

BALL HEADS

Our new centre ball series is hot out of the hands of the design team. Favoured by those who give priority to speed over millimetric precision when setting up the perfect shot, the range offers considerable weight-saving features and low-profile design. Made completely of aluminium, the Manfrotto centre ball head range offers each type of user a similar basis to build upon. Movements across models have been brought closer together, while positioning angles cover 360° rotation around the vertical axis to +90° / -90° lateral tilt. The ratchet lever ball lock system is secure and fast, with speed in use further guaranteed by the quick release plate optional on many of the models in the series in addition to the standard 1/4" or 3/8" fixed screw.



On models **482, 484, 486, 488, 490, 468**: fixed screw.



On model **488RCO**: hexagonal quick release plate



On models **484RC2, 486RC2, 488RC2, 468RC2**: rectangular quick release plate.



On models **484RC4, 490RC4, 468RC4**: large rectangular quick release plate.



Ball Heads



MICRO BALL HEAD 482

- 5.9cm
- 0.11kg
- 2kg
- Pan 360°
- Tilt +90°-90°

All-purpose ball head designed for use with compact, 35mm and small digital cameras. This head is ideal for the Table Top Tripod 209, car window clamp 243 and monopods such as the 276. It has a single indexed "ratchet" locking knob for 360° pan and +90° -90° tilt movements. Camera attachment is via a 50mm platform with 1/4" male thread. Head to tripod attachment is 1/4" and 3/8" female. All aluminium construction and black finish.

MINI BALL HEAD 484

- 7.5cm
- 0.25kg
- 4kg
- Pan 360°
- Tilt +90°-90°

Designed for use with compact, 35mm and small digital cameras. The strong die-cast construction, precision-machined aluminium housing and extremely hard phenolic resin ball provide excellent smooth movements across all tilt positions. A single "ratchet" control lever securely locks both the +90°-90° ball and the 360° pan movements. Camera attachment is via a 50mm platform with 1/4" male thread. Head to tripod attachment is 3/8" female.

MINI BALL HEAD WITH RC2 RAPID CONNECT SYSTEM 484RC2

- 9.5cm
- 0.32kg
- 4kg
- 200PL-14
- Pan 360°
- Tilt +90°-90°

This versatile head is fitted with a quick release 200PL camera plate system with a secondary safety catch. The head is perfect for 35mm SLR cameras with medium lenses, and light medium format cameras. Head to tripod attachment is 3/8" female.
Optional Plates: 200PL-38, 200PLARCH-14, 200PLARCH-38

COMPACT BALL HEAD 486

- 9.2cm
- 0.38kg
- 6kg
- Pan 360°
- Tilt +90°-90°

The Compact Ball Head is strong enough to take 35mm SLR cameras with medium lenses, and light medium format cameras. It has a single indexed "ratchet" locking knob for 360° pan and +90° -90° tilt movements. Camera attachment is via a 50mm platform with 1/4" male thread. Head to tripod attachment is 3/8" female. All aluminium construction and black finish.

COMPACT BALL HEAD WITH RC2 RAPID CONNECT SYSTEM 486RC2

- 10cm
- 0.46kg
- 6kg
- 200PL-14
- Pan 360°
- Tilt +90°-90°

Same as the 486 but equipped with a quick release 200PL camera plate system with a secondary safety catch. Camera plate has 1/4" male thread. Head to tripod attachment is 3/8" female.
Optional Plates: 200PL-38, 200PLARCH-14, 200PLARCH-38

MIDI BALL HEAD 488

- 11.2cm
- 0.56kg
- 8kg
- Pan 360°
- Tilt +90°-90°

With its solid aluminium construction and phenolic resin ball, this head is the ideal support for all traditional or digital small or medium format cameras. It features separate fast action "ratchet" locks on 360° pan and +90° -90° tilt movements. You can position your camera anywhere in 180° sphere with confidence and ease. Camera attachment is via a 50mm platform with 1/4" male thread. Head to tripod attachment is 3/8" female.

MIDI BALL HEAD WITH RCO RAPID CONNECT SYSTEM 488RC0

- 13.4cm
- 0.83kg
- 8kg
- 030-14
- Pan 360°
- Tilt +90°-90°

Same as the 488 but equipped with a quick release 030 camera plate system with a secondary safety catch and two spirit levels for precise levelling on both vertical or horizontal axes. Camera attachment has 1/4" male thread. Head to tripod attachment is 3/8" female.
Optional Plates: 030ARCH-14, 030ARCH-38, 030HAS, 130-14, 130-38, 030L, 030UNIV.



