

Lens Holders Selection Guide

Lens holders are available for a wide variety of lens sizes and shapes.

		Fixed Type	Movable Type
Lenses		 LHF-S/LHF LHG	 LHCM/ALHN
Cylindrical lenses		 CHA	
Objective lenses		 LHO	 Two-axis pinholes/objective holders TAT + Adapters TAT-180A
Focusing lenses		 LHF-M LHF-UDL	
Small diameter lenses		 MLH/MLH-SF	 Fiber Optics Holders FOP + MLH-10ADP-2 + MLH-SF

Lens holders that can hold a range of different size lenses are also available.



Lightweight and compact fixed lens mount specialized for lenses with thin edge.

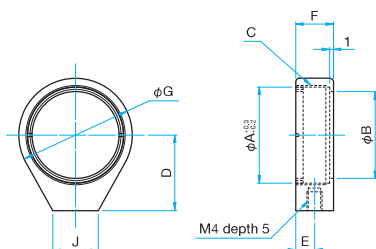
- These holders are best for single convex lenses and a new design resulting in reduced prices.
- Available for lens diameters from 12.7mm to 50.8mm, with either inch or metric threaded mounting hole.
- Since the metal retaining ring is used, powder of the resin does not occur.

**Guide**

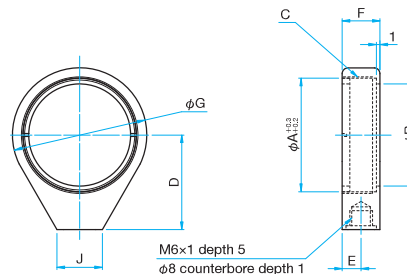
- Post is not included. Purchase posts (RO) and post holders (PST) separately.
 ► [WEB Reference](#) [Catalog Code](#) W6052, [WEB Reference](#) [Catalog Code](#) W6039
- Spacers are available (PS-SP) for use with a post stand (PST) to align the optical axis to inch height. [WEB Reference](#) [Catalog Code](#) W6042
- By using an adapter nut (AND-M6), LHG-30/ LHG-50 / LHG-50.8 can convert its mounting hole pattern into M4 or 8-32UNC.
 ► [WEB Reference](#) [Catalog Code](#) W6078

Attention

- Resin washer is not included. A delrin washer (DR) between the optic and the metal retaining ring is recommended if the optic is made of easily damaged material. [Reference](#) C041
- LHG-12.7, LHG-20, and LHG-25.4 can not be mounted on M6posts. Please use post holders (PST) or M4 posts (ROC).
 ► [WEB Reference](#) [Catalog Code](#) W6039, [WEB Reference](#) [Catalog Code](#) W6052

**Outline Drawing****LHG-12.7/20/25.4**

Part Number	φA (mm)	φB (mm)	C (mm)	D (mm)	E (mm)	F (mm)	φG (mm)	J (mm)
LHG-12.7	φ12.7	φ11.5	M13.55×0.75	12.7	3.5	7.5	φ17.5	7
LHG-20	φ20	φ17.5	M20.85×0.75	20	5	10	φ25	12
LHG-25.4	φ25.4	φ23	M26.25×0.75	20	5	10	φ30	12

LHG-30/50/50.8

Part Number	φA (mm)	φB (mm)	C (mm)	D (mm)	E (mm)	F (mm)	φG (mm)	J (mm)
LHG-30	φ30	φ27	M30.85×0.75	25	5	10	φ35.5	12
LHG-50	φ50	φ46	M50.85×0.75	35	6.5	12.5	φ55.8	20
LHG-50.8	φ50.8	φ47	M51.65×0.75	35	6.5	12.5	φ55.8	20

