SIZE.

Excellent prints up to 64 inch width – from commercial to art prints, for in- and outdoors.

www.epson.de
Winning sought-after awards is wonderful as it acknowledges the passion and hard work that goes into product development. This is especially true when given by an internationally recognized jury. And so we were all the more delighted to discover that our latest camera – the H3DII-50, launched last fall – was awarded on behalf of renowned American photography magazine “Professional Photographer” the 10th annual Hot One Awards in early March. The 18 judges – independent, professional photographers selected for their expertise and knowledge – elected the H3DII-50 based on overall quality, innovation, design, performance and value for money in the category Medium-Format Digital Camera System. The award confirms, once again, the world leading quality of Hasselblad cameras.

The real payoff, however, is when a company witnesses its cameras performing in the hands of creative professionals – and we’re not just talking about the H3DII-50, the peak of cutting-edge camera design, but the H3DII-31, the entry model into Hasselblad’s H family. The advantages really stand out in our comparative test with one of today’s leading 35 mm DSLR cameras. Evidently, even Hasselblad’s smallest – the H3DII-31 – is of a higher league. And experts are not only aware of this in theory. Page 22 delivers practical evidence, saying it loud and clear: the bigger the better! And since the H3DII-31’s dramatic price reduction, now competing literally with high-end 35 mm DSLR systems, photographers can opt for a camera system that is far superior to 35mm DSLRs. For an increasing number of 35 mm professionals, the choice has become a no-brainer.

However, outstanding cameras also require outstanding lenses. Fortunately, owners of H cameras can choose from a variety of first-class objectives. Recently, the palette was expanded by an impressive 35-90 mm zoom lens, merging a pragmatic focal length spectrum with distinct compactness. Newcomers to the H system – this one’s for you! The H system prepares professional photographers for creative top performance. Flip to our bombastic Masters spread on page 32 and discover the sheer diversity with which the ten winners of the Hasselblad Masters’ Competition 2008 have interpreted the “Passion” theme with an H3DII. Immerse yourself in artificial, surreal as well as realistic worlds overflowing with passion – the key, after all, to every form of truly great photography.

Yours
Christian Poulsen, CEO Hasselblad A/S

04 >> NEWS
Hasselblad’s latest all-purpose weapon: the HCD 35-90mm zoom lens. H3DII-50 wins the Hot One Award for best medium format digital camera. Phocus update: new features for Mac and Windows users.

06 >> STARDUST
German fashion photographer, Manuel Pandalis, also worked for a long time in the music business. For a contemporary fashion shoot, he turns to the glam rock mood of the early seventies.

14 >> TURN, BABY, TURN
It’s a model you don’t get to see every day – let alone have a chance to photograph: Claus Peter Dudek captures the Bugatti Veyron 16.4., the fastest and most expensive sports car in the world.

22 >> THE BIGGER THE BETTER
The race of the megapixels unfolds: in an exclusive photo shoot, VICTOR compares a 35mm DSLR with 21.1 megapixel sensor to the Hasselblad H3DII-31. The medium format is the clear winner.

32 >> HASSELBLAD MASTERS 2008
What does the word passion mean for the winners of the Hasselblad Masters Awards 2008? Take a close look at the very personal and unusual visual answers given by ten top international photographers.

62 >> NEXT VICTOR ONLINE
The next issue of the VICTOR online magazine will appear on May 1st. Let the impressive portraits by South African fine arts and commercial photographer, Michael Meyersfeld, capture your imagination.
**ZOOM LENS**

**HCD 35-90 mm AVAILABLE NOW**

The new HCD f/4-5.6 35-90 mm Aspherical lens merges power with compactness. Its zoom spectrum ranges from extreme wide angle to normal that will occupy only a little space in your equipment case.

The HCD f/4-5.6 35-90 mm Aspherical lens ever made by Hasselblad to incorporate aspherical elements – a real feat considering the large, until recently unfeasible, diameters necessary for medium format lenses.

Apart from workflow improvements and LAB and CMYK color spaces, Phocus 1.1.3 adds support for the HTS 1.5 Tilt & Shift adapter and shows all adjustments for tilting, shifting and rotation in the capture info window.

**AWARDS**

**GOLD FOR THE NEW H3DII-50**

The H3DII-50 is the best medium format digital camera in the world! This was the verdict of 18 independent, professional photographers chosen for their expertise and knowledge, to select the Hot One Award for the American magazine “Professional Photographer”. Based on overall quality, innovation, design, performance, and price/value ratio, the H3DII-50 came first in the medium format digital camera category. According to "Professional Photographer", Hasselblad's H3DII-50, armed with a Kodak 50 megapixel 36x48mm sensor, edged out competition from Leaf, Mamiya and Phase One. “We’re delighted with the award,” Philip Boissevain, Marketing Manager at Hasselblad, says. “But Hasselblad won’t rest on its laurels. After this win comes the next challenge.”

Following its Gold Corporate Publishing Award 2008, VICTOR’s editorial staff is also hard on the job. Submissions for this year’s competition are already being accepted – we’ll just have to wait till June 24 at the award ceremony to see if the magazine can match last year’s success.

**PHOCUS UPDATE BOASTS NEW FEATURES**

Hasselblad’s digital imaging software Phocus reaches version 1.1.3 on Mac and 1.0.2 on Windows, introducing an impressive bundle of powerful new features to the photographers digital workflow. Both system editions have been designed for full compatibility with Hasselblad’s revolutionary HTS 1.5 Tilt & Shift adapter, neatly displaying in designated program panels all relevant device information, in addition to device information for telephoto converters or extension tubes (optional). A new firmware release, supported by Phocus will equip photographers using an H3DII with additional ISO settings 800 (H3DII-39) and 1600 (H3DII-31), as well as rigging all digital H cameras for compatibility with the HTS 1.5. For customers working with high volume production or via a network, a simple hot folder concept has been added. Any active folder becomes “hot” using the “Export New Images Automatically”, available through the File menu. Thus any file placed in this folder is processed automatically, using the current Export settings.

In response to requests from museums and galleries using Hasselblad’s Multishot cameras for the reproduction of artworks, Phocus 1.1.3 for Mac has been upgraded for conformity with linear curves and RGB, LAB and CMYK colour spaces. In addition a new reproduction tool allows the use of local input profiling and working with a linear response curve. Though now boasting added support in English, German, French, Spanish, Italian, Japanese and Chinese, the Windows edition has yet to catch up with the Mac edition’s scope of operations – something that will happen in due time as both versions will be continually improved and accelerated.

**Download Phocus here**
Scoro. Simply the Best.

Asymmetry 10 f-stops independent control over each of 3 heads
Power Range 3200 J / 1600 J to 3 J with constant colors
Flash Duration configurable from 1/12'000 - 1/85 seconds
Colour Temperature adjustable in +/- 200 K steps
Recycling 1200 J every 0.4 seconds
Glitter, glitz and glamor – lovingly reminiscent of the early seventies, when glam rock and David Bowie’s cult figure Ziggy Stardust reigned supreme, photographer Manuel Pandalis pulls out all the stops and presents a sparkling fashion show.