MIDI BALL HEAD WITH RC2 RAPID CONNECT SYSTEM 488RC2

- 
10.8cm
- 
0.67kg
- 
8kg
- 
200PL-14
- 
Pan 360°
- 
Tilt +90°-90°

Same as the 488 but equipped with a quick release 200PL camera plate system with a secondary safety catch. Camera plate has 1/4" male thread. Head to tripod attachment is 3/8" female.
Optional Plates: 200PL-38, 200PLARCH-14, 200PLARCH-38

MAXI BALL HEAD WITH RC4 RAPID CONNECT SYSTEM 490RC4

- 
13.7cm
- 
1.12kg
- 
12kg
- 
410PL
- 
Pan 360°
- 
Tilt +90°-90°

Same as the 490 but equipped with a quick release 410PL camera plate system with a secondary safety catch and two spirit levels for precise levelling on both vertical or horizontal axes. Camera plate has 1/4" male thread. Head to tripod attachment is 3/8" female.

MIDI BALL HEAD WITH RC4 RAPID CONNECT SYSTEM 488RC4

- 
11.5cm
- 
0.8kg
- 
8kg
- 
410PL
- 
Pan 360°
- 
Tilt +90°-90°

Same as the 488 but equipped with a quick release 410PL camera plate system with a secondary safety catch and two spirit levels for precise levelling on both vertical or horizontal axes. Camera plate has 1/4" male thread. Head to tripod attachment is 3/8" female.

**GRIP ACTION BALL HEAD BLACK 222
GRIP ACTION BALL HEAD GREEN 222NAT**

- 
21cm
- 
0.78kg
- 
2.5kg
- 
200PL-14
- 
Pan 360°
- 
Tilt +90°-90°

Versatile, quick and easy to use. Just grip the handle and you can position your camera anywhere within a 180° sphere. Supplied with quick release camera plate with secondary safety lock, built-in bubble level and tension adjustment. Made of cast aluminium. Ideal for 35mm cameras with short or medium focal length lenses.
 Available in two versions: the 222 is black painted while the 222NAT green painted.
Camera attachment: 1/4"
Optional Plates: 200PL-38, 200PLARCH-14, 200PLARCH-38
 PATENTED

MAXI BALL HEAD 490

- 
14cm
- 
1.05kg
- 
12kg
- 
Pan 360°
- 
Tilt +90°-90°

The top of Manfrotto's range of centre ball heads in die-cast aluminium with precision phenol resin ball. The 490's features make it versatile and ideal for digital and traditional photographic equipment from 35mm to 20x25cm format up to 12kg in weight. It features separate locks on 360° pan and +90 -90° tilt movements, with an additional friction control on the ball movement to give just the right resistance and smoothness with minimum effort, even with varying weight of equipment on board.
 The Maxi Ball Head attaches to the camera via a 50mm platform with an ingeniously combined 1/4" and 3/8" male thread.
 Head to tripod attachment is 3/8" female.

HYDROSTAT BALL HEADS

The Hydrostat is the most advanced ball head of the entire Manfrotto range. Designed to meet the demand of professional photographers for a lightweight, but at the same time heavy duty load capacity ball head. This model has similar features to our standard range of ball and socket heads, like independent pan and tilt locks, 360° pan and +90° / -90° tilt movement - but employs a revolutionary friction and locking mechanism. Designed for camera and lens loads of up to 16kilos, this head has a magnesium die cast body, a 2" Teflon coated aluminium ball which combined with specially designed tension surfaces provides movement as smooth as silk. A calibrated adjustable tension control allows you to preset the ball tension to suit your camera weight and give you fingertip control. The oversized lock knob hides a "PAT PENDING" locking mechanism which uses the fundamental criteria of the hydraulic laws - specifically referring to the hydrostatic ones, which locks the camera in such a secure position it gives the impression it has become one solid part of the head and removing completely any movement during the locking phase. Completing this masterpiece, a graduated panoramic base and a choice of six different "Hydrostat Ball Head" versions featuring a variety of quick release plate fixings.



Picture shows the model 468MG in the configuration with the camera to head attachment by a fixed camera platform with dual 1/4" and 3/8" camera fixing screw. Available other five different configurations with interchangeable quick release plate system of different shape and sizes.

Totally in magnesium die casting body

Independent pan lock for 360° movement



Model shown: 468MG

Amazing locking power and capability to keep in position cameras up to 16 kilos of weight

Independent tilt lock for +90° -90° tilt movement

A calibrated adjustable friction control

Ball Heads

Manfrotto's range of quick release plates is as broad as the range of photographic shooting equipment available in the world. One of the principle criteria used in manufacturing a quick release camera plate is its capability to hold the weight of the camera in all head positions. That is why, for example, the 200PL (RC2) connect plate system is mainly used to hold SLR systems, while the 410PL (RC4) is used with medium format cameras, and the sliding quick release system, 357PL/501PL (RC3/RC5), is used with cameras with heavy and bulky tele lenses. In order to give all professionals the possibility to work with this innovative ball head, we have prepared a version for every quick release camera plate Manfrotto manufactures plus a fixed version for those who prefer this type of attachment. Enjoy the choices!



