

User Manual



Slide Kamera HSO-4 rotational slider is a professional equipment perfect for smooth shots during the camera movement. Suitable for cameras and photo cameras of a total weight up to 10 kg. Specially designed three wheel construction of the slider allows to lead the camera in many directions thus presenting the user with many amazing possibilities of creating images.

Slide Kamera HSO-4 rotational slider

PDF version of the manual available for download: www.slidekamera.eu



Before you start your work with Slide Kamera HSO-4 rotational slider we strongly recommend to read the manual carefully. Please note that using the slider in a manner inconsistent with the instructions, unauthorized repair attempts or any kind of modification of the drive can cause damage the manufacturer is not responsible for.

In case of damage during transport you are required to submit:

- ☒ proof of purchase
- ☒ protective styrofoam inserts/ fillers included in the set in case of new product delivery

If you fail to comply with the abovementioned conditions, the manufacturer reserves the right to refuse the complaint.

Photos of products may slightly differ from the actual product due to constant modifications and improvements introduced by the manufacturer.

Slide Kamera ®

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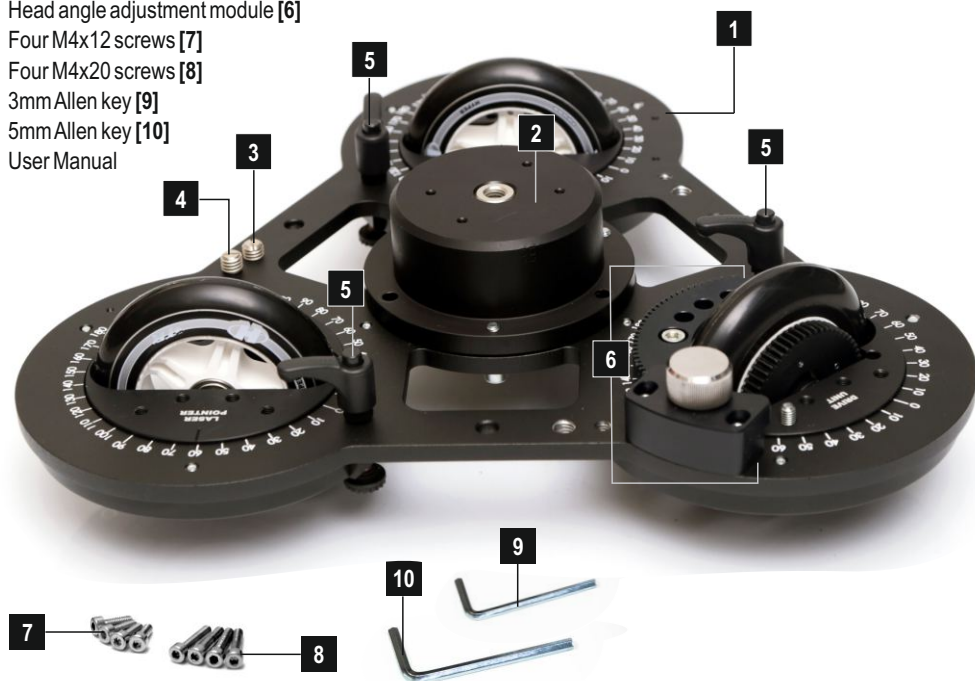
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1. Elements of Slide Kamera HSO-4 rotational slider

Once you receive the shipment please make sure that all the elements of Slide Kamera HSO-4 rotational slider are inside.

