Useful Accessories

Pro focusing rack
CASTEL XQ II

Fine adjustment handle
CASTFINE

Quick release unit
Q=MOUNT

L-Bracket
QPL-VERTIKAL

Information

For more information, advice and tips concerning our products contact your photo dealer, the distributor of NOVOFLEX products in your country (have a look at the "Where to buy" section at our website to find your distributor) or visit our website www.novoflex.com

For personal advice about possible accessories which is suitable for your NOVOFLEX product please contact the following phone number or send us an E-mail.

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NOVOFLEX

Universal bellows
BALPRO 1 and BALPRO T/S

USER MANUAL

NOVOFLEX

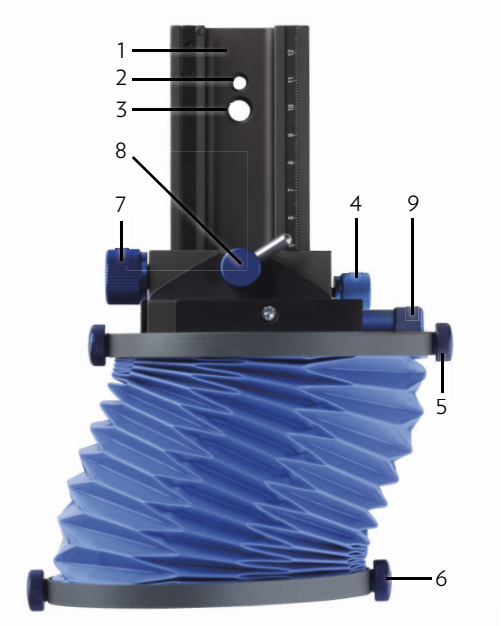
Nomenclature

BALPRO 1 and BALPRO T/S

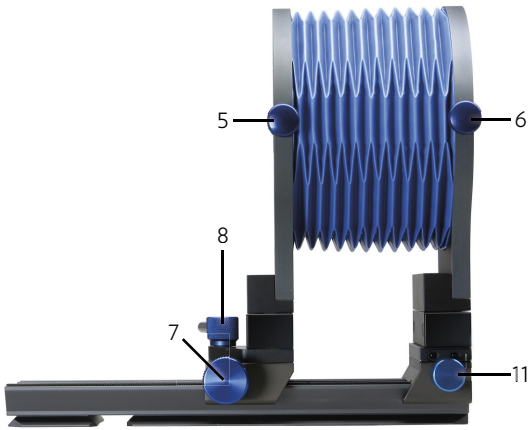
1	Dove tail rail
2	1/4"-20 thread
3	3/8"-16 thread
4	Locking knob - rail
5	Locking knob - lens adapter rings
6	Locking knob - camera adapter rings
7	Drive knob

BALPRO T/S only

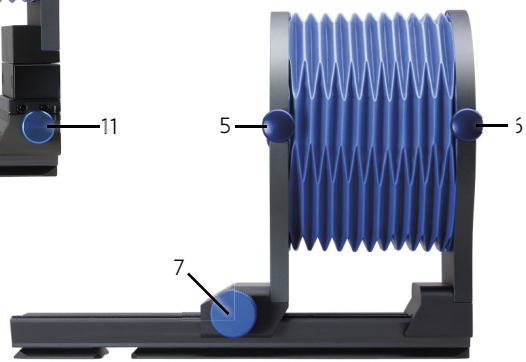
8	Locking knob TILT lens standard
9	SHIFT lens standard
10	SHIFT camera standard
11	Locking knob TILT camera standard



BALPRO T/S Top view



BALPRO T/S Side view



BALPRO 1 Side view

Manual lens	**| Adapter**
Canon EOS*:	| * (see below)
Canon FD:	| PROLEI and LEICAN
Contax/Yashica:	| PROLEI and LEICONT
C-Mount:	| PROLEI and LEICE
COPAL-0 flat:	| PROCOPAL-0F
COPAL-0 sunk:	| PROCOPAL-0
Hasselblad V:	| PROHA
Leica M39:	| PROLEI
Leica R:	| PROLEI and LEI-F
Leica M:	| PROLEI and LEI-M
M42x1:	| PROLEI and LEICO
Mamiya 645:	| PROMAM
MicroFourThirds:	| * (see below)
Mikroskop-Objektive:	| PROLEI and LEIMIK
Minolta MD/MC:	| PROLEI and LEIMIN
Nikon G**:	| PROLEI and LEINIK NT
Olympus OM:	| PROLEI and LEIOM
Pentax 67:	| PROPENT
Pentax K:	| PROLEI and LEIPENT
Sony Alpha / Minolta AF**:	| PROLEI and LEIMIN-AF NT
Sony E-Mount:	| * (see below)
Adapter for BALUNI- and CASTBAL T/S rings:	| UNIPRO
Shift-Adapter:	| PROshift+

