

RANGE OVERVIEW

B+W FILTERS

SCHNEIDER MAGNIFIERS



B+W



Schneider
KREUZNACH

B+W filter technology

Quality and innovation from tradition

The B+W filter production facility was founded by the business partners Biermann and Weber in Berlin in 1947. The later merger with Optische Werke Jos. Schneider made it possible to expand the product range to include optical filters for scientific and technological purposes, provided some important advances in multi-coating (MC) and multi-resistant coating (MRC) technology and made B+W one of the world's leading manufacturers of quality filters which are the optical equals of even the very best lenses. B+W was the first filter manufacturer in the world to launch the new water-resistant and dirt-repelling multi-resistance coatings (MRCs) which can also provide very high scratch resistance in addition to the excellent reflection reducing properties. B+W uses almost exclusively colored glass from Schott for their filters in order to ensure optimum taking quality and to meet the highest demands.



The top priority of B+W is utilizing the highest possible optical quality glass, as well as the highest quality filter mounts

Advanced technology and strict controls

B+W produces high-precision filters in an impressive variety of types and diameters using the latest production equipment. Quality controls are integrated into the decisive parts of the production process; in combination with the obligatory final acceptance inspection for every single lens before shipping, these ensure the famously high quality standards of B+W. At B+W, guarantee and service are part of everyday

business and not just meaningless slogans. The continuous further development and new development of the filter models mean that users can achieve the best possible taking results. In contrast, cheap filters which may appear more cost-favorable at first can result in a dramatic deterioration of the imaging performance of high-quality lenses. It is therefore important to give the quality of the filter the same consideration as the quality of the lenses when purchasing new equipment – you cannot go wrong if you choose B+W, because image quality is also determined by what is in front of the lens!

Filters of the same precision as lenses

Because photographic filters lie in the image-generating optical beam path, they should only provide the desired absorption, polarization or other properties and should not have any “optical side effects” which might impair the excellent images of high-quality lenses. This requires a glass material which is homogeneous (free of striae), completely clear and free of any clouding as well as surfaces which have a precise plano-parallel design (without arching or wedge error), perfect smoothness (roughness results in scattered light and a reduction in contrast similar to soft focus) and as little reflection as possible (as otherwise scattered light also occurs and double images or ghost images can be produced).

With B+W you will be on the safe side

B+W can look back on almost 60 years of experience which ensure a level of know-how unique in the glass and coating industries. Together with Schott glass materials, the latest production machinery and continuous quality controls, this guarantees first-class products for the global market.



B+W continues to maintain the cutting edge coating technology

Software filters

New: Filtering on the monitor with B+W

Especially for those who do not have the right filter available for specific taking situations or who do not even have a (glass) filter for their digital camera, B+W can now provide new software filters (plug-ins) for portrait shots as well as for interior and exterior views which allow a number of useful filter effects to be applied to the digital image files and permit the photos to be enhanced on the computer monitor.



Original photo without filter



With B+W software filter

Versatile: B+W Portrait & Family Set

This software filter provides six versatile features whose effects can be set via sliders and which also allow further parameters to be adjusted in some cases so that photos can be individually optimized. “Black and White (cool)” converts color photos into black and white pictures with a cool base shade; the gray value conversion can be controlled in a manner similar to that with black and white filters – but infinitely. “Enhance Colors” is used to give the colors even more brilliance. “Luna” turns daylight shots into mysterious moonlight photos. “Summertime” injects a touch of summer heat to the photos. “Warming” eliminates blueness and gives skin a natural shade.



The B+W software filter “Warming” tints the coolish daylight so that the nave seems to be illuminated by all the warm candles.

For landscape/nature: B+W Outdoor Set

The second software filter is an ideal tool for landscape and nature photographers. In addition to the “Summertime” and “Warming” effects described above, it provides four features which can also be regulated according to a number of different parameters: “Brighten” allows the lights and shadows to be brightened separately and infinitely. “Graduate Blue” and “Graduate Neutral Density” provide a more intense blue of the sky or a darkening of the foreground or background as with a blue or gray graduated filter. “Polarizing Enhancer” produces more saturated colors in the manner of a polarizing filter.



The B+W software filter “Polarizing Enhancer” increases color saturation and contrast such that a pale image becomes brilliant and clear.



Operating systems & imaging programs

The B+W software filters are “plug-ins” that can be used with the following and some other compatible imaging programs:

Windows® 98/ME/NT/2000/XP

Photoshop® 5.5 and higher, Photoshop® Elements, Corel® Photo-Paint® 11 and compatible programs.

