





# YOUR MOMENTS, OUR TECHNOLOGY.

You see the world through your own eyes! And with our B+W Filters you can share your perspective with others. No matter what you photograph - quiet landscapes, fast action, animals, plants, or people - our B+W Filters bring your style to life. All of our filters are both high-tech and high-class products. They reflect 75 years of experience, know-how, and development - all focused on one goal: to provide you with the best possible tools for the best possible photos.

Introduction	4
Filter Lines	8
Filter Mounts	10
Coatings	12
Protection Filters	14
Polarizing Filters	16
ND Filters	18
ND Vario Filter	20
ND Graduated Filters	22
Black & White Filters	24
Infrared Filters	26
Soft Pro	28
Accessories	30
Product Range	36
Technical Data	38



# **TIP**

#### Cleaning, storage, transport.

With filters, it's a bit like records - If you treat them well, they can provide a lifetime of service. All of our accessories for cleaning, storing, and transporting can be found starting from page 30.

Light does not forgive.

Light does not forgive. Even the smallest deviations make a big difference to the result. This is a challenge, but it also means: quality pays off, innovation pays off, care pays off. You can see the difference. And that's what drives us! This is also why our B+W Filters have been among the best in the world for more than 75 years - in terms of mechanics, coating, glass quality and user-friendliness. You can feel it! As soon as you hold one of our filters in your hands, it's clear: this is a high-quality product.

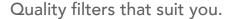
# 75 YEARS OF INNOVATION AND QUALITY!

2022 marks the 75th anniversary of B+W Filter. This is an occasion to look back and celebrate. After three very successful quarters of a century, we have established a world-wide reputation as a manufacturer of high-quality and innovative filters. That is why we are pleased to present our current program to you. It is the result of 75 years of research & development, know-how and attention to detail.



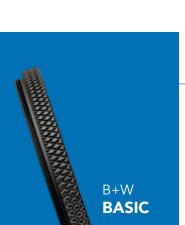


## **FILTER LINES**



There are three filter lines in our program: BASIC, MASTER and T-Pro.

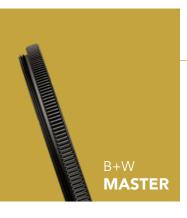
BASIC is perfectly suited for photographers with high quality awareness. Almost all of our filter types are available in the BASIC line. The MASTER and T-Pro lines meet the highest professional demands. They are equipped with our exclusive MRC nano coating and slim design features. Our B+W Filters are suitable for cameras and lenses with a front thread. In addition, they have also got a front thread themselves for further accessories such as snap caps, lens hoods and additional filters.



#### Variety and high quality standards

**BASIC** 

- Better grip thanks to a new knurled finish
- Easy to screw on and off, thanks to special lacquering
- Durable, robust brass mount
- Suitable for wide-angle to telephoto lenses
- Available in Ø 37 mm to 105 mm
- MRC coating (except Infrared Filters and Soft Pro)



#### Lightweight for professionals

**MASTER** 

- All the advantages of the BASIC line
- Even narrower, even lighter
- Suitable for super wide-angle to telephoto lenses
- Available in Ø 30.5 mm to 112 mm
- MRC nano coating



#### Filter line for individualists

T-Pro

- All advantages of the MASTER line, incl. MRC nano coating
- Titanium finish
- Available in Ø 30.5 mm to 95 mm
- 5 years warranty



MADE IN GERMANY

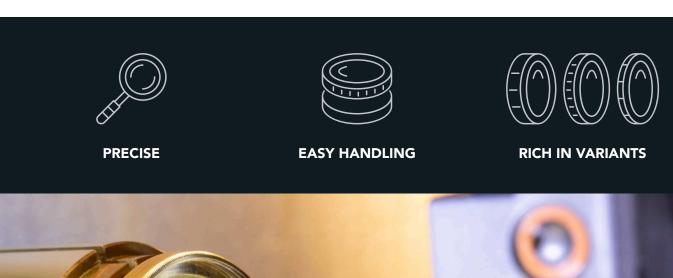


# **FILTER MOUNTS**



Easy, precise, versatile, and perfect to handle.

Our mounts offer a combination of precision manufacturing, outstanding materials, easy-grip knurls, and a functional lacquer finish, for easy and precise placement and removal. This allows you to change your filters quickly and easily, while at the same time confirming proper position of rotating mounts.





### Quality you can touch

All of our filters are high-quality products. And you can feel that as soon as you hold them in your hands.

