



AcceleratedVision

Further Modules

SHARPEN

HDR

NEAT

DENOISE

FOCUS

COLOR

LUT

ZOOM

BLACK & WHITE

EMOTION

ANALOG

DIVE

Guide to the basic functions of all programs

Further Modules

The guides to the Accelerated Vision programs describe the RAW, Expert, Presets, Selective Drawing, Sensor Error Correction and Color modules. These are independent, powerful modules with their own editing window or, as with the presets, the heart of many programs.

This guide deals with further modules in finalization mode. **These modules are offered in full in some programs and in a limited selection in others because they are tailored to the individual objectives of the programs and different implementation ideas.**

The sequence of the modules described here

- **Magnifying glass/Comparison view**
- **Intelligent colour space**
- **Photo film emulation area**
- **Optimisation assistant**
- **Virtual micro-details**
- **Grain module**
- **LUT-module**
- **AI training area**
- **Focus-peaking analysis area**
- **Watermark Area**
- **Keyboard Shortcuts**
- **Supported RAW formats**

does not represent a rating. It is based on the toolbar, in which the desired module is shown and hidden by clicking on the icon.

The user interface and operation is the same in all programs and makes it easy to find your way around when switching.

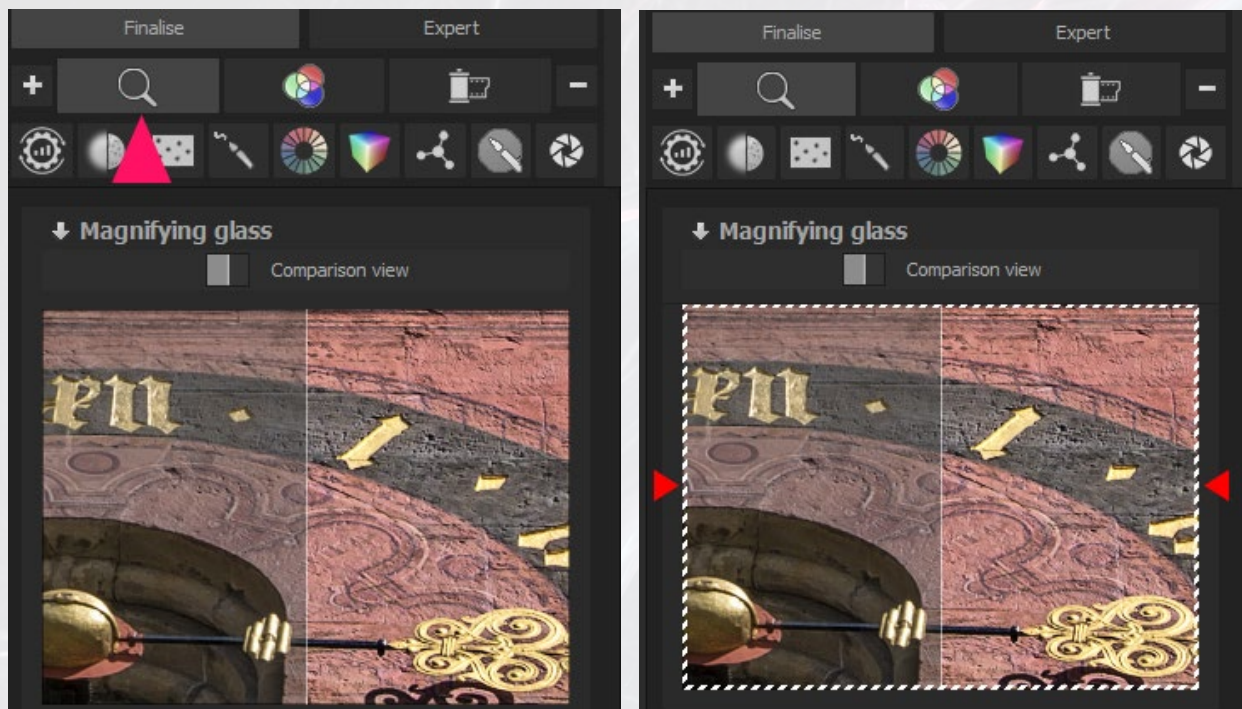
In this guide, **COLOR** has been used as an example, and the **FOTO 3D** programme has been used for the **watermark module**.

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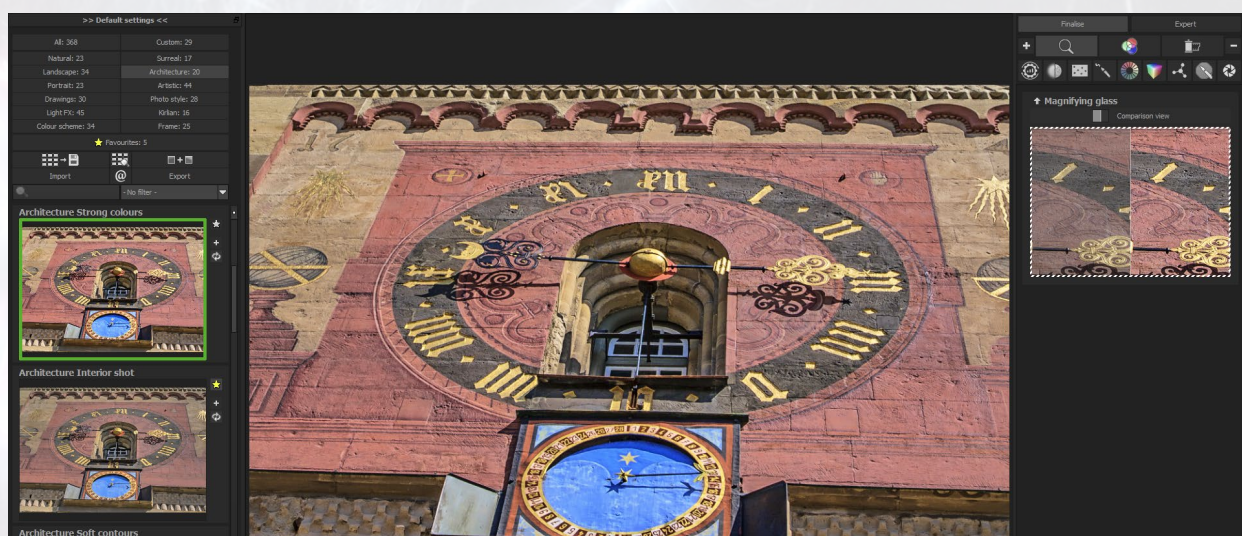
1. Magnifying glass/Comparison view

The magnifying glass shows a vertically divided comparison view below the current mouse display.



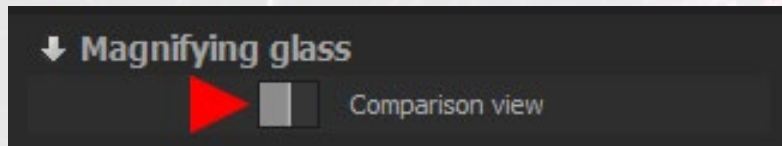
Click on the button with the magnifying glass symbol to display the original data on the left and the data of the selected preset with the current editing status on the right.

Fix position: If you want to fix the current position below the mouse display, press the button . The white dashed line visualizes this fixed view. Pressing it again cancels it and switches to the standard view.



Change comparison view: The entire “floating” comparison view is displayed by default. By clicking in the magnifying glass, the same area is displayed on the left and right, which often makes assessment easier.

With the “**large**” **comparison view**”, the image look of a selected preset and any other changes in other modules can be quickly compared with the original. The integrated magnifying glass also allows a greatly enlarged comparison of selected detail areas.



Click on the **Comparison** view button...

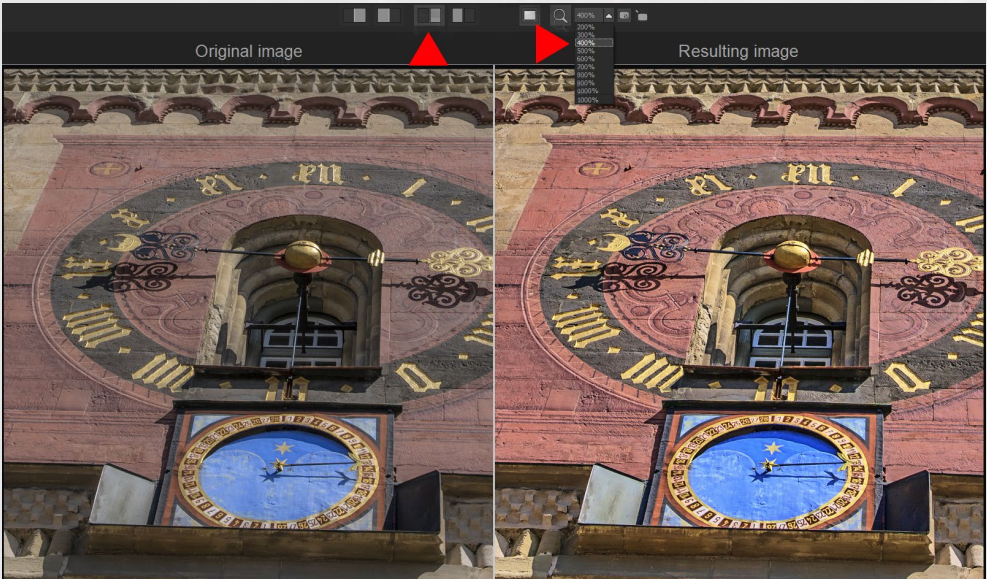


... opens the window with the large comparison view and various view options in the top toolbar:

1. **Small image overview** at the bottom left and **entire image area** in the center.
2. Display (standard) **Original on the left, current processing status on the right.**
3. Display **original on the right, current processing status on the left.**
4. Display **the same image section with the original on the left** (often recommended).
5. Display **same image section with original on the right.**
6. **Deactivates/activates** the **small image overview** at the bottom left.
7. **Activates/deactivates** the **zoom view** at the mouse pointer.
8. Sets the zoomed area to centered/non-centered mode.
9. Click on **Close** to close the window of the comparison view.

You decide which of the options offered is appropriate for assessing the before/after comparison. The following example shows one of the possible comparison options.

Move view: By holding down the mouse button, the desired image section can be moved in all directions as required.



Same image section, activate zoom: In the image example, the small image overview at the bottom left has been hidden, the **same image section** has been selected and the standard **zoom view of 400%** has been activated by clicking on the magnifying glass symbol. By clicking again on the small triangle, the zoom variations from 200 to 1000%, which corresponds to 100 times the area magnification, are offered for selection.



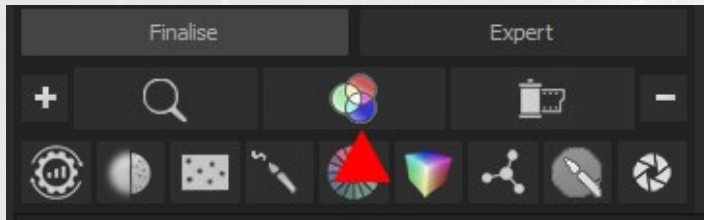
Zoom view same image section: In the image example, the standard zoom view has been selected by clicking on the magnifying glass symbol. If you move the mouse over a selected image area, it is displayed in the selected zoom view in a before/after comparison and allows a very good and quick assessment of all critical image areas.

Zoom view same image section: In the image example, the standard zoom view has been selected by clicking on the magnifying glass symbol. If you move the mouse over a selected image area, it is displayed in the selected zoom view in a before/after comparison and allows a very good and quick assessment of all critical image areas.

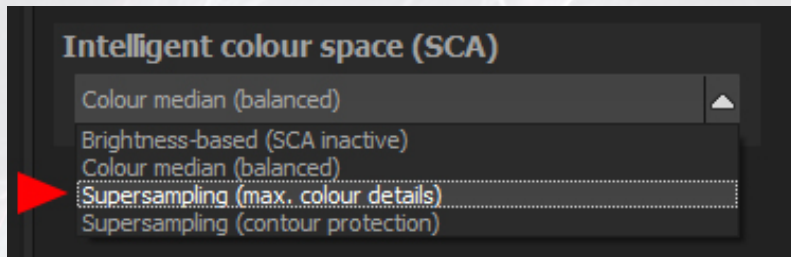
2. Intelligent colour space

In this module you can make fine distinctions for the optimal **color detail gradations** of your resulting image.

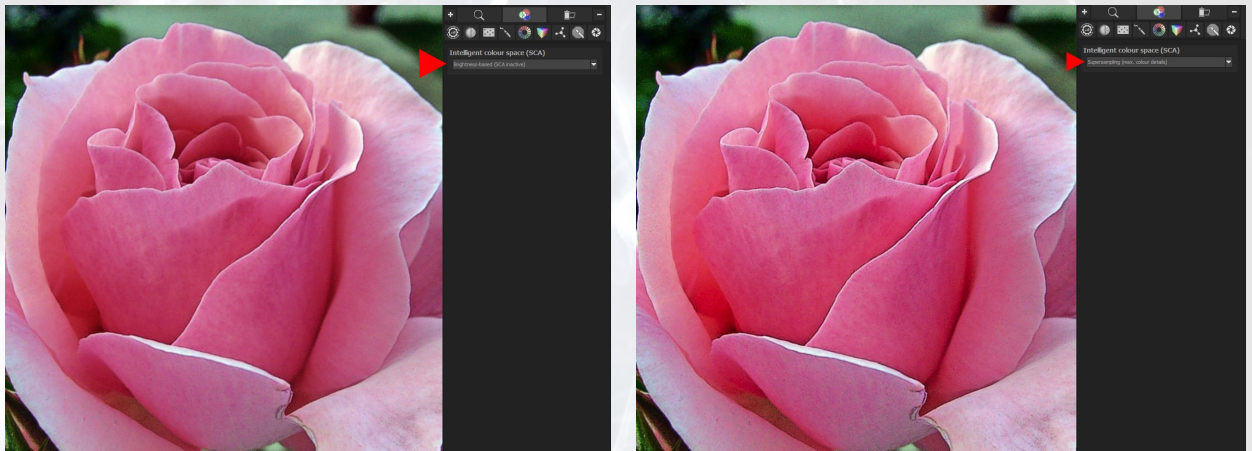
This module is integrated in HDR, FOCUS, NEAT and COLOR.



Click on the button with the 3 color circles...



... the **Intelligent colour space** with the SCA method is displayed. This **Smart Colorspace Adaption procedure** activates the intelligent color space in all calculations of the program and shows **differences in the details of saturated colors**.



The options offered differ in terms of the objective of creating better detail structures or switching off SCA when **brightness-based** (graphic on the left). The default setting is **Colour median** (balanced), the two **supersampling** methods focus either on **maximum colour details** (graphic on the right) or **contour protection**.

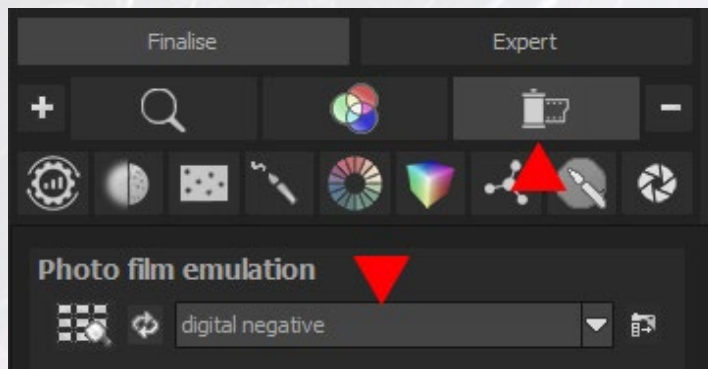
The slightly longer computing time for supersampling methods no longer plays a role for most computers today.

Note: In **supersampling mode** you get rich colors with unique color details and stronger color differences at the contrast edges.

3. Photo film emulation area

Photo filters, photo film emulations or imitations of an analog film are quasi replicas of analog photo films from various manufacturers such as Agfa, Fuji, Kodak, Rollei and others, which come very close to the respective film characteristics.

This module is integrated in COLOR, ANALOG and BLACK & WHITE.



Click on the button with the film reel symbol to display the module.



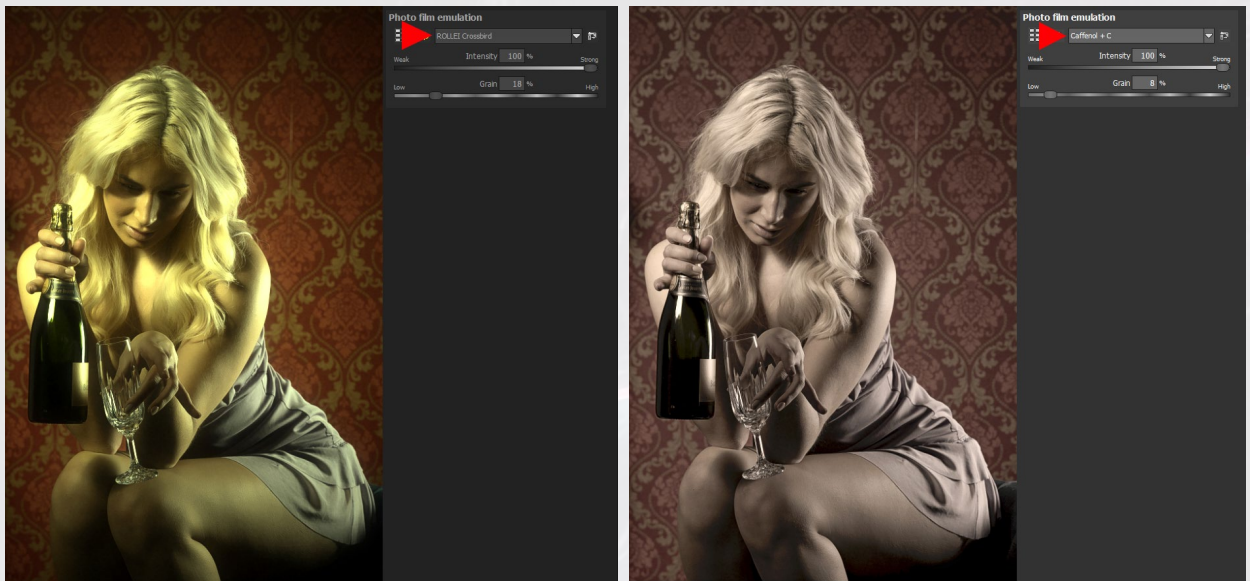
Click on **digital negative** or the small arrow to the right to open the selection list of all available emulations.

This selection is different in Accelerated Vision's programs because they are tailored to their specializations.