Set includes:

HSO-4 rotational slider with three castor wheels of a 100mm diameter [1]
Low base with 3/8" central hole (base mounted on three M6x30 screws) [2]
AF-12SL reduction 3/8" thread [3]
AF-11SL reduction 1/4"-3/8" thread [4]
Clamping lever that locks the rotation of the caster wheel head [5]
Head angle adjustment module [6]
Four M4x12 screws [7]
Four M4x20 screws [8]
3mm Allen key [9]
5mm Allen key [10]
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You can also purchase HSO-4 rotational slider in a set with HKN-2 stepper drive. In this case, the package additionally includes:

HKN-2 stepper drive driving motor already mounted on HSO-4 rotational slider [11]
HKN-ST controller [12]
RJ-45 cable connecting the motor with the controller [13]
AC Adapter [14]
WS Shutter release cable (one to choose from) [15]

**ONLY SLIDE KAMERA MANUFACTURER
CAN MOUNT HKN-2 STEPPER DRIVE
ON HSO-4 SLIDER.**



A detailed list of WS shutter release cables and photo cameras they support can be found in Slide Kamera HKN-2 stepper drive user manual. You can also find a pdf version (WS shutter release cables-supported cameras) available for download: www.slidekamera.com or www.slidekamera.eu.

2. Accessories for Slide Kamera HSO-4 rotational slider

Adapters:

Slide Kamera AF-15 adapter for 75mm/100mm half ball [1]

Slide Kamera AKC-3 adapter [2]

NOTE! Only Manfrotto half ball with MN319SH short handle can be attached to AF-15 adapter (Manfrotto 520 BALLSH half ball 75mm, Manfrotto 500 BALLSH half ball 100mm).



AF-15 adapter sockets:

Slide Kamera HCZ-75/100mm socket (Manfrotto system) [3]

Slide Kamera HCZ-75/100mm socket (Miller system) [4]

Slide Kamera HCZ-75/100mm socket (Sachtler system) [5]



Manfrotto half balls with short handle:

Manfrotto MN520BALLSH 75mm [6]

Manfrotto MN500BALLSH 100mm [7]

Articulated arms:

11" Magic arm for DSLR [8]

Slide Kamera AF-17 articulated arm [9]



Electric drives:

Slide Kamera HKN-2 stepper drive for HSO-4 slider [10]

Slide Kamera HDN/ HDN PRO DC drive for HSO-4 slider [11]



Additional accessories:

AFL-1 laser pointers [12]

On-camera field monitor: LCD 7" Lilliput 5D-II/O/P [13]



Shutter release cables:

WS-1 [14]
WS-2 [15]
WS-3 [16]
WS-4 [17]
WS-5 [18]
WS-6 [19]
WS-7 [20]



3. Product description

Slide Kamera HSO-4 rotational slider is a professional equipment perfect for smooth shots during the camera movement. Suitable for cameras and photo cameras of a total weight up to 10 kg. Specially designed three wheel construction of a slider allows to lead the camera in many directions, thus presenting the user with many amazing possibilities of creating images.

Double bearinged wheels of 100mm diameter [1] work out perfectly on uneven ground, providing excellent stability of the device. Additionally each wheel is equipped with clamping lever [8] that locks the rotation and allows to set the device in a desired position. Wheels are mounted in rotational heads with markers [12] that facilitate proper wheel angle adjustment. The slider is also equipped with angular markings [13] that allow for easy and precise adjustment of heads angular position. The set also includes low base [3] with 3/8" threaded hole [5] and head angle adjustment module [10] that allows for small angular adjustments. Slide Kamera HSO-4 rotational slider is equipped with a number of holes that allow to mount various accessories in a variety of combinations, thus providing great configuration possibilities and universality of our product.

100mm diameter castor wheel [1]

Wheel rotational head [2]

Low base with 3/8 central threaded hole [3]

Four M4 holes in low base [4]

3/8" central hole in low base [5]

3/8" hole in slider aluminium housing [6]

1/4" hole in slider aluminium housing [7]

Clamping lever that locks the rotation of the castor wheel head [8]

Head angle adjustment module half sprocket [9]

Head angle adjustment module [10]

HSO-4 slider toothed wheel [11]

Head marker [12]

Angular markings [13]

LASER POINTER position marking [14]

ELECTRIC DRIVE position marking [15]