HYDROSTATIC BALL HEAD 468MG



HYDROSTATIC BALL HEAD WITH RC0 RAPID CONNECT SYSTEM 468MGRC0



HYDROSTATIC BALL HEAD WITH RC2 RAPID CONNECT SYSTEM 468MGRC2



HYDROSTATIC BALL HEAD WITH RC3 RAPID CONNECT SYSTEM 468MGRC3



HYDROSTATIC BALL HEAD WITH RC4 RAPID CONNECT SYSTEM 468MGRC4



HYDROSTATIC BALL HEAD WITH RC5 RAPID CONNECT SYSTEM 468MGRC5



Ball Heads



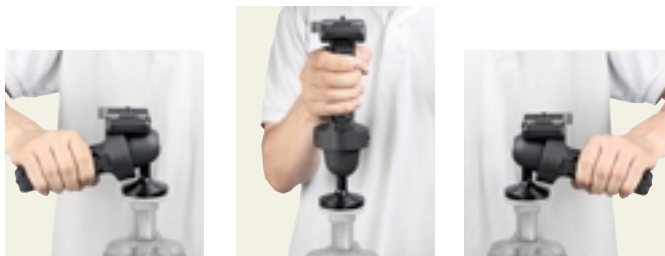
HORIZONTAL GRIP ACTION BALL HEAD 322RC2

- 
10.3cm
- 
0.7kg
- 
5kg
- 
200PL-14
- 
Pan 360°
- 
Tilt -90°+90°
- 
Tilt -3°+90°

Take the versatility of a ball head, add true ergonomic control and you get the 322RC2: a photographic head that allows you to unblock, move, position and lock your camera with one hand in one position thanks to the revolutionary design of its grip handle, which incorporates the ball lock lever and can also mount the 322RS shutter release accessory. A friction control wheel lets you regulate the power of the blocking mechanism to match the weight of your camera/lens. The 322RC2 is made from magnesium for lightweight performance, and is designed to keep the weight of your kit as close as possible to the tripod's centre of gravity by way of its reduced height. It is this fact, matched with the precision construction of the 322RC2 that gives the head its load capacity of 5kg. Complete with built-in bubble spirit level and quick release camera plate (standard 1/4" screw, with secondary safety pin). Suitable for use with 35mm or medium format cameras.

Optional Plates: 200PL-38, 200PLARCH-14, 200PLARCH-38

PAT. PENDING



ERGONOMICS

Whether you're left handed or right, whether you prefer a horizontal grip or vertical, the 322RC2 is practical and ergonomic. Customise the location of the camera plate to suit your ideal working position.



CENTRE OF GRAVITY

In turn, aligning the camera close to the tripod centre of gravity gives the 322RC2 an extraordinary 5kg load capacity.

Lateral tilt movement: -3° / +90°.



322RS fitted for left-handed use of the 322RC2 head in horizontal position.



322RS fitted for left-handed use of the 322RC2 head in vertical position.



322RS fitted for right-handed use of the 322RC2 head in vertical position.



322RS fitted for right-handed use of the 322RC2 head in horizontal position.



BACK VIEW
Double action switch
2.5mm stereo jack

ELECTRONIC SHUTTER RELEASE KIT FOR 322RS

The remote control electronic shutter release kit fits the 322RC2 grip action ball head and puts control of your camera's shutter down on the head itself, so you can take photos the moment you're in position, without having to move your hand from the head grip up to the camera body. The 322RS can be fitted to the head no matter which position you choose to use it in, for both right and left handed photographers. PAT. PENDING



CABLE SHUTTER RELEASE KIT 322RSM

The cable shutter release kit fits the 322RC2 Grip Action Ball Head and puts control of your camera's shutter down on the head itself, so you can take photos the moment you're in position, without having to move your hand from the head grip up to the camera body. The 322RS can be fitted to the head no matter which position you choose to use it in, for both right and left handed photographers.



ADDITIONAL CAMERA PLATE ADAPTER FOR 322RC - 322RA

Camera plate attachment assembly for the 322RC2 can also be available as a separate accessory in case you want the camera to be as close as possible to the tripod's center of gravity, which provides a higher rate of stability.

