Large-Format Camera Bodies for Medium Format Digital Backs

at Photokina 2010

Nicholas Hellmuth
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Included here are primarily cameras that were exhibited at Photokina 2010.

### Architectural cameras with no rise or fall

<table>
<thead>
<tr>
<th>Camera Model</th>
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<tr>
<td>Cambo W Compact Digital</td>
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### Architectural cameras with rise and fall but no tilt and swing

<table>
<thead>
<tr>
<th>Camera Model</th>
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<tbody>
<tr>
<td>Alpa 12 TC</td>
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<tr>
<td>Alpa 12 WA</td>
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<tr>
<td>Alpa 12 SWA</td>
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<td>Alpa 12 XY</td>
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<tr>
<td>Arca-Swiss Rm2d</td>
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<tr>
<td>Arca-Swiss Rm3di</td>
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<tr>
<td>Cambo Wide RS Digital</td>
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<td>Cambo Wide DS Digital</td>
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<tr>
<td>Linhof TECHNO</td>
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- Lateral and vertical shift on rear plane.
- Rise fall front lens panel
- Lateral shift rear standard

### Special-format cameras with rise and fall plus tilt and swing

- Silvestri Bicam II, with bellows
- Silvestri Flexicam
- Sinar arTec

### Mid-sized 4x5 cameras sized to handle medium format digital backs (not 4x5”)

<table>
<thead>
<tr>
<th>Camera Model</th>
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<tbody>
<tr>
<td>Arca-Swiss 6x9 F-Classic Compact</td>
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<tr>
<td>Arca-Swiss F-metric 6x9</td>
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<tr>
<td>Cambo Ultima 23</td>
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<tr>
<td>Linhof 679cc</td>
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<tr>
<td>Rollei X-Act2</td>
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<tr>
<td>Silvestri S5 micron</td>
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<tr>
<td>Sinar f3 SL</td>
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<td>Sinar ps / ps SL</td>
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- Similar in size and shape to the Rollei X-Act2
- Full-size studio camera controls, a bit bulky for outdoors

In this final category (downsized 4x5 cameras) there are many more brands but not all were exhibited at Photokina. Most conspicuous by their absence were Japanese cameras such as Horseman. I was told that the owner of Horseman died recently.

Although plenty of people around the world are still using 4x5 film, not enough are to warrant all the brands that existed a decade ago. Since Kodak is not making as many large-format tri-linear scanner chips, and since nowadays 1-shot medium format does such a good job, not many large format tri-linear scanning backs are still being sold.
Alpa

This company wants to set itself far apart from the rest of medium format cameras. Almost all digital backs available in the market can be fitted to their cameras. I saw a couple of models at their booth and one thing that stands out immediately is that all their models are built symmetrically. You can switch the lens position to the digital back position end and it will match perfectly. The Rodenstock and Schneider lenses have custom made mounts to fit all their models.

Alpa is one of the great cameras available today, but at Swiss prices. And for focusing you need an laser-like system. I would want to try helical focusing out in the field to see how it functions when under the stress and hectic of a real photo shoot out in a Guatemalan rain forest or standing shoulder deep in a flooding swamp (to photograph water lilies).

Alpa cameras are manufactured by their Swiss neighbor, Seitz. I have been to the Seitz factory a decade ago. Very impressive.
Arca-Swiss F-metric 6x9 and Rm3di

At Photokina 2002 Arca-Swiss introduced a medium format field camera but no brochure was available. Arca-Swiss has not previously had a web site either.

The main feature of their new camera was its portability. This is definitely made for transportability and use outside on location. Unfortunately that led to compromises. When I got out on location, yes, my shoulders ache from carrying a heavy camera, but I actually take a Sinar X or Cambo Ultima (which I have found to be as good if not better than the Sinar). I also have a Linhof Technikardan, but the Cambo is better in all respects because the Linhof has an L-shaped structure, so one side sags under the weight of a digital back… in other words, the Cambo is worth the extra weight.

At PhotoPlus a month later it was possible to see the baby Arca-Swiss in more detail. Frankly the Linhof M 679cc and Rollei X-act2 both looked more versatile.

This is the first Arca-Swiss product that did not excite me. Indeed this is the difference between FLAAR and other reviewers of cameras. Some other reviews are sham reviews, pseudo reviews, or review only one or two favorite brands. And they almost never detail what is uninspiring about their favorite band of camera.

In distinction, FLAAR is read more often, and used as a buyer’s guide, precisely because we are not a PR agency! We do not sell cameras: we provide information!

F-metric and M-line (monolith) are the two traditional series of models from Arca-Swiss. Then came their Misura model. Then came the current R-series.