4. Specification

Application:	For smooth shots during the camera movement. Suitable for cameras and photo cameras of a total weight up to 10 kg.
Weight:	3,3kg
Payload:	10kg
Castor wheel head mounting holes:	Four M6 holes
Low base mounting holes:	3/8" central hole Four M4 holes (Manfrotto spacing)

HSO-4 slider aluminium housing mounting holes :	Three 3/8" threaded holes
	Three 1/4" threaded holes
	Six M4 holes
Bubble level:	N/A
Material:	aluminium
Color:	black

5. Mounting devices and accessories to HSO-4 rotational slider

Slide Kamera HSO-4 rotational slider is equipped with various mounting holes that allow you to mount photo-video equipment and accessories in variety of combinations, thus providing the user with many configuration possibilities.

5. 1. Mounting devices to HSO-4 slider equipped with a low base

Slide Kamera HSO-4 rotational slider comes with a low base with 3/8" central hole [1], that allows for mounting Slide Kamera heads or video heads with flat base using a proper reduction (recommended reduction: AF-12 SL 3/8" mandrel), and four M4 holes [2] that allow for mounting Slide Kamera AKC-3 adapter. Hole spacing allows you to mount Manfrotto MN577 adapter with MN501PL sliding plate.

- 3/8" central hole [1]
- Four M4 holes [2]

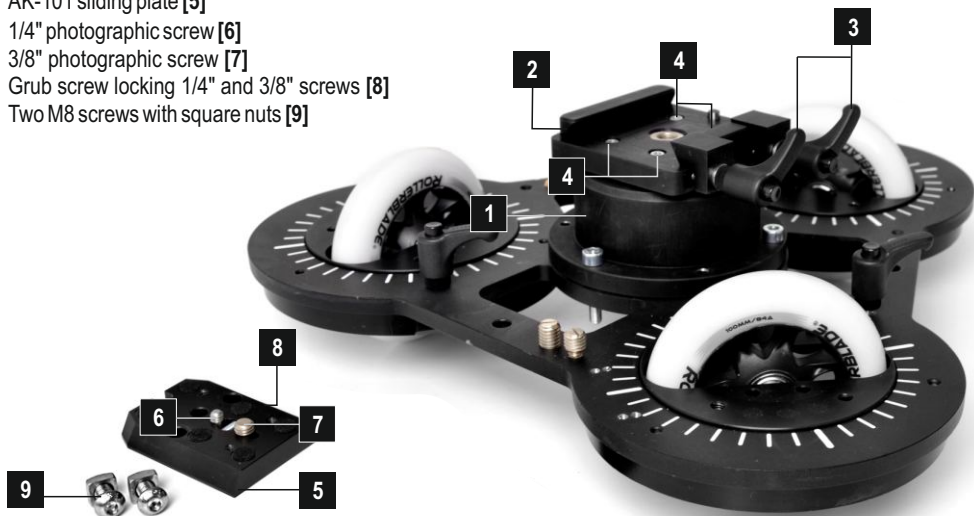


If you need a lower set-up of the base, mount the base from the bottom of the slider.

5.1.1. Mounting video head on HSO-4 slider equipped with a low base using Slide Kamera AKC-3 adapter or Manfrotto MN577 adapter

Slide Kamera AKC-3 quick release adapter allows to attach accessories used during photo-video realisations very quickly without tedious and time consuming mounting and dismounting. In this case, AKC-3 adapter mounted on the low base facilitates mounting/ dismounting video head on/from HSO-4 rotational slider. In order to mount AKC-3 adapter on the low base [1] remove all screws from the base. Release the clamping levers [3] and slide out AK-101 sliding plate [5] from AKC-3 adapter base [2]. Screw Slide Kamera AKC-3 adapter base to the low base using four M4x12 screws [4] (3mm Allen key).