PHOTOS: MANUEL PANDALIS
PRODUCTION: CLAUDIA SCHOLTAN
Left and right: dress: Acne; vest and sleeves: Noir; necklace: Chanel;
shoes: Mascaro; tights: Fogal; belt: Martin Margiela

Shoes: Acne; vest and sleeves: Noir; necklace: Chanel;
Dress: Acne; vest and sleeves: Noir; necklace: Chanel
MANUEL PANDALIS
Photographer Manuel Pandalis was born 1972, in the small town of Brilon/Germany. From 1993 to 1994 he worked as a photo assistant before getting into the music business where he held a variety of jobs for some years in label management, distribution and event organization. In 2001 Manuel Pandalis returned to photography – assisting various fashion photographers. He began his own freelance career in 2004. Pandalis’ pictures have been published in a number of German and international magazines, and have appeared in exhibitions in London, Paris, Hamburg, Berlin and Stockholm.

Catch a bit of glamor – just like Manuel Pandalis. After correcting the position of Hayley Magna’s glittered hands for the black & white portrait on page 10, a few sparkles stick to the photographer’s right temple. The fashion photographer doesn’t notice: he’s fully concentrated on his Australian model, bowing, kneeling and prostrating before her, the H3DII-39 in hand, intent on catching every dazzling pose.

Pandalis has opted for fashion photography because that’s where he finds most freedom of expression. “Virtually anything is possible. Fashion can and should allow for the personal touch to be included,” he explains. Pandalis is the perfect match for this shoot, whose initial theme was glam rock and David Bowie’s cult figure, Ziggy Stardust. After all, before finally deciding on photography, he spent part of the nineties working in the music business – in label management and distribution.

The changeover from music to fashion photography went very smoothly, as both fields strongly influence each other. Considering how well glamor and glam rock fit current fashion trends, it wasn’t hard for German stylist Claudia Scholtan, to find the appropriate designer pieces with glam rock-accents while maintaining their contemporary fashion flavor. While Scholtan hangs up dresses, jackets and trousers by Prada, Gucci and Chanel, Pandalis and make-up artist Agnesha Kollien, leaf through the 300 page photo book “Moonage Daydream. The Life and Times of Ziggy Stardust”. Pandalis comments, “there are a couple of pictures we can use as inspiration – good poses that we can reinterpret.” Even so, the three are in agreement that the images shouldn’t look too retro-rock. By minimizing the backdrops, deliberately forgoing the use of props from the music scene, and using a photographic style differing completely from the aesthetics of the seventies, they establish a clear distance from Ziggy Stardust. “It should only be at a second or third glance that the viewer might be reminded of David Bowie,” Pandalis explains.

To create the mood, Kollien’s look is playing Bowie music in the bathroom. After Kollien covers Hayley’s eyebrows with thick white theater paint and fills her hair with orange hairspray, the model glances at herself in the mirror. “I’m starting to look a bit like Bowie,” she says. “I can feel him taking over.” However, seeing as the hairdo and make-up aren’t supposed to look too much like Bowie, and Scholtan has suggested that the whole thing should become even more glittery, Kollien cuts a small bag of surplus sequins from the sequined bolero and carefully sticks them onto Hayley’s eye lids.

At the Aplanat Studios in Hamburg, Manuel Pandalis and his assistant, Sebastian Böttcher, have prepared everything for Hayley’s big entrance: they’ve put up enough lights to ensure there will be no shadows, and that the model will appear perfectly in front of a clean, even, white background, making the colors and details of her outfits fully visible. Hayley steps into the spotlight, posing with a fur shawl. Next she’s wearing a purple dress by Paul & Joe. “Let’s try out a geometric pose, showing the back,” Pandalis proposes. Hayley changes position, making triangles out of the material, and throwing a cool glance back over her shoulder. Manuel is delighted. “Wow, you look great!”

He changes the memory card and when he raises his eyes from the camera, they’re attracted to a lightbox standing by the stairway. A wooden frame with 24 bulbs and a lot of aluminum foil. A simple construction, but very effective when used properly. Hayley stands carefully inside the box, folds her hands over her head and tosses a lascivious look upwards. Her shoes and necklace sparkle. The shining bulbs encircle her like spotlights surrounding a rock star. Once Pandalis has captured the image, the Australian laughs, “I’ll look like the perfect human – half Bowie, half Hayley.”

Hair and make-up: Agnesha Kollien with products by Dermatologica
Model: Hayley Magnus/Next, Paris
Photo assistants: Sebastian Böttcher, Charlotte Eltmann; Digital Artwork: Valentina D’Ettore/Happy Finish
www.manuelpandalis.de

Left: dress: Gucci; ring: Cada
Below left: dress: Akris; trousers: Mads Nørgaard; necklace: Swarovski; fur vest: Diesel Black Gold; shoes: Prada
Right: Paul & Joe.
If you see it, it will only be from the rear, as ...
… it is the fastest street car in the world – Bugatti Veyron 16.4
... it is the fastest street car in the world – Bugatti Veyron 16.4
A superlative sports car: the fastest, the strongest, the most expensive.

In preparation for the interactive Internet presentation of the Bugatti Veyron 16.4 in 3,136 color combinations, photographer Claus Peter Dudek spent a week prowling around the car with his camera.

Claus Peter Dudek began photographing cars when he was sixteen. He photographed a friend’s remote control racer in a supermarket car park in Swabia, Germany, using a camera bought with money given to him as a Confirmation gift. When the young photographer held the developed pictures in his hands, instead of a flashy action shot of a toy car, he only saw a grey, blurred surface with something fuzzy and white inside.

To avoid ever having to experience such an unpleasant surprise again, Claus Peter Dudek immersed himself in the study of photography.

Twenty-nine years later, Claus Peter Dudek now lives in Hamburg, and is a specialist in automotive photography and interactive product presentation. He has photographed more than 130 cars, many for rotating presentations on car manufacturer’s websites.

When the opportunity arose to photograph the Bugatti Veyron 16.4, Dudek knew it would be an extraordinary shoot: “I love cars and knew this would be superlative in every way. I was so excited when the truck pulled up with the Bugatti Veyron: the back opened and the technical assistant started this incredible vehicle with his laptop. The engine roared and I said: ‘Wow! – what on earth is happening?’”

What is happening is 1,001 HP, with a top speed of 252.9 mph. It took five years and 120 engineers to develop the Bugatti Veyron 16.4, the most powerful super sports car on the planet since fall 2005. The 1.1 million Euro price tag – VAT not included – also makes it the most expensive serial car in the world. The name Veyron dates back to a Bugatti test driver from the 1930s. Pierre Veyron began working as a test driver at the Bugatti plant in Molsheim in Alsace. In 1939, he won the 24 Hours of Le Mans, claiming Bugatti’s last big racing title. Molsheim is also where the Veyron 16.4 is being built today – in a limited edition of 300. Within half a year following the presentation of the Veyron 16.4 already 100 of the 300 were sold. These enthusiasts are spoilt for choice when it comes to the finish – the Veyron 16.4 stands out for its two-tone exterior available in 56 colors and 3,136 combinations. An online ‘car configurator’ was developed to enable potential customers to select color combinations for both exterior finish and interior padding, controls and instruments, at the click of a mouse.

