Tip

As a supplement or highly modular alternative, we recommend the new NOVOFLEX Goniometer head QUBE. This device consists of several modules, whereby each module is used for only one rotation around the respective axis. The units can be combined in any order using the Q-coupling system.

Information

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

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

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Geared Head KOPF²

MANUAL

NOVOFLEX

Illustration shows product variant KOPF²-PRO Kit

Congratulations on your purchase of the KOPF², the compact, high-precision three-way geared head. Whilst you should have no difficulty in using your new geared head, you may find the following explanations useful.

Nomenclature

Quick release unit Q=MOUNT

1	3/8“-16 mount with 1/4“-20 adapter and 1/4“-20 mounting screw
2	Clamping screw Q=Mount
3	Safety pin on quick release unit to prevent the plate from slipping out
4	Anti-twist grub screw
5	Anti-twist video pin (also on PANORAMA II panning base)
6	Spirit level

Mounting brackets with joints for transverse and longitudinal axes*

7	ARCA-compatible dovetail profile
8	3/8“-16 mount with 1/4“-20 adapter and 1/4“-20 mounting screw (optionally)
9	Cutout for safety pin
10	Holes for the video pin of the Q=MOUNT quick release unit
11	Hole for the video pin of the panning base PANORAMA II
12	Clamping lever for rotation around the transverse or longitudinal axis
13	Fine adjustment screw for rotation around the transverse or longitudinal axis
14	Adjustable angle ring with 90° scale in both directions
15	Fine adjustment handle CAST-FINE-K (optionally accessory)

PANORAMA II panning base (BASIC-Kit)

16	Locking screw horizontal rotation around the vertical axis
17	Angle scale 0-360°

PANORAMA=Q II panning base as an alternative (PRO-Kit)

18	Integrated quick release unit type Q=MOUNT for ARCA profile
19	Clamping screw Q=Mount
20	Locking screw horizontal rotation around the vertical axis

*Which axis is used for rotation around the transverse axis (tilt) or longitudinal axis (turn) depends on the orientation of the upper quick release unit on the mounting bracket and the type of mounting of the coupling plate underneath your camera.

Reset previously defined angular positions or set defined angular distances

The joints of the transverse and longitudinal axes have adjustable angle rings (14) with 90° scales in both directions. This allows certain positions to be defined as zero positions, which can be revisited later or used as reference points for specific angular intervals, such as 90°.

Adjusting the angular position around the vertical axis (horizontal panning)

Open the blue locking screw at the bottom of the panning base (16 or 20). Pan the camera horizontally while looking through the viewfinder until the desired angle position is reached. Now close the blue locking screw again. The panning base has a marking line in the upper part and an angle scale (17) in the lower part, which are used to set certain angular positions reproducibly.

Technical Data

Product	Weight	Dimensions	Max. load	Setting range
KOPF²	0.935 kg 2.061 lb	103 x 121 x 110 mm 4.05 x 4.73 x 4.33“	5 kg 11 lb	120°/230°
KOPF²-BASIC-Kit	1.194 kg 2.632 lb	137 x 121 x 110 mm 5.39 x 4.73 x 4.33“	5 kg 11 lb	120°/230°/360°
KOPF²-PRO-Kit	1.273 Kg 2.806 lb	145 x 167 x 130 mm 5.71 x 4.73 x 4.33“	5 kg 11 lb	150°/210°/360°

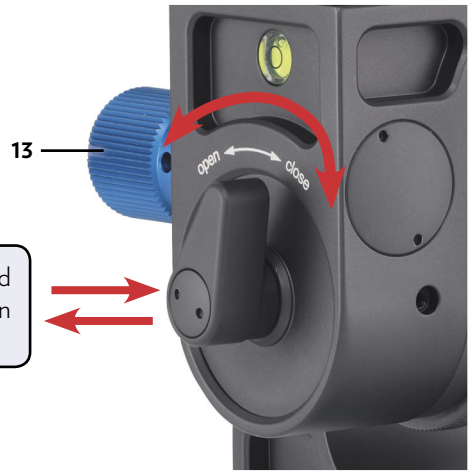
Warning: The KOPF² geared head is designed for use in a temperature range of **-10°C to +60°C / 14°F to 140°F**. When used outdoors, special attention must be paid to ensure that no moisture or snow can penetrate the interior, especially during sub-zero temperatures. This could result in damage.