Macintosh OS X

Photoshop® 7.0 and higher, Photoshop® Elements 2.0, Corel® Photo-Paint® 11 and compatible programs.

UV/Skylight/Protection filters

Also for DIGITAL

The **UV filter** UV 010 blocks ultraviolet radiation which can cause blur or – in color shots – blueness. It is ideal for photos in the mountains, by the sea or in areas with very clear air. Pictures become more brilliant, irritating blue haze is avoided and color reproduction remains neutral. This UV filter is also suitable for use as front lens protection. The recommended product for digital cameras is the UV/IR blocking filter 486, a steep-flanked interference filter which additionally blocks infrared and prevents blur and color cast with IR-sensitive CCDs.

The **Skylight Filter** KR 1.5 also blocks UV radiation and has a delicate, reddish yellow shade to counter the high blue portion in shadow caused by the sky's light in color transparencies with a warmer picture hue.

The **Clear Glass protective filter** Clear 007 has an optically high-quality clear glass with an MRC coat and serves only as protection for the front lens.



B+W filters with MRC coating excel by an extremely hard, water and dirt repelling surface

Polarizing filters

Also for DIGITAL

Polarizing filters make it possible to reduce reflections in cases of oblique light incident on electrically non-conductive surfaces (e.g. glass, plastics, varnish) and increase color saturation. **Circular polarizing filters** have the same effect and also prevent incorrect exposure times and autofocus errors of cameras with a beam splitter in the TTL exposure meter or AF beam path). **B+W Käsemann polarizing filters** have a very high degree of elimination, are cemented with plano-parallel high-performance glasses, ground to an exact plano-parallel shape and lacquered at the edges as protection against environmental effects. **Warm tone polarizing filters** have a correction filter KR 1.5 or a 81 A as a protective glass. They combine both filter effects in only one filter.



Reflection and blue haze without a polarizing filter



Saturated blue sky and vivid colors with B+W polarizer



Attention: A polarizing filter makes the clouds stand out, but on this 17 mm wide-angle photo it cannot darken the sky evenly



With a warm tone polarizer, shadow areas are rendered with the correct colors, without the clouds taking on a reddish cast

Redhancer

Also for DIGITAL

The B+W Redhancer is a filter with very special transmission properties to amplify the red color portions of orange, red or brown motifs and is frequently used in nature shots or landscape photography. It is particularly effective in connection with a polarization filter to eliminate the bluish gray haze and to increase color saturation.



Without Redhancer color fidelity is true to nature, but the color is not enough for an attractive photo



With a B+W Redhancer certain colors are weakened in order to enhance others, especially red, orange, brown

Neutral density filters

Also for DIGITAL

B+W gray filters are available in a number of values (1, 2, 3, 6 and 10 f-stops) and permit wide aperture even when it is very bright for low depth of field and an interplay of sharpness and blur and/or long exposure times for motion blur or wiping effects (speed emphasis or flow of water). They also permit “normal” time values and f-stop values when the film sensitivity is too high for the prevailing light. Gray filters with higher density (3 to 10 f-stops) are also used for technical photography, e.g. shots of lit lamp filaments, of combustion processes and procedures in melting ovens as well as for astrophotography.

CAUTION: These filters must not be used for the direct visual observation of the sun (they can cause severe burn to the retina up to total blindness!) since they transmit too much infrared for this purpose; special dielectric solar filters and AstroSolar Film are available for this.



ND 0.3 2x ND 0.6 4x ND 0.9 8x ND 1.8 64x ND 3.0 1000x



A small aperture results in excessively large depth of field



With B+W ND filter 103, the aperture can be opened up



Without an ND filter a fast shutter speed resulting from bright sunshine virtually freezes the surging surf



A B+W ND filter 106 permits the use of a slow shutter speed that makes the surging water appear to flow again

Conversion filters

KB Blue conversion filters serve the increase of the color temperature of light. They have a delicate blue tint to reduce the slightly increased portions of red, orange and yellow in the morning and evening and so provide a neutral color reproduction. They also adapt the light shade of normal lamps to artificial light transparency films for halogen light or can be used for motifs which should be given a cooler color. KB 12, KB 15 and KB 20 adapt halogen light or bright lamps (100 W) or weaker lamp light (25 W) to daylight transparency films.