The car configurator required 360 degree images of the Bugatti Veyron and Dudek was the man for the job. He photographed the car in a studio in Düsseldorf, Germany, using his digital Hasselblad camera. He had a very narrow time frame to complete the assignment: “I had to shoot the
For the exterior shots around the vehicle, he established six main views. Then he shot the halfway positions between them which were in turn connected with further halfway views, for a total of eighteen images for the outer rotation. “Each of the main six views was composed with individual lighting, whereas the in-between images were given more global illumination. Since these blend together with the turning motion, only the brightness values of the car components had to be in sync and the rest would simply blur,” Dudek explains. Before shooting the first picture, he composed the images by sketching perspectives and angles, using two threads to check the changing rotational angle and also the distance from the camera to the car.

From previous experience, Dudek knew how to achieve the camera rotation around the vehicle. However, one detail of the Bugatti Veyron presented the team with a challenge: the car is exceedingly low and there was no jack available to help lift the car so that the tires, the valve and logo, could be spun into the preferred position. “In car advertisements wheels are normally rotated in such a way that the valves are pointing downward and the logos are level; or, one valve is pointing right and the other left. This is what clients prefer,” Claus Peter Dudek explains. Using postproduction to manipulate the logo and valves into the desired position would have been extremely time consuming – especially in the case of the angle – so they photographed the car as it was.

Fortunately, the Bugatti was finished in bright colours, so Claus Peter Dudek could compose the lighting without having to think too much about the backdrop – reflections on bright paint finishes have less contrast. “And, anyway, a black car can’t really be turned into silver in postproduction,” he adds with a grin. In the end, car configurator specifications dictated the course of the shooting. After that came the digital imaging phase, Claus Peter Dudek dedicated
The Veyron’s passenger cab is manufactured from carbon fiber in “Monocoque” style. In the front, this is integrated in a grid frame; in the back, in a construction off carbon fiber, stainless steel and aluminum.

The Veyron rides on 20-inch wheels with rims made of forged steel in sizes 265/35 R20 at the front and 365/35 R21 at the back (a 100 percent view of the front wheel taken from the above image).

a lot of time to making the interactive online Veyron presentable from various angles. Once the images received the final retouches it took another three days to get the car to rotate: “Due, among other things, to the fairly low studio ceiling, we had to work at different distances and the rotation wasn’t filmed in one flow. All the images had to be assembled and the brightness levels of the different exposures harmonized – which was time consuming” Claus Peter Dudek explains.

In addition to the car configurator application, Dudek kept the prospect of publishing the photographs in a magazine in the back of his mind: “When you have such a vehicle it would be a shame not to seize the opportunity.” Unfortunately, the chance to take the super sports car for a spin was limited to the hall in which the shooting took place. “Of course, we could hardly test the speed in the studio, and we all refrained from flooring the gas peddle. That could easily have dug a hole in the ground. But what a sound!” he says enthusiastically. There was no time to test drive the car outside the complex; but car-buff Dudek eventually came to terms with the disappointment and now says he wouldn’t have wanted to anyway – for fear of damaging the car and then having to face the problem of a huge repair bill!

What Dudek had no problem with was “collecting” – as he calls it – all of the critical exposures for the vehicle’s rotation. For this he relied on 360-degree technology he has himself developed for virtual presentations, as well as his pronounced ability to think three dimensionally. In school, Dudek had a particular talent for trigonometry: “I’m good at thinking spatially,” the photographer affirms. After fifteen years of digital photography he is also fortunate to be working with a great camera. Dudek switched to Hasselblad four years ago and is especially impressed with the high-quality contrast and sharpness: “The software provides me with great leeway to adjust the gradients with extra precision – automotive paint finishes have many gradients.” In this respect, the Veyron 16.4 is just like any other model; yet, the parting after a week’s shoot was a special moment: “When it left the studio it was clear to us that we would probably never see one again. Only 300 of them are being built. But at least we were able to see more of the Bugatti than its rear bumper!”

Susanne Schmitt

www.dudek.de
www.bugatti.com
PICTURES WANTED!

Are you one of the best? Then just show us what you’ve got! VICTOR magazine sets the stage for the best photographers and is published in six languages worldwide. Send us five images that show us who you are. Inspire us and we’ll offer you a unique platform to help you reach out to the world. From fashion to architecture, from fine arts to automobiles – send us your images of choice and make sure the quality is nothing short of fantastic.

BE PART OF VICTOR

WWW.VICTORBYHASSELBLAD.COM/PORTFOLIOS
THE PROOF...
One photographer, one model, one set, but two types of equipment. The photo on the left was shot with a state-of-the-art 35 mm DSLR system comprising a 21.1 megapixel body and a f1.2/50 mm lens. The image was exposed according to ISO 100, the sensor’s native sensitivity, the aperture stopped down to f2.0. As the camera was used in landscape orientation, it had to be cropped to fit the page and was flipped about the vertical axis.
Within minutes, the photographer switched to a different system, a 31 megapixel Hasselblad H3DII-31 and its bundled HC 2.8/80 lens. The latter was used fully open at f2.8 to get the same depth of field as the f1.2/50 mm lens at f2.0. Exposure was according to ISO 100, the native sensitivity of the H3DII-31. Again, the camera was held in landscape orientation, so the image had to be cropped to fit the page.
The enlarged crop of the image on the preceding pages exposes the differences in resolution. The 35 mm image not only has fewer pixels, but is limited even more severely by its antialiasing filter that, while it prevents moiré, at the same time reduces sharpness.
The image taken with the H3DII-31 delivers crisp detail from the center up to the very corners, due to excellent edge-sharpness of the lens even fully open. There is no anti-aliasing filter reducing sharpness since moiré is taken care of during raw conversion in Phocus.
... THE BIGGER THE BETTER

Everything is miniaturized – computers, cell-phones, even SUVs are getting smaller these days. But not everything can be reduced without losing something essential, high-end cameras being a case in point. Building cameras around a big sensor incurs benefits that go far beyond the obvious advantage of accommodating more pixels.

BY MICHAEL J. HUSSMANN

PHOTOS: ROBERT GRISCHEK

Everything is getting smaller these days, but sometimes the laws of physics punish those who go too far in their strive for miniaturization. In the automotive industry there is no substitute for cubic inches under the hood, and what is true of engine displacement also applies to camera design: there is no substitute for sensor size. And there doesn’t have to be, since in the CO2-free world of digital photography there is no penalty for going to the max. The full range of benefits of using a big sensor tended to be overlooked when megapixel alone sufficed to separate the 35 mm cameras from the high-end market.

Today’s ever shrinking pixel sizes mean that even 36 mm x 24 mm sensors have crossed the 20 megapixel line and with corresponding resolution enhancements in the high-end market, the divide is shifting towards 30 megapixels. However, a bigger sensor will always accommodate more pixels making it a game 35 mm DSLRs cannot win, but this trivial advantage isn’t what is most important about sensor size. The sensor diagonal is the main parameter characterizing a camera system from which most of the others are derived. Increasing sensor size has multiple repercussions for image quality. Sensitivity to the full depth of field, resolution requirements for lenses, dynamic range, signal-to-noise-ratio, and other factors crucially depend on it. But, before the first image is taken with a high-end DSLR one must first look through the camera’s viewfinder.