* The following adapter combination converts any BALPRO-bellows into a full-fledged Canon EOS-automatic bellows:
EOS-RETRO | RETRO/PRO | PRO/RETRO

* into a full-fledged MFT-automatic bellows:
MFT-RETRO | RETRO/PRO | PRO/RETRO

* into a full-fledged Sony E-Mount-automatic bellows:
NEX-RETRO | RETRO/PRO | PRO/RETRO

Recommendation

NOVOFLEX offers the apochromatic and digitally corrected SCHNEIDER Apo-Digitar 4.5 / 90 mm (F) lens from Schneider Kreuznach, order code: PRO-APO-DIGI 90 optimized for the BALPRO bellows. The lens head comes premounted on the necessary lens board. No extra adapter is required. The lens head allows adjustment to infinity with all cameras. The setting for 35 mm cameras ranges from infinity to 1.4x enlargement.

NOVOFLEX Adapter rings

Camera	Adapter
CANON EOS*:	CANA-AF and APRO or PROshift+
CANON EOS M:	EOSM/A and APRO or PROshift+
CANON FD:	CANA and APRO or PROshift+
CANON EOS R:	EOSRA and APRO or PROshift+
CONTAX 645:	CONTPRO
CONTAX/YASHICA:	CONTA and APRO or PROshift+
FOURTHIRDS:	OMA-DIGI and APRO or PROshift+
FUJI G:	FUGPRO
FUJI X:	FUXA-K and APRO or PROshift+
HASSELBLAD V-SYSTEM:	HAPRO
HASSELBLAD X-SYSTEM:	HAXPRO
LEICA M (Live View):	LEMA-K and APRO or PROshift+
LEICA R:	LEA-R and APRO or PROshift+
LEICA S:	LESPRO
LEICA T/SL:	LETA and APRO or PROshift+
MAMIYA 645:	MAMPRO
MICROFOURTHIRDS:	MFTA and APRO or PROshift+
MINOLTA MD/MC:	MINA and APRO or PROshift+
NIKON 1:	NIK1A and APRO or PROshift+
NIKON F:	NIKA and APRO or PROshift+
NIKON Z:	NIKZA and APRO or PROshift+
OLYMPUS OM:	OMA and APRO or PROshift+
PENTAX K/SIGMA:	PENTA and APRO or PROshift+
PENTAX 645:	TAXPRO
PENTAX 67:	PENTPRO
PENTAX Q:	PENTQA and APRO or PROshift+
ROLLEI SL 35:	ROLA and APRO or PROshift+
ROLLEI SL 66:	ROLPRO
SAMSUNG NX:	NXA and APRO or PROshift+
SONY ALPHA/MINOLTA AF:	MINA-AF and APRO or PROshift+
SONY NEX/E-MOUNT:	NEXA-K and APRO or PROshift+

Fig. right:
PRO-APO-DIGI 90 with hood SON 40,5

BALPRO 1

The BALPRO 1 bellows is mounted between the camera and the lens to increase the distance to the sensor plane. This means the lens is moved closer to the object to be photographed with a larger image ratio.

At the same time the speed of the lens is significantly reduced. The BALPRO 1 does not transfer any automatic camera functions. Automatic transfer is supported only by Canon-EOS, MFT and Sony NEX in combination with the NOVOFLEX EOS-RETRO, MFT-RETRO and NEX-RETRO.

BALPRO 1 with NOVOFLEX EOS-RET-

BALPRO T/S

The special features of BALPRO T/S bellows allow the lens system to be both shifted and tilted. Converging lines (perspective) can be corrected by shifting the lens system from the center line. The depth of field can be changed (according to Scheimpflug) by tilting the lens system. The depth of field can be matched to the desired photographic plane. This can be used for creative purposes (working with selective sharpness) or to change the exposure/lens stop ratio. In fact, increasing the aperture (decreasing the f-stop and thus reducing the exposure time) is what makes some shots feasible in the first place. This type of image manipulation is otherwise only available with a more expensive and unwieldy whole-plate camera.