KB 1.5 KB 3 KB 6 KB 12 KB 15 KB 20



Reddish evening light before sunset



Moonlight effect with B+W conversion filter KB 6



Halogen illumination with daylight film



Neutralized with B+W conversion filter KB 12

KR Amber conversion filters reduce the color temperature of the light. They have a delicate reddish yellow tint to swallow up UV radiation, violet and some blue as well as a minimal amount of green, but transmit yellow and red in full; the light color becomes “warmer”. Both conversion filters KR 1.5 and KR 3 are useful in correcting the blue cast in shadow under a blue sky and for distance telephoto shots, especially with a hazy sky. KR 12 permits color-neutral daylight photos on transparency film for artificial light.

The less reddish conversion filters 81 A and 81 B are adapted to the effect of Kodak Wratten filters, provide a very attractive skin color and are recommended for shots with small flash units with too high a color temperature.



KR 1.5 KR 3 KR 12 81 A 81 B



Bluish atmospheric haze causes a blue cast



Autumn vegetation with B+W conversion filter KR 3

Color correction filters

The B+W filter range also includes CC filters for professional applications in the subtractive primary colors of cyan, magenta and yellow and in the additive primary colors of red, green and blue, in each case in four density steps of 05, 10, 20 and 40. More information can be found in the B+W Filter Handbook; the available sizes and mounts can be found in the tables on pages 12 to 14 of this brochure.



Fluorescent light produces a disturbing green cast because of a pronounced green spectral line



A B+W color correction filter magenta 20 (or the special B+W fluorescent light filter 499 FL-D) eliminates the cast

Infrared filters

Also for DIGITAL

Infrared filters transmit IR radiation, but block visible light either completely or largely. The black B+W infrared filter 093 allows pure IR photos in scientific or technical applications (e.g. material research, forensic investigation, criminology). The B+W filter 092 is the most popular filter for IR black and white photos. It is black and only purple against light sources. It provides an infrared image with a red portion for the better utilization of the low sensitivity of infrared films. The B+W filter 099 transmits a little yellow and a lot of orange and red and is so ideal for the IR color film known as false-color film.



Photographed on ordinary b&w film, without a filter



... and with B+W filter 093 on infrared b&w film



Boring low contrast image on IR color film without filter



Suppression of blue cast with B+W filter 099

Graduated filters

B+W graduated filters are preferably used for the coloring or darkening mostly of the sky or sometimes of the foreground. The rotatable mount permits the exact upward or downward alignment with the color or gray shade when the filter is screwed tight. If the sky is too bright with only low cloud delineation, the graduated filter gray 501 (max. 1 f-stop darkening) or blue 581 are very popular. The graduated filter dark gray 502 (max. 2 f-stops darkening) provides a more dramatic effect and the other color graduated filters provide special (alienation) effects, e.g. orange 524 and even more red 590 give a sundown mood; violet 543 creates a normal moonlight effect, while lilac 585 generates a ghostlike moonlight; tobacco 550 gives a warm mood or, under dark clouds, an effect similar to that before a sandstorm in the desert. The graduated filters green 561 or yellow-green 560 are usually used with the color portion at the bottom to intensify the green of vegetation; possibly also in combination with a second graduated filter 501, 502 or 581 for the sky which otherwise could be overexposed.



Dramatic clouds with B+W graduated filter gray 501



Summery lightness with B+W graduated filter blue 581



Opposing combination of B+W blue 581 and tabac 550



A different mood with B+W graduated filter orange 524



Black & white filters

Also for DIGITAL

Black and white filters are color filters for photos on black and white film, but also for digital shots which should be output in black and white via a camera function or subsequently using a photo-processing program. They are designed to modify the conversion of the colors into gray values such that the actual color and its related colors are brightened, while the complementary colors and their related colors are darkened. B+W black and white filters are available in a number of stages from bright yellow to red and in yellow-green and in green.

The bright yellow filter 021 suppresses violet and attenuates blue; thus the blue sky appears a little darker in the photo, white clouds are emphasized. The medium yellow filter 022 and the dark 023 attenuate blue a little more in each case; the blue sky is made correspondingly darker. Yellow, orange and red appear brighter, in contrast. All three are ideal for landscape photos, since white clouds are reproduced better and the green of vegetation is also better differentiated. In portraits, freckles and skin blemishes are attenuated and the complexion is a little brighter. With the dark yellow filter 023, however, the lips also appear paler (can be countered with a dark lipstick!).



The yellow-orange filter 040 and the red-orange 041 have an even more powerful effect than the dark yellow filter, because blue is filtered almost completely and green is also attenuated. A cloudy sky becomes dramatic to threatening. Skin shades are brightened, plant green darkened. Particularly the yellow-orange filter 040 is therefore very popular for nude outdoor shots because it renders the skin-tone brighter against the darker vegetation for better contours.