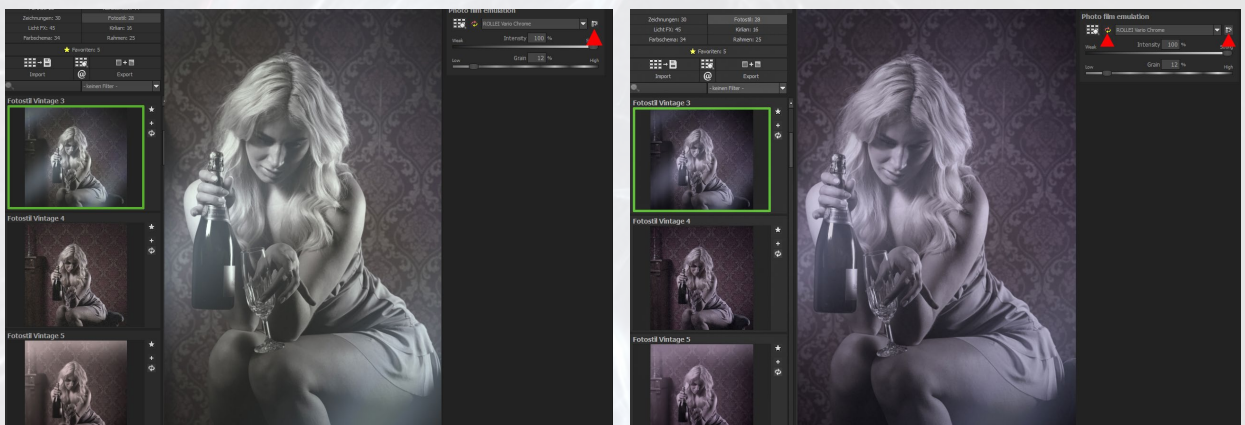
The default setting is **digital negative**, i.e. **no influence** on the currently selected preset, in the example **Portrait Soft skin**.

The choice of any emulation always affects the selected preset, which makes the application possibilities even more varied and exciting.

The selected emulation is applied with a simple mouse click. If you want to try out the effect of different emulations, activate an emulation and scroll up or down using the up or down buttons.



The selected analogue films, such as **ROLLEI Crossbird** in the graphic on the left or **Caffenol + C (ANALOG)** program) in the graphic on the right, simulate an image look as if you had photographed the image with this film.



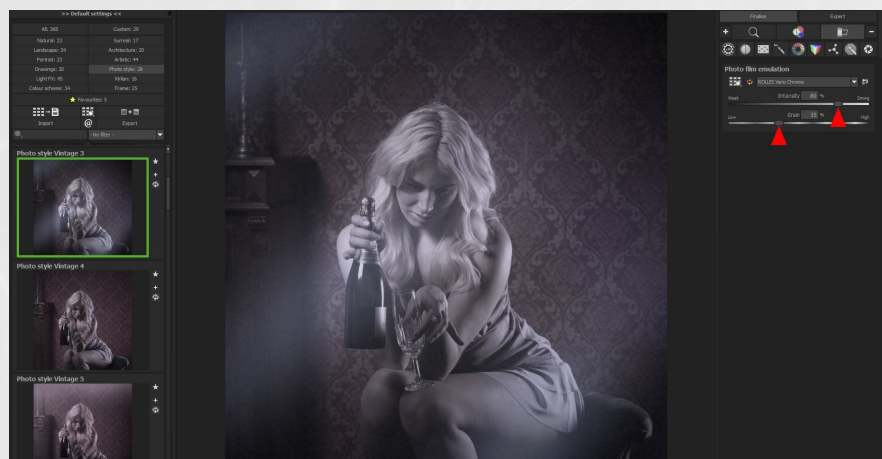
Emulation downstream/upstream: Click on the button to the right of the small arrow to switch the order of the calculations.

Sequence preset/emulation: By default, the selected photo emulation is placed **after the current preset** (in the example **photo style Vintage 3**), which means that the image look of the preset, in the example **ROLLEI Vario Chrome**, has "priority" over the image look of the photo film emulation (graphic on the left).

Emulation/preset sequence: Click on the button to reverse the sequence of calculations, the button is highlighted in **gray**: The photo film emulation is now calculated on the original image **first**, followed by the currently selected preset (graphic on the right).

Reset to default values: Click on the coloured arrows to reset all selected settings to the default values.

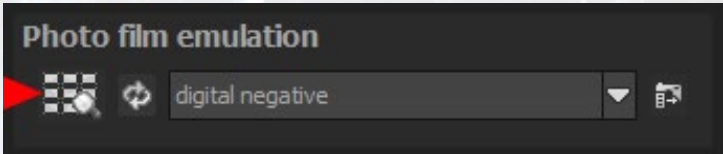
Parameters: You can use the **Intensity** and Grain sliders to decisively influence the image look of a selected photo film emulation in a desired direction.



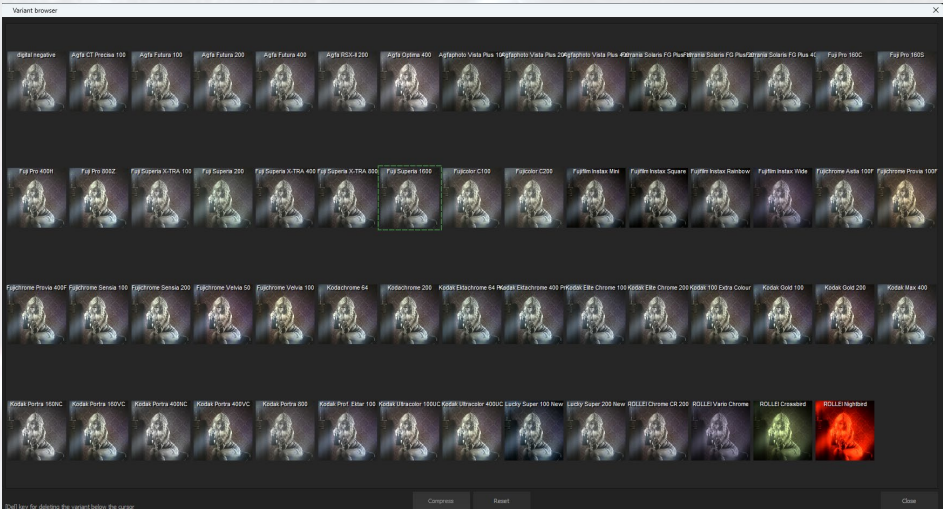
Intensity: At 100%, the effect of the film is fully calculated, at 0% you only see the image look of the preset. In the image example, an intensity of 80% has been selected.

Grain: With selected image motifs as in the example, activated presets that strongly desaturate the colors and photo film emulations that emphasize the character of the image, a grain enhances the desired effect. In the image example, the standard preset has been increased from 12% to 35% and underlines the analog image mood.

Note: When changing presets, the last parameter settings are retained. If this is not desired, they should be deleted beforehand.



Variant browser: By clicking on the button...



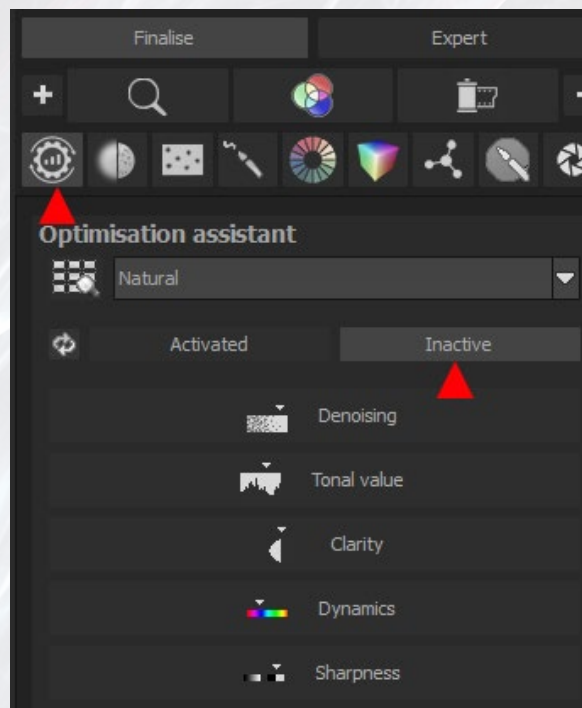
... all available photo film emulations are displayed in the variant browser in a matter of seconds and allow a quick overview. Use the mouse wheel up or down to enlarge or reduce the thumbnails, double-click on a thumbnail to load it immediately.

4. Optimisation assistant

The optimization assistant is switched off by default, i.e. inactive. If you activate it, you can put the finishing touches to your images with the “intelligent” optimization assistant and track all corrections live.

“Thinking along” means that this personalized assistant virtually slips into your role, looks at the invited image motif with the selected preset and analyses it for you. Is there perhaps too much noise? How much brightness needs to be adjusted? How much detail and clarity should be added to or removed from the image? The image is then optimized as it should be in his opinion.

This module is integrated in COLOR, BLACK & WHITE, HDR, FOCUS, NEAT, ANALOG and EMOTION.



Overview and options: Click on the button to display the module with the corresponding parameters:

- **Denoising:** The further the slider is moved to the right, the stronger the effect of the automatic denoising optimizer. It has no effect at all on the left.
- **Tone value:** The further the slider is moved from the center to the right, the more the image is brightened with the help of the automatic tone value optimizer and the more it is darkened to the left.
- **Clarity:** The further the slider is moved from the center to the right, the more details and structures are emphasized by the automatic clarity optimizer; further to the left, everything appears “softer” and smoother.
- **Dynamics:** The further the slider is moved from the middle to the right, the more color-intensive the image becomes, whereby the already saturated colors are taken into account less. Towards the left, the colors become more desaturated.
- **Sharpness:** The automatic image sharpness optimizer adjusts the strength of the desired image sharpness the further the slider is moved to the right.



Activate the assistant: By clicking on **Active**, the parameters “come to life” and can be influenced as desired. This also applies to the other options:

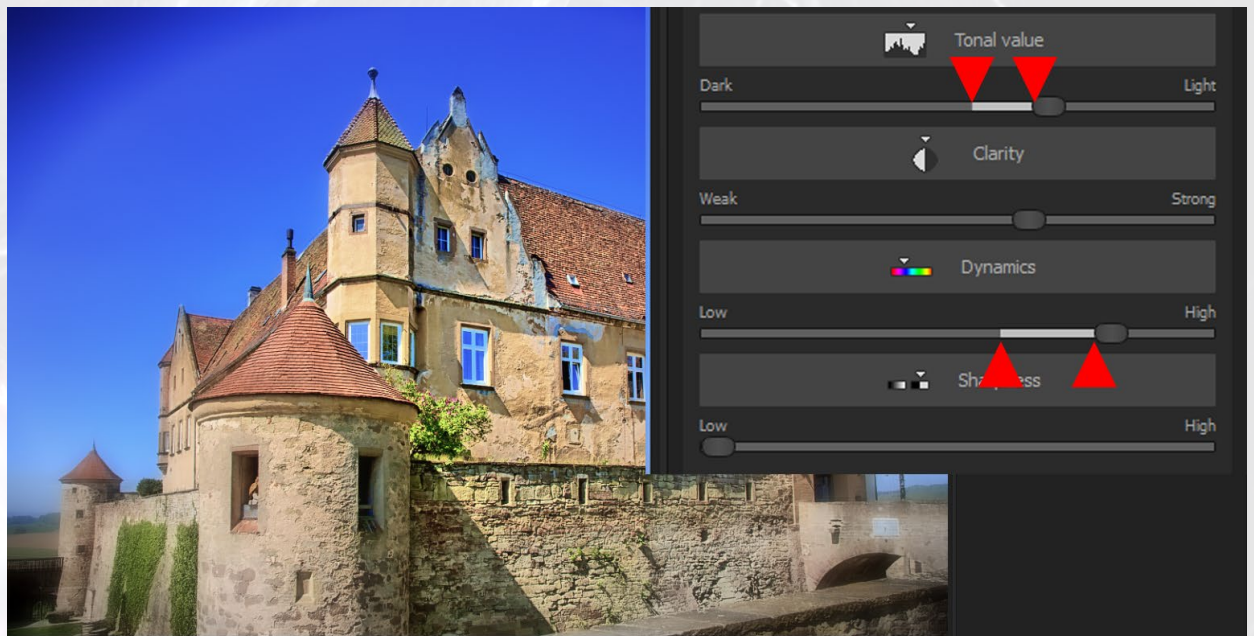
1. **Regulate opacity:** The overall effect can be continuously reduced using the **opacity regulator**, which is set to 100% by default
2. **Selection of a suitable optimization preset** with selection of different image moods.
3. **Optimization wizard browser**, which displays the selection of image moods as an overview in the variant browser.
4. **Mask image areas** to protect selected colors or image areas from the selected settings or only apply them to them.



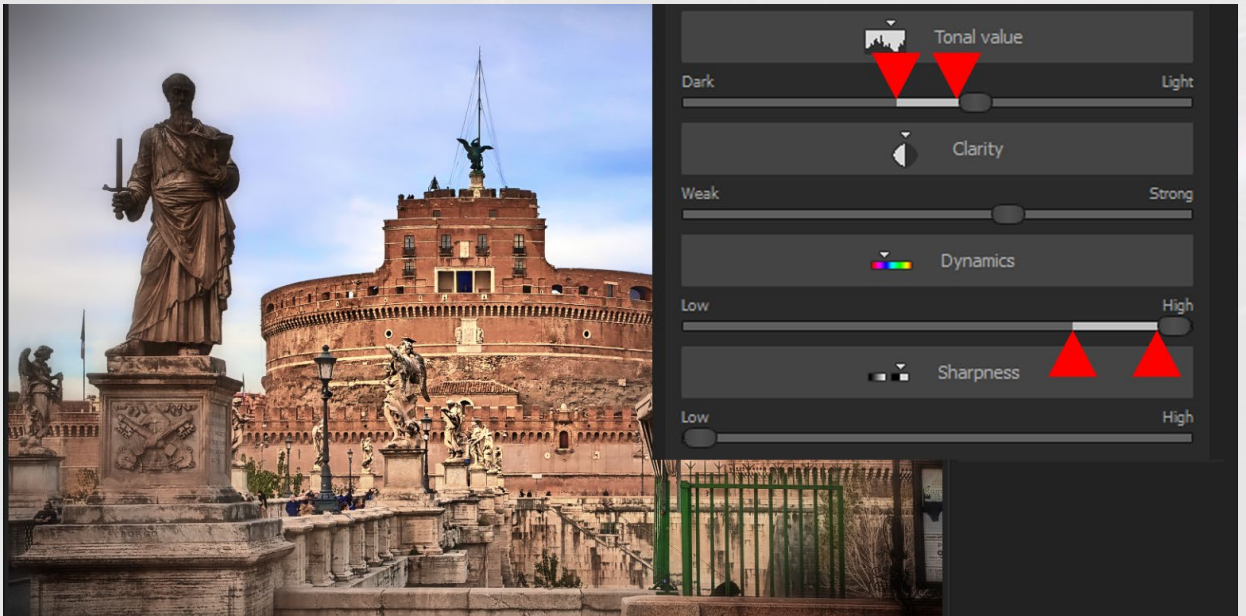
Image example: The **Architecture Central point** preset has been selected for the loaded image motif. The optimization wizard is **inactive** by default.



If the optimization assistant is **activated**, the change is particularly noticeable in the clearer and more detailed structures of the castle. The main reason for this is the **clarity parameter**, which was automatically positioned away from the middle to the right by the program.



Change parameters: For example, if you now drag the **tonal value slider** to the right to brighten the image a little more and the **dynamic slider** to the right to get even more saturated colors, this can be recognized by the **greyed-in distance between the initial position and the new target point of the slider**.



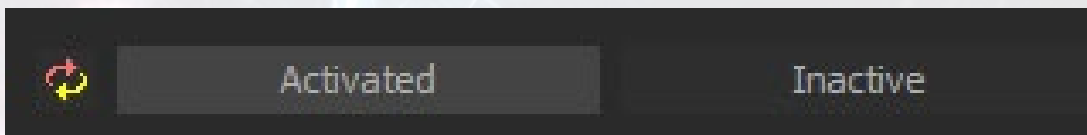
The “thinking” assistant: If you now load in a new image file, ideally an image motif from a comparable category, the optimization assistant will remember your previous settings and transfer this changed image flavour to the new image motif. This is easily recognizable by the two greyed-in lines: Tone value: With tone value, the line length, i.e. the difference between the original brightness and the changed brightness, has remained the same.

The position of the slider with the changed target brightness has been automatically moved to the left by the program and thus adapted to the different brightness values of the new subject.

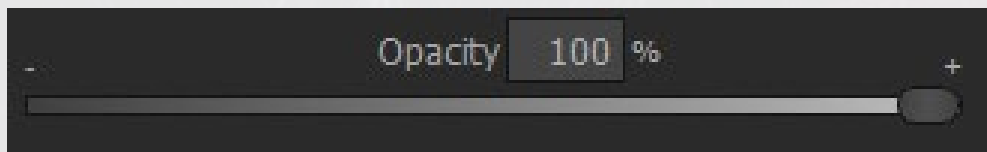
Dynamics: The target point of the Dynamics slider has automatically been moved to the far right compared to the first image. The distance of the dynamic change has also shifted accordingly.

The assistant remembers the average of your settings from the last few pictures and updates them - this personalized assistant learns and gradually adapts the settings to your taste in pictures.

You can use the “intelligent” optimization assistant very well or try it out, for example, to assess the difference to a selected preset and then decide whether this automatic correction is more to your liking, whether you still want to intervene manually or whether the preset without automatic optimization is more in line with your personal preferences. In the latter case, deactivate the assistant again.



Deleting optimization trends: The optimization wizard “keeps” your changed settings until you click on the button with the coloured arrows and decide that all optimization trends you have learned in the past should be deleted.



Change opacity: If you feel that the effect on the image is too strong after activating the optimization wizard, reduce the opacity until the image look meets your expectations.