- High-precision production with state-of-the-art CNC machines
- Precise flat support for tension-free seating of the high-quality filter substrates
- High fitting accuracy and functional lacquering guarantee easy and precise screwing and unscrewing
- Easy-grip knurls for better feel and handling
- Stable and durable brass filter mechanism
- Full front thread for additional filters, lens hoods, snap caps, etc.
- Compact designs for zoom, wide-angle to telephoto lenses



<sup>\*</sup> Soft Pro and IR-Filter uncoated

# **COATING SYSTEMS**



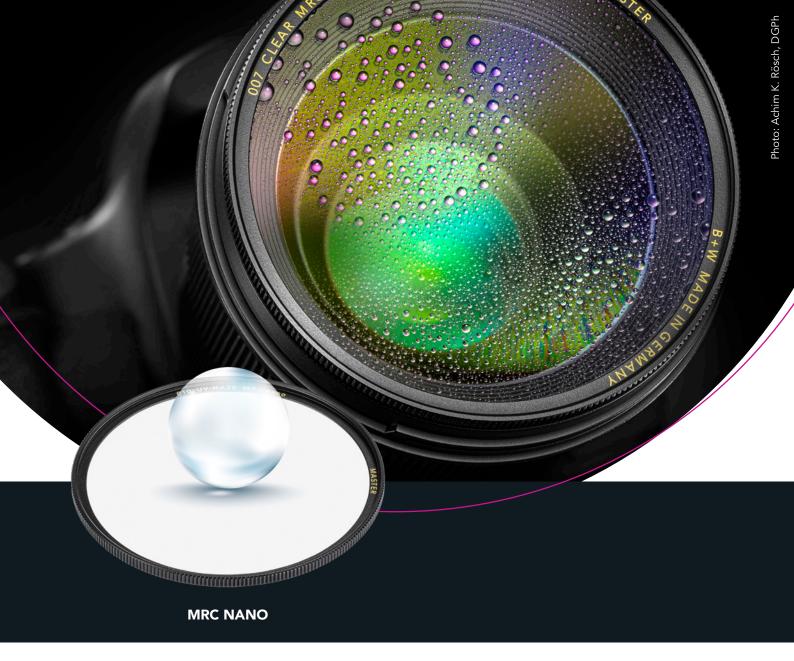
Bring light into the camera.

Coating is the process by which the glass surface of filters becomes non-reflective. And the quality of the coating is crucial for the quality of the filter. Reflections can lead to ghosting or double images. In addition, reflected light does not arrive where we want it to be: On the film or the sensor. This makes a big difference, especially with high-resolution cameras and high-quality lenses.

In addition, our MRC and MRC nano coatings ensure that liquids simply drip off thanks to the lotus blossom effect. It protects against dirt, makes cleaning easier and ensures that you can get started - even with changes in temperature and humidity, as any fogging disappears more quickly.



	MRC	MRC nano
Number of layers	16	16
Wavelength	400 - 680 nm	400 - 680 nm
Reflection	Ø < 0.5%	Ø < 0.5%
Transmission	Ø > 99.5%	Ø > 99.5%
Scratch resistance	**	***
Water resistance	$\star\star$	***
Dirt resistance	**	***
Oil resistance	★ ★ ☆	***
Acclimatization	★ ★ ☆	***
Easy to clean	★★☆	***



### World class!

Continuous research and development go into our B+W coatings. We are always investing in, and striving for, the highest quality and innovation possible: Higher transparency, brighter colors, more contrast. When choosing a B+W Filter, you receive the following benefits:

- High transmission, extremely low light loss
- Vibrant colors, high contrast
- Reduced back reflections, no ghost/double images
- Color neutrality
- Water, oil and dirt repellent
- Fast acclimatization
- Scratch resistance

#### **Technical information**

Further technical data, an overview of the filter factor and extension factor, as well as the transmission curves, can be found from page 38.



# PROTECTION FILTERS

Put an end to dirt and scratches.

One speck of dust and the photo is ruined. One scratch and you need a new lens. With our Protection Filters you can save yourself the trouble and expense. Just put the filter on your lens and leave it there until you want to use other filters. In short, Protection Filters are a standard attachment in everyday life. Constant protection means that your lens element is shielded from dust, and other contaminants. Some of our Protection Filters also offer additional features, for example the filtering of UV light.

## Three options: Clear, UV, UV-IR

**Technical information** 

Further technical data, an overview of the filter factor and extension factor, as well as the transmission curves, can be found from page 38.