The red-orange filter 041, like the bright red filter 090, is ideal for architectural photos, since both allow the house fronts (provided they are not blue or green) to contrast brightly against a dark sky and to enhance the white clouds. The red filter 091 increases the effect even further. The red-orange and red filters can be recommended for photos of flowers and other plants when a better separation of shades means that orange or red blooms should be reproduced more brightly than the green of the leaves and the grass.

The yellow-green filter 060 has a similar effect to that of the medium yellow filter, e.g. it darkens blue and violet but also makes red a little darker; the green filter 061 darkens red even further: red house roofs and blooms appear darker relative to the green of plants (contrary to the effect with yellow filters). The yellow-green filter 060 emphasizes spring green in nature, it makes portraits more striking, but skin blemishes more obvious; a yellow filter is better with such problems or some make up may be necessary. In the opposite way to the red filter, the green filter 060 can image an orange or red bloom darker than the green of the leaves. This shade separation effect is also popular in technical shots where red and green areas would appear equally gray without a filter.



Yellow-green 060 Green 061



This photo shows the colors of the scenery to be taken on black-and-white film



The black-and-white photo taken without a filter suffers from almost invisible clouds



With B+W yellow filter 023, the yellow façade is brightened, but the sky could do with a little more darkening



With B+W orange filter 041, the façade remains bright, but the clouds are rendered more prominently



These colors are to be translated by b&W film into differentiated shades of gray



Without a filter, b&w film renders red and green in nearly equal shades of gray



With B+W red filter 090, red is brightened and green is darkened for good separation



With B+W green filter 060, invertedly green is brightened and red is darkened

Close-up lenses/Macro lens

Also for DIGITAL

Close-up lenses expand the close-up adjustment range of analog or digital cameras for much larger imaging scales in a simple manner. The B+W close-up lenses NL 1 to NL 5 with +1 to +5 diopters allow a matching to the focal length of the lens. Close-up lens NL 1 is ideal for zoom lenses up to around 200 mm with a near focus limit of around 1 m. NL 2 is recommended for standard lenses with a near focus range of up to around 50 cm or for zoom lenses where NL 1 is no longer sufficient. NL 3 permits an even greater near focus when NL 2 also does not do enough for zoom lenses and for wide-angle lenses which can be focused to around 35 cm. NL 4 continues the range of NL 2 for standard lenses and is the maximum for portrait zoom lenses. NL 5 continues the focusing range of the wide-angle lenses beyond that possible with the NL 3. The B+W **macro lens** (+10 diopters) has been specifically designed for digital compact cameras.



Closest focusing distance with a 50 mm standard lens



Frame-filling image with a B+W close-up lens NL 1



Approaching the macro range with B+W close-up lens NL 3



A true macro photograph with the B+W macro lens

Soft focus attachments

Also for DIGITAL

Soft-focus filters give photos a delicate haze of gentle softness without loss of sharpness. They are popular for romantic portraits of girls and women, especially because they also hide wrinkles or skin blemishes. Good soft-focus attachments actually image light points in a sharp manner, surrounded by a distinct "halo". The effect of the B+W soft-focus attachment **Soft Pro** is based on fine lenticular elevations on a high-quality, plano-parallel glass plate which generate the halo. Even sharpness fanatics can be won over by pictures taken with such attachments. A similar effect is achieved with the **Zeiss Softars 1** and **2** of optically high-quality plastic, which produce a slightly more pronounced soft focus.



Harsh sharpness without attachments



Flattering soft focus with B+W Soft Pro



Pleasing soft focus with B+W Zeiss Softar 1



Considerably softer with B+W Zeiss Softar 2

When the B+W soft-focus attachment **Soft Image** is positioned in front of the lens, the motif contours flow even more softly. Light sources and reflections are given pronounced halos, bright motifs a light fringe – even when stopped down. Recommended for portraits with back light, but not for landscapes (too soft!). The B+W fog attachments **Fog 1** and **Fog 2** have a completely different effect. The motif appears to be behind a fine, light veil of mist. Fog 1 creates distinct halos around light sources and very bright areas. Fog 2 produces almost no halos but a denser mist, and all colors appear whiter (reduced color saturation) over the full image area. A slight overexposure can further increase the romantic effect.