Open the unit's clamping screw (2) and insert the camera clamping plate into the quick relase unit. Now close the clamping screw again and check that the camera is securely held in the coupling.

Adjusting the angular position around the transverse and longitudinal axes (tilt and turn)

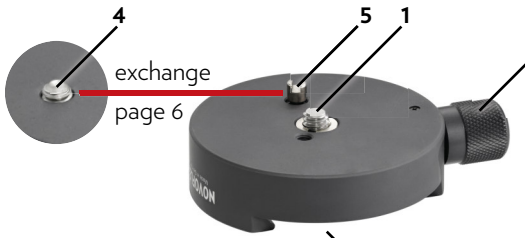
To roughly preset the angle around the respective axis, hold your camera with one hand and open the clamping lever for rotation (12) with the other hand in the direction of the "open" marking.

Set the desired angle and move the clamping lever in the "close" direction until it stops. Now you can release the camera and use the fine adjustment screw (13) next to it to make small, precise movements in both directions.

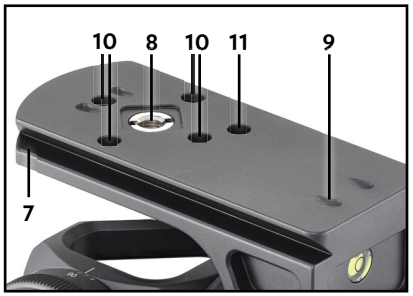


Tip: Both levers can be pulled outwards and twisted and then reinserted.

Tip: In order to bring the camera into a position exactly aligned with the horizon, use the upper spirit level (6) of the quick relase unit as a guide or, if available, use the electronic level of your camera. To assess a 90° tilted or turned position, use the spirit level for the respective axis.



For better illustration, the underside is also shown here



Quick release unit Q=MOUNT

PANORAMA II panning base

alternative

PANORAMA=Q II panning base

Product description

The KOPF² is a compact, high-precision three-way geared head that allows for independant adjustment of all three axes. It was specially developed for architectural, studio, macro, repro and astro photography. The camera can be panned horizontally, tilted up and down and turned sideways. Movements around the transverse and longitudinal axes (tilting and turning) can be carried out roughly using the clamping levers (12) and then finely using the adjusting screws (13). When the clamping lever is closed, the self-locking fine drive protects heavy camera structures from falling or sinking. By increasing the diameter of the fine adjustment screw using the fine adjustment handle CAST-FINE-K** (15), particularly small, precise angular movements can be achieved. For reproducible angular positions, the joints of the longitudinal and transverse axes each have an adjustable angle scale (14). With the help of the built-in spirit levels (6), these scales can be adjusted to e.g. 0° in order to move to this specific position later again or or set defined angular distances.

The upper and lower mounting brackets each have an ARCA-compatible dovetail profile (7), a 3/8"-16 threaded hole with 1/4"-20 adapter, a 1/4"-20 mounting screw (8), holes for video pins (10) for anti-twist installation and cutouts for safety pins (9).

The ARCA-compatible dovetail profile (7) allows the geared head to be inserted directly into a corresponding quick release unit. When using a quick release of the Novoflex Q-System, the cutouts for safety pins (9) prevent the clamping plate from inadvertently slipping out when the clamping screw of the unit is still half-open. Inserted video pins (5) prevent accessories, mounted on the brackets using a 1/4" screw, from twisting.

** The CAST-FINE-K fine adjustment handle is included in the scope of delivery of the KOPF²-PRO kit or is available as an optional accessory.

Product variants

The KOPF² is available in three different kits:

- KOPF²-PRO: Pro kit with Q=MOUNT, PANORAMA=Q II and 2x CAST-FINE-K fine adjustment handle
- KOPF²-BASIC: Starter kit with Q=MOUNT and PANORAMA II panning base
- HEAD²: Geared head alone without quick release unit and panorama base - for users who already own the corresponding accessories

Mounting the fine adjustment handle CAST-FINE-K (15)

(2 pieces included in the KOPF²-PRO kit or available as an optional accessory)

Open the handle's fastening screw a few turns using the enclosed Allen key, insert the handle over the fine adjustment screw as far as it will go and tighten the fastening screw hand-tight.

Operation

Mounting the camera

First make sure that both clamping levers (12) of the axles are in the "close" direction as far as they will go.