FIRST LOOK

The difference between a 35 mm camera and a Hasselblad DSLR can be appreciated by merely looking through their respective viewfinders. The medium-format viewfinder’s greater brightness and field of view is apparent at first glance, and while the sensor as such isn’t even involved here, its size accounts for the visible difference. In any DSLR, the visible portion of the focusing screen corresponds exactly to the light-sensitive area of the sensor – as it must since light travels the exact same distance from the lens to both the sensor and the focusing screen. With a bigger sensor and thus a larger focusing screen, one can design for a bright viewfinder that fills a large field of view. Hasselblad’s HVD 90x viewfinder magnifies the already quite large image on the focusing screen by a factor of 3.1, effectively delivering a significantly larger field of view than typical 35 mm DSLRs such as the Canon EOS-1Ds Mark III or the Nikon D3. Similar considerations apply to the waist-level viewfinder HVM – it requires a medium-format camera to project an image onto the focusing screen that is large enough to be viewed from a distance and without the aid of an eyepiece (though there is an integrated 3.25x eyepiece available as well).

LENSES FOR BIG SENSORS

Lenses are commonly classified into normal, wide-angle, and telephoto according to their focal lengths which are defined by the sensor diagonal. A focal length roughly equal to the sensor diagonal is classified as a normal lens because its angle of view corresponds to that of the human eye when viewing an image at a typical viewing distance. Lenses with a longer or shorter focal length are telephoto or wide-angle lenses, respectively. In a 35 mm camera, a 43 mm lens would correspond exactly to the diagonal of a 36 x 24 mm frame, however, since the time of Oskar Barnack, inventor of the 35 mm format, the normal lens has been defined as a 50 mm lens. Similarly, the 80 mm is the normal focal length for a medium-format camera, even when the diagonal of typical sensor sizes is actually shorter – 80 mm corresponds most closely to the 6 x 6 format of the original Hasselblad.

The 44.1 x 33.1 mm sensor of an H3DII-31 is 1.3 times longer on the diagonal and covers an area about 70 percent larger. The diagonal of the even larger H3DII-39 and -50 is 1.4 times longer, covering slightly more than twice the area of a 35 mm sensor. Lenses for a medium-format DSLR covering the same angle of view as those for 35 mm DSLRs thus require a 1.3 to 1.4 times longer focal length. As the speed of a lens depends on the ratio between the entrance pupil and the focal length, the entrance pupil needs to be enlarged as much in retrospect, improving the resolution of the final image.

Synopsis

- A big sensor is the key to achieving exceptional image quality.
- With a bigger frame size comes the additional benefit of a bigger focusing screen and thus a viewfinder image offering a wider field of view.
- Medium-format lenses allow for greater f-numbers to be used and still maintain a shallow depth of field, but with reduced lens aberrations.
- Since the medium-format frame size is larger, the digital images don’t have to be enlarged as much in retrospect, improving the resolution of the final image.
- Technological advances benefit all sensor sizes equally, bigger sensors will remain on top.
- Comparison shots using a 35 mm and a Hasselblad DSLR drive these points home.

To attain the same lens speed, the entrance pupil needs to be larger since with its longer focal length, the lens projects a bigger picture, spreading the light over a larger area. The lens needs to gather more light to sustain a larger sensor, and the larger opening has repercussions for the depth of field.

With the longer focal length comes a proportionally larger entrance pupil so the lens speed stays the same, and the larger opening influences the depth of field. Between cameras with different sensor sizes, the f-number isn’t a universal indicator of depth of field – equal f-numbers might result in different depths of field. The entrance pupil is a more useful measure: Two lenses capturing the same field of view will produce about the same depth of field if their entrance pupils are the same size. A medium-format lens, even when it was a scaled-up version of a 35 mm lens, would produce images with a more shallow depth of field at the same f-number since the corresponding entrance pupil is larger. To bring its depth of field in line with that of the 35 mm lens, the medium-format lens would have to be stopped down by one full f-stop. In terms of ratios, the f-number has to be multiplied by 1.4, the ratio of the medium-format and 35 mm diagonals, to create images with the same depth of field.

The implications of this are two-fold: First, a medium-format camera is better suited for isolating the subject against a blurred background – without limiting the photographers creative freedom, as the depth of field can be expanded just as easily by stopping down. The limit is reached only when image sharpness deteriorates due to diffraction blur at small apertures, but since one is starting with a large opening to begin with, there is ample room for stopping down before diffraction becomes an issue.

Second, instead of aiming for minimal depth of field, one could also stop down to get the same depth of field as with a 35 mm lens, but at a greater f-stop. A 35 mm system often traps the photographer between a rock and a hard place: fast lenses capture images with a shallow depth of field, but corner sharpness and contrast leaves much to be desired. This will sometimes remain unnoticed when objects near the edges of the image are well outside the depth of field anyway, but one has to accept that only the central zone within the field of view is actually usable for rendering sharp images. Stopping down the lens would improve
its sharpness but, at the same time compromise the shallow depth of field. A medium-format lens, solely by virtue of being bigger, has the same shallow depth of field at a higher f-stop so the photographer doesn’t have to compromise: the medium-format solution provides for the desired shallow depth of field and at the same time holds the potential for great sharpness and contrast extending to the outer edges of the image.

**MAGNIFY EARLY**

Creating a photographic print is a multi-part process: first the lens projects an image onto the sensor, then this image is digitized and eventually printed out at the desired size. If the sensor size is small, the enlargement required at the last step is quite substantial. For example, enlarging the 36 x 24 mm frame size of 35 mm systems to an A3-sized print requires a magnification by a factor of 12.4. Starting from the larger 44.1 x 33.1 mm frame size of an H3DII-31, the necessary magnification drops to 9.5, or to 8.6 with the H3DII-39 and -30 and their even larger 49.1 x 36.7 mm frame size. Thus, for technical lengths of medium-format lenses create larger images to begin with, so one doesn’t have to enlarge so much later. This was true in the age of silver-halide photography and optical enlargers, and remains true today. While lenses for 35 mm systems need to push the envelope to deliver a resolution matching that of sensors with ever increasing megapixel numbers, designers of medium-format lenses can either relax the resolution requirements so they can tighten the constraints on other parameters crucial to image quality, or they can aim for even higher resolutions that are impossible in the world of 35 mm photography.

Employing longer focal lengths for a larger image, rather than for magnifying far away subjects with a small angle of view (the latter being of little concern in a studio setting), reduces the number of line pairs that need to be resolved to achieve a certain desired resolution in the final image. With 35 mm DSLRs, the resolution of fine detail depends on the contrast of a pattern of 60 line pairs per mm (lp/mm). In a medium-format DSLR, the very same detail is enlarged by 30 to 40 percent in the image projected onto the sensor, so the resolution requirement drops to 20 megapixels – almost good contrast. Therefore, a medium-format lens with a resolution similar to that of a good 35 mm lens will support a higher resolution sensor. A higher number of sensor pixels is a prerequisite for increasing the effective resolution, but without lenses delivering sharp images, there is no real benefit to be gained. A larger sensor size not only accommodates more pixels, but at the same time allows for the construction of lenses that project finely detailed images onto the sensor, making it worthwhile to deal with the amount of data a high resolution sensor provides. The requirements of sensor and lens are much easier to reconcile in the medium-format world, especially since the medium-format camera is missing the antialiasing filter that typically limits the resolution of 35 mm cameras well below their nominal megapixel count.