Original contrast of a photo without attachments



With attachment B+W Fog 1 you can smell the incense



Noticeably whitened and desaturated with B+W Fog 2

Cross screen attachments

The B+W cross-screen effect attachments have a linear grid pattern at which stars are created at light spots which produce attractive effects on a dark surrounding field of the light spots. The stars largely have the same color as the light source, but can also have weak spectral colors. The ray direction is always at right angles to the extent of the lines. Rotary mounts permit optimum alignment in the viewfinder of a reflex camera or on the monitor of a digital camera. All three B+W cross-screen attachments may also be used with video cameras.

The B+W 4x cross-screen attachment has a rectangular line grid with a square grid pattern. The B+W 6x cross-screen has a grid of lines in the directions of the sides of an equilateral triangle; the rays therefore form angles of 60° in each case. The B+W 8x cross-screen has the appearance of two right-angled line grids placed over one another offset by 45° with respect to one another. The rays it forms create pairs of 45° angles.

It applies to all cross-screens that they should only be used on motifs with one strong light source or very few light sources or bright reflections with the darkest possible surrounding so that the rays are brightly distinct, are highly visible and are not superimposed on one another to create just chaos (with too many light sources). It is furthermore mostly recommended to rotate the filters, while keeping an eye on the viewfinder of a reflex camera or on the monitor image of a digital still or video camera, so that no ray extends precisely vertically or horizontally, since this almost always has a rather static effect.



4x Cross screen 6x Cross screen 8x Cross screen

Filter cleansing

Filters and close-up lenses must be kept as clean as photo objectives because fingerprints or other dirt on their surface will result in the same reduction in image quality as if they were on the surface of the front lens of the objective. This is why B+W offers cleansing accessories for gentle, yet thorough maintenance of filters, which can also be used for cleaning photo objectives.

B+W Photo-Clear Micro-Fiber Cleansing Cloth

There is no better cleansing and care cloth for filters, lenses and other sensitive optical equipment (like binoculars, spotting scopes and eyeglass lenses). It is free of chemicals and lint, it cleans well but gently and it can be washed in an environmentally safe manner. Available in two sizes with a protective transparent plastic envelope: appr. 36x29 cm ($14 \times 11 \frac{3}{8}$ in.) and 17x17 cm ($6 \frac{1}{2} \times 6 \frac{1}{2}$ in.).

B+W Opticlean Cleansing Fluid

If persistent marks or other soiling requires a liquid detergent, then B+W Opticlean is the best choice. Anionic tensides, silicone saturated polymers and alcohol ensure effective but gentle cleansing. An antistatic agent prevents electrostatic charge from wiping that could attract new dust and lints. A pump spray allows accurate dosage (please spray onto the cleansing cloth, not onto the filter or the lens surface!) without polluting propellant gas. Opticlean is biodegradable.



Photo taken against the sun with 8x Star Cross Screen



Photo taken without Screen



With 4x Star Cross Screen a confusing multitude of stars



B+W Opticlean and B+W Photo-Clear Micro-Fiber Cleansing Cloth

Filter mounts and adapters

B+W Standard Filter Mount F-Pro



The B+W standard filter mount F-Pro provides some substantial enhancements over the previous B+W standard mount. It has been given a shallower design while maintaining the excellent material and production quality and its unchanged high mechanical stability and can therefore now also be used without any risk of vignetting for many wide-angle lenses. While no exact focal length limit can be given, since the vignetting depends not only on the height of the filter mount, but also on the tube design of the lens, it can generally be considered that the B+W standard filter mount F-Pro can be used without any vignetting with 35 mm film, and indeed always up to 35 mm, almost always at 28 mm and frequently even at 24 mm focal length.

Another advantage of the new F-Pro mount is that the screw ring which holds the filter glass in the mount is no longer inserted from the front, but from the rear. This means that the screw ring can no longer be loosened unintentionally after an additional filter or a lens hood has been screwed on (too tightly) and then unscrewed again.

B+W SLIM Wide-Angle Filters



Many lens manufacturers follow the trend to designs which are as compact as possible and frequently make the filter thread diameters so small that, with a large image angle, that is with short wide-angle focal lengths, the marginal rays obliquely incident at the image corners are shadowed by a filter mount of normal thickness, while the lens mount just manages to have no effect. For this reason, the new and thinner B+W "SLIM" wide-angle filters have been developed with a height of only 3 mm and without a front thread for the super wide-angle lenses which are prone to vignetting (only "SLIM" polarization filters which do not have one glass plate, but two with a polarization film cemented between them, have a height of 5 mm). In most cases, shots are thus possible with extreme wide-angle focal lengths without vignetting from 17 mm in the 35 mm format.