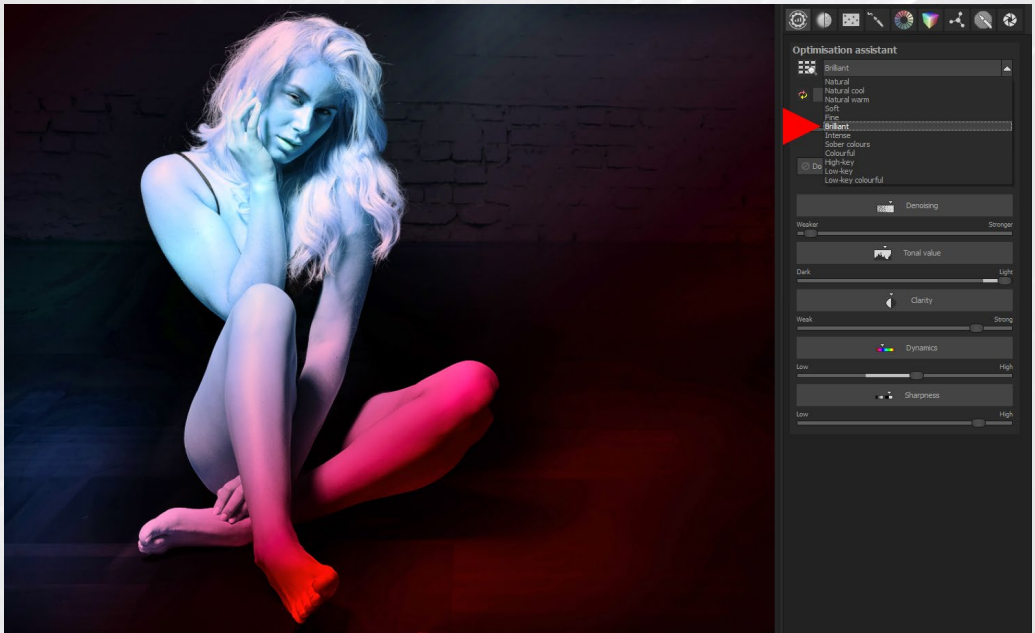
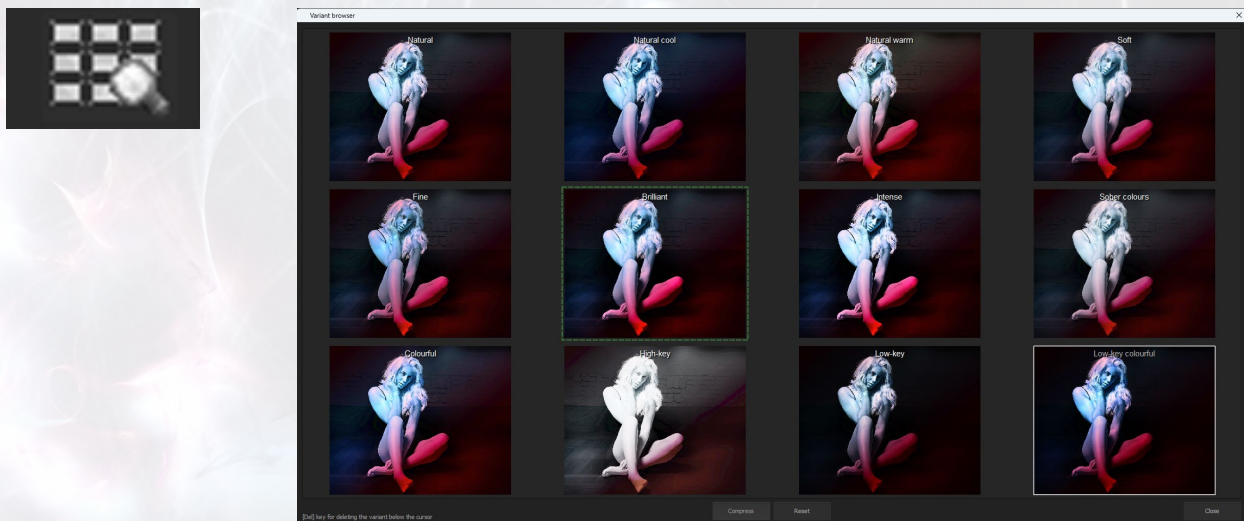
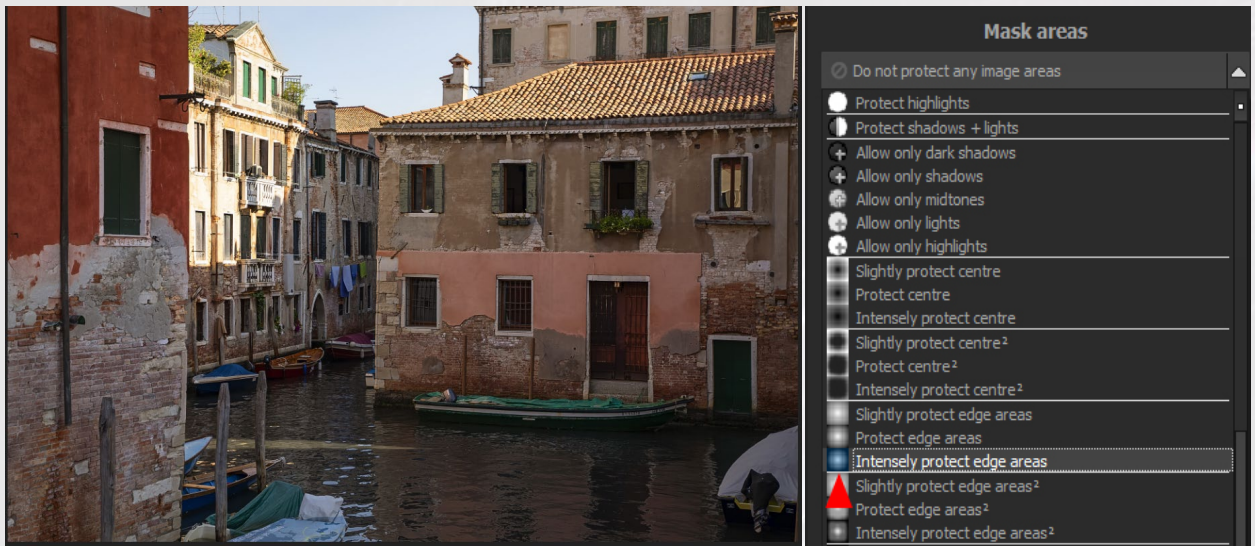


Image look variations: Click on the Natural button (set by default) or the small arrow next to it to select interesting image look variations (**Brilliant** in the example). This allows you to switch back and forth between many creative suggestions in a flash.



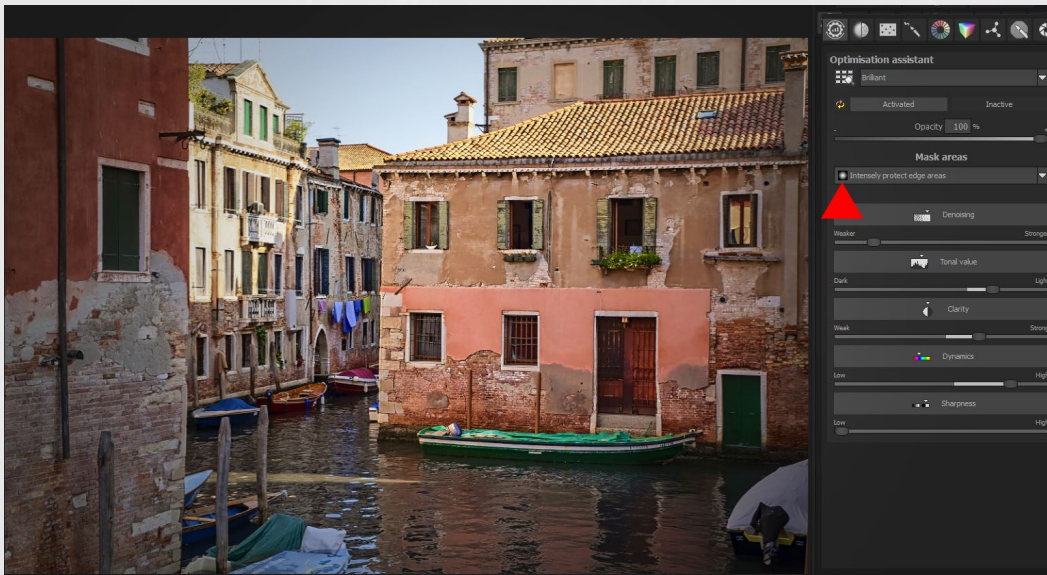
Variant browser: Click on the button with the browser symbol to display an overview of all available image look variations for quick orientation. Use the mouse wheel up/down to enlarge/reduce the thumbnails and double-click to load them immediately.



Mask areas/protect image areas: If you want to exclude selected colors or image areas such as the sky, the skin, the image center or border areas from the effect of the optimization assistant to a greater or lesser extent or only take these into account, click on the **Do not protect image areas** button below **Mask areas** and select the default setting from the very extensive list that best meets your requirements, in the example **Intensively protect edge areas**.



After activating the optimization assistant, the image expression has been influenced via the parameters **tonal value**, **clarity** and **dynamics** in such a way that everything appears brighter, more detailed and more dynamic in colour. Of course, this result could be saved. However, if you would like to focus the changes on the center of the image, for example, and bring the edge areas closer to the image look of the original or selected preset, select a variant of **Protect edge areas** from the list, for example, **Intensively protect edge areas** in the example.



The focus of the changes is now more concentrated on the center of the image, making the resulting image more interesting and exciting.

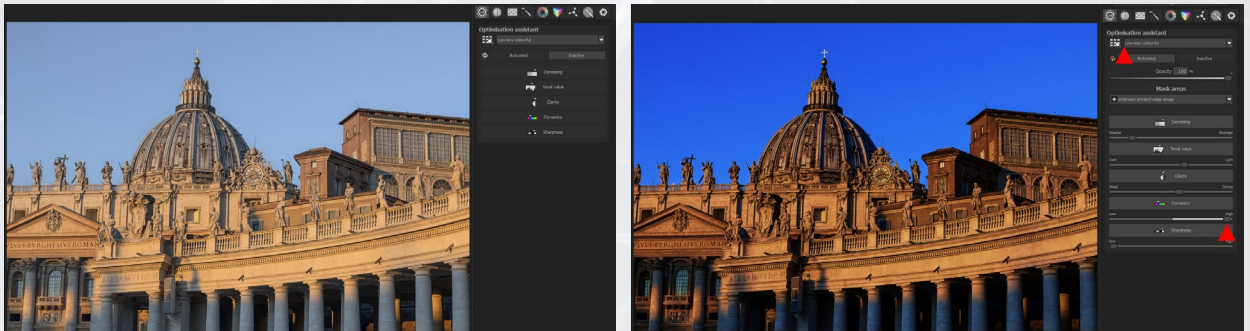


Image example 2: Here, the somewhat pale sky of the original is to be made more intense and darker in order to create a stronger contrast to St. Peter's Basilica.

In the first step, **Low Key colourful** has been selected as the colourful image look and the colour **dynamics** slider has been moved to the right. The result is only convincing for the sky, St. Peter's Basilica has become far too dark.



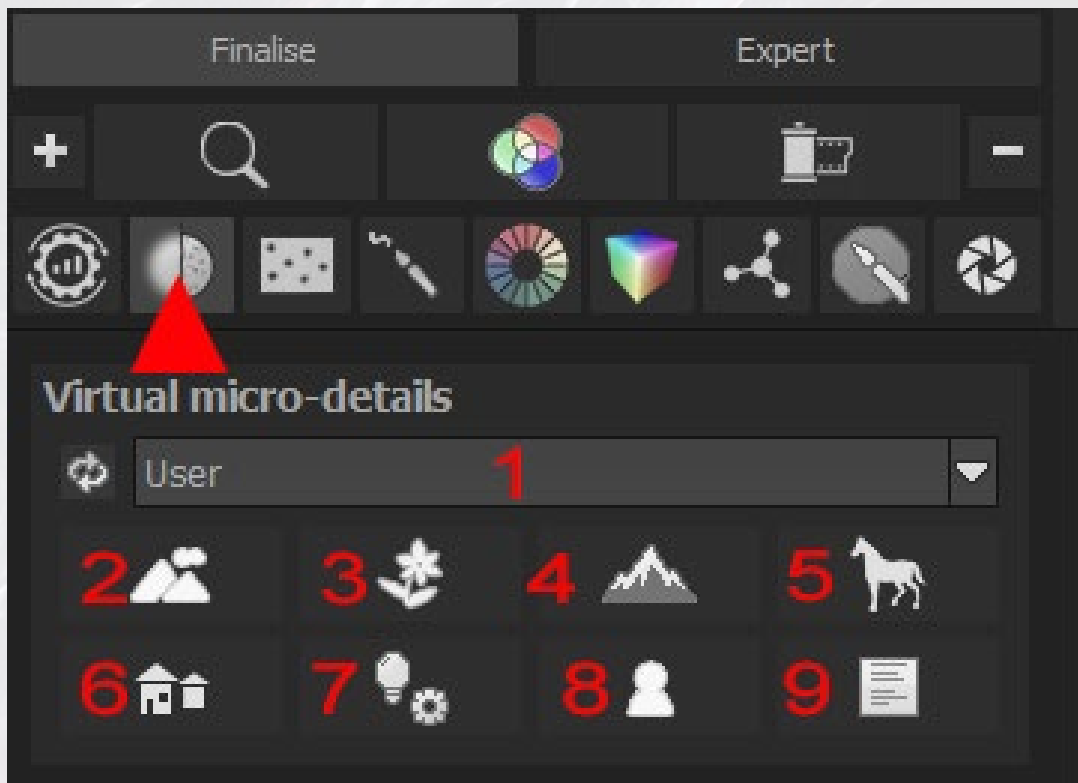
In the 2nd step, **Permit sky blue only** was activated in the selection list of the area masks with the very good result that the sky was changed as desired and St. Peter's Basilica retains its original color.

5. Virtual micro-details

With the **Virtual micro-details module**, it is possible to include additional, very fine details in the photo. **Virtual** means that, depending on the selected category, e.g. **architecture**, details that **could be** in the image, i.e. appear **plausible**, but are not actually present in the original, such as lawns, walls, stones, smooth skin or industrial plants, are included here.

This can also be useful if details and fine structures have been lost due to various processing stages, such as **denoising** night shots or portraits, and the simulation makes the overall image look more natural again.

This module is integrated in COLOR, BLACK & WHITE, HDR, FOCUS, NEAT, SHARPEN, DENOISE, ZOOM and ANALOG.



Click on the icon in the toolbar to show or hide the **Virtual micro-details module**. By clicking on one of the eight categories or using a preset from the selection list, details matching the photo are generated. You can also **combine categories** by clicking on several. Activated categories are displayed with a highlighted button.

1. **Templates** that can still be changed individually.
2. Micro-details for **landscapes**.
3. Micro-details for **flowers**.
4. Micro-details for **mountains**.
5. Micro-details for **animals**.
6. Micro-details for **architecture**.
7. Micro-details for **technology**.
8. Micro-details for **portraits**.
9. Micro-details for **documents**.

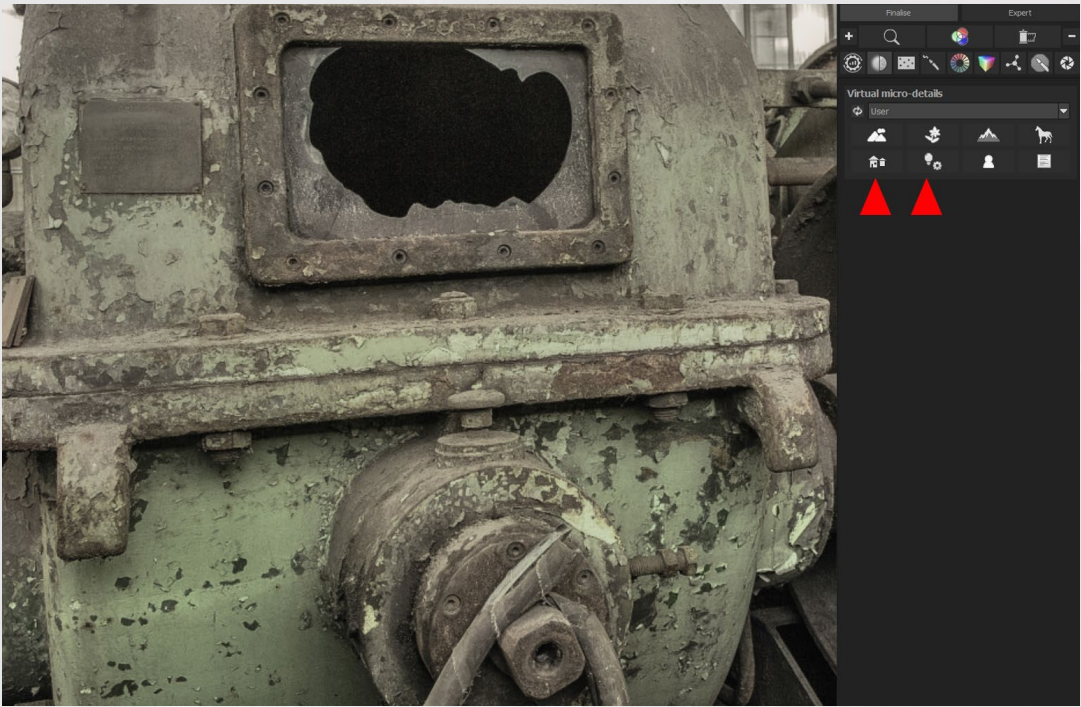
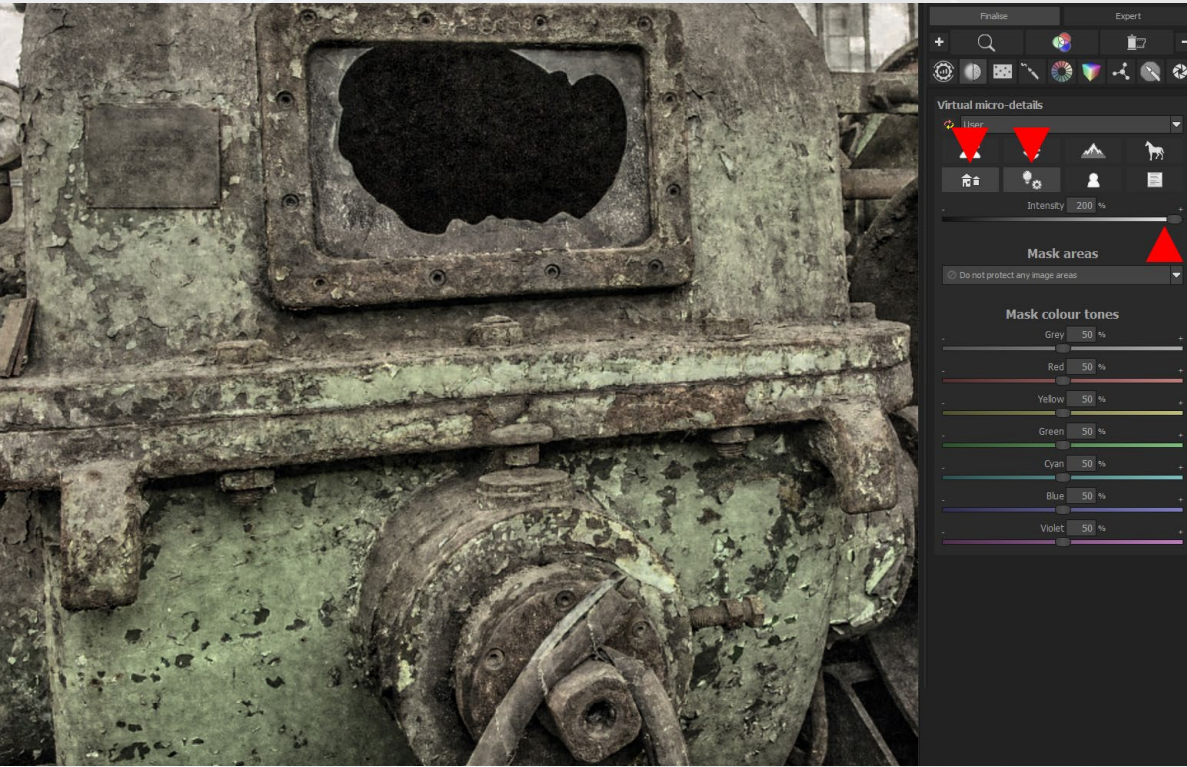