- Low base [1]
- Slide Kamera AKC-3 adapter base [2]
- AKC-3 adapter clamping lever [3]
- Four M4x12 screws [4]
- AK-101 sliding plate [5]
- 1/4" photographic screw [6]
- 3/8" photographic screw [7]
- Grub screw locking 1/4" and 3/8" screws [8]
- Two M8 screws with square nuts [9]

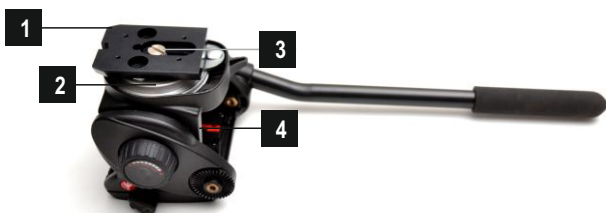


Remove the screws: 2 x M8 [9] with square nuts from Slide Kamera AK-101 sliding plate and:

- ☒ 1/4" photographic screw [6] in the case of mounting a head equipped with 3/8" hole
- ☒ 3/8" photographic screw [7] in the case of mounting a head equipped with 1/4" hole
- ☒ grub screw locking 1/4" and 3/8" screws [8]

Screw Slide Kamera AK-101 sliding plate to the video head base equipped with 1/4" or 3/8" threaded hole using a suitable Slide Kamera photographic screw 1/4" or 3/8".

- AK-101 sliding plate [1]
- Video head base [2]
- Slide Kamera 3/8" photographic screw [3]



Slide the head with AK-101 plate into AKC-3 adapter base and lock the clamping levers.

- Video head [1]
- AK-101 sliding plate [2]
- AKC-3 adapter base [3]
- Clamping levers [4]
- Low base [5]



M4 holes spacing allows also for mounting Manfrotto MN577 adapter with MN501PL sliding plate on the low base of HSO-4 rotational slider. Method of mounting is the same as in case of mounting AKC-3 adapter.

Elements of Manfrotto MN577 adapter MN501PL sliding plate

Manfrotto MN577 adapter [1]

Manfrotto MN501PL plate [2]

Four M4 holes [3]

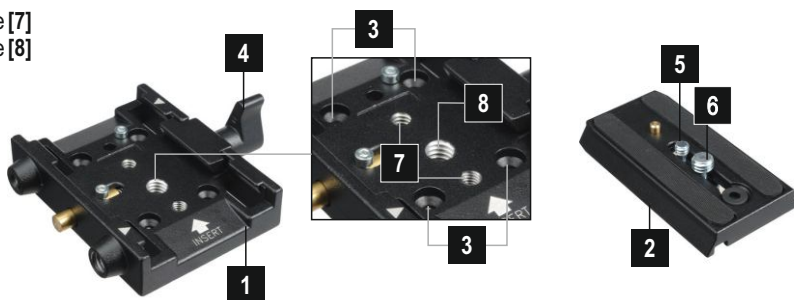
Clamping knob [4]

1/4" screw [5]

3/8" screw [6]

1/4" threaded hole [7]

3/8" threaded hole [8]



5.1.2. Mounting video heads on HSO-4 slider equipped with a low base

Low base of HSO-4 rotational slider allows you to mount Slide Kamera heads or video heads with a flat base and 3/8" connection. Connect the devices by screwing a proper reduction (recommended reduction: AF-12 SL 3/8" mandrel) into 3/8" central mounting hole of the low base. Next, attach the head. Photo below presents Slide Kamera HGO-3 rotational fluid head mounted on HSO-4 slider.



5.2. Mounting devices using Manfrotto leveling half ball on a slider equipped with Slide Kamera AF-15 adapter

HSO-4 rotational slider can be additionally equipped with Slide Kamera AF-15 adapter. The adapter is specially designed for Slide Kamera sliders of all series. It allows to mount a photo-video head with a flat base (3/8" connection) using Manfrotto 520/500 BALLSH on Slide Kamera slider.

IMPORTANT!!!