Specifications

Primary material: Aluminum
Finish: Black anodized

Part Number	Compatible Optics		Clear Aperture φB [mm]	C	Optical Axis Height D [mm]	Weight [kg]
	Diameter φA [mm]	Thickness [mm]				
LHG-12.7	φ12.7	2 – 5.4	φ11.5	M13.55 P0.75	12.7	0.0032
LHG-20	φ20	2 – 7	φ17.5	M20.85 P0.75	20	0.0088
LHG-25.4	φ25.4, φ25	2 – 7	φ23	M26.25 P0.75	20	0.0085
LHG-30	φ30	2 – 7	φ27	M30.85 P0.75	25	0.012
LHG-50	φ50	2 – 9	φ46	M50.85 P0.75	35	0.0263
LHG-50.8	φ50.8	2 – 9	φ47	M51.65 P0.75	35	0.024

Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

Motorized Stages

Light Sources & Laser Safety

Index

Guide

Mirrors

Lenses

Prisms

Polarizers

Lasers

Beam Shaping Diffusers

Filters

Shutter

Others

Fiber

A lens holder that can be used in two ways, Metric (M6) and Inch (1/4-20 UNC). It is convenient to use in an experiment where metrics and inch parts are mixed.

- To set the optical axis height from the baseplate to round figures such as 55mm or 60mm, replace posts with post stands (PST-**). (W6039)
- This item can firmly hold thin single lenses as well as thick lenses such as achromatic lenses.
- Best suited when the holders are in close proximity and when setting up a optical system such as folded beam go through the right next to the lens holder because the outer diameter of the holder is small.
- Resin retaining ring fix lenses securely without scratching them. (Resin ring is not attached.)



Guide

- Post length can be changed by specifying the post length when you place an order. Replacement of the post is free of charge, but we may charge the difference in price depending on the length. Contact our Sales Division for more information.
- Adapter nuts (AND) are available to convert M6 female threads to M4 or 8-32UNC female threads.

► [WEB Reference](#) [Catalog Code](#) W6078

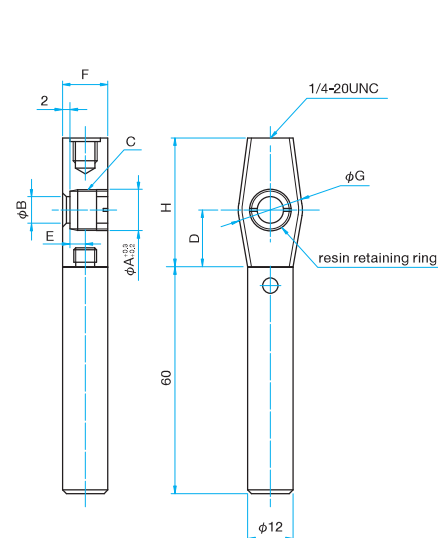
Attention

- Aluminum retaining rings are suitable for clean rooms or high-power laser applications (RR-**). [Reference](#) C041