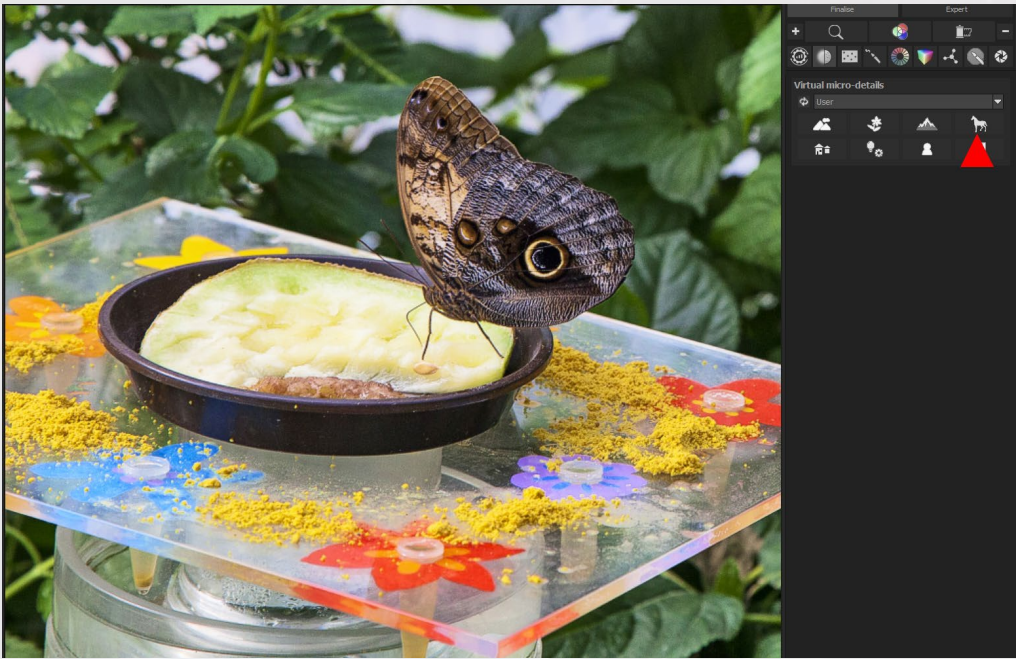
Image example 1: Click on the desired category or categories, in the example **architecture** and **technology** ...



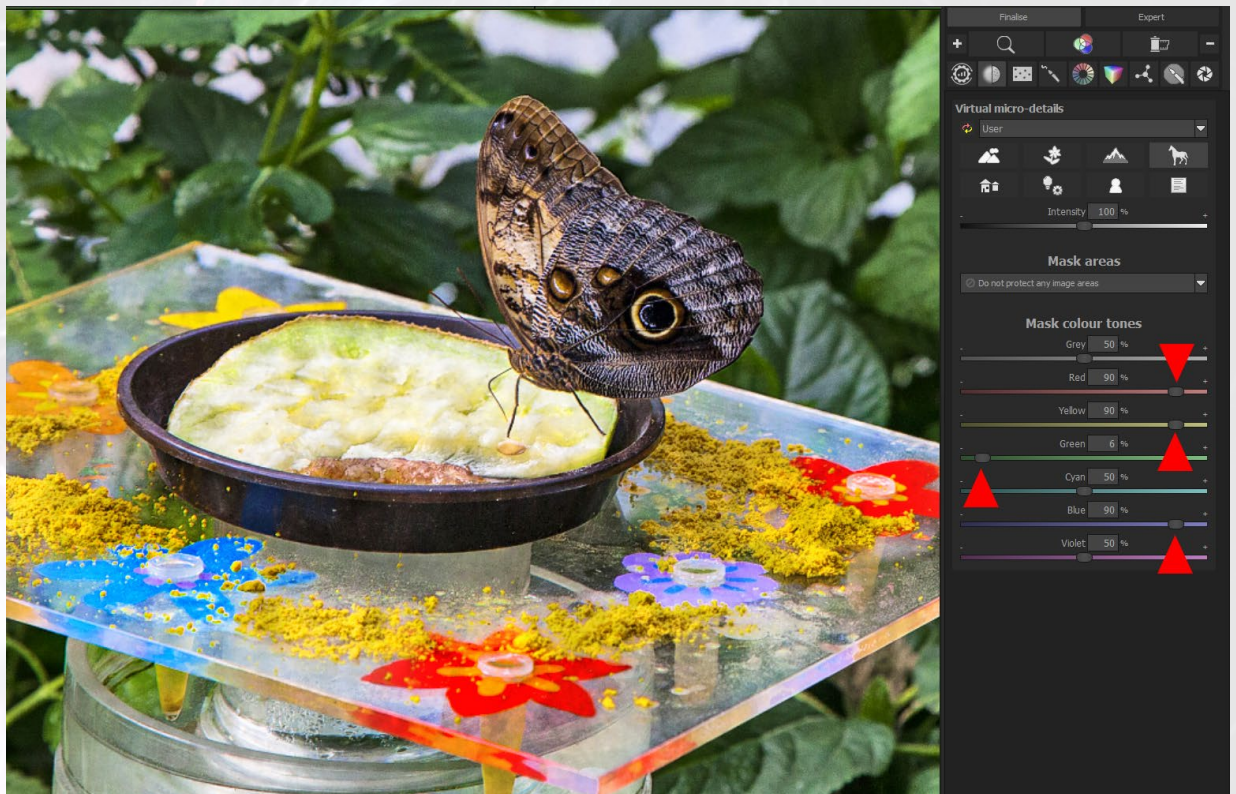
... all setting options **Intensity**, **Mask colour tones** and **Mask areas** are displayed.

Intensity: The **Intensity slider**, which is set to 100% by default, can be used to adjust the strength of the micro-details to be included so that they appear credible and plausible.

Mask colour tones:



Click on the category **Animals** selected in the 2nd picture example ...



... you can control the addition of the micro details in addition to the intensity via **Mask colour tones** and determine in the selected category in which **colour tone ranges** the virtual micro details should be further enhanced (slider to the right) or attenuated (slider to the left).

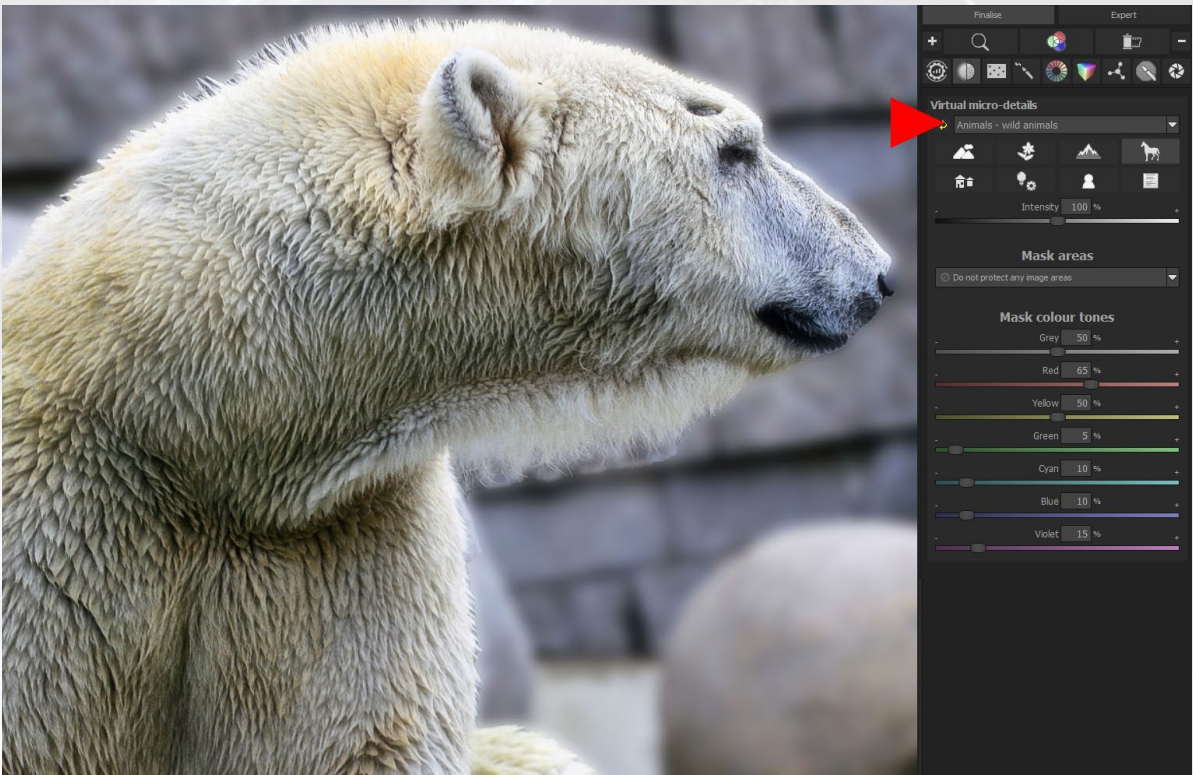
In the example, the **red**, **yellow** and **blue** hues have been amplified and the background **green** attenuated.

Select template: You can also select an option from the range of **templates** that meets or comes close to your requirements and change it individually if necessary.



By clicking on **User** or the small arrow next to it, all selection options are displayed and by clicking again on an option, in the example **Animals - Pets**, they are immediately implemented with the correspondingly adjusted parameters and slider settings.

As in the previous example, you can still change all parameters individually. The selected template name then becomes **User** again.



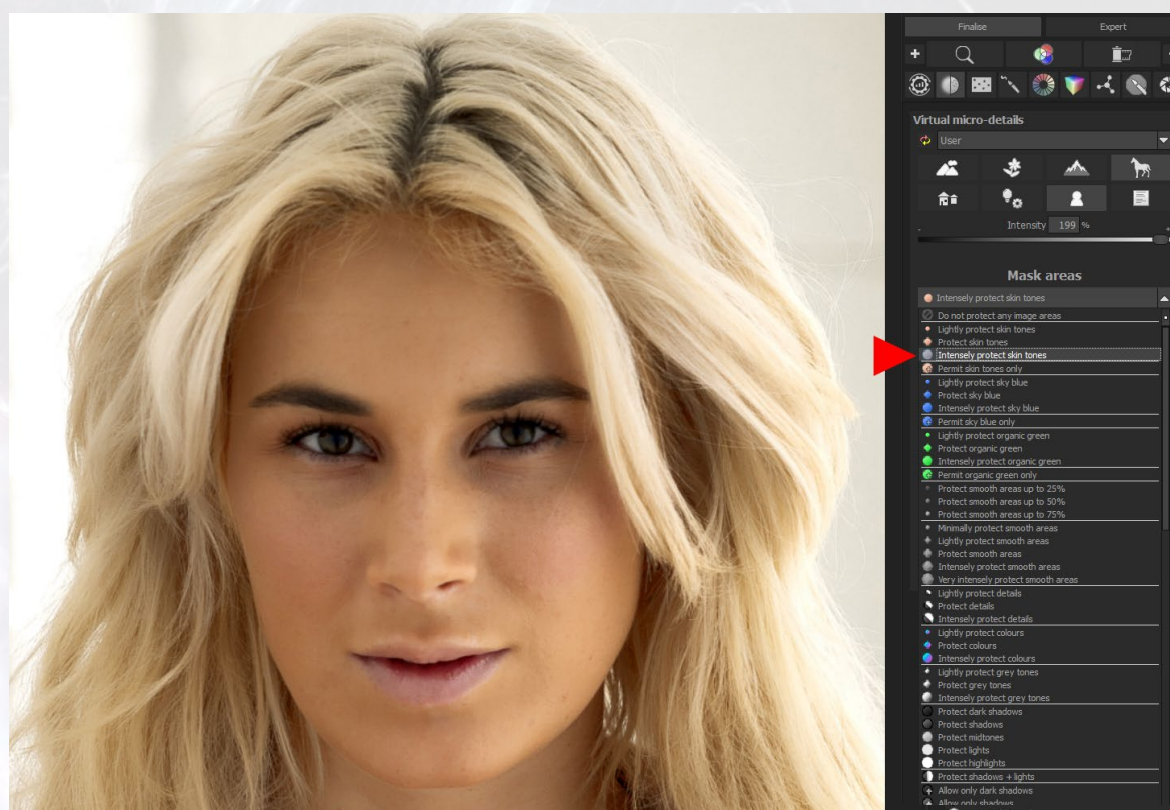
These templates have the advantage that the slider settings of the parameters are immediately adjusted to the selected motifs, such as here **Animals - Wildlife** compared to **Animals - Pets in the example above**, and in many cases deliver very good results without individual intervention.

Reset: Click on the coloured arrows to reset the module to the default values.

Mask areas



In the image example, all parts of the image with structures and details such as hair, eyes and lips should be further emphasized by adding micro details, which is effectively achieved after selecting the **Portrait** category, raising the **intensity** slider and emphasizing the **red** and **yellow** tones. Disadvantage: The skin tones appear blotchy and their naturalness has been lost.

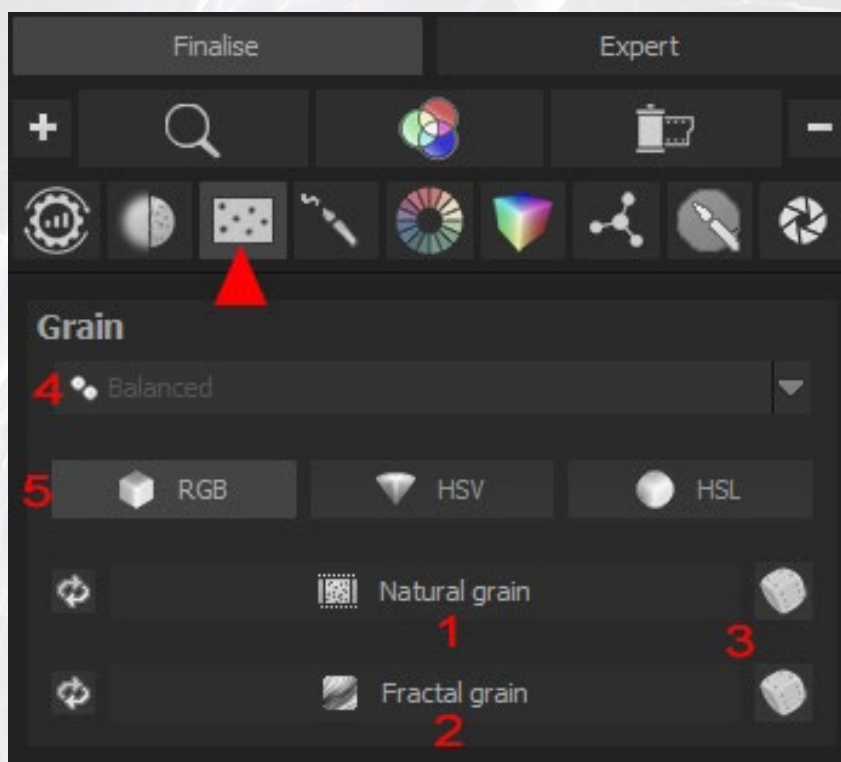


Solution offers **mask areas**, which is identical to all modules in which this effective area is offered. By clicking on **Do not protect any image areas** or the small arrow next to it, you can select from the extensive selection list of skin tones, e.g. **Protect intensely skin tones**, and immediately obtain a very convincing overall image.

6. Grain module

At the time of analog photography with film and photographic paper, images were considered “noble” or of high quality if they had good quality grain to match the photographed subject. Grain was particularly popular in portrait photography. Today, digital images often look too smooth, but this is not always desirable. The grain module with **Natural Grain** and **Fractal Grain** uses a unique technology to transform an image that looks too smooth into a more natural image look. The program simulates several layers of photo paper that are uneven and not absolutely smooth. To do this, the image is greatly enlarged, various grain sizes are added and the image is then scaled down again. This complex process of photo paper simulation results in a natural, realistic image look.