Code	Description
U5463	Bronica SQAI
U5453	Bronica SQAM, ETR md
U5453	Canon
U5FW41	Canon Elan 2, 2E, 7, 7E Rebel 200, XI Lite
522SCA	Canon EOS 300D, DIGITAL REBEL
U5FW46	Canon EOS 1, A2, A2E, AS, 1N, 620, T90
U5FW43	Canon EOS 1V, 3, D2000, D30
U5466	Canon EOS 1V, 3, D30, D60, 10D, 1D, 1D Mark II, 1Ds
U5459	Canon EOS A5, A2E, A2, 1, 1N, 620, T90
U5FW41	Contax 645, A1, N1
U5465	Hasselblad 503CW/CXI
U5452	Hasselblad ELM, ELX
U5456	Leica
U5467	Mamiya 645AF
U5FW45	Mamiya 645AF
U5454	Mamiya RZ67, RZ67 II, 645 Super, 645 Pro
U5458	Minolta 5000/I, 7000/I, 8000/I, 9000/I, 5Xi, 7Xi, 9Xi, 700si
U5FW42	Minolta 7 & 9
U5FW44	Nikon D1, D1x, N90/s, F5, F90x, F100
U5451	Nikon MD2/4/12/15, 8008/s, F4S
U5453	Olympus
U522SCA	Pentax *ist
U5FW47	Pentax 645N & all Pentax Autofocus SLR cameras except Z-1P



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THREE-WAY HEADS

A tripod head is just as important as a tripod. It is important to match the task of the tripod, head and camera. For this reason, Manfrotto offers a wide range of heads able to carry loads up to 12kg for use with point and shoot cameras up to heavy large format cameras. The Manfrotto range of Three Way Heads are precision engineered to provide smooth and independent control of pan, back and forward tilt plus side to side tilt movements. In fact, the camera position can rapidly change from landscape (horizontal) to portrait (vertical) or adjusted to the appropriate angle that best suits the shot. Large rubber grips on the pan and tilt handles provide efficient control and the range includes models with quick release camera plate systems which enable cameras to be interchangeable quickly or to go from tripod to hand held and back rapidly.



3D MAGNESIUM HEAD 460MG



An innovative 3D Head unlike any other! Cast from lightweight magnesium, the head can be positioned in virtually any position to get the exact framing of the image. The lock-system using spring-loaded conical joints allows greater flexibility than any other 3D head whether mounted on a tripod centre column or lateral arm. The rubber grip knobs provide finger tip control and won't poke you in the eye like conventional handles do. The 460Mg is the ideal head in combination with the Carbon Number One line for 35mm SLRs and medium format cameras. Camera attachment: 1/4"

Optional Plates: 200PL-38, 200PLARCH-14, 200PLARCH-38.



3D JUNIOR HEAD 056



A self-adjusting conical bearing locking system allows 360° rotation on both the vertical and horizontal plane. This is the ideal head for 35mm and light to medium format work.

Camera attachment: 1/4"

Optional Plates: 625, 323, 394, 357, 577.



SUPER 3D HEAD 115



A self-adjusting conical bearing locking system allows 360° rotation on both the vertical and horizontal plane. The head incorporates a larger camera mounting platform and large easy grip ratchet handles, for cameras up to medium format.

Camera attachment: 1/4"

Optional Plates: 625, 323, 394, 357, 577.

Three-way Heads



BASIC HEAD 141



An easy to use pan/tilt head for cameras up to medium format. Full three way action with each axis movement controlled by separate locking handles. Camera attachment: 1/4"

Optional Plates Adapters: 625, 323, 394, 357, 577.



BASIC HEAD BLACK WITH QUICK RELEASE PLATE 141RC



Identical to 141 but fitted with quick release plate and secondary safety lock for added security.

Camera attachment: 1/4"

Optional Plates Adapters: 200PL-38, 200PLARCH-14, 200PLARCH-38.



BASIC HEAD GREEN WITH QUICK RELEASE PLATE 141RCNAT



Identical to 141RC but green.

Optional Plates Adapters: 200PL-38, 200PLARCH-14, 200PLARCH-38.



STANDARD HEAD 029



Ideal for most cameras, 35mm, medium format and view cameras.

Features include quick release camera plate with secondary safety catch, two bubble levels and three easy grip rubber handles for precise positioning.

Camera attachment: 1/4" + 3/8" screw

Optional Plates: 030-38, 030ARCH-14, 030ARCH-38, 030HAS, 030L, 030VHS-14, 030VHS-38, 130-14, 130-38.

Three-way Heads



PRO COMPACT HEAD WITH QUICK RELEASE PLATE 329RC4



A professional compact, low profile 3D head (only 13cm high) suitable for a wide range of cameras up to large format. The very low profile ensures the centre of gravity of the camera is over the centre of the tripod for maximum stability and control; a quick release plate with secondary lock safety system keeps the camera securely locked but easily attached and removed when required; friction adjustment on each of the 3 movement controls guarantees easy, smooth and safe operation; three spirit levels allow you to align the camera perfectly and painlessly for panoramic shots. 3/8" screw camera attachment included.
Camera attachment: 1/4" + 3/8" screw.