Attach only Manfrotto half ball with a MN319SH short handle to the AF-15 adapter (Manfrotto 520 BALLSH half ball-75mm, Manfrotto 500 BALLSH half ball - 100mm). If you already have a half ball with a long handle (520BALL, 500BALL), purchase only MN319SH short handle. Unscrew the long handle and screw the short one instead.

Slide Kamera Manufacturer offers two types of MN319SH short handles: with 3/8" or M10 thread. Table below presents proper thread type for a given handle.

Video head:	75mm socket	100mm socket
Sachtler	M10	M10
Manfrotto	3/8"	3/8"
Miller	3/8"	M10



In order to mount AF-15 adapter on HSO-4 rotational slider you must remove the low base from the slider. In order to do so unscrew (from the bottom of the slider) three M6x30 screws that connect the base with the aluminium housing of the slider. Attach AF-15 adapter using the same screws (from the bottom of the slider).



5.2.1. Mounting video head on HSO-4 slider equipped with Slide Kamera AF-15 adapter

In order to achieve full functionality of AF-15 adapter it is necessary to use Manfrotto 500BALLSH or 520BALLSH leveling half ball that facilitates easy mounting and leveling of your photo-video equipment.

Attach only Manfrotto half ball with a MN319SH short handle to AF-15 adapter (Manfrotto 520 BALLSH half ball-75mm, Manfrotto 500 BALLSH half ball - 100mm). If you already purchased a half ball with a long handle (520BALL, 500BALL), purchase only MN319SH short handle. Unscrew the long handle and screw the short one instead.



Attaching video head with a flat base to the leveling half ball (3/8" connection) ensures strong mounting of your equipment and gives leveling possibilities. Slide Kamera manufacturer offers two types of MN319SH short handles: with 3/8" or M10 thread (see paragraph 5.2 Table presenting proper thread type for a given handle).

Central 3/8" screw of Manfrotto leveling half ball [1]

Video head [2]

Manfrotto 520 BALLSH leveling half ball with MN319SH short handle [3]

Slide Kamera AF-15 adapter [4]



You can also mount Slide Kamera heads on Manfrotto leveling half ball (method of mounting is the same as in case of the low base, see paragraph 5.1.2.) or Slide Kamera AKC-3 adapter/ Manfrotto MN577 adapter. Attach the adapter base to Manfrotto leveling half ball - 3/8" connection (method of mounting is the same as in case of low base, see paragraph 5.1.1.).

6. Slide Kamera HDN/HDN PRO DC drive for HSO-4 rotational slider

Slide Kamera HDN/ HDN PRO DC drive for Slide Kamera HSO-4 rotational slider, is equipment specially designed for smooth shots in motion with a speed ranging from 4mm/s to 110mm/s, as well as Timelapse photos. HDN drive consists of an intuitive controller and a power unit (HDN-ZN-3). The drive features speed stability that ensures perfect smoothness of motion. Quiet operation reduces the noises to the minimum on the recorded material. Additionally, the device is very light, its weight does not exceed 1kg. To eliminate any movement during shutter release, PRO version of HDN DC drive additionally includes shutter release cable. Drive can be supplied from either AC adapter or three R6/AA batteries. HDN drive is designed in a way to allow simple connection / disconnection at any time, ie, the cameraman can perform alternately hand held camera movement and use the drive. Drive controller is equipped with 1/4" mounting hole that allows to mount it on devices with the use of Slide Kamera AF-17 articulated arm or MagicArm 11".