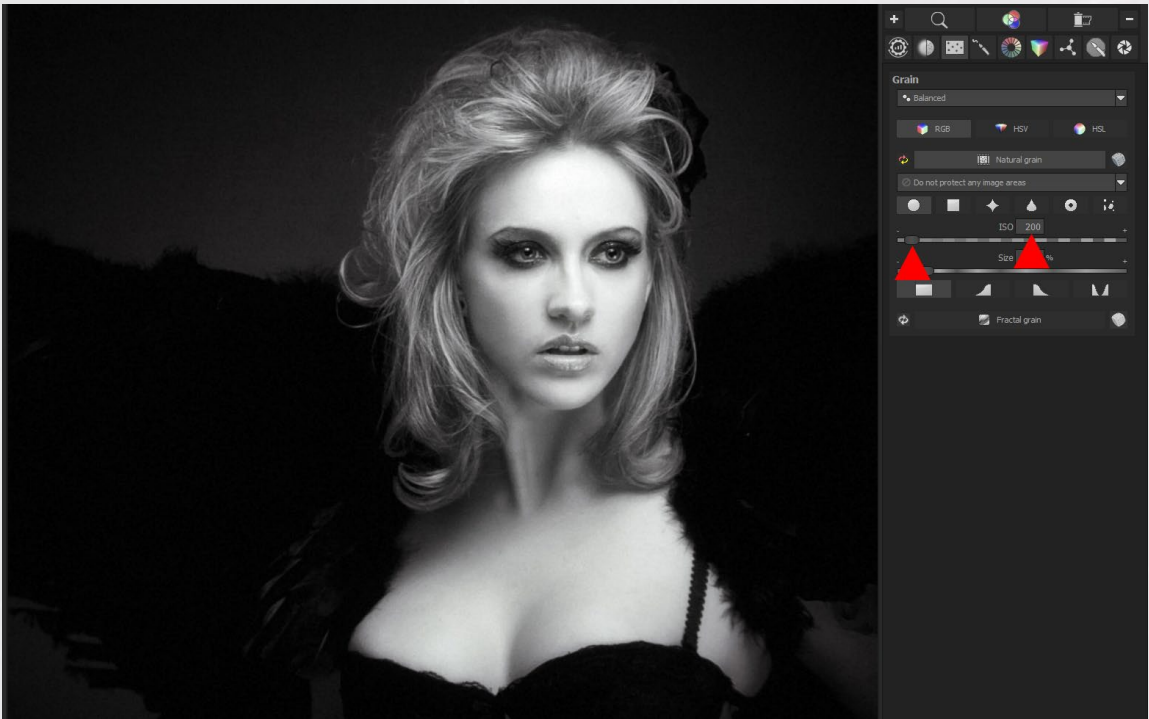
This module is integrated in COLOR, BLACK & WHITE, HDR, FOCUS, NEAT, SHARPEN, DENOISE, EMOTION, ANALOG and FOTO 3D.



Click on the icon in the toolbar to show or hide the Graining module and display the various options:

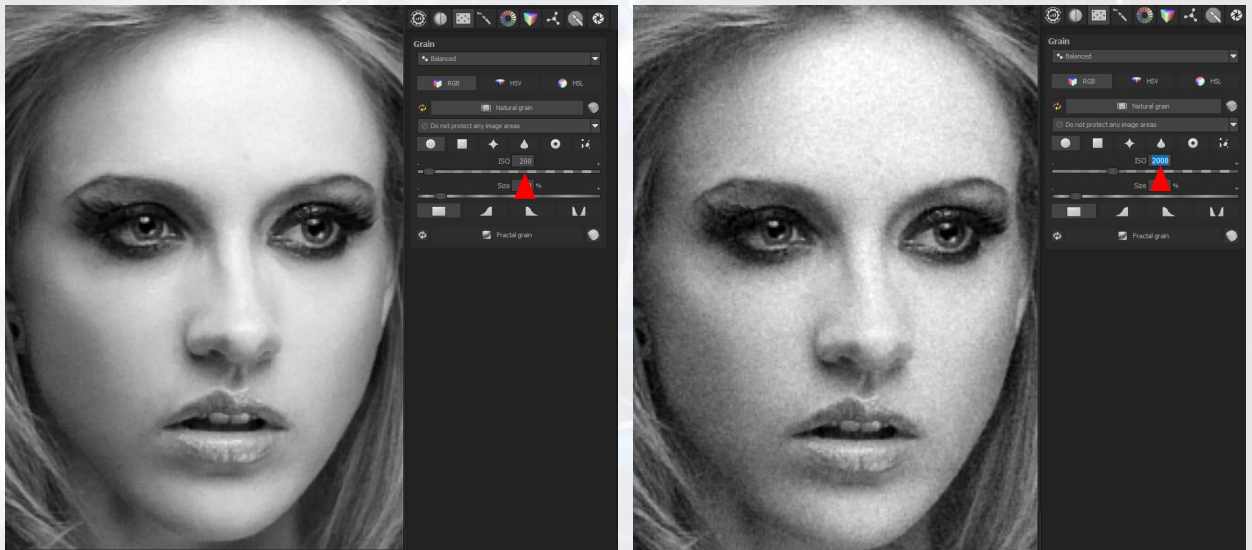
1. Activates the generation of **Natural grain**.
2. Activates the generation of Fractal grain.
3. Creates a new **random distribution of the natural/fractal grain**.
5. Calculates the grain optionally in the Colour spaces **RGB** (standard), **HSV**, **HSL**.

Natural grain:



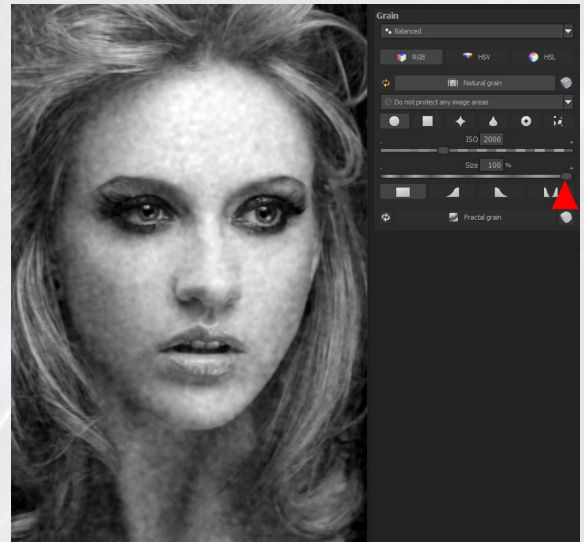
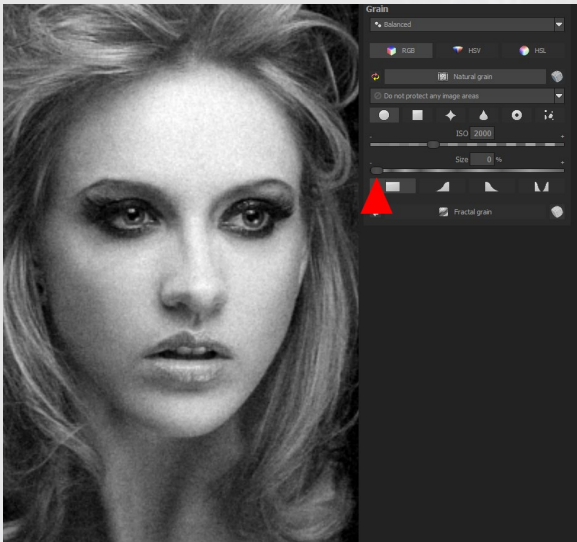
Activate Natural grain: Click on the **Natural grain** button to activate the calculation. Particularly with female portraits, the natural grain 'refines' the resulting image at low ISO values, which also enhances the prints.

Select ISO strength: This value, which indicates the light sensitivity of the camera sensor and leads to grainy images at high values, is set to 100 by default. This is sufficient for a more natural image look with some subjects. In the example, the **ISO value 200** has been selected.

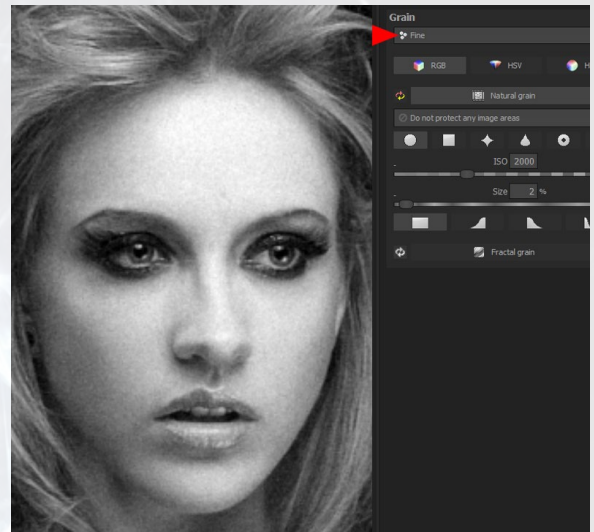
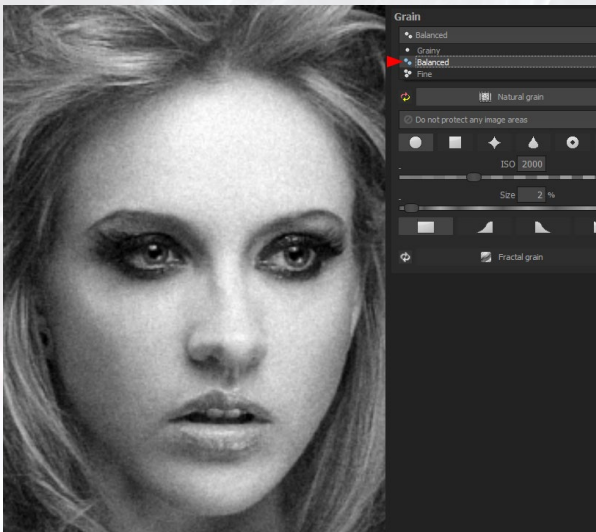


Comparison of **ISO 200** (left) to **ISO 2000** (right): If you pull the ISO slider too far to the right, as in the exaggerated example, the skin becomes far too grainy. It therefore makes sense to slowly raise the slider at a high zoom level and follow the result live until the 'correct' ISO value is reached.

Other parameters and possible influences



Size: Use the **Size slider** to set the area size of the grain, i.e. how large the grain should appear or look. In the image on the left, the **ISO value 2000** has been retained for better demonstration, the size slider is set to **0%** on the far left, the grain is practically unrecognisable. Despite the excessively high ISO value, the result is still acceptable. In the image on the right, the size slider is set to **100%** on the far right at the same ISO value. The result is a very coarse-grained, unattractive image, which is not intentional.

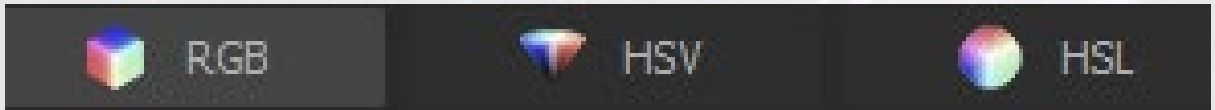


Selecting and differentiating the grain size: By clicking on the default grain size **Balanced** (graphic on the left), you can select further differentiations if required: **Grain** and **Fine**. For better visualisation, the **ISO value 2000** is again set at a size of **2%**. If you select **Grain**, an even coarser grain is applied to the image than with **Balanced**.

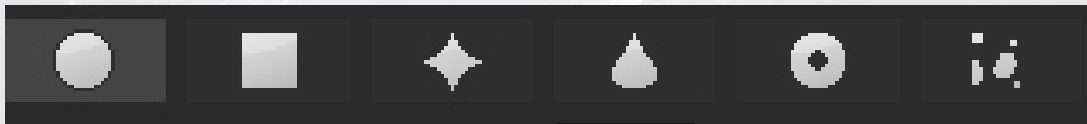
Fine grain is interesting and recommended for female portraits in particular: this very complex process, in which grains are applied to the image three times in succession, produces a very high quality image, even for prints. The graphic on the right confirms this with a homogeneous and very even grain distribution, even at high ISO numbers.

Other parameters and possible influences

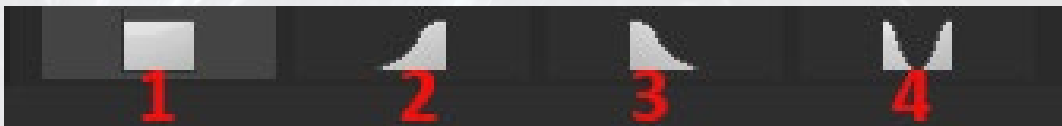
The parameters presented on the previous pages have a major influence on the desired image effect, as the examples have shown. The following possible influences and options invite you to experiment and try things out in order to assess and, if necessary, select fine distinctions. As a rule, you can retain the standard settings here.



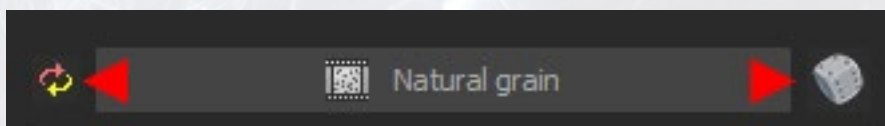
Selecting the colour space: By selecting the colour space, you define the distribution of the grain. The **RGB colour space** set by default has a more even distribution, in the **HSV colour space** the distribution in colourless areas is stronger (**H** = hue, **S** = saturation, **V** = value, brightness value) and in the **HSL colour space** there is more grain in colour-intensive areas (**L** = lightness, brightness).



Form: The **round form** (left) is set by default. As the forms have different effects on an image motif, it is worth trying them out on the currently loaded image.



Masking: With the masks, it is possible to distribute the calculation of the grain to certain exposures. **Uniform distribution** (1) is switched on by default. To give highlights a natural grain, activate the mask for **highlights** (2). The same is also possible for **shadows** (3). If the grain is to be included in **highlights and shadows**, activate this function (4).



Random distribution of the grain: Each time you click on the button with the cube symbol to the right of the **Natural grain** and **Fractal grain** buttons, a new random distribution of the grain is triggered, which may correspond even better to your ideas.

Delete the individual settings: Click on the coloured arrows to the left of the **Natural grain** and **Fractal grain** buttons to reset all individual settings made in these areas to the default values.

Fractal grain



The fractal grain simulates a **large-scale irregularity** and can also be used for dramatic alienation.



Click on the **Fractal grain** button to activate this simulation: If you move the ISO slider far to the right, in the example to **6000 ISO**, the image subject is covered with this coarse grain and leads to the desired dramatic effect. If the quality is set too low, such as 5% in the example, the result is not convincing. The preset value of 50% ...



... should always be set to **100%** at these high ISO values in order to achieve the best possible result.

Area protection: Area protection is just as comprehensive and effective as in all modules in which it is offered.



In the image example, the locomotive should be largely excluded from the coarse grain.

Click on **Protect no image areas** or the small arrow next to it to select an option in the selection list that protects dark areas, e.g. **Protect shadows**, and you will immediately see a convincing result image.



Use the grain module for compositings: If you have created compositings or collages from several different image elements, a final grain gives the image the final convincing finishing touch. The individual image elements have rarely been photographed under identical conditions, which gives the impression of many individual elements being put together, especially with different ISO values or previous smoothing. The grain module turns this into a credible 'total work of art' because the grain allows the individual elements to 'merge' better with each other.

If required, **natural grain** and **fractal grain** can also be selected and applied together, as in the image example.

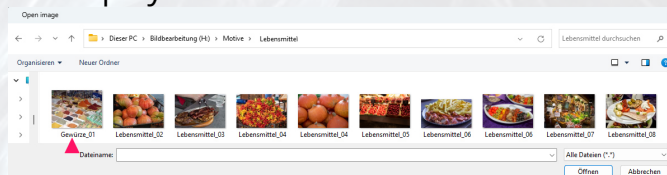
7. LUT-module

In the **LUT photo styles module**, you create completely new photo styles with the help of colour tables, **lookup tables** or **LUT** for short. These new image looks are created by **combining a loaded image with another photo from a selected image file**.

This module is integrated in COLOR, BLACK & WHITE, HDR, FOCUS, NEAT, SHARPEN, DENOISE, ZOOM, EMOTION, ANALOG, AI-Filter and FOTO 3D.



Click on the button to display the module.

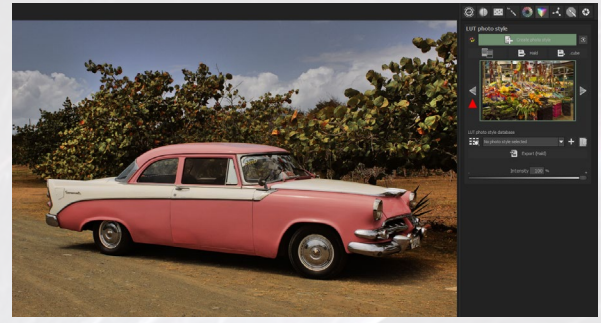


Another click on the **Create photo style button** opens the file dialogue of a selected folder, from which you select the image with which the photo style is to be created, in the example **spices**.



By double-clicking or clicking on **Open**, the file, the new LUT image, is displayed as a thumbnail on the right-hand side, automatically analysed and converted into the new image mood based on the **brightness, contrast and colour distribution** values with the original.

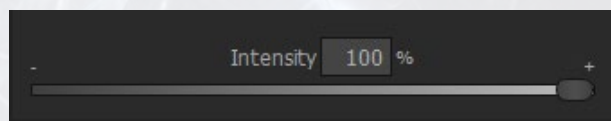
All this information is bundled in the LUT photo style and applied to the currently loaded photo. **The result is an image that resembles the style of the LUT image.**



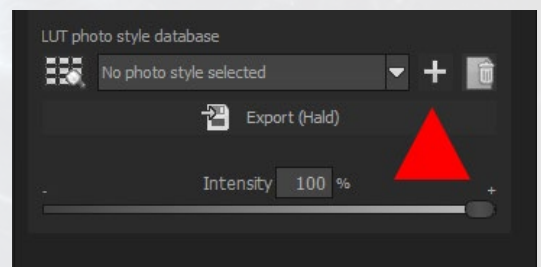
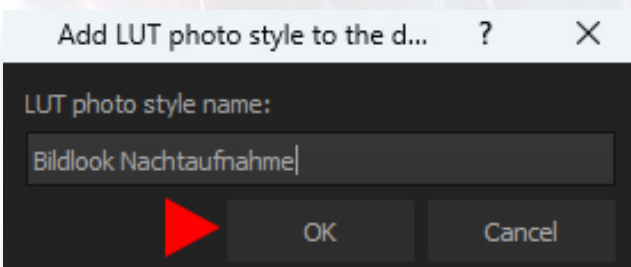
Try out different motifs from the folder: By clicking on the **arrow pointing to the right** (graphic on the left) or **to the left** (graphic on the right), you can call up the images in the selected folder and assess the effect on the loaded image motif. This option makes it easier to decide on a LUT style that you want to adopt and save if required.