The Misura is sort of an exercise in camera design. Like their newer tripod heads, made by an engineer for the sheer joy of doing engineering. But the average photographer does not need a tripod head such as these. The Misura ($4,395 street price) is still in the era of 4x5 cameras, so a tad overly large for medium format (though so much better than an old-fashioned full-sized 4x5 “museum piece”).

Arca-Swiss and Alpa both have in common that you will need to know the exact distance of your subject or have a laser measuring device to know it, because you will not be able to focus on the camera. They say that if you are an expert then you don’t need see to focus. Also the Arca-Swiss cameras can be used with most of the digital backs available.
The Arca-Swiss Rm3di is the latest of competitors to an Alpa camera (Alpa are made by Seitz, also a Swiss company). Other competition (at lower price) would be the various Cambo architectural cameras.

The Arca-Swiss Rm2d is a smaller version of the newer multi-faceted Rm3di.

Arca-Swiss offers great cameras. The Arca-Swiss Rm3di would be great to evaluate for architectural photography. And the Arca-Swiss F-metric 6x9 would be an able competitor against the Linhof M 679cs and Rollei X-Act2 but we gave up trying to obtain one for review, so at Photokina 2010 I did not even ask. Silvestri provided a camera for review within three weeks after Photokina so this is the camera we will start with.

Cambo

Cambo has been helpful and understanding in providing cameras to FLAAR for evaluation. So we have written FLAAR Reports on the Cambo Ultima (using it with Better Light tri-linear scanner backs), and on their sliding back adapter (using it with medium format Phase One P25+.

Cambo offers precision engineering yet at reasonable prices. I have been using a Cambo Ultima for many years, and now their sliding back adapter. I am content with this equipment.
Cambo also offers three cameras for architectural photography: no tilts or swings: pure flat (which has the great advantage that the camera will never get out of swing! The lens is always parallel to the sensor chip).

Cambo Wide DS
Cambo Wide RS
Cambo Wide

The Cambo Wide DS is definitely the one I would be the most interested in.
Linhof

At Photokina the Linhof M 679cc has been exhibited for years. The current model is the Linhof M 678cs. I considered this the industry standard in terms of having been around the longest and in having full-tilts, swings, shifts, etc. Very impressive looking camera, however I have never had the pleasure of using one. Actually looks more precise than the L-shaped supported Linhof Technikardan 4x5 and the L-shaped supported grand studio 8x10 Linhof Kardan GTL which I still own (but have not used in many years).

But any 6x9 cm camera will still be relatively large and correspondingly heavy. So each manufacturer has seen the market move to needs for more lightweight solutions. So at least by Photokina 2008 Linhof exhibited their TECHNO. This has rise and fall, with bellows, on the front standard, but not the rear (this saves space and weight).

In a way it is sad that so many 6x9 systems are still being made when roll-film backs are as dead or at least dying as are all other kinds of film. We need to move forward. It should either be 7x9 (to hold a tri-linear scanner back), or down to 6x6 to hold a medium format back. It is time to move forward into the future and forget about 6x9 format.

Of course medium format sensors are not full 6x6, yet, but we can always hope. But they won’t be 6x9 for the foreseeable future.

The Linhof TECHNO, as well as the Linhof M 678cs are definitely cameras I would be interested in evaluating. However the almost EIGHT-thousand dollar price of the TECHNO is a slight stumbling block.

Nicholas Hellmuth reviewing the Linhof cameras presented at Photokina 2010.
Linhof cameras presented at Photokina 2010.

Linhof camera suitcase presented at Photokina 2010.
Rollei Xact, Franke & Heidecke Hy6 (DHW Fototechnik GmbH)

There were two totally different and unrelated booths for Rollei cameras at Photokina 2010: first was the booth of a company that bought the rights to the brand name Rollei many years ago. They had an exhibit of the remarkable history of the Rollei camera, ending in the year that the brand name was sold to a company in Asia (I assume originally in Japan). This company now makes tiny point-and-shoot cameras in Asia.

Then there was a second booth, across the aisle from the Linhof booth. This second booth was labeled DHW Fototechnik GmbH but displayed primarily if not exclusively the Franke & Heidecke Hy6 digital camera and the remarkable lenses made by Schneider for this impressive medium format camera. I cover the Hy6 camera in a separate report.

At Photokina 2002, Rollei offered their two X-Act medium format camera models to hold digital backs, X-Act1 and X-Act2. Both of these are what Hasselblad should have come out with instead of their inadequate Hasselblad FlexBody and ArcBody. Either of the two Rollei X-Act models is better in every respect from either of the Hasselblad attempts in those past years.