**THE NYQUIST LIMIT**

Even when a lens should be able to deliver a finely detailed image showing reasonable contrast even at very high spatial frequencies, it still has to be sampled by the sensor. A sensor imposes its own limits on resolution, set by the number of pixels. Applied to the domain of digital imaging, the sampling theorem by Nyquist and Shannon states that we need two rows of pixels for resolving one pair of black and white lines – and that’s an optimistic measure since the rendering of fine detail will start to deteriorate even earlier. With a pixel size of 6.8 µm (H3DII-39 and -31) or 6.0 µm (H3DII-50), resolution hits the Nyquist limit at 74 or 84 line pairs per millimeter, respectively. The pixel size of a 35 mm DSLR is similar, 6.4 µm being a typical size, so the limits imposed by the sensor are similar as well: 78 lp/mm is the maximum spatial frequency that a typical 35 mm sensor with 21 megapixels can resolve. When the resolution per millimeter is similarly limited, the only way of increasing resolution is to provide more millimeters – in other words, a bigger sensor.

**THE MEGAPIXEL GAP**

The megapixel race continues in all classes from the tiniest sensors in compact digicams to medium-format CCDs. The megapixel gap between medium-format and 35 mm cameras is shifting again, from around 20 megapixels last year to roughly 30 megapixels today, but still this gap shows no signs of closing: All sensors are based on similar technologies, even when some are CCDs and others are CMOS chips. Whenever 35 mm sensors can boast additional megapixels within the same frame size, so will their bigger medium-format brothers. In the end, the difference in the number of pixels will always match the difference in the sensors’ light-sensitive areas. As much as is sensible without compromising dynamic range and signal-to-noise ratio, that is, as both factors being dependent on the pixel size and are thus imposing an upper limit on the megapixel count of a high-end camera. An even higher number of sensor pixels would require an even larger sensor. History repeats itself, as the same thing happened with silver-halide photography. In 1982, for example, Kodak introduced the new disc film format, for the first time using T-Grain technology for a finer grain and improved resolution. Because of the improved emulsion technology, the new small format (8 x 11 mm) could compete with the larger frame sizes, but T-Grain technology soon spread to 35 mm and 120 film. As all sizes of film benefited from the same technological advances in the same way, the differences in resolution remained constant. Eventually, the range of smaller sizes of film widened, with only 35 mm and 120 film still being in wide-spread use today.

The Hasselblad DSLRs delivered higher image quality even in their 22 megapixel incarnation, but the current line-up offering resolutions of 31, 39, and 50 megapixels – not counting the even higher effective resolution of the H3DII-39Ms in multi-shot mode – can boast a better rendition of color and tonal values on top of a much higher resolution, a difference even more dramatic than megapixel figures would suggest. The H3DII-31 shares those traits with higher resolution models; its sensor pixels are the same size as those of the H3DII-39, but twice as sensitive with the angle of view captured being only slightly smaller. By the use of microlenses for concentrating incident light on the light-sensitive area of the pixel, the otherwise technologically similar CCD in the H3DII-31 doubles the quantum efficiency, i.e. the efficiency of converting light into electrons. The base sensitivity is ISO 100 rather than 50, values up to ISO 800 being selectable in-camera and ISO 1600 in Phocus.

**APPLES AND ORANGES**

Photographers are invited to experience for themselves what Hasselblad DSLRs have to offer. For a first impression, we have run a com...
parison of a Hasselblad lens against its 35 mm counterpart, providing a detailed analysis of their performance backed up by actual MTF charts and, most importantly, by images photographed in a special VICTOR shooting that illustrate what the Hasselblad H system can deliver.

For a realistic comparison, the H3DII-31 with its bundled HC 2.8/80 mm lens had to stand its ground against the highest resolution 35 mm DSLR on the market in August 2008 with its 21.1 megapixel sensor representing the top of the line in its class. This 35 mm body was matched with an equally top-of-the-line f1.2/50 mm lens. The focal lengths of both lenses are roughly equivalent, the HC 2.8/80 having a slightly narrower field of view. We stopped down the f1.2/50 mm lens to f2.0 to match the depth of field of the HC 2.8/80 used fully open. Both cameras were held in landscape orientation for capturing an image that almost filled two facing VICTOR pages (59 x 38 cm), with only small differences due to the different aspect ratios of 35 mm (3:2) and medium-format (4:3) sensors as well as the slightly different field of view. Both images were cropped to the size of a VICTOR page and with the 35 mm image mirrored across the vertical axis, these images are presented side-by-side on pages in between the gate fold. All the other images presented here are cropped to the size of a VICTOR page and with the 35 mm image mirrored across the vertical axis, these images are presented side-by-side on pages in between the gate fold. All the other images presented here are magnified crops of the original.

Stopped down to f2.0, the f1.2/50 mm lens of the 35 mm DSLR shows adequate contrast within the central part of the image, but about halfway towards the corners, the MTF curves indicate a sharp drop of contrast at all spatial frequencies. The decrease in contrast of tangential patterns begins even earlier; at the very center of the image which suggests chromatic aberration as a possible cause — indeed we see color fringes within the image. Stopped down to f2.0, the lens is suitable for portrait work where contrast near the edges doesn’t matter, but not for any shots making use of a bigger part of the image circle. Stopped down to f8 results in a much improved sagittal contrast with excellent results up to the corners, while tangential contrast, especially at 60 lp/mm, doesn’t improve in quite the same way. Again, this points towards chromatic aberration as the most likely cause — chromatic aberration is most visible at high spatial frequencies and cannot be reduced by stopping down. Regardless of the f-stop, actual resolution is compromised beyond what is indicated by the MTF chart, mostly because of the antialiasing filter employed to combat moiré.

Hasselblad’s HC 2.8/80, used fully open at f2.8 to get the same shallow depth of field, shows very good contrast with minimal variation between sagittal and tangential contrast up to 60 percent of the image circle and just a moderate drop towards the corners. At 10 and 20 lp/mm, tangential contrast is even better than sagittal contrast, indicating a high level of correction for chromatic aberration. Stopping down would mostly be used for extending the depth of field rather than for improving contrast, but the Hasselblad lens gets even better at f11 (equivalent in terms of depth of field to f8 with the f1.2/50 mm lens): sagittal contrast maintains a consistently high level within the whole image circle and tangential contrast drops only slightly beyond 80 percent. Moreover, resolution isn’t marred by an antialiasing filter. Compared side-by-side, the difference in sharpness and contrast obtained by medium-format and 35 mm DSLRs is quite substantial and highly visible even near the center of the image.

GRAB THE BIG GUNS

Bigger may be better, but not everyone will be able to afford it. Not so much financially perhaps — when an H3DII is the best tool to get a job done it will pay for itself: especially the H3DII-31 which is now within the reach of many professional photographers. There is no denying that a medium-format kit can get quite heavy and bulky; outside the studio, in sports, wildlife, or reportage photography, one might want to pack a smaller and lighter kit, using longer focal lengths for their greater reach rather than for improving image quality. For photographers who can handle the big guns there is no real choice for there is no way to get around the laws of physics which prevent smaller cameras and lenses to achieve the same level of quality as a medium-format solution.