3D PRO HEAD 229



Finely machined for greater positioning with smooth, certain action. Three built-in spirit levels for horizontal and vertical control. The head has a quick release camera plate with secondary safety catch for added security.

Camera attachment: 1/4" + 3/8" screw.

Optional Plates: 030-38, 030ARCH-14, 030ARCH-38, 030HAS, 030L, 030UNIV, 030VHS-14, 030VHS-38, 130-14, 130-38.



HEAVY-DUTY HEAD 160



Ideal for large format cameras. Supplied with quick release camera plate. Over-sized locking controls and heavy-duty construction provide an extra measure of security. Side movements allows full vertical positioning for fixed-back cameras. The head has a quick release camera plate with secondary safety catch for added security.

Camera attachment: 1/4" + 3/8" screw.

Optional Plates: 030-38, 030ARCH-14, 030ARCH-38, 030HAS, 030L, 030VHS-14, 030VHS-38, 130-14, 130-38.

GEARED HEADS

Manfrotto, the world's leader in professional camera supports, was the first company in its field to introduce the three-way geared head mechanism. These heads combine the speed of a ball head and the precision of a three-way head. The result is a range of three models, each one designed to support the three types of cameras available in the traditional and digital photographic markets: small, medium and large formats. The 400 Geared Head, with its 10 kg load capacity, can support all large format cameras up to 20x25 cm format. The 405, with a 7,5 kg load capacity, has been developed to work with all the medium format cameras up to 6x7 cm, equipped with digital or traditional backs. The smallest of the range, the 410, is extremely compact and light with its 5 kg load capacity, and perfectly matches the range of SLR cameras both analogue or digital available in the market. All three models offer incredible speed, stability and precision.



JUNIOR GEARED HEAD 410

-  13cm
-  1.22kg
-  5kg
-  410PL
-  Pan 360°
-  Frontal Tilt
-30°+90°
-  Lateral Tilt
-90°+30°

Extremely compact, this unique head offers gear movement in three directions, pan, tilt and side to side tilt. The head incorporates a quick release camera plate system and is suitable for 35mm SLR and medium format cameras. Camera attachment: 1/4" + 3/8" screw.
PATENTED



PRO GEARED HEAD 405

- 
16cm
- 
1.6kg
- 
7.5kg
- 
410PL
- 
Pan 360°
- 
Frontal Tilt
-30°+90°
- 
Lateral Tilt
-90°+30°

Speed and digital precision are paramount in the latest 405 Pro Digital Geared Head, the 405 provides ideal support and fast, pinpoint positioning for professional medium format cameras with conventional or digital backs. The 405 Pro Digital Geared Head was designed specifically to meet the more exacting, time-sensitive needs of busy professional digital photographers who shoot with medium format or 35 mm camera/back with payloads up to 7.5 Kg. It utilizes large, easy-to-grip knobs that provide smooth, positive, geared control through 360° pan and +90° -30° frontal and lateral tilt. In addition to its 3-D geared functions, the 405 also incorporates a unique feature that allows you to instantly disengage the gears and rough position the camera by hand, then instantly reengage them for ultra-precise final alignment. Camera attachment: 1/4" + 3/8" screw.
PATENTED



GEARED HEAD 400

- 
16cm
- 
2.6kg
- 
10kg
- 
Pan 360°
- 
400PL-LOW
400PL-MED
400PL-HIG
- 
Frontal Tilt
-90°+30°
- 
Lateral Tilt
-7.5°+7.5°

This unique head offers precise geared movement in 3 directions. Fold away rotating handles for pan and tilt; and side to side levelling by a separated handle. In addition, the tension holding the round quick release plate can be released to allow fine adjustment with complete safety. Designed to mount on either studio column stands or larger tripods, this geared head for medium and large format cameras, provides the ultimate in fine adjustment and control to achieve the exact framing required. Three 1/4" screws for camera attachment included.

TWO-WAY HEADS

Alongside the photographic heads is an equally broad sweep of heads designed for video work. This section presents only a few of the available models that, although created with the needs of video cameramen in mind, can also support stills cameras with medium/long tele lenses or scopes and binoculars.