Our Protection Filters are available in three variants:
Clear, UV-Haze and UV-IR Cut. 007 Clear is transparent
and permeable for the entire light spectrum. 010 UV-Haze
absorbs disturbing UV components and helps you to avoid irritating
blue shadows. 486 UV-IR Cut is only permeable for visible light and
allows you to take particularly detail-rich images with natural colors.

	007 Clear The professional	010 UV-Haze The classic	486 UV-IR Cut The specialist
Front lens protection	•	•	•
Color-neutrality	•	•	•
Without filter factor	•	•	•
Wide-angle	***	***	$\star\star$
UV block	★ ★ ☆	***	***
Reduces blue cast	★ ★ ☆	***	***
IR cut	★ ☆ ☆	★ ☆ ☆	***
High transmission	***	$\star\star$	$\star\star$
Easy to clean	•	•	•
Coatings	MRC, MRC nano	MRC, MRC nano	MRC
Available filter lines	BASIC, MASTER, T-Pro	BASIC, MASTER, T-Pro	BASIC



FRONT LENS PROTECTION



QUICK, EASY CLEANING



ALSO SUITABLE FOR 4K AND 8K CAMERAS

# **POLARIZING FILTERS**

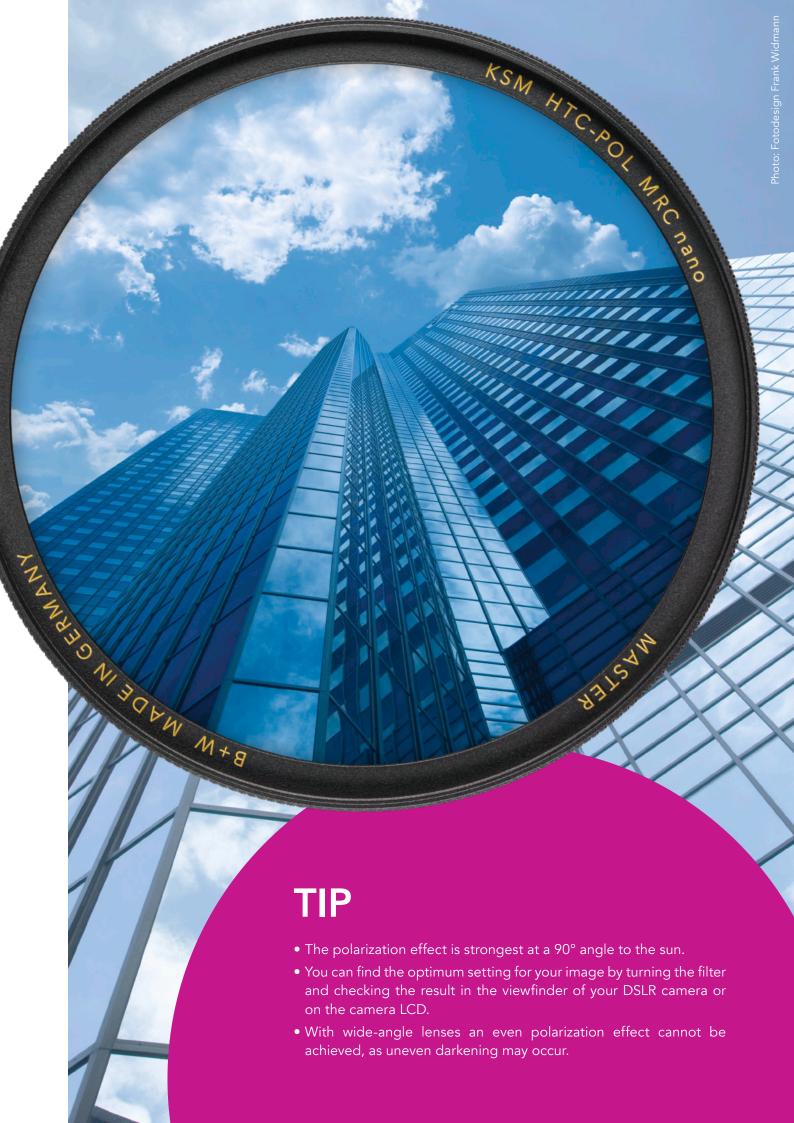
Less reflections, more intense colors.

Polarizing Filters can achieve some of the most interesting and important effects in photography. Therefore, they belong in the basic equipment kit of every photographer. With Polarizing Filters, you can reduce reflections and achieve a clearer, less disturbed image, for example, when photographing reflective, non-metallic surfaces such as windows, glass vitrines, or water surfaces. You can also enhance colors and achieve higher contrasts, for example, between foreground and sky. The results can be dramatic!