To reap these benefits, all three cameras in Hasselblad’s current line-up, the H3DII-31, the H3DII-39, and the new H3DII-50, are suited equally well. All three share the same set of lenses and despite the 10 percent smaller diagonal of its sensor, the H3DII-31 gains all the advantages the HC/HCD lenses offer, its sensor cherry-picking the central 44.1 x 33.1 mm worth of the bigger image circle.

For further information please visit www.hasselblad.com

The quite visible red fringe running along the line of the shoulder proves that contrast of fine detail is indeed compromised by lateral chromatic aberration

The rendition of low contrast detail in the corner of the image is suffering from the general drop in contrast near the circumference of the image circle

Sharpness isn’t just compromised near the edges of the image. The antialiasing filter in front of the sensor is placing an upper bound on the resolution of lens and sensor as a system
The HC 2.8/80 maintains good contrast up to the edges of the image, even fully open at f/2.8 which gives the same shallow depth of field as a 35 mm lens at f/2.0.

Lateral chromatic aberration is not an issue with the Hasselblad lens; it’s high level of correction doesn’t need any digital correction in Phocus.

The advantage of a higher resolution sensor continues to be visible even near the corners of the image, due to much better edge sharpness of the Hasselblad lens.

The high contrast of fine detail the lens delivers can be fully brought to bear as there is no anti-aliasing filter limiting resolution. Moiré artifacts are eliminated by the moiré filter in Phocus.

Medium-format HC 80 f/2.8

Medium-format HC 80 f/11

MTF (Modulation Transfer Function) charts are a handy way of visualizing the performance of a lens in terms of sharpness and contrast. An MTF chart gives a good impression of a lens’s strengths and weaknesses making it a useful tool for comparing lenses. When the lenses to be compared are from different camera systems with different frame sizes though, a couple of pitfalls must be avoided.

The modulation transfer function indicates how the contrast (and thus the sharpness) of alternating black and white lines vary from the center of the image to its edges. Ideally, the contrast should start out as high as possible at the center, sloping gently towards an inevitably lower, but still acceptable contrast at the edges. Harsh drops in contrast pointing to an uneven distribution of sharpness in the image area are to be avoided.

Typically, an MTF chart comprises three pairs of curves as it takes more than a single curve to paint a complete picture. MTF charts differentiate between the contrast of patterns in different orientations – sagittal patterns of lines running from the center towards the edges and tangential patterns of lines running perpendicular. The MTF curve for sagittal patterns is generally represented by a solid line, the curve for tangential patterns by a dashed line.

Corresponding curves for tangential and sagittal patterns should be as close as possible or at least run in parallel. MTF curves are also measured for different spatial frequencies: patterns of fine lines have a high spatial frequency, whereas the spatial frequency of patterns of thick lines is low. The contrast of high frequency patterns correlates to the ability of resolving fine detail, the contrast of low frequency patterns to the overall contrast in the image. Generally, high contrast across all spatial frequencies is desirable, but some loss in high frequency contrast towards the edges is acceptable as long as low frequency contrast stays high. Soft-focus lenses with their deliberately undercorrected spherical aberrations exhibit reduced contrast for low spatial frequencies while retaining some contrast with high frequency detail. Stopping down reduces some aberrations and improves contrast by cutting out peripheral rays, so an analysis of lens performance needs to take the aperture into account. Typically, MTF measurements will be made with the aperture fully open and after stopping down to the optimum aperture for the intended use.

When comparing lenses from different camera systems, the f-numbers should be equivalent – that is, resulting in the same depth of field – rather than identical. Lenses for medium-format cameras have to be stopped down by one f-stop if they are to be compared to 35 mm lenses.

MTF charts show how the contrast changes from the center to the corners of the image, i.e. the radius of the image circle. For 35 mm cameras, the radius is 21.6 mm while medium-format cameras have larger image circles. For purposes of comparison, the distance from the image center shouldn’t be measured in mm, but as a percentage of the radius. In our charts for the HC lenses, we have defined 30 mm as 100 percent.

Since the contrast of patterns of alternating black and white lines is taken as a measure of resolution, the spatial frequency of these patterns needs to be adapted to the sensor size as well. The spatial frequency is specified in line pairs per millimeter, referring to the image in the focal plane. The spatial frequencies need to be adjusted to account for the different image sizes. For medium-format cameras, 10, 20, and 40 line pairs per millimeter (lp/mm) are appropriate, the measurements at 40 lp/mm being indicative of the ability to resolve fine detail. Lenses from 35 mm cameras project smaller images onto a smaller sensor, requiring an about 50 percent higher magnification in order to reach the same print size, so the spatial frequencies used for comparison have to be raised by 50 percent as well, i.e. to 15, 30, and 60 lp/mm, respectively.
Ten categories of photography, ten master photographers from around the globe, ten impressive styles – and ten individual responses to a single question: What is passion? Be it man or beast, documentary or staged, the first ever Hasselblad Masters Book presents a number of outstanding photographs by the ten winners of the Hasselblad Masters Award 2008 which puts an extremely original spin on the “passion” theme.

The 2008 Hasselblad Masters Competition honoured these ten photographers out of more than 1,700 entrants: Julia Fullerton-Batten, Gregor Halenda, Morfi Jiménez Mercado, Andrey Kopac, Bronoek Kooza, Benji mon Antony Monn, Louie Palu, Hans Strand and Kevin Then. The ten winners were rewarded with a new challenge: each was invited to create a portfolio for an exclusive book using the theme “passion”.

“For our first Masters book,” explains Christian Poulsen, CEO of Hasselblad, “we selected the theme which was the driving force behind Victor Hasselblad and the company he founded, and continues to be what drives our enterprise today: passion. Whether it is being passionate about your art, your craft, your vision; or the world and people around you; without this powerful feeling it’s difficult to achieve one of the main goals in photography: to arouse emotion in others.”

The images, all captured with an H3D-II, demonstrate the many different ways “passion” can be interpreted. The “Hasselblad Masters Book 2008”, published last autumn by renowned publisher teNeues, is a stunning 250 page large-format coffee table book, handsomely bound. The book is a worthy frame for the fiery photographs of this year’s prize winners. Christian Nørgaard – Hasselblad Photographer Relations Manager and Director of the Hasselblad Master program, is delighted, “The photographs in this book express so many aspects of passion: a passion for art and innovation; for the people we meet every day; for our most personal thoughts and – most importantly – a passion for life and photography.” On the following 20 pages, the ten Hasselblad Masters reveal extremely different and original concepts of passion expressed through photography.

www.teneues.com
www.hasselblad.com
“There is a lot of passion in the diversity and uniqueness of contemporary architecture to be discovered – but you might have to look twice.”

German architectural photographer Benjamin Antony Monn, 29, wants to do more than just take pictures of buildings. He strives to extract the bare elements of an architectural style and so reveal the personal signature of the architect. How can passion be captured in architecture?