The B+W SLIM wide-angle filters are characterized by excellent mechanical finishing with screw rings which guarantee absolute, long-term strength and by their optical quality well beyond filters from other suppliers. The unique B+W Käsemann polarized filters are now likewise available in an ultra-shallow SLIM mount of only 5 mm thickness for wide-angle shots free of vignetting.

B+W Wide-Angle Filters with oversized mounts



While normal filter mounts have approximately the same external diameter as the lens mount, the front part of "oversized" filter mounts is over-dimensioned relative to the screw thread and has a much larger filter glass. The advantage is a larger "clearance" so that the marginal rays incident at a highly oblique angle from the outside with a large image angle are not impeded, that is no vignetting (darkening) occurs in the picture corners.

With extremely wide-angle lenses, especially with those with an excessively large image circle for adjustable large-format cameras, which have image angles of around 110° or even 120°, such filter mounts are an absolute must. Since wide-angle lenses anyway have an unavoidable brightness drop toward the edge for physical reasons (\cos^4 law), vignetting would be even more noticeable here.

B+W Polarizing Filters according to Käsemann



Since polarizing filters are thicker than other filters due to their double glass plates with polarization film between them, the normal version can shade the image corners with wide-angle lenses. The B+W SLIM polarization filters with a height of 5 mm, which are also available in a Käsemann version, can be used without vignetting for most wide-angle lenses and up to a focal length of around 28 mm – and often up to 24 mm – with 35 mm cameras. B+W special polarization filters with an oversized mount have been developed for wide-angle lenses with even larger image angles, with front mounts which are too small and for large format wide-angle lenses with extremely large image angles. They are fitted with the particularly high-quality linear or circular polarization films, ground to an exact plano-parallel design after cementing, then polished and lacquered at the edges.

B+W Adapter Rings for various filter sizes



Adapter rings serve to adapt filters, close-up lenses and other attachments to lenses with different filter thread sizes. For example, with photographic equipment including lenses with 52 mm and 49 mm filter threads, they permit the use of 52 mm filters on both lens groups. This not only saves money which can be invested more meaningfully in a larger selection of filter types, but also reduces the volume and weight in the photographer's bag. CAUTION: When a small filter is adapted to a lens with a larger thread, there is a possible risk of vignetting!

Accessories

B+W Collapsible Lens Hoods 900, 920 und 930



Folding rubber lens hoods are very compact and do not take up much room in a photographer's bag. A matt-black groove structure prevents inner reflections and the elastic material provides good protection against jolts. The length and opening angle of Model 900 is matched to standard or short zoom lenses. Model 920 is suitable for wide-angle lenses up to 70° image angle and Model 930 with its larger effective length and narrow opening angle for telephoto lenses.

B+W Metal Lens Hoods 950, 970, 960 and PC



Robust lens hoods made of black anodized aluminum with light-absorbing matt-black inner grooves. Model 950 for standard lenses in a space-saving short design. The even shorter Model 970 provides a large opening angle for wide-angle lenses up to 70° image angle. The long Model 960 with a resulting narrow opening angle is designed for telephoto lenses.

The B+W metal lens hood with a short conical tube is designed exclusively for the wide-angle shift lens Schneider PC Super-Angulon 28 mm f/2.8 and can accept special filter glasses for this lens up 74 mm diameter.

B+W Lens Caps and Camera Body Covers



The B+W accessory program also comprises different plastic protective covers. The snap-on covers have two spring claws at opposite sides which latch at the inside in the filter thread of the lens or in the front thread of a screwed-on filter. Press-on covers are available in normal length and shallower, for Slim filters on lenses with larger outer diameters. Protective covers for lens/camera housing are available for Canon FD (330/320), Minolta MD (331/321), Nikon (332/322), Olympus OM (333/323), Pentax K (334/324) and M-42-thread (335/325).

B+W Plastic Filter Cases BH, D and E



Thanks to their transparent lids, these handy flat filter cases, made of impact-resistant plastic material, let you see right away which filter, close-up lens or softener is stored inside. A foam rubber insert keeps filters from rattling. A filter contained in such a sturdy case can be carried in a non-padded compartment of a backpack or in a trouser pocket without any problems. These B+W plastic filter cases are available in the following sizes:

Size BH	For filters and special effects attachments up to	52 E
	Matching step-down inserts up to	48 E
Size D	For filters up to	82 E
	Matching step-down inserts up to	62 E
Size E	For filters up to	105 E

B+W Filter Pouch B 4 and B 6



The padded filter pouches B 4 and B 6 are made of a flexible plastic material with snap fasteners. See-through pockets shelter four (filter pouch B 4) or six (B 6) filters, close-up lenses or softeners in sizes up to 86 E or 62 E respectively and protect them against scratches, fingerprints or other dirt. They easily fit in any gadget bag, e.g. for quick access in a front compartment and have proven to be convenient carriers for filters and attachments.