## BASIC, MASTER, T-Pro: Polarizing Filters for every requirement

	Circular Polarizing Filter	High Transmission Käsemann
Brighter colors	***	***
Reduced reflections	★ ★ ☆	***
For high-resolution cameras	★ ★ ☆	***
Extension factor	3 - 4	2 - 3
Aperture stops	approx. +1.5 - +2	approx. +1 - +1.5
Coatings	MRC	MRC nano
Available filter lines	BASIC	MASTER, T-Pro



## **ND FILTERS**

For photos that not everyone can take.

With ND Filters, you can expand your repertoire by impressive effects that are not easy to create. From wiping effects and light traces to the targeted reduction of the depth of field - the creative potential is huge, and the areas of application are diverse. ND Filters are perfectly suited for all those who want to delve deeper into the art of photography.



EXCELLENT COLOR NEUTRALITY



ND FILTER EFFECT WITH INNOVATIVE COATING

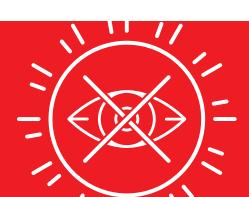


ALSO SUITABLE FOR 4K AND 8K CAMERAS

## The trick: Our special coating

All of our ND Filters are made of high-quality, finely ground, and polished base glass. The effect of these filters cannot be achieved without a special coating. That is why we do not use the classic B+W Filter MRC nano coating here, but an innovative coating combination with a homogeneous filter effect and high color fidelity.

Туре	Filter Line	Density	Filter Factor	Apertures	Transmission (%)
802	MASTER	0.6	4	+2	25.0
803	MASTER	0.9	8	+3	12.5
806	MASTER	1.8	64	+6	1.6
810	MASTER	3.0	1,000	+10	0.1



#### **ATTENTION**

Whether solar eclipse or not: ND Filters are not suitable for direct observation of the sun! They do not filter out UV and IR radiation that is harmful to the eyes.



For beginners it can be a challenge to achieve optimal results with ND Filters at first. There are a few things to consider and often it is necessary to maintain perfect conditions over a longer period. With these tips, you'll have everything you need to get fantastic shots right from the very beginning!

- Use a stable tripod. Again, good equipment is 50% of success.
- Work in Bulb mode "B" for long exposures.
- Use the remote control of your camera app.
- Do not rely on the automatic mode but set the exposure values manually.
- Use low ISO values and choose a small aperture.
- Use Live View for control.
- Use the RAW file format to make post-processing easier.
- Cover the camera's viewfinder while taking the photo.
- Our B+W ND Calculator app will help you set the correct exposure times.
- Remember to turn off the noise reduction program.

#### **B+W ND CALCULATOR APP**

Get to know the advantages of our app and make it easier for you to determine the exposure time.





#### **Technical information**

Further technical data, an overview of the filter factor and extension factor, as well as the transmission curves, can be found from page 38.



# **ND VARIO FILTER**

Flexible light control without changing filters.

The ND Vario Filter gives you infinite control over the density from +1 to +5 stops. Whether you choose a wide aperture to cleanly separate your main subject from the background, or go for long exposures to give flowing water a soft character - our ND Vario helps you to create your perfect photo. For hobby filmmakers, it also offers optimal light balancing for video and film recordings.



STEPLESS ADJUSTMENT +1 TO +5 STOP LEVELS



IDEAL FOR FILM FOOTAGE



LIGHT, PRECISE FILTER MECHANICS



## X across the photo? No way!

Light rays run differently in the center of the image than at the edges. Initially, this shows in the darkening of the corners. However, in more pronounced cases it can have effects right up to image center. That is when an X-shaped shadow appears to lie above the image. Such extreme cases occur with wide-angle lenses 28 mm and shorter. To avoid this effect, our ND Vario has a stop for the brightest and a stop for the darkest position. NOTE: The markings are for reference only, and do not represent specific stops.

Density	Filter Factor	Apertures	Transmission (%)
0.3	2	1	50.0
0.6	4	2	25.0
0.9	8	3	12.5
1.2	16	4	6.3
1.5	32	5	3.1

Lens Mount	46	49	52	55	58	62	67	72	77	82	95
Front Thread	49	52	55	58	62	67	72	77	82	86	105

# **ND GRADUATED FILTERS**

Connecting heaven and earth.