Monn started out by questioning his own understanding of architecture and then embarked on a quest for contemporary European buildings that inspired him. Benjamin Antony Monn studied their history, familiarized himself with existing photographs, and spent a lot of time in and around the buildings, discovering his own personal connection to them. He then sought to capture what he saw in an integral style, photographically exploring the structure and material, the interplay of light and shadow, the details. The overall impression is the main-spring of his creative endeavors: Making the essence visible – capturing “the soul of a building”.

www.benjaminmonn.com
www.candela-project.de
“I love Iceland – it’s my favorite subject at the moment – I put all of my passion into taking my aerial photographs of the country. The outcome is a joyful interplay of color and form.” Hans Strand, 52, sees himself as a photographer who specializes in passion – not as a scientific researcher specializing in photography. He loves exciting compositions of natural phenomena, of the wild and untamed. “Photography isn’t about capturing what you see, it’s about interpreting what you feel,” explains the Swede. Hans Strand finds great inspiration in the poetic, intimate photographs of other Scandinavian landscape photographers. He strives for extreme sharpness and a broad palette of natural color. Hans Strand likes to take his time when taking pictures – except when he’s shooting from above. When speed and precision is essential. “Up in the air you have to lead the pilot to the perfect form – otherwise, you won’t get a single good shot.”

www.hansstrand.com
“For me, passion stands for strong feelings, desires and ambitions. It’s about the most profound and primordial emotions.” August Bradley is not turned on by the flowery aspects of passion – he’s into darkness: like obsession and frustrated desire. The American photographer tends towards the baser feelings of aloofness, isolation and jealousy. “I wanted to focus on those emotions which feel real and immediate but also have the odd, surreal quality of images that exist in our minds,” Bradley explains. In his photographs, all notions of time come to a standstill. The elusiveness, stylization and minimalism of the images disorient the viewer who often fails to grasp the when, how and where of the setting. We are instead mesmerized by the characters and their bizarre, timeless surroundings and find ourselves repeatedly drawn into their twisted states of feeling. “Because photography can freeze time, you can look at an event unfolding and see the emotions beneath the surface.”

www.augustbradley.com
“The will to survive is the ultimate force in the universe. This passion is incessantly being lived out in the animal kingdom. Humans, on the other hand, have largely withdrawn from this everyday battle.” Nonetheless, Bremen-born English photographer Julia Fullerton-Batten, 38, is convinced that basic animal instincts still exist within human beings: a passion lurking under the surface. To illustrate her assumption, the fine-art photographer placed young models in a forest wearing animal heads – as modern symbol-laden tableaux vivants. The heads of chasing and hunted animals blend seamlessly with the human body, just as lustful instincts appear to blend effortlessly with the more sublime aspects of human nature. Julia Fullerton-Batten’s combined use of day and studio lighting gives her compositions a theatrical character – like frozen scenes at the end of an act; a brief flash, and the battle goes on.

www.juliafullerton-batten.com
“Passion inspires everything; it connects us with what we love most and enables us to do things that would seem difficult, or even impossible under other conditions.” Peruvian portrait photographer Morfi Jiménez Mercado, 32, has a passion for his people. This inspired him to photograph the rural lives of Peruvian highlanders living in the Andes province of Cuzco. For a week he travelled the tiny cities and remote villages located high up at 11,500 to 13,000 feet. Morfi Jiménez Mercado’s photographic manipulations remove everyday scenes from their hard, bleak reality. His skilful use of artificial and natural light, together with subsequent image colorization – his preferred tones are gold, green and brown – elevates the commonplace to the timeless. Looking at the unique interplay of bright and dark, and the unusual color palette of his images, it comes as no surprise that photographer Morfi Jiménez Mercado is a great admirer of renaissance painters such as Leonardo da Vinci, El Greco and Rembrandt.

www.morfijimenezmercado.com
“Passion is whatever we need to live, love, survive and reach our goals.” This is what Canadian photographer Louie Palu, 42, came to understand when he sparked up a conversation with a homeless person when he was trying out his H3DII. Towards the end of their two-hour conversation, the homeless man explained that passion was what humanity demands. “That’s when I realized that my project could be a vehicle to tell a story about something that is relevant for cities around the world: homelessness,” explains Louie Palu. He spent weeks meandering the streets of Washington DC: Union Station, Pennsylvania Avenue, K Street, Watergate, Dupont Circle. In the tradition of the Photo League, and inspired by street photographer Ben Shahn, he documented what he saw in no-frills black & white. Although he occasionally shows abstract shapes and structures, his compact excerpts of reality effortlessly assemble a striking portrait of homelessness. In doing so, Louie Palu shifts homeless people from the fringes of society to center stage.

“I’d prefer it if the discussion were about them, not me.”

www.louiepalu.com
“Those who believe are envied and mocked, praised and decried. Faith is both liberating and restricting; it offers enlightenment and switches off rationality. At the heart of it – this can’t be denied – we have passion.”

Upon hearing about the “passion” theme, the Catholic-raised photographer Broniek Kozka, 38, immediately thought of Christ’s tale of woe. The Australian photographer with Polish roots chose to interpret twelve Stations of the Cross – from Jesus’s conviction to his death – in monumental, solemn photographs where he blends harsh light with heavy shadow and contrasts sharpness with blur. Kozka reveals that passion is intertwined with pain and that mankind’s pain remains a universal subject. But to Kozka, passion is also the courage to stand for something: his photographs are moving and bound to provoke discussion. “Since traditional religious symbols are considered politically incorrect these days,” says Kozka, “their symbolic power – and their potential positive and negative contributions to faith in human existence – remains unexplored. In creating these images, I encounter faith and its results.”

www.kozka.com
“In photography, everything revolves around a passion for collaboration. Only when everyone is passionate about their role – and believes that outstanding images are being created – can a great picture, full of passion, be born.” Wedding Photographer Kevin Then, 30, insists that not only does the make-up artist, stylist and light technician function together perfectly, but also the bride and groom. It takes teamwork if you want to capture emotions in images. But since “love” is not only about flowers, the Malaysian photographer insists that the photos include all the stages of a passionate relationship: emerging intimacy, first conflicts, ensuing solutions, melancholic moments and matrimonial love rituals. Kevin Then is passionate about fusing once-in-a-lifetime moments into staged scenarios and working them into delightfully artistic images. It makes sense that he came to photography through his wife: while photographing her highly pregnant, he was so moved by the beauty of the photographs that he has been infatuated with photography ever since.

www.kevinthen.com
“Passion is about finding the beauty in the everyday.” The American photographer Gregor Halenda, 42, has a knack for finding the beauty in diverse products like perfume vials, spilled nail polish, raw meat, spoons, sunglasses, headphones – and of course, motorbikes. His passion for motorbikes was staged skillfully on location in a high-speed shoot. The still life specialist demonstrates that he is also at home outside the studio and comfortable with models. Gregor Halenda started out as a photojournalist in his small mountain-ringed home town of Westcliffe, Colorado. He landed his first title story on the local newspaper at the tender age of twelve with images of rodeo bull riders in action. During his time at Gregory Heisler in New York, he learned the most important part of commercial photography: creative problem solving and technical precision. Gregor Halenda demonstrates full mastery of his craft in the artistic still lifes of his “passion” spread. He arranged tools and fruits with some beautifully abstract results – mysterious images not created in Photoshop but, rather, using his “bare” camera. Gregor Halenda’s goal was to develop a technique that looks beyond this world while maintaining tradition. “It was a lot of work and quite painstaking, but I think it was really worth all the trouble.”

www.gregorhalenda.com
“Passion is admired as a secretive and inspired condition, and as the driving force behind creativity. But it can also be a source of folly, leading people to overreact or succumb to self-destructive tendencies.”