B+W Nylon Fabric Filter Pouches E 1, E 2 and E 3



These blue filter pouches are made of padded, water-resistant and abrasion-resistant nylon fabric with velcro closures and a white space for lettering and identification. They provide good protection and can be opened and closed very fast. This makes them the ideal containers for those filters that are used very frequently and therefore should be kept in a trouser or jacket pocket for quick access. They are available in the following sizes:

Size E 1	11.5 x 11.5 cm	for filters up to	77 E
Size E 2	14.5 x 14.5 cm	for filters up to	105 E
Size E 3	20.0 x 20.0 cm	for filters	> 105 E

Standard filters / Lens hoods

Page	Explanation of Symbols: ○ Standard mount for thicker filters/prisms/close-up lenses ○ Standard mount F-Pro ○ SLIM wide-angle mount, see page 14 ⊙ Oversized wide-angle mount, see page 14 ● Single-layer coating ● MRC multi-layer coating ● Single-layer- and MRC multi-layer coatings are available ● uncoated and MRC multi-layer coating are available	M 19.0 x 0.5	M 24.0 x 0.5	M 25.0 x 0.75 + DIGITAL-PRO	M 25.5 x 0.5 + DIGITAL-PRO	M 27.0 x 0.5	M 27.0 x 0.75 + DIGITAL-PRO	M 28.0 x 0.75 + DIGITAL-PRO	M 28.5 x 0.5	M 30.0 x 0.75 DIGITAL-PRO	M 30.5 x 0.5 + DIGITAL-PRO	M 34.0 x 0.5 + DIGITAL-PRO	M 35.0 x 0.5	M 35.5 x 0.5 + DIGITAL-PRO	M 37.0 x 0.5	M 37.0 x 0.75 + DIGITAL-PRO	M 37.5 x 0.5 + DIGITAL-PRO	M 38.0 x 0.75	M 39.0 x 0.5 + DIGITAL-PRO	M 40.0 x 0.5	M 40.5 x 0.5 + DIGITAL-PRO
		4	Protection Filter 007 Clear	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	UV-Blocking Filter UV 010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Digital UV-/IR-Blocking Filter 486	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Skylight Filter KR 1.5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
4	Polarizing Filter according to Käsemann (linear)					○		○		○	○			○	○	○			○		○
	Polarizing Filter according to Käsemann (circular)					●		●		●	●			●	●	●			●		●
	Circular Polarizing Filter					●		●		●	●			●	●	●			●		●
	Linear Polarizing Filter Top-Pol					○		○		○	○			○	○	○			○		○
	Warm-Tone Polarizing Filter (linear, circular)					○		○		○	○			○	○	○			○		○
4	Redhancer 491	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
5	Neutral Density Filter 101, 102	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Neutral Density Filter 103	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Neutral Density Filter 106, 110, 113, 120	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
5	Convers. Filters (LB Filters) KB 1.5, KB 3, KB 6, KB 12, KB 20	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Conversion Filter (LB Filter) KB 15	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Conversion Filters (LB Filters) KR 1.5, KR 3, KR 12	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Conversion Filters (LB Filters) 81A, 81B	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
6	Color Correction Filters (CC-Filters)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
6	Infrared Filters 092, 093, 099	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
6	Grad. Filters 501, 502, 524, 543, 550, 560, 561, 581, 585, 590																				
7	Filters for black-and-white film 021, 022, 023, 040, 041	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Filters for black-and-white film 060, 061, 090, 091	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
*	Fluorescent Light Filter 499 F-Day	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	UV Black Filter 403; UV-Blocking Filters 415, 420	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Infrared-Blocking Filter 489	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
8	Close-up Lenses NL 1, NL 2, NL 3, NL 4																				
	Close-up Lens NL 5																				
	Macro Lens															○					
8	Soft focus attachment Soft Pro	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Soft focus attachment Soft Image	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Soft focus attachment Original Zeiss Softar 1, 2																				
	Fog attachments Fog 1, 2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
9	Cross Screens 4x, 6x, 8x	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
11	Collapsible Lens Hood 900										●			●		●			●		●
	Collapsible Wide-Angle Lens Hood 920																				
	Collapsible Telephoto Lens Hood 930																				
	Metal Lens Hood 950																				
	Metal Wide-Angle Lens Hood 970																				
	Metal Lens Hood for 28 mm f/2.8 PC Super-Angulon lens																				
	Metal Telephoto Lens Hood 960																				