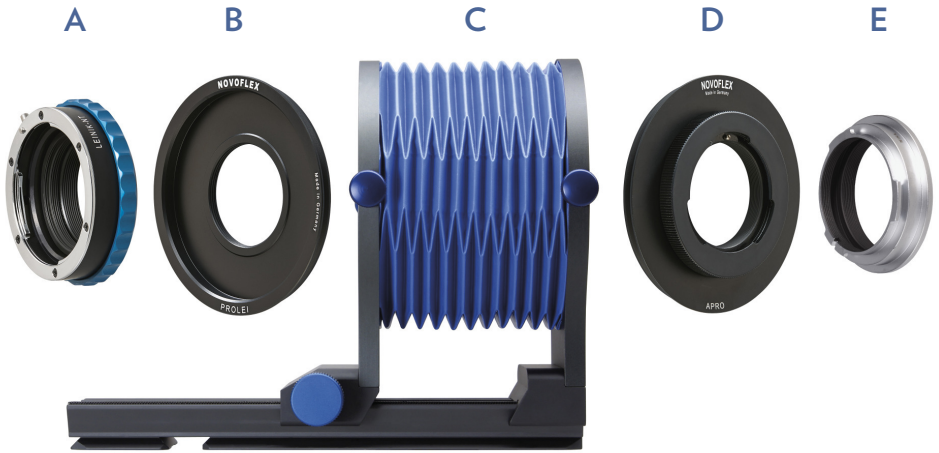
Application example BALPRO T/S

NOVOFLEX Adapter System

Thanks to a complete adapter ring system (see table page 5) almost every combination of different lenses and camera systems is possible. This allows you to combine not only most medium format lenses but also almost all mechanical 35mm lenses or special lenses with camera housings of any size up to 6x7 format.

Attach the matching adapters to the lens or the camera (screw thread or bayonet lock).

Now insert the adapter rings into the bellows and lock them with the locking knobs (5) on the lens standard and with the locking knobs (6) on the camera standard.



A: Lens adapter

B: Intermediate adapter for lens connection - M39 thread

C: Bellows

E: Camera adapter

D: Intermediate adapter for camera connection **APRO** or alternatively **PROshift+** (see left)

For some medium format cameras and digital backs direct connections are available too.

PROshift+

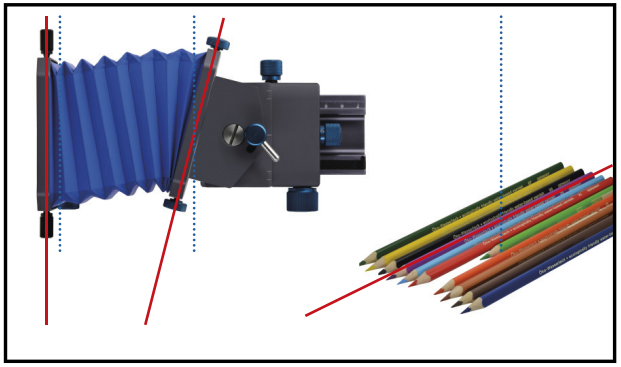
ATTENTION:

Check the tight fit of the adapters before connecting your camera/lens.

The Scheimpflug and Shift principles

In a rigid camera, the object plane, the lens plane (corresponds roughly to the front standard) and the sensor plane all lie parallel to each other.

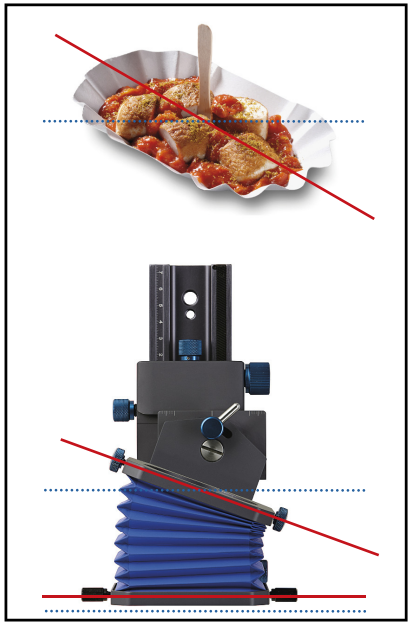
The Austrian officer and cartographer Theodor Scheimpflug in 1907 defined the optical law named after him, which states that the object plane can be inclined when the three planes meet at one point. For this purpose, it is therefore necessary that either the front- or the back standard of our bellows (or both) are to be pivoted against one another (TILT).



Bellows turned by 90°, pivoting downwards, focal plane tilts.

Parallel shift

Lateral pivoting (Tilt) to achieve a diagonal focal plane



The illustrations are not to scale and serve only to **clarify the principle**, shown here with our CASTBAL-T/S bellows.