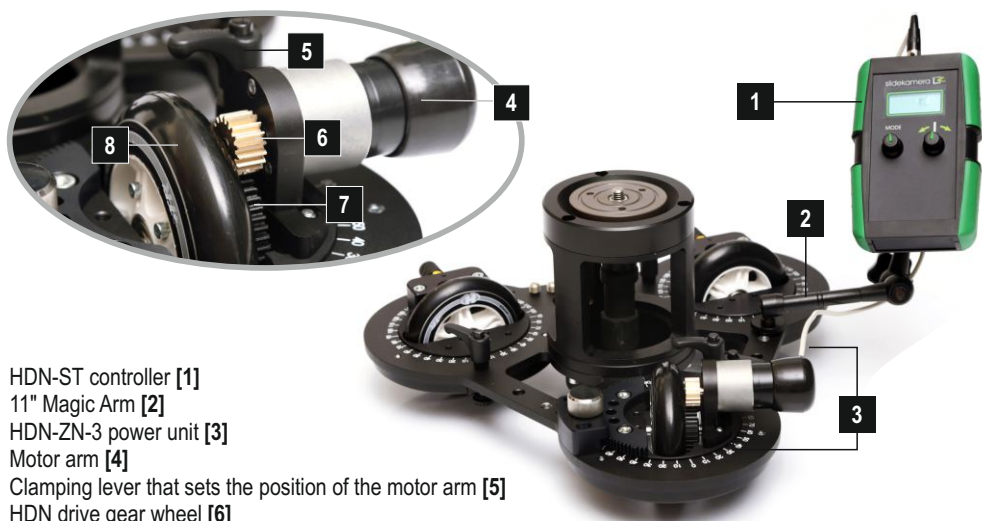
HDN-ZN-3 power unit must be attached to HSO-4 rotational slider only in a place with DRIVE UNIT marking (use the M6x20 screws). Transmission of power is achieved thanks a toothed gear. In order to connect/ disconnect the drive use a clamping lever that moves the power unit to/from the toothed wheel.

HSO-4 slider toothed wheel [1]

Holes for M6x20 screws that mount the power unit [2]

Hole for a clamping lever that locks the position of the power unit [3]





HDN-ST controller [1]

11" Magic Arm [2]

HDN-ZN-3 power unit [3]

Motor arm [4]

Clamping lever that sets the position of the motor arm [5]

HDN drive gear wheel [6]

HSO-4 slider toothed wheel [7]

Castor wheel [8]

7. Slide Kamera HKN-2 stepper drive for HSO-4 rotational slider

IMPORTANT !!!

Only Slide Kamera manufacturer can mount HKN-2 stepper drive to HSO-4 rotational slider. Any attempts to mount the drive can cause serious damage to the equipment the manufacturer is not responsible for. If you fail to comply with the abovementioned condition, the manufacturer reserves the right to refuse the complaint.

Slide Kamera HKN-2 stepper drive for HSO-4 rotational slider, is equipment specially designed for smooth shots in motion, as well as Timelapse photos. HKN-2 stepper drive consists of an intuitive controller and a driving motor. Simple and functional menu of the controller provides excellent ergonomics of use. The controller allows to work in various working programs: VIDEO, ANIMATION, TIMELAPSE. Front panel of the controller is equipped a joystick and two knobs to adjust: SPEED and DAMPING.



To eliminate any movement during shutter release, HKN-2 set includes a shutter release cable that is used in ANIMATION and TIMELAPSE working programs. Depending on your camera model you can choose a proper cable. Power unit allows for a payload of 10 kg. Drive controller is equipped with 1/4" mounting hole that allows to mount it to the slider using Slide Kamera AF-17 articulated arm or Magic Arm 11".

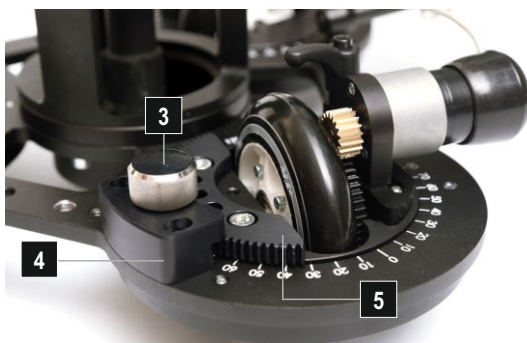
8. Head angle adjustment module

Slide Kamera HSO-4 rotational slider comes with a head angle adjustment module in the set that allows to turn the wheel head by a very small angle. This allows the user to achieve precision when small angular adjustments are necessary. Module steering knob and the base are attached to aluminium housing of the slider on two M4x20 screws, module half sprocket is attached to wheel head on two M6x16 screws. To adjust the angle move the base to the half sprocket.