* These special filters are described in detail in the B+W Filter Handbook

SLIM- and oversized wide-angle filters

Page	Explanation of Symbols:	M 49.0 x 0.75	M 52.0 x 0.75	M 55.0 x 0.75	M 58.0 x 0.75	M 60.0 x 0.75	M 62.0 x 0.75	M 67.0 x 0.75	M 72.0 x 0.75	M 77.0 x 0.75	M 82.0 x 0.75	M 86.0 x 1.0	M 95.0 x 1.0	M 105 x 1.0	M 110 x 1.0	M 112 x 1.5	M 127 x 0.75
4	Protection Filter Clear 007	●	●	●	●	●	●	●	●	●							
	UV-Blocking Filter UV 010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Digital UV-/IR-Blocking Filter 486	○	○	○	○	○	○	○	○	○	○	○	○				
	Skylight Filter KR 1.5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
4	Polarizing Filter according to Käsemann (linear)				○		○	○	○	○	○	○	○	○	○	○	
	Polarizing Filter according to Käsemann (circular)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Circular Polarizing Filter	●	●	●	●		○	○	○	○	○						
	Warm-Tone Polarizing Filter (linear, circular)				○		○	○	○	○	○	○					
4	Redhancer 491	●	●	●	●	●	●	●									
5	Neutral Density Filters 101, 102	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Neutral Density Filter 103	●	●	●	●	●	●	●									
	Neutral Density Filters 106, 110, 113, 120	○	○	○	○	○	○	○									
5	Conversion Filters (LB Filters) KB 1.5, KB 3, KB 6, KB 12, KB 20	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Conversion Filter (LB Filters) KB 15	●	●	●	●	●	●	●									
	Conversion Filters (LB Filters) KR 1.5, KR 3, KR 12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Conversion Filters (LB Filters) 81 A, 81 B	●	●	●	●	●	●	●									
6	Color Correction Filters (CC-Filters)	○	○	○	○		○	○									
6	Infrared-Blocking Filter 489*; Infrared Filters 092, 093, 099	○	○	○	○	○	○	○									
6	Graduated Filters 501, 502, 524, 543, 550, 560, 561, 581, 585, 590	○	○	○	○		○	○									
7	Filters for b & w films 021, 022, 023, 040, 041, 060, 061, 090, 091	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
*	Fluorescent Light Filter 499 F-Day	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	UV Black Filter 403; UV-Blocking Filter 415, 420	○	○	○	○	○	○	○									
8	Close-up Lenses NL 1, NL 2, NL 3, NL 4, NL 5	○	○	○	○		○										
8	Soft focus attachment Soft Pro	○	○	○	○	○	○	○	○	○	○	○					
	Soft focus attachment Soft Image	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	Fog attachments Fog 1, 2	○	○	○	○	○	○	○	○	○							
9	Cross Screens 4x, 6x, 8x	○	○	○	○		○										

* These special filters are described in detail in the B+W Filter Handbook

Magnifiers



3x

Large field of view for 6x7 cm

The generously proportioned optical system covers an area of 7x7 cm with outstanding imaging performance. Ideal for examining roll films and large format sheet films. Interchangeable bases (skirts) for viewing reflection copy or transparencies.



4x

Universal magnifier

A versatile magnifier with brilliant, high resolution optics. Eyeglass wearers can see the entire image comfortably up to the corners for fatigue-free working. Distortion-free, even at long eye relief. Interchangeable bases (skirts) for viewing reflection copy or transparencies.



6x ASPH

Maximal magnification

Strong magnification for critical evaluation of sharpness while still covering the full 35 mm format! An aspherical surface assures the best performance. Ideal for ground glass evaluation, too. Interchangeable bases (skirts) for viewing reflection copy or transparencies.



10x

Detail sharpness

Ideal for examining the very finest details. Equipped with a high-grade optical system for brilliant imaging quality of practically microscopic resolution. Comfortable fatigue-free viewing.



L 10x

Illuminating magnifier

Optically identical to the 10x magnifier, but equipped with white-light-LEDs for bright incident illumination with minimal energy consumption. The button cell can easily be replaced.



Large lens diameter and ample diopter compensation permit comfortable and effortless viewing as well as a large field of view for eyeglass wearers



A sophisticated quick fastening device permits fast attachment or removal of the gently elastic neck strap



The 3x, 4x and 6x magnifiers are supplied with interchangeable opaque and transparent bases (skirts) for viewing reflection copy and transparencies



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