700RC2



700RC2NAT

MINI VIDEO HEAD BLACK 700RC2 MINI VIDEO HEAD GREEN 700RC2NAT



9.6cm 0.52kg 2.5kg 200PL-14 360° -90°/+90°

A compact and lightweight 2-movement video head designed principally to support the latest digital video equipment but also suited to still photography cameras with medium and long tele lenses. The 700RC2 has a fixed length pan bar with soft handle and separate locking mechanisms for the 360° pan and the +90°/-75° tilt. Smooth and constant movements on both axes are assured by a fixed system of fluid cartridges.

Equipped with quick release 200PL-14 video plate system with VHS PIN and a secondary safety catch. Head to tripod attachment is 3/8" female.

Available in two versions: the 700RC2 is black painted while the 700RC2NAT is green painted.

Optional Plates: 200PL-38.



JUNIOR HEAD BLACK 390RC2
JUNIOR HEAD GREEN 390RC2NAT

- 10cm
- 0.7kg
- 5kg
- 200PL-14
- Pan 360°
- Frontal Tilt
-75°+90°
- Lateral Tilt
-90°+0°

This 3-way aluminium head is designed to allow still photography or video application. It is equipped with a quick-release 200PL camera plate system and Teflon pads to ensure smooth pan and tilt movements with independent locks. The pan-locking bar is padded with soft non-slip rubber. Available in two versions: the 390RC2 is black painted while the 390RC2NAT is green painted.

Optional Plates: 200PL-38.

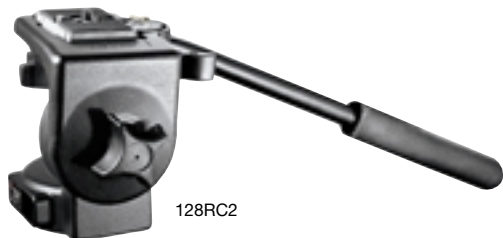


MICRO VIDEO HEAD 128LP

- 11cm
- 1kg
- 4kg
- Pan 360°
- Tilt -90°+90°

The micro video head is perfect for lightweight video cameras, and includes an adjustable pan bar. It has smooth fluid movement, pan and tilt locks. The adjustable pan bar can be positioned either on the left or right side.

Optional Plate Adapter: 625, 323, 394, 577.



MICRO VIDEO HEAD BLACK 128RC
MICRO VIDEO HEAD GREEN 128RCNAT

- 11.5cm
- 1kg
- 4kg
- 200PL-14
- Pan 360°
- Tilt -60°+90°

A lightweight fluid head with adjustable pan bar and quick release camera plate with secondary security, ideal for cameras up to 4kg in weight. It has smooth fluid movement, pan and tilt locks.

Available in two versions: the 128RC is black painted while the 128RCNAT is green painted.

Optional Plates: 200PL-38.



MINI VIDEO HEAD 701RC2

- 10.1cm
- 0.8kg
- 4kg
- 200PL-14
- Pan 360°
- Tilt -60°+90°

Small and lightweight, this fluid video head is capable of accommodating a payload of up to 4 kg, and is ideal for set-ups such as a fully equipped 3 CCD mini DV camcorder or a spotting scope combined with a digital still or video camera for digiscoping purposes. It is equipped with a fixed 1.5 kg counterbalance spring which combined with a camera plate attachment made of a touch and go/sliding plate who can shift from +15mm to -15mm from the 0 point to optimize the position of the counterbalance spring and deliver a wide range of balancing positions.

VR HEADS



Harry De Zitter



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Panoramic, cubic & spherical VR photography: It's time to broaden your horizons!

Since the inception of photography over 150 years ago, photographers have continuously sought better ways to bring realism and a sense of intimacy to their viewers. While panoramic photography has been with us for almost 80 years, recent imaging technologies and software have taken the panorama to yet another level, allowing capture of complete 360° x 360° cubic and spherical views of the scenes we photograph, along with the ability to display them in powerfully immerse environments. Cubic and spherical panoramas expand upon the traditional flat or cylindrical panorama. They allow for documentation of the complete environment around you and provide a way to virtually immerse your audience into your vision. They even offer a new means of artistic expression. Natural spaces and architectural projects can be accurately and interactively visualized by audiences who may never actually visit these locations in person. Virtual reality (VR) panoramas and object movies provide superior means to entertain, educate and inform, as well as to market and sell commercial products. Manfrotto's new 303SPH head allows photography of multi-row cubic, spherical and cylindrical panoramas, along with VR object movie sequences. It is the latest addition to Manfrotto's celebrated family of pan heads, tripods and camera supports that will change the way you photograph your world.



OBJECT PANORAMA

Use the 300N base as a turntable to spin a 3D object through sequential constant angle movements in front of your camera until a 360° cycle has been completed. Superimpose the images in the correct order using your chosen software to allow viewers to see the object from all angles.



SPHERICAL PANORAMA

Use the 303, 303PLUS or 303SPH head plus a 185° fisheye lens. Take two photos at 180° to each other, then stitch them together to create a 360° x 360° spherical panorama.