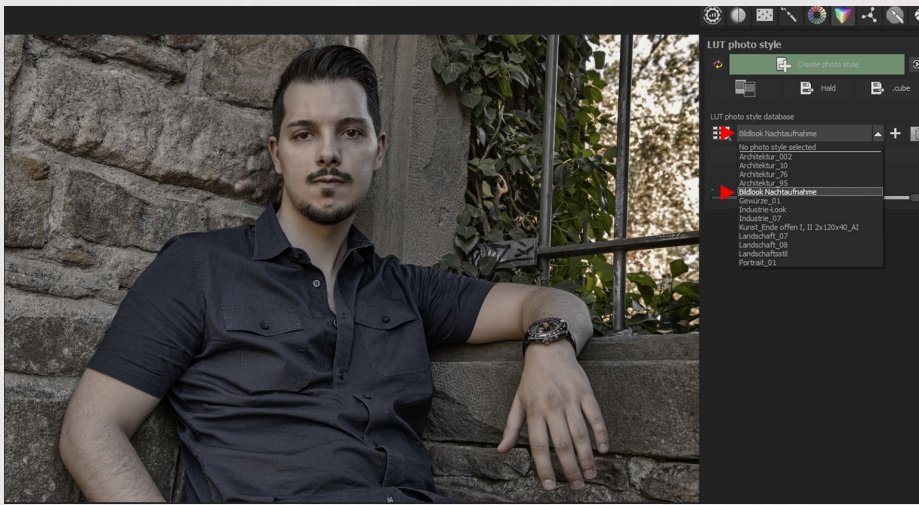
The new resulting image can be slightly altered, as in the example on the previous page, or stronger, as here with an invited night shot.



Intensity: If required, the effect of the new look can be varied as desired using the **intensity slider**, which is set to 100% by default.

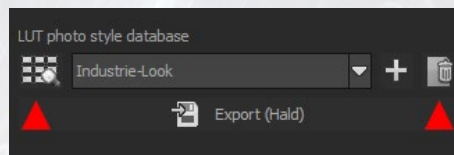


Add LUT style to the database: If you are happy with the new photo style, you can save the image as usual or **add the LUT style to the database** so that it is permanently available. Click on the **plus sign** to open the dialogue window in which you can accept the file name of the LUT image or assign your own and confirm everything with OK.

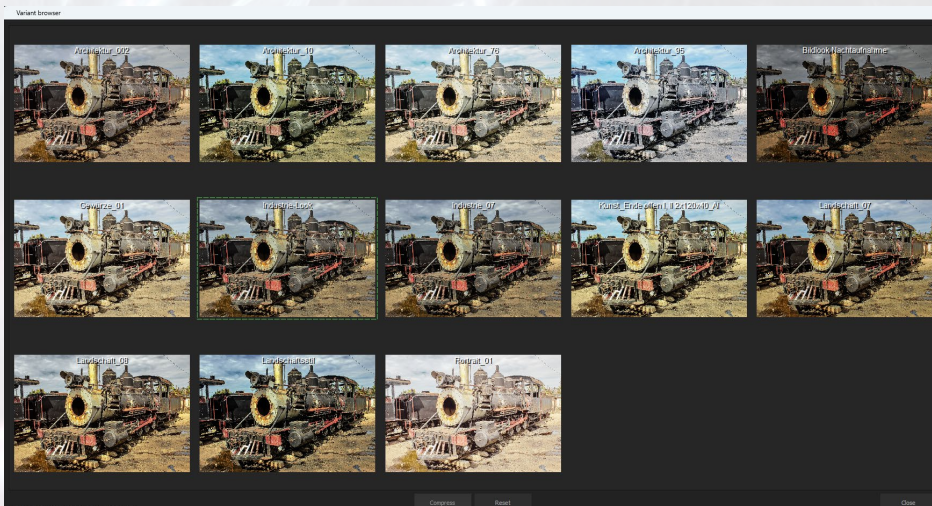


Apply saved LUT style: The LUT database is set to **No photo style selected** by default. By clicking in it, all database entries saved up to that point are listed and applied immediately to each newly loaded image by simply clicking in a desired style.

Note: The photo style database is comprehensive, which means that all photo styles that you save in one programme, for example **COLOR**, are also available and can be used in all other programmes.

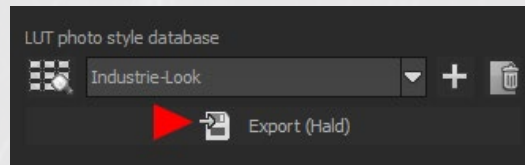


Delete LUT style: Click on the **recycle bin** icon to delete the currently selected LUT photo style, in the example **industrial look**.



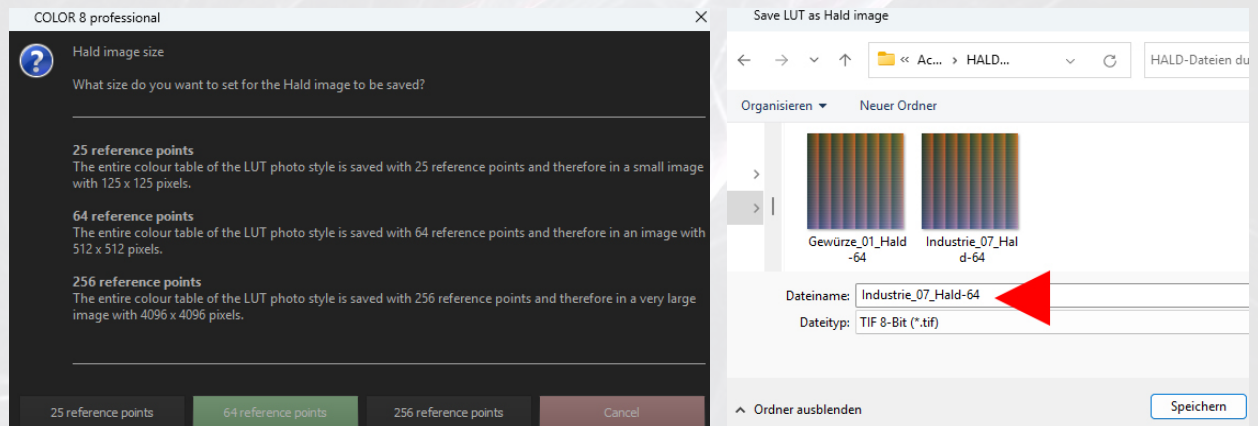
Variant browser: Click on the button with the browser symbol to display all saved LUT photo styles in the variant browser. The view can be enlarged or reduced with the mouse wheel up or down and moved as required by holding down the mouse button.

If you click on a thumbnail, it is shown with a green dashed border. Double-click on it to load it into the programme window.

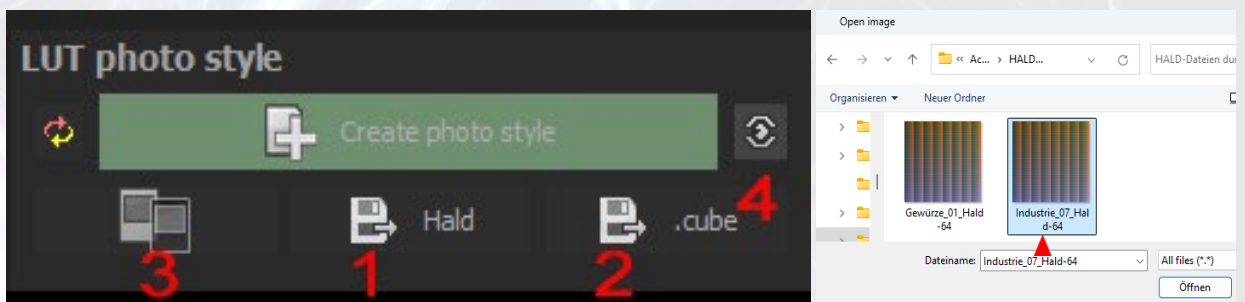


Export photo style: Each photo style can be exported with a **Hald file** and made available to other users if required, for example.

HALD and **Cube** are file formats that can save LUT styles. You can call up saved LUT styles in these file formats in all programmes that can handle these formats, e.g. Photoshop or the **Accelerated Vision video programmes**, which are **cube** files.



Click on **Export** (Hald) to open a selection window in which the size of the Hald image to be saved is determined. The accuracy is specified via so-called interpolation points. The higher the value, the more accurate. By default, the colour table is saved with 64 interpolation points. Clicking on the button opens the file dialogue in the desired folder, in which the file is saved as a TIF file with the name of the LUT style.



Import Hald file: Click on the **HALD button** (1) to select the desired file in the folder and import this image look by double-clicking on it.

Alternatives: Click on the **.cube button** (2) to import an image style from a cube file.

Click on the left-hand button (3) to create a LUT photo style from the difference between the resulting image and the original image.

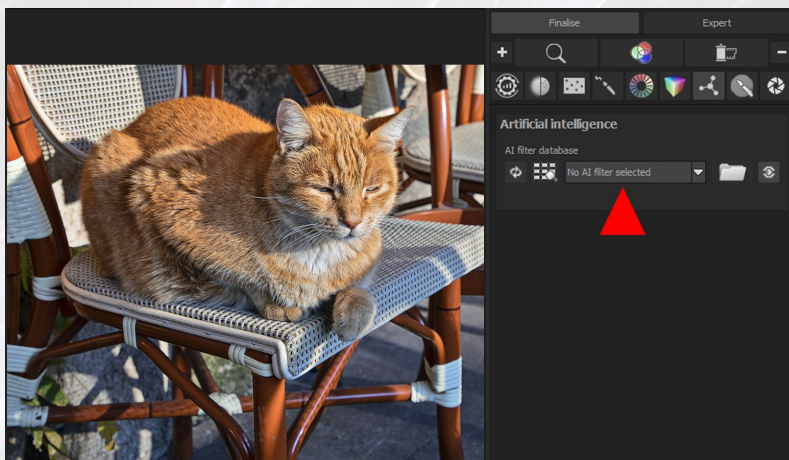
Switch calculation off/on: Click on the **eye symbol** (4) to switch off the currently calculated photo style and switch it back on again when you click again. This gives you a quick before/after comparison.

8. AI training area

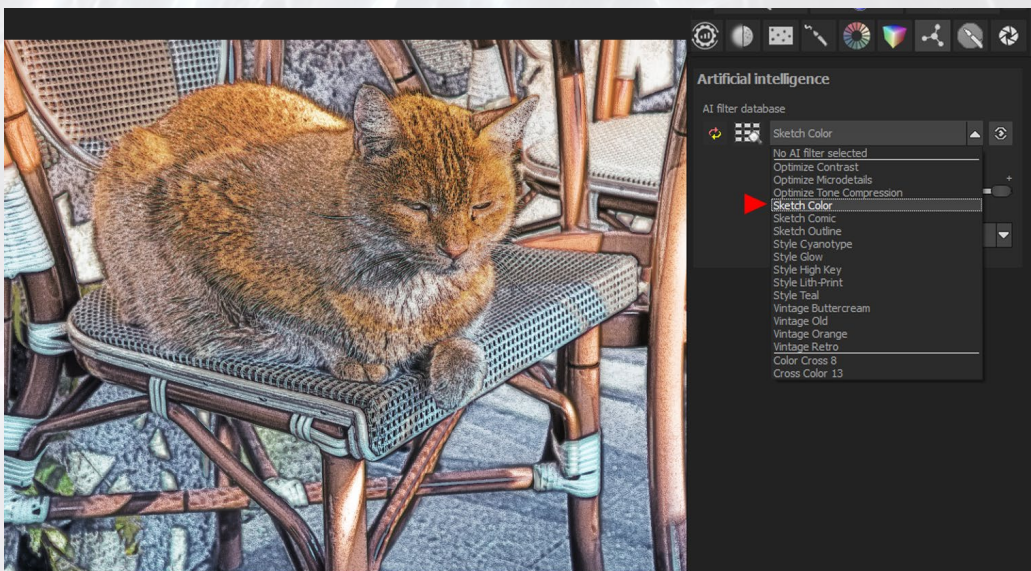
In the **AI training** area with **AI filters** (Artificial Intelligence) module, you can overlay your image with effects that have been previously trained with neural networks. Alternatively, you can create your own effects in the AI filter programme.

The term **AI training area** therefore does not mean that you can train effects in this module, but that you can access the filters previously trained in the **AI-programme**, which enable many exciting and surprising transformations of an image motif.

This module is integrated in COLOR, BLACK & WHITE, HDR, FOCUS, NEAT, SHARPEN, DENOISE, ZOOM, EMOTION, ANALOG, AI-Filter and FOTO 3D.



Click on the button to display the module.

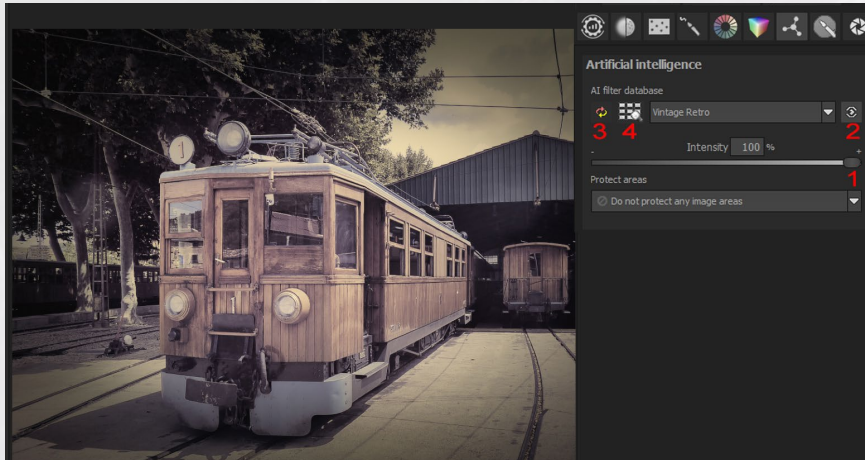


Click on **No AI filter selected** or the small arrow next to it to open the list of AI filters offered as standard, including any of your own trained filters below the white dividing line. In this list, activate a desired effect, in the example Sketch Colour, by clicking on it.

As with the LUT styles, all supplied and self-created effects are offered identically in all programmes in which this module is available.

Further parameters and orientation options:

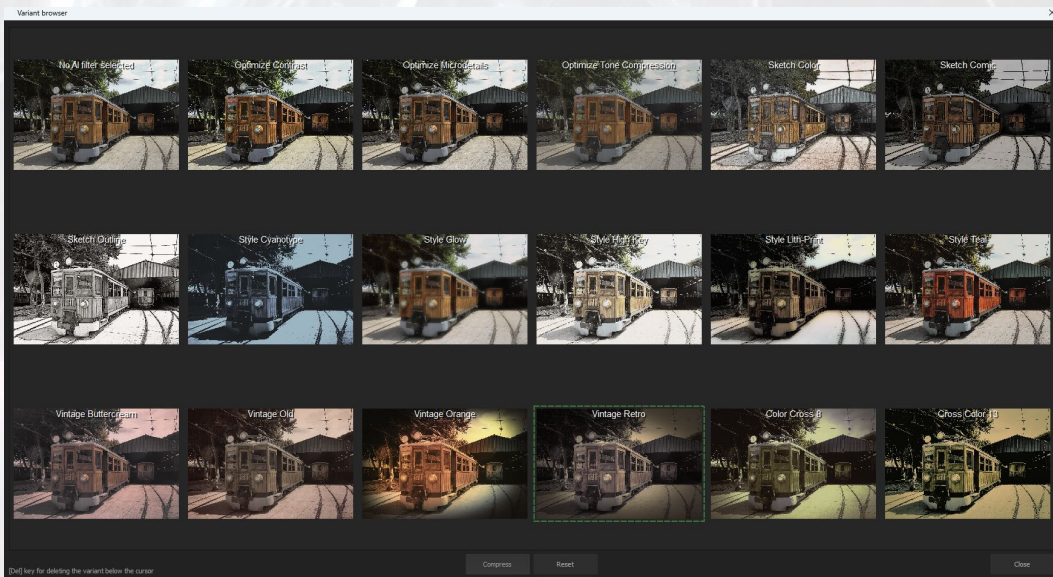
If an effect is activated, such as **Retro Vintage** in the example, further options become visible:



Intensity: The **intensity control** (1), which is set to 100% by default, can be used to reduce the effect as required.

Hide and show effect: Click on the symbol with the eye (2) to hide the effect and click again to show it. This allows you to make a quick before and after comparison.

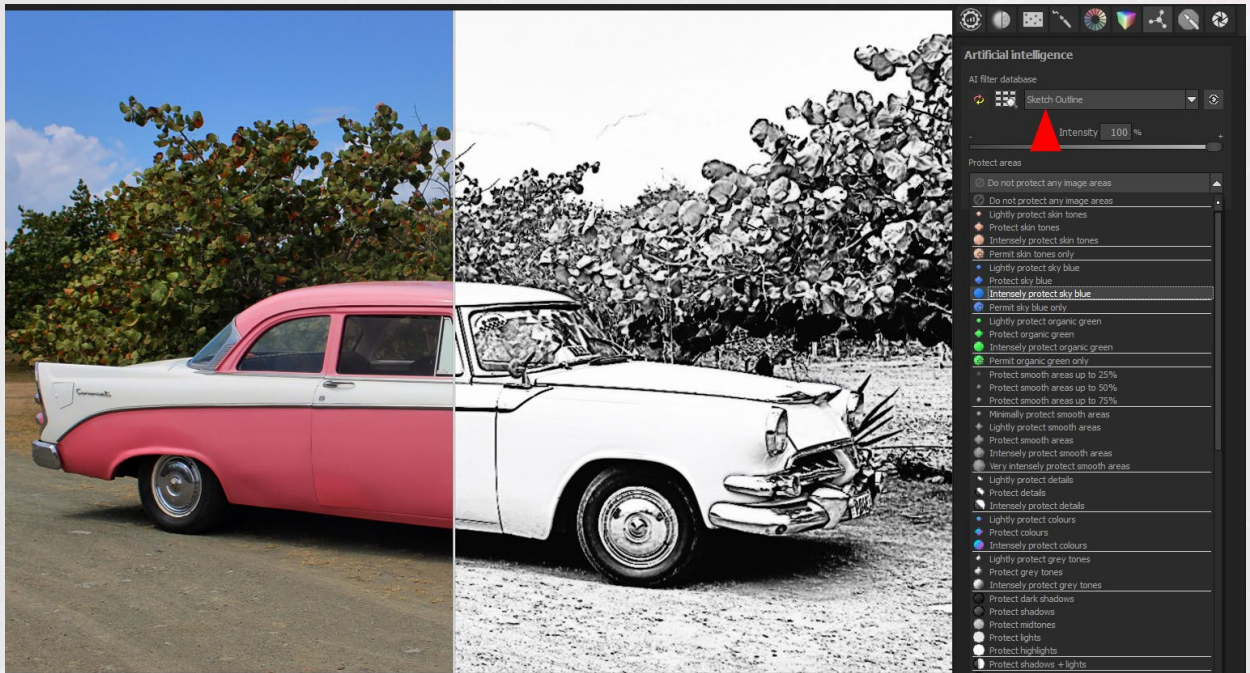
Reset settings: Click on the button with the coloured arrows (3) to remove the current AI network from the memory and reset all settings to the default values.



