com/html/info/voigtlander_2.html 1964 professional lenses catalog

Web sites/Forums:

<http://www.largeformatphotography.info> The associated forum is <http://www.largeformatphotography.info/forum> In my opinion the forum is the best English language LF forum but discussions aren't always at a high level. I have doubts about the quality of some of the information presented on the site. Not everyone agrees with these assessments.

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<http://www.galerie-photo.com/> The associated forum is <http://www.galerie-photo.info/forumgp/> In French. To my taste the main site has more and better information than its US brother and discussions in the forum are at a higher level. Not everyone agrees with me on this.

Both of these sites have search engines that are, um, problematic. I use Google Advanced Search at https://www.google.com/advanced_search to search them. I put the search terms in the "Find pages with" section, put the domain name in the "Then narrow your results by ..." section's "site or domain" window.

<http://graflex.org/> The Help Board isn't very active these days but the site is the best repository of information of Graflex and Graphic cameras and accessories. Questions posted on the Help Board are usually answered promptly.

<https://viewcameraaustralia.org/> *"View Camera Australia blog is dedicated to users of large format cameras and photographers using darkrooms to make photographs."*

Wollensak LF lenses:

https://www.cameraeccentric.com/static/img/pdfs//wollensak_14.pdf Cross-sections on p. 52.

<https://alphaxbetax.com/wollensak-lens-and-shutter-compendium/> Many catalogs, including a 1962(?) catalog of Wollensak's process lenses and much, much more. Well worth exploring. To find the process lens catalog, click on Wollensak Catalogs Etc. and scroll down to 1962? Wollensak Raptar Lenses for the Graphic Arts Not archived, alas.

Wratten® filters' transmission:

<http://www.karmalimbo.com/aro/pics/filters/transmission%20of%20wratten%20filters.pdf>

For some of the information in the link above presented in graphical form, see post #6 in <https://web.archive.org/web/20170809230137/http://www.largeformatphotography.info/forum/showthread.php?140628-Filters-8-or-12-or-15>. Thanks to Emmanuel Bigler for posting it. Unfortunately it can't be archived.

Zeiss Ikon:

<http://cnum.cnam.fr/CGI/redire.cgi?M11193> 1928 catalog. A little lens info, many cameras, most unheard of nowadays. Not archived, alas.

Zeiss Jena:

1901 Zeiss London catalog: http://books.google.com/books?id=cnkWAAAAYAAJ&dq=zeiss+unar&source=gbs_navlinks_s CZ London, really. In

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English. Click on the little starry wheel in the upper right corner of the screen to download as a PDF.

1910 catalog:

https://ia601404.us.archive.org/24/items/cnum_M11192/cnum_M11192.pdf In French.

Late pre-WW II: <https://www.pacificrimcamera.com/rl/00498/00498.pdf>

Post-WW II: <http://www.arnecroell.com/czj.pdf>

Zeiss Oberkochen:

<http://www.arnecroell.com/zeissoberkochen.pdf> Large format only, 1950-72.