ND Graduated Filters are half transparent and offer a graduated ND grey filter effect on the other half. They allow you to balance the contrast between sky and landscape in a targeted manner - for example to impressively highlight cloud formations. For improved handling, these filters can be rotated in the filter holder. This way you can easily adjust the filter effect to the desired position.



NEUTRAL GREY TINT
WITH SOFT TRANSITION
IN THE MIDDLE



LIGHT COMPENSATION WITH HIGH CONTRASTS BETWEEN SKY AND LANDSCAPE



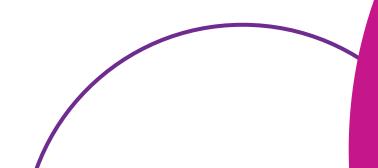
TRANSMISSION 701 (50%) AND 702 (25%) IN THE EDGE AREA

Туре	Filter Line	Density	Apertures	Transmission (%)
701	BASIC	0.3	1	50.0
702	BASIC	0.6	2	25.0

Values at GND 701 and 702 apply at the darkest point on the edge

## No hard edge

The transition from one side to the other should not draw a visible line across your image. That's why we use a special coating process that ensures a smooth transition from the transparent to the ND area, while preserving the sharpness of your image.





• For best results, you should aim for a correct exposure of the foreground (landscape without sky) without an ND Graduated Filter. These values combined with the ND Graduated Filter almost always result in an optimal reproduction of the bright sky.

# **BLACK & WHITE FILTERS**

Colored filters for fascinating contrasts.

The filters themselves are colored, but they are mainly used to achieve expressive black and white contrasts. For example, you can add brilliance to clouds. These filters open a wide range of possibilities, especially for experimental photography and playing with contrasts.

# Four colors, numerous possibilities

#### 022 Yellow 495 MRC

The standard filter for black and white photography.

- Visible higher image contrasts
- Ideal for landscape photography and plant photography
- Corrects light skin blemishes
- Filter factor approx. 2

#### 040 Orange 550 MRC

Sharper, almost graphic contrasts.

- Significantly more contrast in cloudy skies
- Conceals even more pronounced skin blemishes
- Plastic representation of landscapes, architecture, and flora
- Filter factor approx. 4

#### 090 Red Light 590 MRC

Increased contrasts to the point of alienation.

- Dramatic landscapes with thunderstorm atmosphere
- Clear, impressive architectural shots
- Increased tonal separation
- Filter factor approx. 5





ENHANCED GREY TONES
FOR MORE INTENSE
CONTRASTS

YMAMA32 M



ALSO SUITABLE FOR 4K AND 8K, DIGITAL AND ANALOG AS WELL AS COLOR AND MONOCHROME CAMERAS



IMPROVED RESOLUTION AND HIGHER SHARPNESS

#### 091 Red Dark 630 MRC

Extreme contrast to the point of graphic alienation.

- Cloudy skies turn into highly dramatic stormy skies
  - Dunes become moonscapes
  - Beginning Wood Effect (green plant parts appear white)
    - Filter factor approx. 8

All our Black & White Filters are available in the BASIC filter line.

#### **Technical information**

Further technical data, an overview of the filter factor and extension factor, as well as the transmission curves, can be found from page 38.

# **INFRARED FILTERS**

Extreme contrasts for experimental black and white images.

Our Infrared Filter is our special filter for extreme contrasts, with which you can create experimental black and white photos. The Wood Effect is particularly interesting: leaves and grasses appear brilliant white. This is due to the special properties of chlorophyll. On the one hand it is transparent in the infrared range, so that the light of the water contained in the plant is reflected, and on the other hand, chlorophyll absorbs short-wave light and emits it with a wavelength shift in the infrared range.



**EXTREME CONTRASTS** 



FASCINATING LANDSCAPE PHOTOGRAPHS



DE IN GERMANY

**WOOD EFFECT** 

Our Infrared Filters are available in the BASIC filter line.

### Your choice: Dark or Black

#### 092 IR Dark 695

- Still passes parts of the visible light spectrum
- IR photography with very strong contrasts

#### 093 IR Black 830

- Blocks the visible light spectrum
- IR photography with extremely high contrasts
- Pronounced Wood Effect

#### **Technical information**

Further technical data, an overview of the filter factor and extension factor, as well as the transmission curves, can be found from page 38.