Variant browser: Click on the browser icon (4) to display all saved AI filters in the variant browser. The current network, **Retro Vintage** in the example, is discarded. The view can be zoomed in or out with the mouse wheel up or down and moved as required by holding down the mouse button. If you click on a thumbnail, it is outlined with a green dashed line. Double-click on it to load it into the programme window.

Protect areas

This area is also identical to that in all other modules in which area protection is offered.



In the image example, the selected **Sketch Outline** effect has been applied to the entire image. If you want to exclude the sky from this effect, click the **Do not protect image** areas button or the small arrow next to it ...

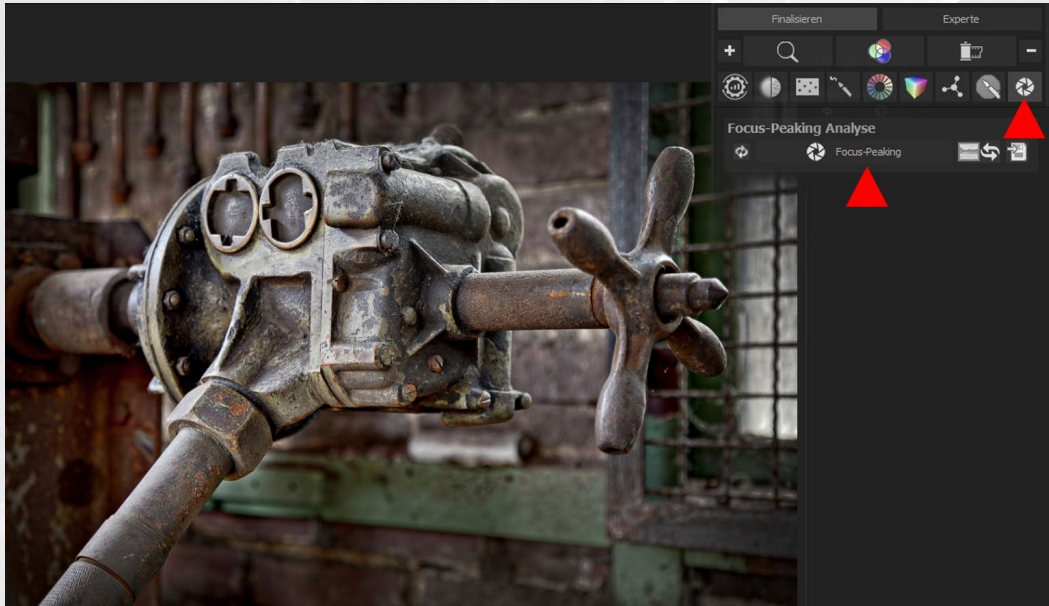


... and select, for example, **Protect sky blue intensively** in the context menu that then opens. The resulting image is as desired: the vintage car, the road and the trees have the new **sketch outline look**, the sky is blue as in the original file.

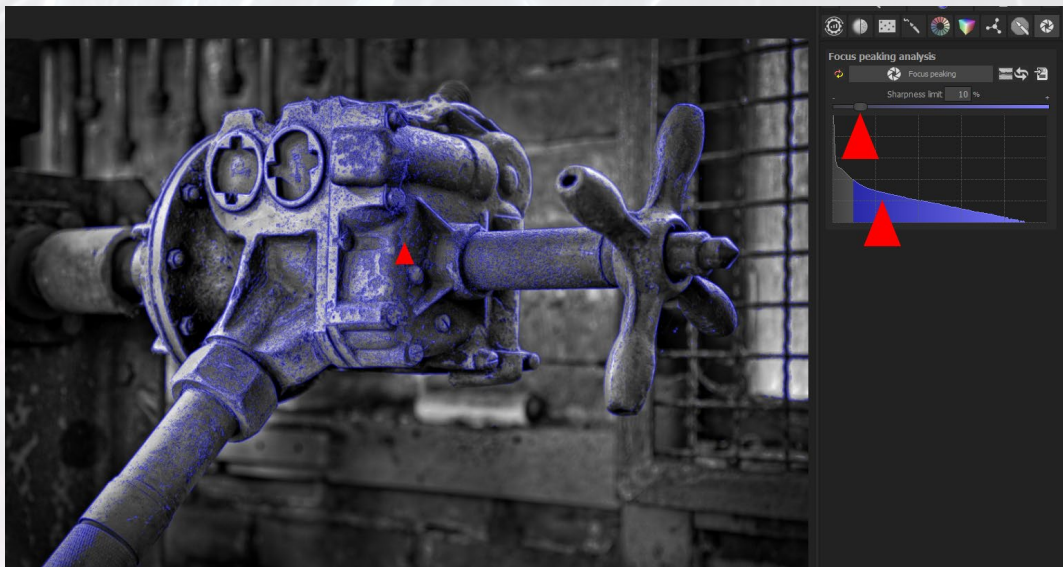
9. Focus-peaking analysis area

In the **Focus-Peaking Analysis** module, a loaded image file is analysed for sharp, more **precisely pixel-wise high-contrast** image areas and visualised in the sharpness histogram.

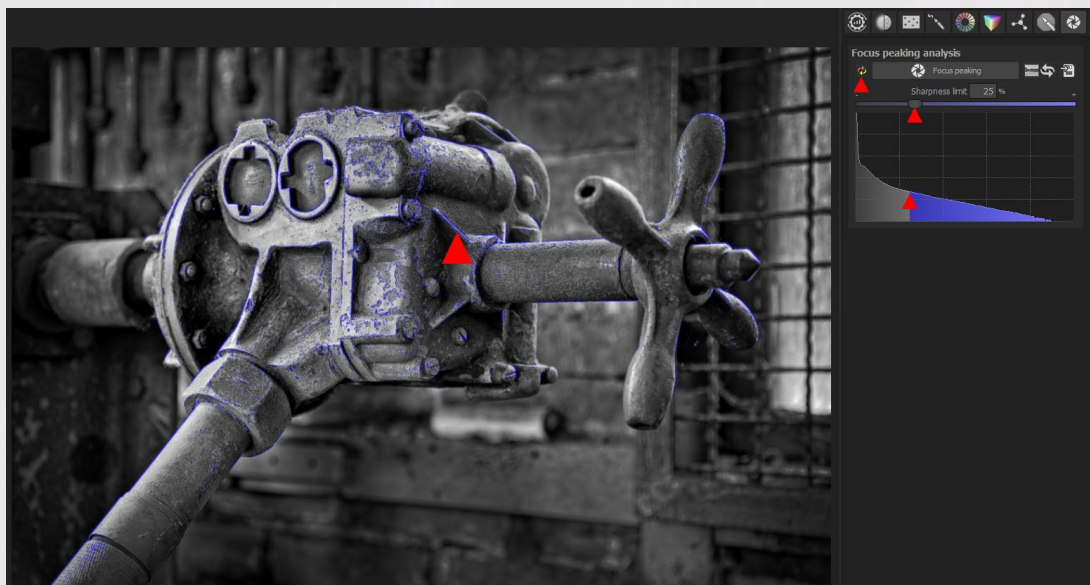
This module is integrated in COLOR, BLACK & WHITE, HDR, FOCUS, NEAT, SHARPEN, DENOISE, EMOTION, ANALOG and FOTO 3D.



To display these areas or contours in the image, click on the button to show the module and activate the analysis and display by clicking again on the **Focus-Peaking** button.

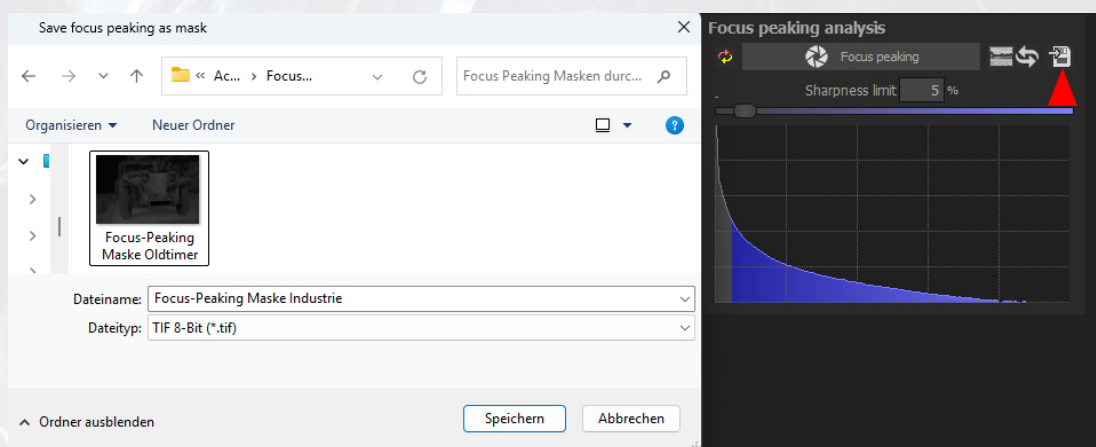


For better visualisation, the subject is displayed in **black and white** and the **sharp areas in blue**. The special feature of this module is that the sharpness limit can be set and the distribution of sharpness per pixel is displayed in a sharpness histogram. The frequency of soft pixels (smoother areas) is displayed on the left-hand side and the frequency of sharp pixels is displayed on the right-hand side.



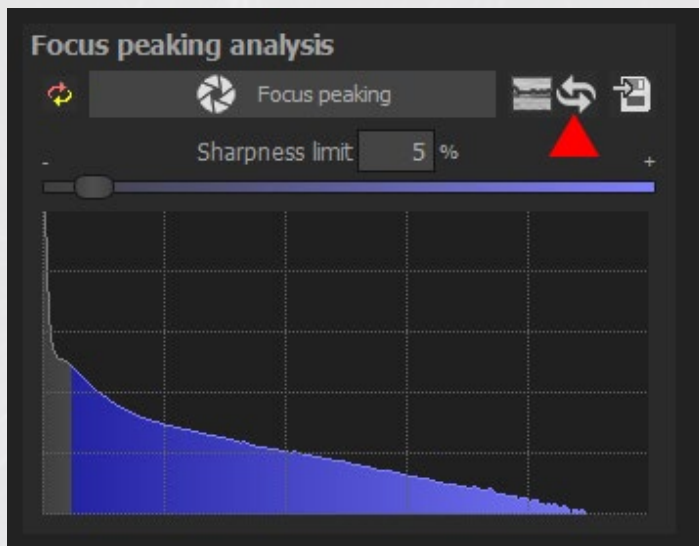
Narrow/extend sharpness limits: The sharpness limits can be narrowed using the **sharpness limit slider** (to the right as shown in the graphic), in which case only the few very sharp areas are displayed. If you drag the slider to the left with a smaller percentage, the softer pixels are increasingly displayed. Everything can be visualised live in the sharpness histogram.

Reset module: Click on the **reset button** with the coloured arrows around it to reset the module to the default values.

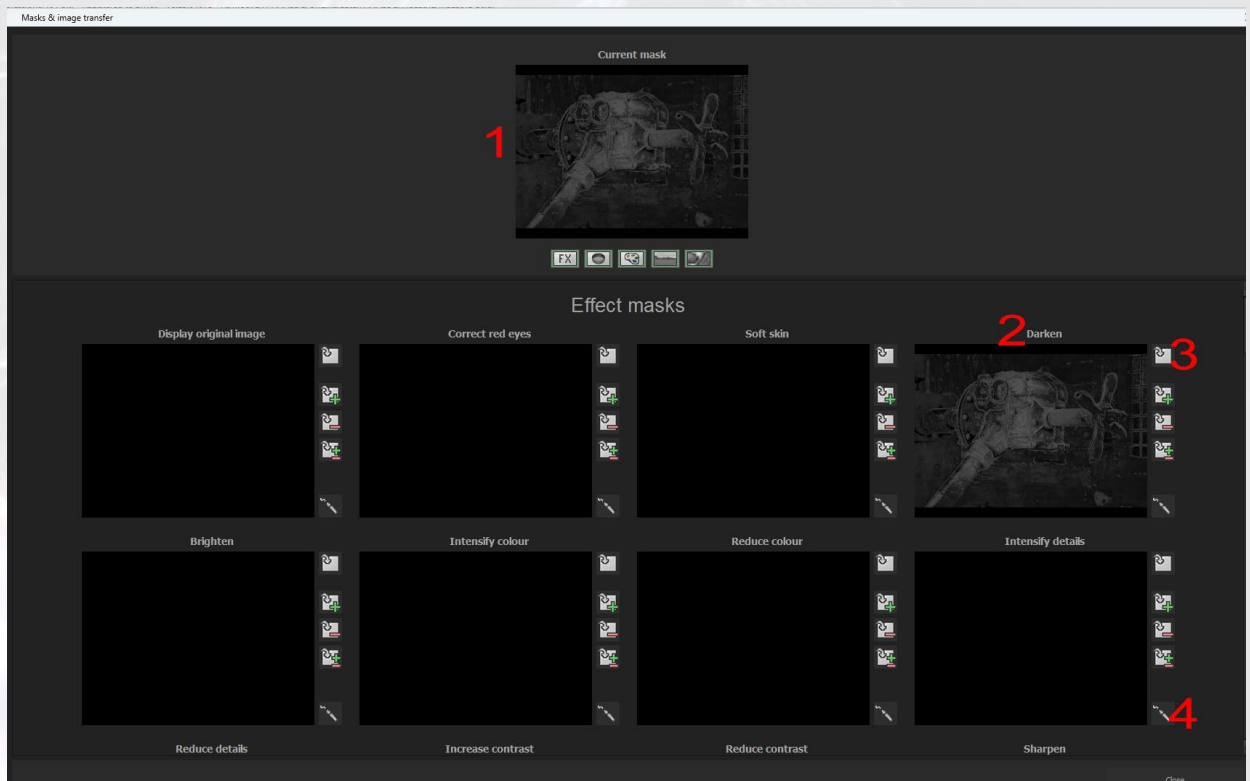


Save mask: By clicking on the button with the floppy disc symbol, the mask can be saved in a folder of your choice as an image file in TIF format in order to use it at a later time, e.g. in **Selective Drawing** in the same or other programmes, or to make it available to other users.

Note: This module is of course not a sharpening module, which influences the real image sharpness, e.g. when the sharpness limits are shifted. In addition to visualising the areas of sharpness in the image, the major advantage is that the areas of sharpness or contours and edges can be masked. You can transfer these masks to **Selective Drawing** (see next page), for example, in order to accentuate these image areas or contours more or less, to strengthen, weaken or sharpen details.



Transfer focus mask: The current focus peaking display, in the example with the sharpness limit 5%, can also be sent (transferred) directly to the **Selective drawing** module as a soft mask. Click on the button with the 2 arrows or to the left of it ...



... the **Masks & Image Transfer** window opens with the mask areas in Selective Drawing, which are displayed below the current mask image (1). For example, if you now select the **Darken** effect (2) in the effect masks by clicking on the button with the 'Insert' arrow (3), the mask is inserted there. By clicking on the brush symbol (4), it is immediately transferred to the **Selective Draw effect masks area** and assigned the **Darken** effect, which effectively increases the light-dark contrast in the image and saves time in the workflow.

10. Watermark Area

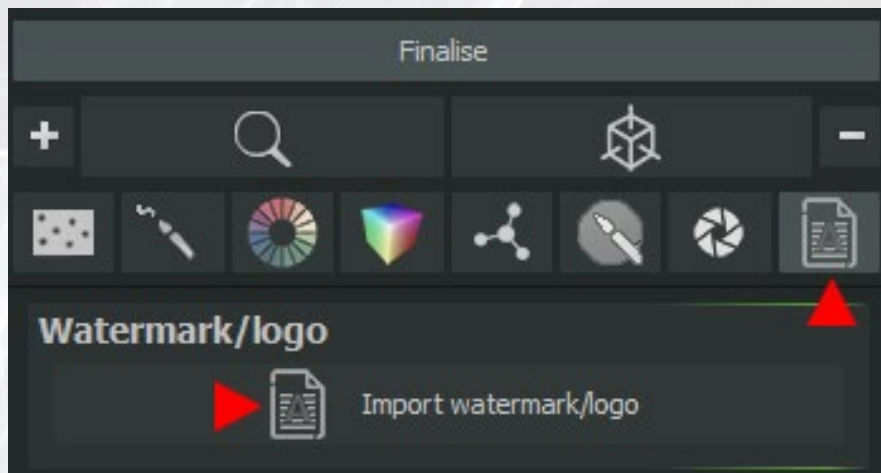
In the **Watermark module**, you can load your own transparent image files or logos that you have cut out and saved in programmes such as CUTOOUT, Photoshop or other image editing programmes.

You position these files with a transparent background as the **current watermark** at a desired position on the imported original.

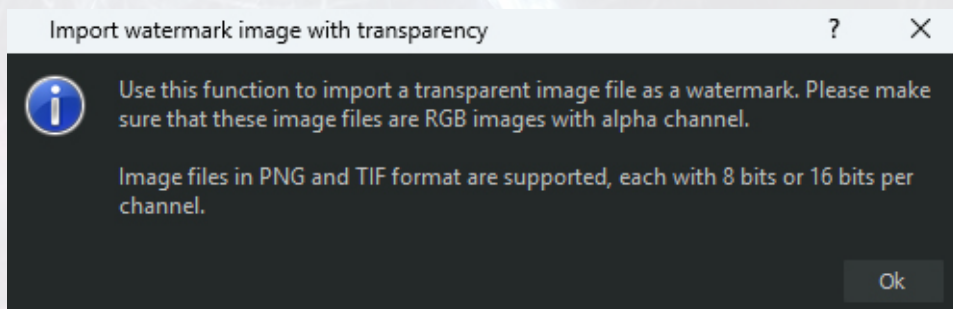
The file formats are either **.png** or **.TIF**.

However, this module offers even more special features:

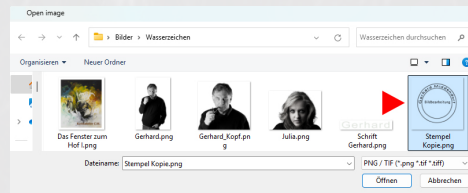
- The currently selected watermark is automatically visible on all subsequently loaded image files in the same position with the specified size and transparency until you delete it.
- The watermark works across all programmes: If you have set a watermark in a programme that offers this module, e.g. **FOTO 3D** or **HDR**, and load an image file in another programme, this watermark is adopted, just as you know it from the LUT styles or AI filters.
- Watermarks can be any font- or image-files.