Outline Drawing

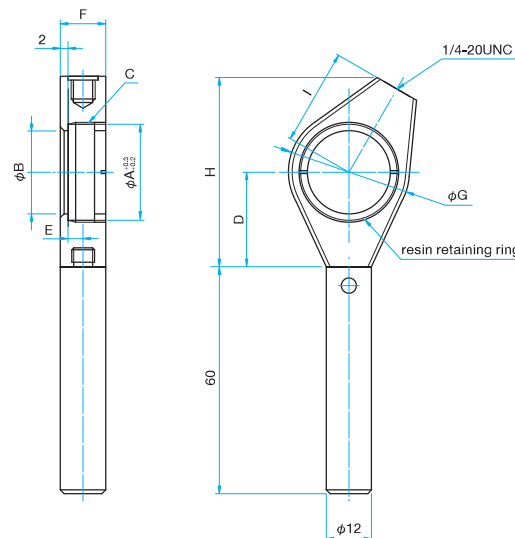
LHF-10S/12.7S/15S/20S

M6 P1



LHF-25S/25.4S/30S/30AS/40S/40AS/50S/50AS/50.8S/60AS

M6 P1



Specifications

Primary material: Aluminum
Finish: Black Anodized

Part Number	Options specified*	Compatible Optics Diameter ϕA [mm]	Thickness t [mm]	Clear Aperture ϕB [mm]	C	Optical Axis Height D [mm]	E [mm]	F [mm]	ϕG [mm]	H [mm]	I [mm]	Weight [kg]
LHF-10S	N	$\phi 10$	2 - 7	$\phi 7$	M10.85 P0.75	15	4	12	$\phi 17$	34.05	-	0.06
LHF-12.7S	N	$\phi 12.7$	2 - 7	$\phi 10$	M13.55 P0.75	15	4	12	$\phi 17$	34.05	-	0.06
LHF-15S	N	$\phi 15$	2 - 10	$\phi 12$	M15.85 P0.75	20	5	15	$\phi 20$	39.05	-	0.07
LHF-20S	N	$\phi 20$	2 - 13	$\phi 17$	M20.85 P0.75	20	7	18	$\phi 27$	39.05	-	0.08
LHF-25S	N	$\phi 25$	2 - 11	$\phi 22$	M25.85 P0.75	25	6	16	$\phi 32$	50	25.4	0.09
LHF-25.4S	N	$\phi 25.4$	2 - 7	$\phi 22$	M26.25 P0.75	25	4	12	$\phi 32$	50	25.4	0.08
LHF-30S	N	$\phi 30$	2 - 7	$\phi 26$	M30.85 P0.75	25	4	12	$\phi 36$	50	25.4	0.09
LHF-30AS	N	$\phi 30$	3 - 12	$\phi 26$	M30.85 P0.75	25	7	18	$\phi 36$	50	25.4	0.11
LHF-40S	N	$\phi 40$	2 - 13	$\phi 37$	M40.85 P0.75	30	7	18	$\phi 46$	66	38.1	0.11
LHF-40AS	N	$\phi 40$	3 - 15	$\phi 37$	M40.85 P0.75	30	8	20	$\phi 46$	66	38.1	0.12
LHF-50S	N	$\phi 50$	3 - 13	$\phi 46$	M50.85 P0.75	35	7	18	$\phi 57$	71	38.1	0.11
LHF-50AS	N	$\phi 50$	3 - 19	$\phi 46$	M50.85 P0.75	35	10	24	$\phi 57$	71	38.1	0.13
LHF-50.8S	N	$\phi 50.8$	2 - 13	$\phi 47$	M51.65 P0.75	35	7	18	$\phi 58$	71	38.1	0.11
LHF-60AS	N	$\phi 60$	3 - 16	$\phi 56$	M60.85 P0.75	40	13.5	27	$\phi 67$	76	38.1	0.13

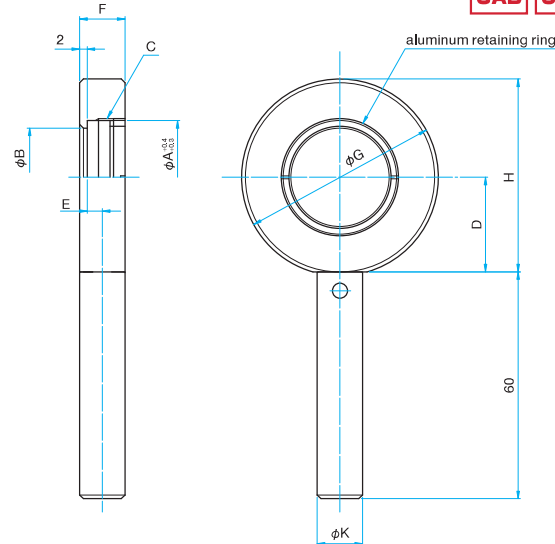
It can firmly fix from a thin single lens to a thick acromatic lens.
Since the outer diameter of the holder is large, it has an effect on blocking stray light.

- For large diameter lenses over 80mm, “A type” holders are available for thick lenses .