When using Infrared Filters, there are a few things to keep in mind for best results. With these application tips, you'll have everything you need to get started:

- Optimal IR effects only occur in very bright light.
- Check the IR capability of your camera by holding an IR remote control towards the camera and pressing the function button. If a white spot appears on the display of the camera, the sensor has sufficient residual sensitivity for IR photography.
- IR photography requires longer exposure times. Therefore, use a tripod.
- Observe the IR index when adjusting the distance on your lens, to compensate for the focus difference that occurs.
- Adjust the focus manually before attaching the filter.
- Choose a small aperture and determine the correct exposure time with a test series.
- IR images must be processed afterwards with an image processing program.



More than a soft focus.

This filter can do more than just blur! You can use it to make sharp images that are gently overlaid with blur. For example, you can create portraits in which details such as eyelashes are not blurred, but skin blemishes are gently masked. In addition to portrait photography, you can use the filter for great effects in landscape photography. It dampens high contrasts and softens the light fringes in backlighting. In this way, you give your photos a soft and romantic character.



DIFFUSE LIGHT SPACES



SHIMMERING AURA WITH SPECTACULAR LIGHTS



SHARP CORE IMAGE, SOFT OVERLAY

# High-tech for subtle effects The effects of Soft Pro are made possible by irregularly distributed microlenses on a high-quality ground and polished filter disc. They scatter the light and thus superimpose the sharp core image with airy, diffuse light fringes. This opens deep shadows, while highlights hardly blur at all, but create a shimmering aura in the darker surroundings. • Works irrespective of aperture • Depth of field remains controllable • Camera autofocus still works Our Soft Pro is available in the BASIC filter line. • Choose a larger aperture, especially for smaller sensors and shorter focal lengths.

• Select a focal length of not less than 24 mm for full format, or 18 mm

for APS. Do not set the aperture value below 8.



**ACCESSORIES** 

# EXCLUSIVE LEATHER COLLECTION



Protection, transport, comfort.

Our high-quality accessories are made of the finest cowhide. Whether a camera strap, hand strap or filter cases: They all offer comfort, protection - and a smart look!

- Handcrafted leather
- Manufactured in a traditional leather factory
- Fine, black cowhide with a very pleasant feel
- High quality with sturdy seams



With soft padding for extra comfort.

- Total length strap: 150 cm
- Total length hand strap: 33.5 cm



#### **Leather Filter Case**

Editions for 2, 3 or 4 filters up to  $\emptyset$  77 mm. For quick access, the filters are stored in nets arranged one below the other.



# **POLARIZER FILM**

Experimenting with photography.

Polarizer film and polarized light help you to take photos with particularly vivid color effects. Just attach the polarizer film in front of a light source (e.g., flash units, LED photo lamps, etc.) with an adhesive strip, rubber band, clamp or similar. The film is color-neutral and homogeneous. And it can be easily cut, punched, and bent. So, there are no limits to your experimentation.

#### Linear and in two thicknesses

Our polarizer film is available in two thicknesses: 0.3 mm and 0.8 mm (foil thickness for flexibility only, no optical difference).

- Repro technology for reflection-free photographic results
- Effective range across the visible light spectrum
- Wide range of applications like Inverting for LCD displays, visualization of tensions in materials, creation of impressive color effects
- Available in different sizes



# **ATTENTION**

- Some lamps, such as incandescent or halogen lamps, emit heat as well as light. DO NOT use them with polarizer film, as this will melt the foil.
- Avoid hot spots (point-shaped heat exposure), as this will also damage the pol foil.
- The polarizer film is supplied with a protective film. Remember to remove it before use.

#### **ACCESSORIES**

# **LENS HOODS**



Must-have for better image quality.

With a lens hood, you can achieve a better image quality - for almost any image motif. How? The lens hood prevents disturbing light from coming in from the sides. This gives you clearer contrasts and colors. In addition, the lens hood (also known as a lens shade or sun visor) functions as a practical crumple zone that protects your expensive lenses. In short: Lens hoods are accessories that you should only remove for specific reasons. In most cases, it is better to have one on your lens.



NO DISTURBING LIGHT IRRADIATION



PROTECTION OF THE CAMERA LENS



ESPECIALLY SUITABLE FOR OUTDOOR & NIGHT PHOTOGRAPHY

### Our models

#### **Collapsible Rubber Lens Hood 901**

- High-quality reflection-free rubber
- Connection ring made of robust brass
- Functional lacquer for easy screwing on and off
- For standard lenses (50 mm/FF) and longer
- Inner groove structure avoids reflections

#### **Metal Lens Hood**

- Particularly robust design
- Precisely manufactured tubes
- Black anodised aluminium
- Inner grooves act as light labyrinth to avoid reflections
- Lens Hood 950: For standard focal lengths (50 mm/FF)
- Lens Hood 970: For wide-angle lenses with more than 70° angle of view
- Lens Hood 960: For telephoto lenses from 85 mm/FF



#### **ACCESSORIES**

# **CLEANING**

Clean optics for outstanding images.