CYLINDRICAL PANORAMA

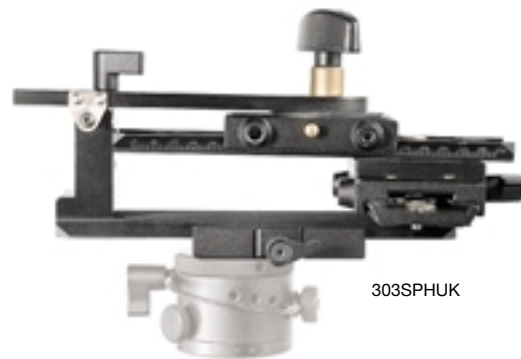
Use the 303, 303PLUS or 303SPH head to spin your camera around its nodal point through a longitudinal sequence of constant angle shots on the same level which can be stitched together (basically... placed edge to edge) using your chosen software to create a single row "cylindrical" panorama.



MULTI-ROW / CUBIC PANORAMA

Use the 303SPH to spin your camera around its nodal point through both latitudinal and longitudinal sequences of constant angle shots which can then be stitched together and composite to create a multi-row "cubic" 360° x 360° panorama.

VR Heads



MULTI ROW PAN HEAD 303SPH



The 303SPH is a multi-row panoramic photography head. It has sliding plates to locate the camera over the panoramic axis of rotation, plus a sliding plate which rotates around the front/back tilt axis. This allows the camera to be rotated on both horizontal and vertical axes around the camera/lens nodal point, so multi-row panoramic photo sequences (cubic VR photos) can be taken accurately and easily. Using the 303SPH ensures that software used for photo stitching produces a precisely composed VR environment with minimum post-production intervention or software correction. All plates and rotation index guides on the 303SPH have clear markings to allow easy repositioning of the camera once nodal point position has been identified and noted down. The 303SPH's vertical bracket can be unlocked and rotated through 90° (then re-locked) so that the head takes up less space in transport, and so that the sliding plate mechanisms are protected against knocks and bumps. The 303SPH comes complete with an extra set of sliding plates for use with cameras of different sizes.

303SPH Features:

- Three sliding plates for precise nodal point positioning on all planes/axes.
- Short plates included for more convenient use with compact cameras.
- Long plates included for use with larger SLR or medium format cameras.
- Camera attachment via 1/4" and 3/8" male screw.
- 3/8" female tripod fitting.
- Dual graduated scale to set the angle of rotation to any of the following: 90°, 60°, 45°, 36°, 30°, 24°, 20°, 15°, 10°, 5° (respectively equivalent to 4, 6, 8, 10, 12, 15, 18, 24, 36 or 72 photos to achieve a full 360° rotation) on upper part of 300N rotation unit.
- Graduated scale from 0° to 360° on lower part of 300N rotation unit.
- By removing vertical brackets, the 303SPH can also be used as an object turntable.
- Vertical bracket folds down and removes for compact size during transport.

APPLICATION

"Multi-Row" cubic Panorama

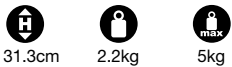


UPGRADE KIT: CONVERTS 302 INTO 303SPH HEAD 303SPHUK

The 303SPHUK upgrade kit is essentially a 303SPH head without the 300N PAN ROTATION UNIT or the plate attachment that locks onto the 300N; by using these components from the old model 302 head, photographers can use their existing pan head as a basis to build a 303SPH-like product. Remember however that the 300N rotation unit has been improved compared to that supplied with the original 302 family.



PRECISION PAN HEAD 303PLUS



The 303PLUS advanced panoramic photography head is built around the 300N pan rotation unit, with sliding plates for nodal point positioning and an elbow bracket to allow the camera to be mounted in either portrait or landscape orientation. It incorporates precise geared movements of the two sliding plates used to locate the camera over the panoramic axis of rotation, adding greater accuracy to nodal point positioning. The micro-positioning plates provide extremely precise fingertip adjustment via a gear drive system; a release button disengages the gear drive to facilitate rapid movement of the plates when required. The plates are also longer than those of the 303 head, which helps to make this head suitable for use with larger traditional or digital SLR cameras equipped with standard or wide angle lenses, or for medium format cameras.

303PLUS Features:

- Double micro positioning sliding plates - 180mm long with 120mm of adjustment for precise nodal point positioning.
- Convenient quick release elbow bracket with 1/4" and 3/8" male screw for camera attachment.
- 3/8" female tripod fitting.
- Dual graduated scale to set the angle of rotation to any of the following: 90°, 60°, 45°, 36°, 30°, 24°, 20°, 15°, 10°, 5° (respectively equivalent to 4, 6, 8, 10, 12, 15, 18, 24, 36 or 72 photos to achieve a full 360° rotation) on upper part of 300N rotation unit.
- Graduated scale from 0° to 360° on lower part of 300N rotation unit.
- By removing vertical brackets, the 303PLUS can also be used as an object turntable.