Head angle adjustment module is particularly useful during long tracks of the slider with electric drive attached, when you need to change the direction of the slider and make a very small angular adjustment.

- M4x20 screws [1]
- M6x16 screws [2]
- Module steering knob [3]
- Module base [4]
- Module half sprocket [5]



9. Mounting Slide Kamera AFL-1 laser pointers

In order to perform a precise rotation around the object that you intend to film, it is recommended to use Slide Kamera AFL-1 laser pointers. AFL-1 laser pointers set the exact radius of rotation in relation to the object that is being filmed. They allow the user to make precise shots while maintaining the same distance from the object. AFL-1 set consists of two laser pointers with laser mounting sockets as well as mounting screws. AFL-1 laser pointers are mounted on wheel rotational head of Slide Kamera HSO-4 slider in places marked: LASER POINTER. M3x3 set screw mounts the laser in the laser socket and adjusts the laser beam. Device is battery-powered.

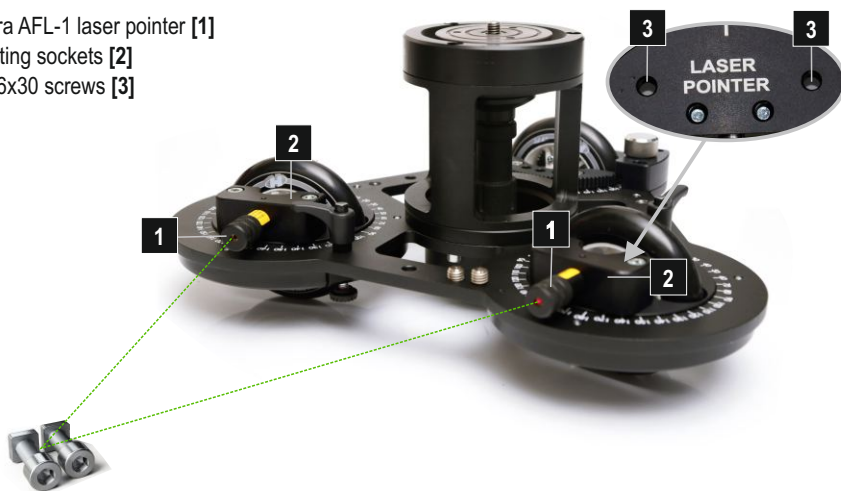
When your slider makes a rotation around the object, castor wheel heads equipped with laser pointers should be set in such a way that a contact point of two laser beams marks exactly centre of the object being filmed (and thereby centre of the rotation of the slider). Castor wheel head with no laser pointer attached, should be set in such a way that the wheel is in a perpendicular position in relation to the filmed object.

IMPORTANT!!!

Laser is NOT A TOY!

Do not allow minors to use a laser pointer unsupervised.

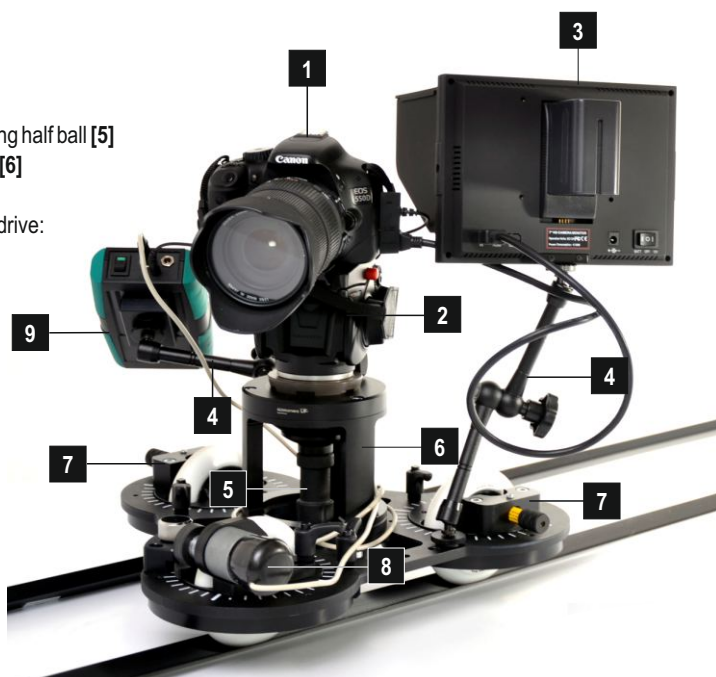
Slide Kamera AFL-1 laser pointer [1]
 Laser mounting sockets [2]
 Holes for M6x30 screws [3]