No matter how good your camera equipment is, dust, fingerprints and other contaminants will ruin even the most stunning image motif. With our cleaning accessories, you can make sure that your filters and lenses are as clear and clean as on the day you bought them.

#### Lens Cleaner Set (2 parts)

- Lens Cleaner Pump Spray, 50 ml
- Photo Clear Cleaning Cloth,
   20 x 18 cm

### Travel Cleaning

**Set** (4 parts)

- Photo Clear Cleaning Cloth black, 20 x 18 cm
- Bellows, 9 cm
- Lens Cleaner Pump Spray, 30 ml
- Cotton Pouch

#### **Cleaning Set**

(5 parts)

- Cleaning Cloth, 20 x 20 cm
- Cleaning Brush, 12 cm
- Bellows, 15 cm
- Lens Cleaner Pump Spray,
   50 ml
- Cotton Pouch

#### **Lens Cleaner Pump Spray**

For stubborn dirt

- Filling quantity: 50 ml
- Streak-free application
- Non-flammable + biodegradable
- Filling quantity: 30 ml (in Travel Cleaning Set only)

#### **Bellow**

Contactless dust removal

- Precise air nozzle guide
- Length: 15 cm
- Small version: 9 cm (in Travel Cleaning Set only)

#### Microfiber Cleaning Cloth

For perfect cleanliness

- MASTER (22 x 22 cm)
- Photo Clear (20 x 18 cm), available in colors black, navy, blue, pink
- Both washable at 40°C

#### **Cleaning Brush**

Gentle cleaning

- Fine goat hair
- Professional version with magnet: 15 cm
- Version without magnet: 12 cm (in Cleaning Set only)





# TOOLS FOR EVERYDAY PHOTOGRAPHY



#### **Nylon Single Filter Case**

- Lined nylon fabric
- Window for labeling
- 11.5 x 11.5 cm up to Ø 52 mm
- 14.5 x 14.5 cm up to Ø 105 mm
- 20.0 x 20.0 cm up to Ø 112 mm



#### Nylon Filter Case 4x and 6x

- Foldable, padded case
- ullet For 4 filters up to arnothing 86 mm
- For 6 filters up to Ø 62 mm



#### **Leather Single Filter Case**

- Window for labelling
- S: For filters up to Ø 49 mm
- M: For filters up to Ø 77 mm
- L: For filters up to Ø 95 mm
- XL: For filters up to Ø 112 mm



#### Snap-Cap 311

- Snap cap locks into the filter thread
- Secure fit
- Internal grips
- Quick unlocking



#### **Reducing Ring**

- Precise and robust
- Made of brass
- Functional lacquer for easy screwing on and off
- Made in Germany

## TIP

Only fit larger filters to smaller lens diameters (vignetting)!

# **DELIVERY PROGRAM**

Here you can find an overview of our complete product range on two pages.