Of the two Rollei cameras, the X-Act2 is the model we recommended for maximum flexibility. The X-Act1 was not as exciting, and did not last long as a model either. Indeed in recent catalogs only the X-Act2 is featured.

I was so interested in the Rolleiflex Hy6 that I did not look to see if the Rollei X-Act2 was still being exhibited in the DHW Fototechnik GmbH booth at Photokina.

The X-Act2 has a sliding adapter to hold medium format digital backs. The Rollei catalog does not reveal whether it has capability for stitching adjacent shots, but another catalog shows a "Pan-Shot" accessory.

The original Rollei, and their descendant company, Franke & Heidecke, designed and engineered the best medium format cameras every created. But it was a Hasselblad that was used in the movie Blow-Up, and it was a Hasselblad that went to the Moon. The rest is history: everyone wanted to show off a Hasselblad! Yet there were many features on the Rollei 6008 and 6008 AF which were better. There were several features on the Fuji GS-690III which were outstanding as well: but that line of cameras never made the big-time as did Hasselblad. As a footnote, it is of course Fujifilm who manufacturers the Hasselblad digital cameras today; Imacon-Hasselblad makes the digital backs.

I have never tested the Rollei X-Act2, the full name is X-act2 System 6000. What is notable is that you can attach a Canon EOS, Nikon, Leica R, Leicaflex, Minolta, Olympus, Pentax or other 35mm SLR cameras to the Rollei X-Act2 with a T2 adapter. With most other 6x9 type of cameras you need a dedicated system for a 35mm attachment.

I am trying to ascertain whether the Rollei X-Act2 is still available from DHW Fototechnik GmbH as this is definitely a camera I would be interested in evaluating for the FLAAR Reports.
Silvestri, Hall 2.1, B 38

The Silvestri Flexicam has a remarkable number of features packed into a compact portable format (in other words, ideal for shooting out on location).

- Bellows, which allows tilt, swing, rise, fall, and more importantly, focus without needing to use a helical focus mount (which are nerve wracking if your vision is now flawless).
- Silvestri Actuator for accepting Hasselblad Zeiss lenses from decades past.
- Adapter ring for Hasselblad Zeiss lenses 50mm, 80mm normal, 120mm macro (these lenses are vintage 1975-1980 and still work perfectly)
- 6x6 Sliding back adapter is almost a necessity with use of medium-format digital back
- F108, Interface to hold Phase One P25+ back for Hasselblad V
- F110, Interface to hold Hasselblad digital back for Hasselblad H
- F109, Interface to hold Leaf Aptus II back, which I assume is for Mamiya AFD (PhaseOne)
- F140 Easy Bellows or comparable bellows viewer (the one shown on the sliding back adapter in the brochure looks fine).
- T2 attachment to allow use of a Canon camera (we have Canon EOS 1Ds Mark III)

The Silvestri Bicam II comes from the heritage of the years when film still was popular. But systems of this precision can still be used with digital backs today. By adding a bellows you add tilt, shift, and swing. It also accepts the Silvestri Actuator for Hasselblad V lenses. Plus you can use a sliding back adapter with stitching ability. However there is no space for stitching option on the Flexicam; but you can use any good pano tripod head adapter, such as that of Novoflex, to do two or more adjacent shots.

Another benefit of working with Silvestri is that the owner himself is a professional photographer. So, for example, he recognizes the need to have a bellows compendium. A few weeks after Photokina I visited the Silvestri world headquarters outside Firenze (Florence, Italy) and also saw their new bellows system: very worth looking at. The Silvestri S5 micron is comparable to the Rollei X-Act2 and the Sinar f3 SL.

If you wish to contact Silvestri camera manufacturer, their e-mail is info@silvestricamera.com; telephone is +39 0571 675 049.

Silvestri S5 micron, Hall 2.1, Booth B 38
Large-Format Bodies for Medium-Format Digital Backs

PHOTOKINA 2010

Silvestri booth at Photokina 2008.

Sinar

A decade ago Sinar was the king of high-quality 4x5 and 8x10 film cameras. But with the collapse of these markets (as digital replaced film), and with other capable brands already occupying the medium-format area, Sinar had a rough transition. I can still remember when Sinar was pushing their full-size 4x5 system for holding a medium-format back. To hold a medium format back, there is no need to have a camera that large, not even in the studio.

Today Sinar is a more practically oriented camera company, but it’s remarkable that they have survived at all (in the face of competition from more agile Arca-Swiss and Cambo). Even Linhof was a tad faster to adjust to reality than Sinar.

One downside of Sinar cameras is that all their accessories are expensive, plus their adaptations of Rodenstock lenses probably cost more than the equivalent generic Rodenstock lens. All this was okay in the past, but today we are in the year 2010, and things are not the same as before (with pricing).