10. Mounting additional accessories

Slide Kamera HSO-4 rotational slider is equipped with 1/4 "and 3/8" mounting holes that allow you to attach various additional accessories, such as articulated arm, on-camera field monitor or electric drive controller. A detailed list of available additional accessories for HSO-4 slider can be found in paragraph 2 of this user manual (Accessories for Slide Kamera HSO-4 rotational slider). Photo below presents a sample configuration of Slide Kamera HSO-4 rotational slider with accessories.

Photo camera [1]
 Video head [2]
 On-camera field monitor [3]
 11" MagicArm [4]
 Manfrotto 520BALLSH leveling half ball [5]
 Slide Kamera AF-15 adapter [6]
 AFL-1 laser pointers [7]
 Slide Kamera HDN PRO DC drive:
 HDN-ZN-3 power unit [8]
 HDN-ST controller [9]



11. Maintenance

Maintenance of Slide Kamera HSO-4 rotational slider reduces to keeping the slider clean. Use professional maintenance products for this type of equipment, such as Dry Lube with Teflon or antistatic cloth. Elements of the slider do not require any lubrication. To remove any impurities, you can use compressed air.

**Any changes in design and repairs are made only and exclusively by the manufacturer.
Failure to comply with the recommended guidelines outlined in this manual
will result in loss of warranty.**

12. Transport

Slide Kamera HSO-4 rotational slider must be transported in transport covers or cases that provide proper protection of the equipment against any damage.

Moreover, complete the following steps in order to ensure safe transport of your equipment:

- ☑ Lock all clamping levers.
- ☑ Any additional accessories such as articulated arms or cameras should be removed and transported separately.

There is no need to remove HDN/ HDN PRO drive or laser pointers from the slider, however make sure they are properly secured (all levers and knobs locked, screws tightened). Never remove HKN-2 stepper drive from HSO-4 slider.

13. Terms of warranty

All Slide Kamera products are covered manufacturer's warranty for a period of 12 months from the date of sale. Warranty covers any design faults or of the material of the product which resulted in the product malfunctioning. The warranty covers the repair, or, if the repair proves impossible, replacement of the product with a new one. However, the cost of repair of the product cannot overrun the catalogue value of the product. The warranty does not cover damage and / or product defects resulting from the improper usage, as well as not following product maintenance specifications.

The warranty excludes:

- ☑ unauthorized attempts to repair or modify
- ☑ mechanical damage caused during transport and operation of such features as scratches, dents, pits, dirt, etc ...
- ☑ flooding, moisture

To obtain warranty service the purchaser should deliver the damaged product together with a proof of purchase and proof of payment (invoice, cash register receipt). The product will be accepted for warranty service on condition that it is delivered with correctly filled in complaint form and properly protected during transport. You can download the complaint from: www.slidekamera.pl / www.slidekamera.eu.

After the warranty period is exceeded any spare parts can be purchased directly from the manufacturer or in any selected points of sale.

PLEASE NOTE: Any package sent at the expense of HET-CNC s.c., 80-175 Gdańsk, Ul. Kartuska 386 will not be received.