APPLICATION

Precision cylindric Panorama



VR Heads



PAN HEAD 303



31.3cm



1.65kg



5kg

The 303 pan head permits the photographer to take sequential constant-angle shots around a single axis with his or her camera either in portrait or landscape position, and with the nodal point of the camera/lens in line with the centre of panoramic rotation to ensure that parallax effects do not cause problems during image stitching. It is built around (and includes) the 300N panoramic unit, adding a system of sliding horizontal and vertical plates for accurate positioning of the camera nodal point. The plates have engraved index rules to make subsequent repositioning easier. The included quick release elbow bracket lets the photographer use the portrait orientation of the camera gaining vertical field. The system is suitable for most 35mm SLR still and digital stills cameras using wide-angle or standard lenses.

303 Features:

- Double sliding plate with 80mm of adjustment for precise nodal point positioning.
- Convenient quick release elbow bracket with 1/4" and 3/8" male screw for camera attachment.
- 3/8" female tripod fitting.
- Dual graduated scale to set the angle of rotation to any of the following: 90°, 60°, 45°, 36°, 30°, 24°, 20°, 15°, 10°, 5° (respectively equivalent to 4, 6, 8, 10, 12, 15, 18, 24, 36 or 72 photos to achieve a full 360° rotation) on upper part of 300N rotation unit.
- Graduated scale from 0° to 360° on lower part of 300N rotation unit.
- By removing vertical brackets, the 303 can also be used as an object turntable.

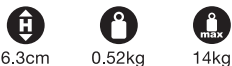
APPLICATION

Cylindric Panorama





PAN ROTATION UNIT 300N



The 300N panoramic rotation unit allows the photographer to take sequential constant-angle shots around a single axis, an essential part of achieving accurate and easy-to-stitch panoramic compositions. The set positions of the 300N give ample choice of rotation angle and so of number of photos needed to complete a 360° pan and cover the most common requests of panoramic photographers depending on the camera/lens equipment used.

To make angle selection easier, a “click-stop” selector screw is included and attached to a safety cable to prevent it from being separated from the head and getting lost. The 300N also comes complete with a secondary locking screw which stops unwanted or accidental rotation of the head when heavy or off-centre equipment makes it less balanced or when the head is used for non-horizontal rotation.

The 300N can also be used as a turntable base for object panoramas, or as a means of reading the angle of rotation of camera pan movements in a range of photography. A camera can be mounted on the panoramic unit by adding one of a range of quick release, sliding or fixed plates or a conventional geared, ball or 3-way head.

300N Features:

- Upper dual graduated scale to set the angle of rotation to any of the following: 90°, 60°, 45°, 36°, 30°, 24°, 20°, 15°, 10°, 5° (respectively equivalent to 4, 6, 8, 10, 12, 15, 18, 24, 36 or 72 photos to achieve a full 360° rotation based on 35mm film frames or 24x36mm CCD).
- Lower graduated scale from 0° to 360°.
- 3/8” female tripod fitting; 3/8” male screw head or plate fitting.

APPLICATION

Quick Panorama

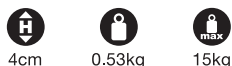


APPLICATION

Object Panorama base



LEVELLING BASE 338



The 338 is fitted between tripod and head and is used in combination with tripods that don't have built-in levelling mechanisms. Its three adjustment dials enable the operator to make fine, finger tip adjustments up to +/- 5 degrees to ensure the camera is perfectly level. The dials also have locking rings to ensure stability once the right position is reached. A spirit level is built in for reference. The base has a 3/8” female tripod fitting and a 3/8” male head fitting.



BALL CAMERA LEVeller 438



The 438 is fitted between tripod and head and provides easy, fast levelling for tripods without built-in levelling mechanisms. Its range of movement is 10°.



BASIC PANORAMIC HEAD ADAPTER 627

Basic panoramic adapter that can be mounted on top of a head, monopod, or tripod. The adapter camera platform has a graduated scale in millimeters to set the camera position during different shooting sequences and a dual 1/4” and 3/8” camera fixing screw. This accessory can be connected to a head, monopod, or tripod by a 3/8” female attachment.



HOT SHOE TWO AXIS BUBBLE LEVEL 337

The 337 is a double axis spirit level that mounts to the hot shoe of any standard 35mm SLR camera to help you achieve a finer degree of accuracy and consistency in panoramic photo sequences.