				Ø → Dimensions in mm	<b>30,5</b> 30.5 × 0.5	<b>37</b> 37 × 0.75	<b>39</b> 39 x 0.5	<b>40,5</b> 40.5 × 0.5	<b>43</b> 43 × 0.75	<b>46</b> 46 × 0.75	<b>49</b> 49 × 0.75
	Mount	Туре		Coating							
	T-Pro	007	Clear	MRC nano	•	•	•	•	•	•	•
	1-110	010	UV-Haze	MRC nano	•	•	•	•	•	•	•
<u> </u>	MASTER	007	Clear	MRC nano	•	•	•	•	•	•	•
Protection Filters	IVIASTER	010	UV-Haze	MRC nano	•	•	•	•	•	•	•
Ž ĪĒ		007	Clear	MRC	-	•	•	•	•	•	•
	BASIC	010	UV-Haze	MRC	-	•	•	•	•	•	•
		486	UV-IR Cut	MRC	-	•	•	•	•	•	•
ວ	T-Pro*	НТС	High Transmission CPL Käsemann	MRC nano	•	•	•	•	•	•	•
Polarizing Filters	MASTER	нтс	High Transmission CPL Käsemann	MRC nano	•	•	•	•	•	•	•
& ⊞	BASIC	S03	CPL Circular Pol	MRC	-	•	•	•	•	•	•
	MASTER	802	ND 0.6	MRC nano	•	•	•	•	•	•	•
lters	MASTER	803	ND 0.9	MRC nano	•	•	•	•	•	•	•
ND Filters	MASTER	806	ND 1.8	MRC nano	•	•	•	•	•	•	•
	MASTER	810	ND 3.0	MRC nano	•	•	•	•	•	•	•
ND Vario Filter	XS Pro	CHT	ND Vario	MRC nano	-	-	-	-	-	•	•
s	BASIC	701	Graduated ND 50% MRC	MRC	-	-	-	-	-	-	•
ND Graduated Filters	BASIC	702	Graduated ND 25% MRC	MRC	-	-	-	-	-	-	•
	BASIC	022	Yellow 495	MRC	-	•	•	•	•	•	•
k &	BASIC	040	Orange 550	MRC	-	•	•	•	•	•	•
Black & White Filters	BASIC	090	Red Light 590	MRC	-	•	•	•	•	•	•
	BASIC	091	Red Dark 630	MRC	-	•	•	•	•	•	•
ared	BASIC	092	IR Dark 695	-	-	•	•	•	•	•	•
Infrared Filters	BASIC	093	IR Black 830	-	-	•	•	•	•	•	•
Soft	BASIC	S-P	Soft Pro	-	-	-	-	-	•	•	•

<b>52</b> 52 x 0.75	<b>55</b> 55 x 0.75	<b>58</b> 58 x 0.75	<b>60</b> 60 x 0.75	<b>62</b> 62 x 0.75	<b>67</b> 67 × 0.75	<b>72</b> 72 x 0.75	<b>77</b> 77 × 0.75	<b>82</b> 82 x 0.75	<b>86</b> 86 x 1.0	<b>95</b> 95 x 1.0	<b>105</b> 105 x 1.0	<b>112</b> 112 x 1.5
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# **FILTER FACTOR**

Almost every filter absorbs a part of the light. The loss of light is compensated by a correspondingly longer exposure. The filter factors given here apply to daylight and are approximate values that depend on various factors - e.g., the lighting conditions, the sensor sensitivity, the desired result and more. With built-in exposure meters, the adjustment is automatic, but it may still be advisable to create an exposure bracket to achieve a perfect individually adjusted result.

Туре		Filter Factor*	Apertures**
007	Clear	1	0
010	UV-Haze	1	0
486	UV-IR Cut	1	0
HTC	Pol High Transmission Circular Käsemann	~ 2 - 3	~ +1.0 - +1.5
S03	CPL Circular Pol	~ 3 - 4	~ +1.5 - +2.0
802	ND 0.6 +2' 25.0 %	4	2
803	ND 0.9 +3' 12.5 %	8	3
806	ND 1.8 +6' 1.6 %	64	6
810	ND 3.0 +10' 0.1 %	1,000	10
CHT	ND Vario	2 - 32	1 - 5
022	Yellow 495	2	1
040	Orange 550	4	2
090	Red Light 590	5	21/4
091	Red Dark 630	8	3
092	IR Dark 695	Diff.	Diff.
093	IR Black 830	Diff.	Diff.
701	GND 50 %	2**	+1**
702	GND 25 %	4**	+2**
S-P	Soft Pro	1	0

#### Height of filter mounts without screw-in thread

•							
Gradient	<b>T-Pro</b> Photo	<b>T-Pro***</b> Pol	<b>MASTER</b> Photo	<b>MASTER</b> Pol	<b>ND</b> Vario	BASIC Photo	<b>BASIC</b> Pol
x 0.75 x 0.5	2.9 mm	N/A	3.4 mm	4.2 mm	9.8 mm	4.4 mm 3.9 mm	6.7 mm
x 1.0	Ø 86 = 3.4 mm Ø 95 = 4.1 mm	N/A	Ø 86 = 3.7 mm Ø 95 = 4.4 mm	5.2 mm	10.6 mm	5.3 mm	8.2 mm
x 1.5	-	N/A	$\emptyset$ 112 = 6 mm	$\emptyset$ 112 = 6.1 mm	_	_	_

<sup>\*</sup> Base value

<sup>\*\*</sup> Measured at the darkest edge

<sup>\*\*\*</sup> Coming soon

# TRANSMISSION CURVES