Mount a clamping plate with ARCA-compatible dovetail profile underneath your camera. We recommend plates of the NOVOFLEX QPL series, where the safety pin of the quick relase unit (3) prevents accidental slipping out if the clamping screw (2) is not fully tightened. The way in which the plate is mounted beneath the camera, either transversely or longitudinally to the optical axis, is crucial in determining whether the upper axis of the KOPF² will be used later for tilting or panning.

Tip: With the QPL1 and QPL-AT1 coupling plates with a square base, a particularly quick, flexible change is possible at any time.

Now screw the larger video pin (5) into the same threaded hole on the top of the PANORAMA II panning base.

With the alternative panning base PANORAMA=Q II with quick release unit (18), the video pin is not needed, as the combination quick realease unit / mounting bracket is already rotationally secure.

Now mount the lower mounting bracket of the unit on the panning base:

- With the **PANORAMA II**, place the unit in a way that the video pin of the panning base engages into the hole (11) on the underside of the bracket and that the central 1/4"-20 mounting screw of the bracket is exactly standing above the central 1/4"-20 threaded hole of the panning base. Now tighten the 1/4" screw on the bracket. To have access to the screw, open both clamping levers for the axes and bring both mounting brackets into a 90° position to each other, see page 7.
- To install the alternative panning base **PANORAMA=Q II** with quick release unit, remove the lower 1/4"-20 mounting screw of the bracket (8), open the clamping screw of the quick relase unit (19) and insert the bracket from above. The rounded end of the bracket should align flush with the underlying panning base. Now, close the clamping screw of the coupling again and verify the secure positioning of the bracket.

PANORAMA II

PANORAMA=Q II

Assembling the components and on the tripod

Important: The joint labeled must always be positioned at the bottom; the second joint is either located to the right with the blue fine adjustment screw (13) to its right or completely twisted with the blue fine adjustment screw pointing forward. To switch between these options, remove any already mounted devices (camera, setups, etc.), open both clamping levers (12) for rotation and the locking screw (16 or 20) for horizontal rotation. Perform two 90° rotations alternately for each axis.

View from behind

Most common variant: The upper fine adjustment screw (13) is on the right.

The conversion allows it to be used by both left- and right-handed people.

Joint with the label

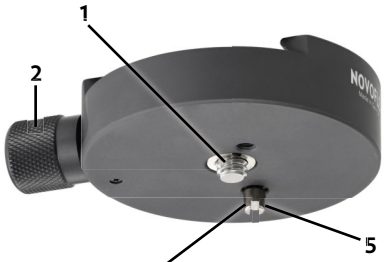
View from behind

Alternative variant: The upper fine adjustment screw (13) is pointing to the front.

Quick release unit Q=MOUNT at the top

To prevent the quick release unit on the mounting bracket from twisting, it has a hole on the underside with a grub screw (4), which is replaced by the larger video pin (5) when used with the KOPF². Screw the grub screw all the way up using the included Allen key and turn the larger video pin into the threaded hole from below.

When installing the quick release unit on the upper mounting bracket, the video pin engages in one of the 90° offset holes (10). The choice of the hole determines the alignment of the quick release unit and the position of the clamping jaws or clamping screw (2). At the same time, you determine whether the upper axis is used for tilting or turning. Fastening is then carried out using the central 1/4"-20 mounting screw (1) from above or below with the help of the included Allen key size 4.



Tip: Mounting accessories on or underneath the mounting brackets using the 1/4"-20 threaded screw

To have access to the screw, open both clamping levers (12) for the axes and bring both mounting brackets into a 90° position to each other. You now have access to the screw from above or below using a long Allen key.

Lower panning base PANORAMA II or PANORAMA=Q II

First, mount the panning base on your tripod. If your tripod is equipped with the larger 3/8"-16 screw, remove the silver 1/4"-20 adapter located in the central threaded hole on the bottom of the base using a screwdriver.

Just like the upper quick release unit, the panning base also has a grub screw (4) on the underside, which is used for anti-twist assembly on the tripod.

Open the blue rotation locking screw (16 or 20) and move the base to the angle position where the top marking line points to the blue dot at the bottom. Through the hole from above, you can now use the supplied Allen key to turn the grub screw against the mounting plate of your tripod and thus create a twist-proof connection.

Notice: If you later disconnect the panning base from the tripod, remember that you have to unscrew the grub screw from above in the first step, otherwise the mounting plate of your tripod could be damaged when unscrewing it.