Click on the button with the **watermark symbol** to display the module.



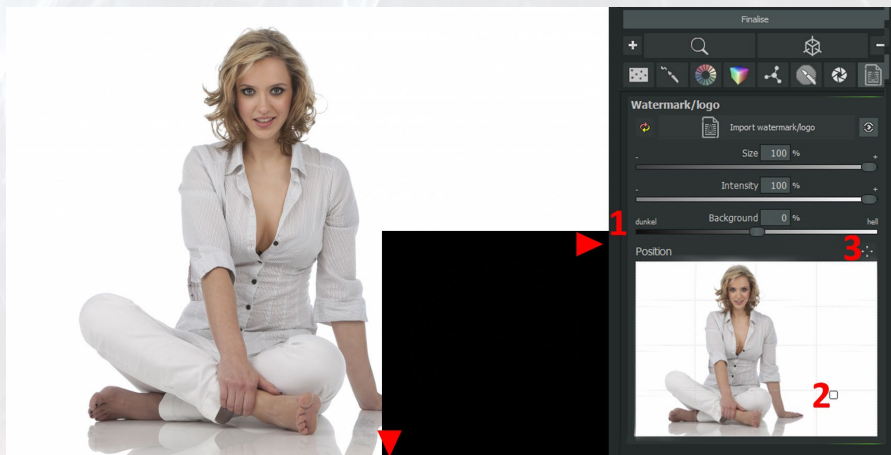
Click on the button **Watermark / Load logo** to open the dialogue window with the information that you can use this function to load a transparent image file as a watermark and the **RGB images with alpha channel** (channel with additional information on transparency) can be loaded as **PNG** or **TIF** files.



In the folder in which the transparent files are saved, select the desired file. Double-click on it or click on **Open ...**



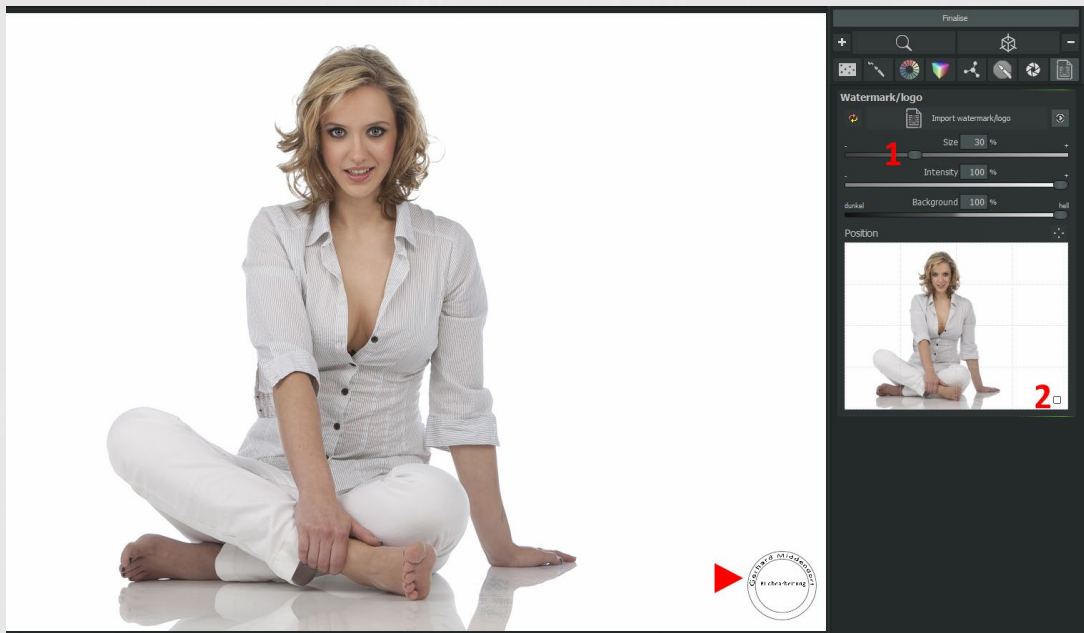
... it is placed in the centre above the original.
The size of the transparent file is a **maximum of 50% of the image width** or **image height of the original file** and is always based on the smaller side, i.e. the image height in the example, and occupies up to 25% of the area of the original.



This is easy to understand if you drag the **background slider**, which is set to 0% by default, to the left to -100% (**dark**) (1) and thus make the file dimensions visible.

Change position: If you now drag the **small position square (2)**, which **determines the centre of the watermark**, to the desired position so that it 'hits' the corners of the image on the right and bottom, as in the example, it is easy to see that the height is 50% of the shorter side of the original file. It makes no difference with a square. Alternatively, you can also click on the **pipette symbol (3)** and hold down the left mouse button to position the transparent file directly at the desired point in the image.

Note: If you move the transparent file to any corner, it will not go beyond the corners, the file will always remain fully visible.



Set parameters:

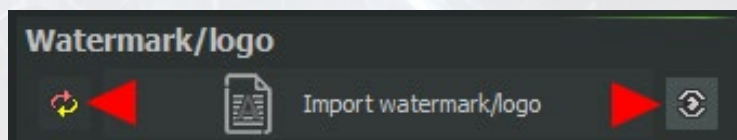
Size: In the image example, the size of the watermark has been reduced to **30%** using the **size slider (1)**.

Position: After setting the desired size, the watermark has been positioned **(2)** so that the watermark 'touches' the right and bottom edges of the image.

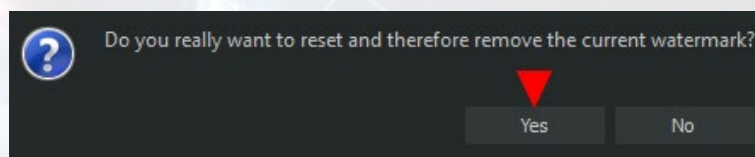
Intensity: Use the **intensity slider** to determine the **opacity of the watermark**: the default setting of 100% makes it fully opaque, 0% makes it invisible.

Background: The default value of 0% in the centre position shows the cropping of a font, graphic, logo or image on a transparent background and is usually the most sensible choice.

If required, a **dark to black background** (slider to the left) or a **light to white background** (slider to the right) with the desired opacity can be faded in.



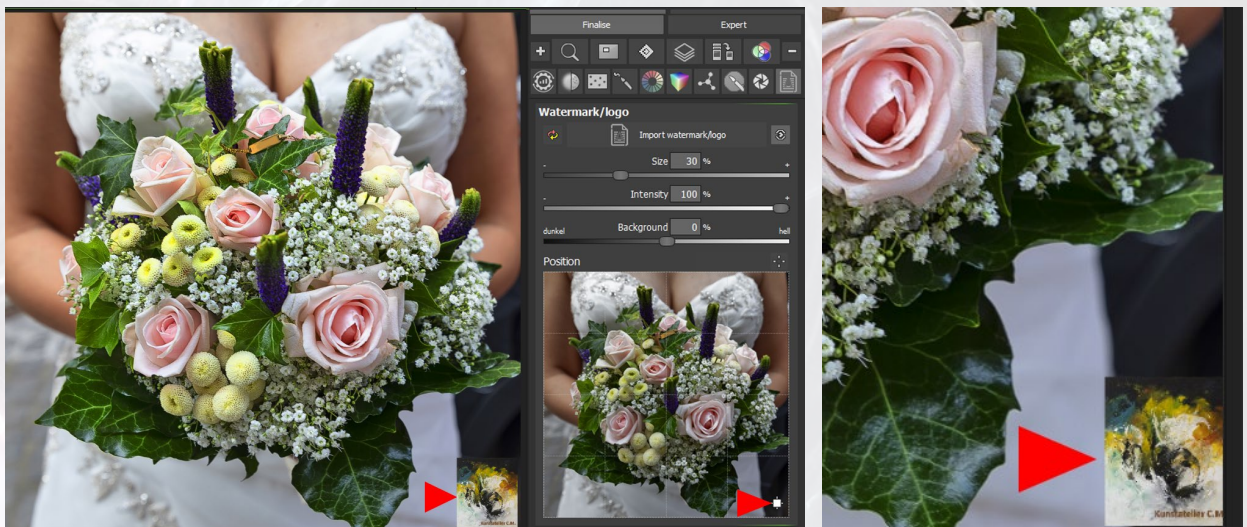
Hide/show visibility: Clicking on the button with the eye symbol **deactivates** the display of the watermark image, clicking on it again **reactivates** it.



Reset: Click on the coloured arrows to decide whether you really want to reset the watermark in the dialogue window that then opens. By clicking **Yes**, the module is **reset to the default settings** and you can load a new watermark if required.



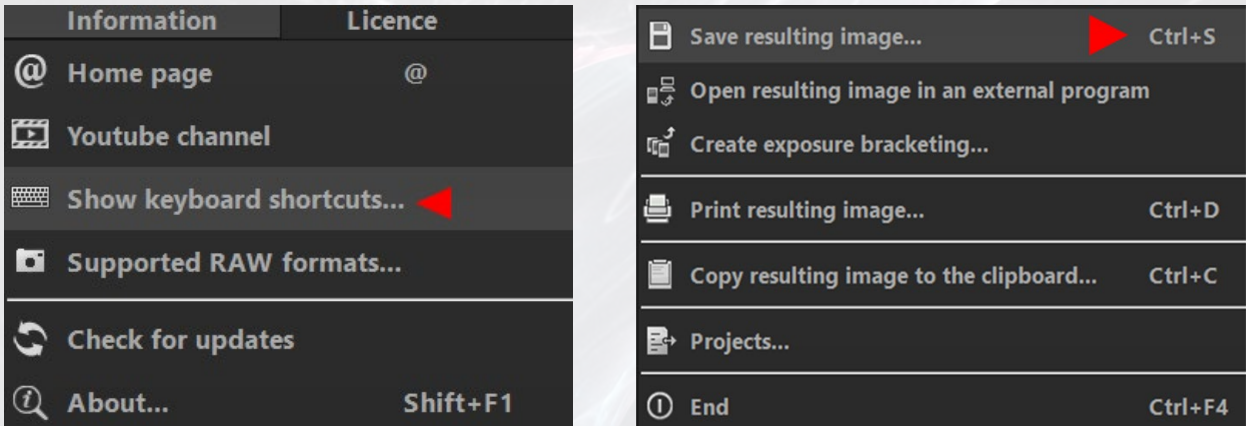
Identical watermark for other images: As long as you do not change the parameters or reset everything to the default settings and load a new watermark, the watermark once selected always remains in the same position for every new image loaded and retains all other selected parameter settings.
This also applies to batch processing.



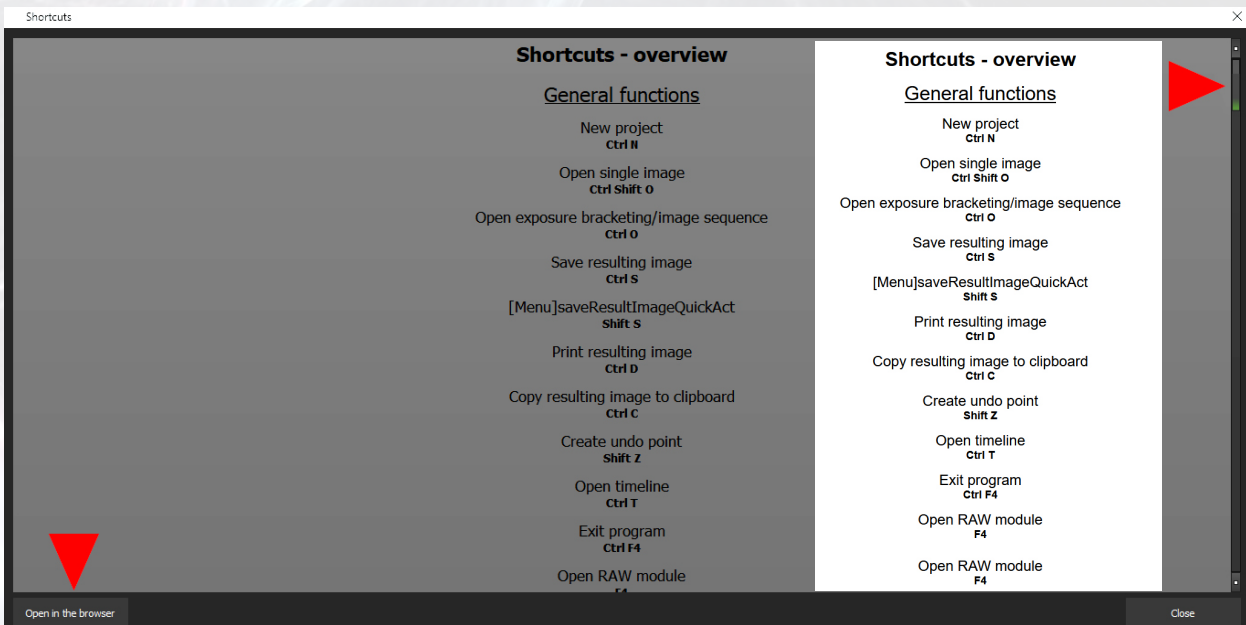
Transfer to other programmes: A placed watermark, in the example an image file, is adopted identically in **every other Accelerated Vision programme** that offers this module, in the image example HDR.
 If it was open at the same time as the watermark was set in another programme, the programme must be closed once and reopened. This also applies to updating a watermark if, for example, the size and position have been changed and, of course, when changing a transparent image file.

11. Keyboard Shortcuts

Keyboard commands or shortcuts speed up the workflow considerably when using a programme regularly, because the available key combinations such as [Ctrl] + [S] for **Save resulting image**, [Ctrl] + [F4] for **End programme** or in **Selective drawing** the keys for reducing the size (1) of the brush or for enlarging the brush (2) more direct and faster than several mouse clicks. In the menus, the shortcuts are displayed for the commands for which they are offered, as shown in the graphic on the right for the **File menu**.



Click on the submenu **Information/Show keyboard shortcuts** commands ...



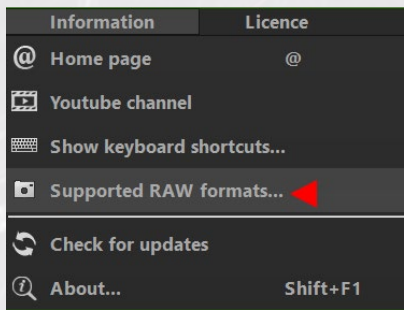
... the overview of all keyboard commands is displayed, which you can scroll down or up using the mouse wheel. Alternatively, drag the slider on the right downwards or upwards.

The overview is divided into **General Functions**, *Image Display Functions*, **RAW Development**, **History Browser**, **Variant Browser**, **Weight Painter**, **Sensitive Selective Drawing**, **Scratch & Sensor Error Correction**, **Selective Drawing**, **Colour Module**, **Crop Image**.

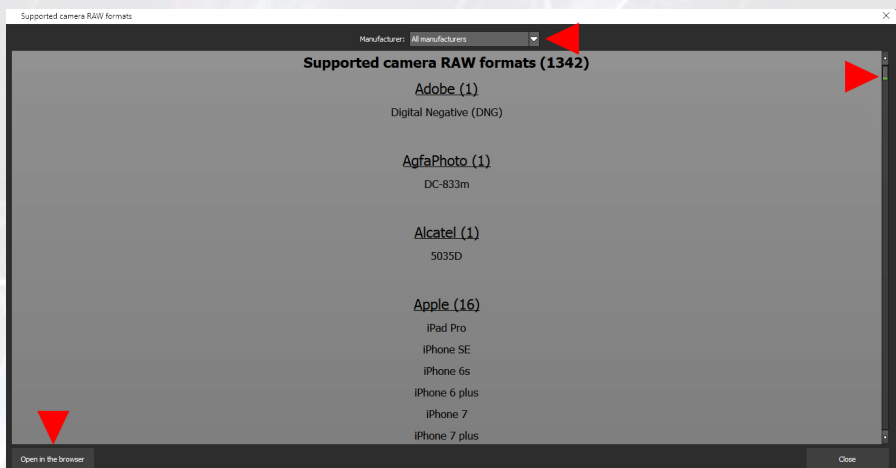
Click on the Open in browser button to open this overview in the specified software (graphic on the right).

12. Supported RAW formats

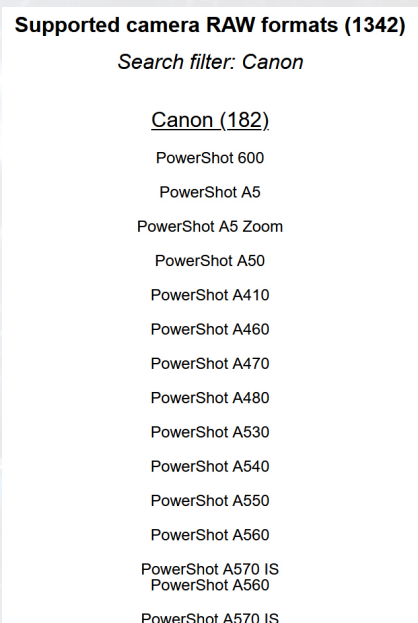
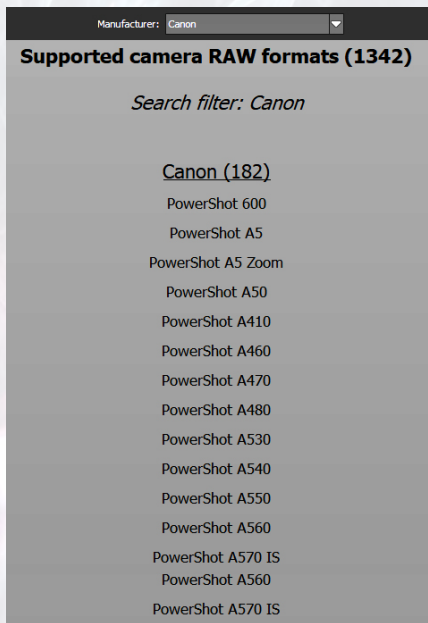
The list of supported RAW formats is constantly updated and with it the number displayed.



Click on the submenu **Information/Supported RAW formats ...**



... the list is displayed, which you can scroll up, down or right with the slider using the mouse wheel.



By clicking on all manufacturers or the small arrow to the right, you can narrow down the selection to a desired manufacturer, in the example CANON. Click on Open in browser to display the RAW formats in the browser.