The Sinar arTec is a nice looking camera, and evidently is the work of collaboration with a photographer who specializes in architecture. But I would need to test it in-person to see if it has all the features I need for architectural history photography plus photography of Maya pyramids, temples, and palaces. I have been photographing architecture since even before studying architecture at Harvard decades ago. In our family someone in each generation was an architect, so it was kind of expected.

There are thousands of HOK designed buildings (the H = Hellmuth), so you can understand why I am interested in evaluating which architectural camera is most practical for which applications (since there are two kinds of cameras available for architecture:
- the totally parallel-to-film-plane (to CCD sensor plane);
- and the cameras with tilt and swing.

Since Cambo and Silvestri each provided a camera for evaluation quickly, so these are the brands we are evaluating presently. But as soon as a Sinar arTec would be available we would consider comparing this with the other brands.

Unfortunately, the person I knew at Sinar in America, R. Jack Ridley, has moved, so I do not know well any of the current Sinar (BronImaging Group) managers or executives.
Conspicuous by their absence from Photokina 2010

**Horseman** did not exhibit, at least not under their own name. At Photokina 2002 Horseman offered their X-Act-D. The name and features seemed to be almost the same as of the Rollei product. The Horseman version offered a sliding back. I did not see this either at Photokina or PhotoPlus but most likely it was indeed present. Horseman was distributed in the USA by Schneider Optics during these early years.

I did not notice a booth for **Toyo** either. If they were present at Photokina 2010, they were well hidden.

I did not notice any booth for **Plaubel**. I did see one of their cameras in a booth somewhere, but they did not have much of a presence.

**Gottchalt** Kameramanufactur has not been at Photokina since perhaps 2002; definitely not since 2006 that I can remember.

**Wisner** has been at some Photokina shows in the booth of others, but not recently. They had only a full-sized 4x5, never a reduced size model for medium format. Wooden cameras, like wooden tripods, are cute, but not necessarily the most capable when compared with cameras machined from metal.

Discussion

The Sinar f3 SL, Rollei X-Act2, and Linhof M 679cc/Linhof M 679cs are all similar to each other. These were made to hold medium-format digital backs. The Silvestri S5 micron is a similar concept but has a unique structure and innovative arrangement.

Rollei never really went into large-format, so their Rollei X-Act2 is the only reduced format camera that is not a special version of a previously 4x5 sized camera.

The Cambo Ultima 23, Sinar ps / ps SL and others are simply ossified 4x5 cameras with slightly reduced size standards. These are small versions of old-fashioned studio cameras, and nowhere near as nearly portable as the Sinar f3 SL, Rollei X-Act2, Linhof M 679cs, and Silvestri S5.

Essentially you can opt for cameras with only rise and fall: Alpa, Arca-Swiss, Cambo, Linhof TECHNO. Or you can opt for cameras that also provide tilt and swing at least up front: Silvestri Flexicam, Sinar arTec.
Ideally I would like to evaluate at least two cameras of each class. I already have a sliding back adapter (with stitch) from Cambo (but for the giant full-sized Cambo Ultima). I really like the Cambo Ultima and we have used it out on location in remote areas all around Guatemala, but it takes too much space in the vehicle, too much space in the boat, and is too heavy to carry in a backpack! This is not the fault of Cambo: this excellent 4x5 camera is made full sized for the studio, not for a backpack. So I need a more portable solution for working in remote jungle areas of Guatemala.
This is the purpose of visiting Photokina, and the reason I am evaluating all the cameras. I am beginning the evaluation with a Silvestri Flexicam. I like this because it accepts Hasselblad Zeiss lenses as well as of course Schneider and Rodenstock.

So I went to visit the Silvestri offices outside Firenze (Florence, Italy) and the Silvestri Flexicam will be sent to our offices in Guatemala so we can begin the evaluation.

*Here I am with Vincenzo Silvestri; photo by Silvia Silvestri.*
These are the FLAAR Reports that are being issued first.

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- **Large Format Digital Camera Bodies**
  - SUGAR CANE BAGASSE, JUTE, BAMBOO, ORGANIC COTTON & SILK
  - Canon iPF, HP Designjet Z and Epson Stylus Pro to hold Medium Format Digital Backs
- **Macro Photography & Stacked Focus**
- **Medium Format Digital Cameras**
  - at Photokina 2010
- **Are Large Format Digital Cameras still meaningful?**
  - Large Format Cameras & Lenses at Photokina 2010
- **Beyond Photoshop Software for Digital Photography**
- **Black & White Fine Art Photography**
  - Which Cameras? Which Software?
- **Flash & Portable Strobe**
  - for use in remote areas far from your studio
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  - at Photokina 2010