From day one, Andrej Kopac, 40, was enthralled by the ambiguity of the theme passion and decided, following in the footsteps of the ancient Greek stoic philosophers, to interpret it as something negative. That’s why jealousy, greed, fear, worry, and shame are in the center of his photographic work. In order to stage such sinister feelings, Andrej Kopac sets up his fashion shoots at unusual places: at a cosmetic surgery, in a posh French restaurant and in the cemetery. The Canadian photographer, who has a Masters Degree in art history, doesn’t just want to show fashion: he aims to draw observers into his work – and lead them into the moods of his subjects to inspire them to reflect on their own feelings.

www.andrejkopac.com
NEXT VICTOR ONLINE: 1 MAY 2009

Be surprised by inspiring portfolios, keep up-to-date with the most significant photographic trends, read in-depth articles on technical developments. On May 1st, 2009, check your monitor for the next issue of VICTOR online.

MULTI-SHOT IMAGES

>> higher resolution, improved color, and natural picture effects

DAVID LYNCH

>> the captivating photographic worlds of the cult director

MICHAEL MEYERSFELD

>> the South African fine arts photographer conjures up expressive portraits

IMPRINT

VICTOR online | 4/2009
www.victorbyhasselblad.com
info@victorbyhasselblad.com

Publisher:
Stephan Bittner, Center of Service GmbH
Publishing House/Advertising:
Center of Service GmbH
Hammerbrookstr. 93
20097 Hamburg, Germany
Tel: +49 40 25 40 48 69 (Fax: -40)
E-mail: info@centerofservice.com

Photographer Relations
Manager Hasselblad: Christian Nørgaard
Christian.Norgaard@Hasselblad.dk

Realization: IDC Corporate Publishing GmbH, Hamburg, Germany
All articles and illustrations contained in the online magazine are subject to the laws of copyright. Any form of utilisation beyond the narrow limits imposed by the laws of copyright and without the expressed permis-

ION

VICTOR online | 4/2009
www.victorbyhasselblad.com
info@victorbyhasselblad.com

Publisher:
Stephan Bittner, Center of Service GmbH
Publishing House/Advertising:
Center of Service GmbH
Hammerbrookstr. 93
20097 Hamburg, Germany
Tel: +49 40 25 40 48 69 (Fax: -40)
E-mail: info@centerofservice.com

Photographer Relations
Manager Hasselblad: Christian Nørgaard
Christian.Norgaard@Hasselblad.dk

Realization: IDC Corporate Publishing GmbH, Hamburg, Germany
All articles and illustrations contained in the online magazine are subject to the laws of copyright. Any form of utilisation beyond the narrow limits imposed by the laws of copyright and without the expressed permis-

ION

VICTOR online | 4/2009
www.victorbyhasselblad.com
info@victorbyhasselblad.com

Publisher:
Stephan Bittner, Center of Service GmbH
Publishing House/Advertising:
Center of Service GmbH
Hammerbrookstr. 93
20097 Hamburg, Germany
Tel: +49 40 25 40 48 69 (Fax: -40)
E-mail: info@centerofservice.com

Photographer Relations
Manager Hasselblad: Christian Nørgaard
Christian.Norgaard@Hasselblad.dk

Realization: IDC Corporate Publishing GmbH, Hamburg, Germany
All articles and illustrations contained in the online magazine are subject to the laws of copyright. Any form of utilisation beyond the narrow limits imposed by the laws of copyright and without the expressed permis-

ION

VICTOR online | 4/2009
www.victorbyhasselblad.com
info@victorbyhasselblad.com

Publisher:
Stephan Bittner, Center of Service GmbH
Publishing House/Advertising:
Center of Service GmbH
Hammerbrookstr. 93
20097 Hamburg, Germany
Tel: +49 40 25 40 48 69 (Fax: -40)
E-mail: info@centerofservice.com

Photographer Relations
Manager Hasselblad: Christian Nørgaard
Christian.Norgaard@Hasselblad.dk

Realization: IDC Corporate Publishing GmbH, Hamburg, Germany
All articles and illustrations contained in the online magazine are subject to the laws of copyright. Any form of utilisation beyond the narrow limits imposed by the laws of copyright and without the expressed permis-

ION

VICTOR online | 4/2009
www.victorbyhasselblad.com
info@victorbyhasselblad.com

Publisher:
Stephan Bittner, Center of Service GmbH
Publishing House/Advertising:
Center of Service GmbH
Hammerbrookstr. 93
20097 Hamburg, Germany
Tel: +49 40 25 40 48 69 (Fax: -40)
E-mail: info@centerofservice.com

Photographer Relations
Manager Hasselblad: Christian Nørgaard
Christian.Norgaard@Hasselblad.dk

Realization: IDC Corporate Publishing GmbH, Hamburg, Germany
All articles and illustrations contained in the online magazine are subject to the laws of copyright. Any form of utilisation beyond the narrow limits imposed by the laws of copyright and without the expres
Boasting sensors twice the size of most 35mm digital solutions and a range of unrivalled professional features and finesses, it's no wonder that the Hasselblad H3DII line of cameras are hailed as the most advanced and most complete professional camera system on the market today.

And the price of shooting with a Hasselblad system is now a lot lower than you might have thought. In fact, for a little more than high-end 35mm solutions and much less than many competing medium format solutions, all the benefits of the Hasselblad system can be yours.

The Hasselblad H3DII-31 (at only €11,995 for camera, viewfinder, and 80mm lens) provides an accessible entry into the Hasselblad system, without sacrificing the benefits of our larger models. Or if its more megapixels you need, the H3DII-39, at a new low price of €14,995 (at only €14,995 for camera, viewfinder, and 80mm lens), makes high-end shooting more affordable than ever before.

IF YOU THOUGHT YOU COULDN’T AFFORD A HASSELBLAD – THINK AGAIN.

www.hasselblad.com/31-39
LEADING GALLERY-QUALITY BLACK-AND-WHITE AND COLOR PRINTS, EASE OF USE, AND BUILT-IN CALIBRATION AND PROFILING.

Utilize a wide color gamut with 12 HP Vivera pigment inks, including a new HP 73 Chromatic Red ink, HP Quad-black ink set, and HP Gloss Enhancer. HP DreamColor Technologies—with embedded spectrophotometer and enhanced HP Color Center—enable easy calibration and profiling for accurate, consistent color and the creation and sharing of paper presets. Experience efficient operation and great ink efficiency.

Discover a world of applications with a wide variety of HP Printing Materials such as HP Canvases, Photo, and Fine Art. Make your images stand out with the HP Designjet Z3200 Photo Printer and the new HP Baryte Satin Art Paper, HP Matte Litho-realistc Paper, or HP Premium Matte Photo Paper.

To purchase, or for more information about HP Designjet Z3200 Photo Printer, please visit www.hp.com/go/z3200/en

© Copyright 2008 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. HP shall not be liable for technical or editorial errors contained herein.