Outline Drawing

M6 P1



Guide

- ▶ Post length can be changed by specifying the post length when you place an order. Replacement of the post is free of charge, but we may charge the difference in price depending on the length. Contact our Sales Division for more information.
- ▶ Thin frame lens holders (LHF-S). [Reference](#) C038
- ▶ Lens holder with rotation center adjustment (LHCM) is also available. [Reference](#) C040

Standards

Standards											Primary material: Aluminum Finish: Black Anodized
Part Number	Options specified*	Compatible Optics Diameter φA [mm]	Thickness [mm]	Clear Aperture φB [mm]	C	Optical Axis Height D [mm]	E [mm]	F [mm]	φG [mm]	φK [mm]	Weight [kg]
LHF-10	EE/UU	φ10	3 – 6	φ7	M10.85 P0.75	15	4	12	φ32	φ12	0.07
LHF-15	EE/UU	φ15	3 – 10	φ12	M15.85 P0.75	20	5	16	φ42	φ12	0.07
LHF-20	EE/UU	φ20	3 – 12	φ17	M20.85 P0.75	20	7	18	φ42	φ12	0.09
LHF-25	EE/UU	φ25	3 – 10	φ21	M26.25 P0.75	25	6	16	φ52	φ12	0.1
LHF-25.4	EE/UU	φ25.4	3 – 6	φ22	M26.25 P0.75	25	4	12	φ52	φ12	0.09
LHF-30	EE/UU	φ30	3 – 6	φ26	M30.85 P0.75	25	4	12	φ52	φ12	0.09
LHF-30A	EE/UU	φ30	3 – 12	φ26	M30.85 P0.75	25	7	18	φ52	φ12	0.11
LHF-38.1	EE/UU	φ38.1	3 – 12	φ34	M38.95 P0.75	30	7	18	φ62	φ12	0.13
LHF-40	EE/UU	φ40	3 – 12	φ36	M40.85 P0.75	30	7	18	φ62	φ12	0.13
LHF-40A	EE/UU	φ40	4 – 14	φ36	M40.85 P0.75	30	8	20	φ62	φ12	0.14
LHF-50	EE/UU	φ50	3 – 12	φ45	M50.85 P0.75	35	7	18	φ72	φ12	0.14
LHF-50A	EE/UU	φ50	4 – 18	φ45	M50.85 P0.75	35	10	24	φ72	φ12	0.17
LHF-50.8	EE/UU	φ50.8	3 – 12	φ46	M51.65 P0.75	35	7	18	φ72	φ12	0.14
LHF-52	EE/UU	φ52	3 – 15	φ47	M52.85 P0.75	40	8.5	21	φ82	φ12	0.18
LHF-60	EE/UU	φ60	3 – 15	φ55	M60.85 P0.75	40	8.5	21	φ82	φ12	0.18
LHF-60A	EE/UU	φ60	4 – 21	φ55	M60.85 P0.75	40	11.5	27	φ82	φ12	0.21

* For specifying options, please refer to “Conversion of Posts, Post Holders and Pedestal Bases of Holders”. [Reference](#) C007

Large Lens

Large Lens											Primary material: Aluminum Finish: Black Anodized
Part Number	Options specified*	Compatible Optics Diameter φA [mm]	Thickness [mm]	Clear Aperture φB [mm]	C	Optical Axis Height D [mm]	E [mm]	F [mm]	φG [mm]	φK [mm]	Weight [kg]
LHF-80	EE/UU	φ80	3 – 15	φ73	M81.1 P1	50	8.5	21	φ102	φ20	0.31
LHF-80A	N	φ80.4	4 – 23	φ73	M81.1 P1	50	12.5	29	φ102	φ20	0.37
LHF-100	EE/UU	φ100	4 – 18	φ93	M101.1 P1	60	11	26	φ122	φ20	0.39
LHF-100A	N	φ100	4 – 22	φ93	M101.1 P1	60	13	30	φ122	φ20	0.42
LHF-130	N	φ130	4 – 18	φ122	M131.1 P1	75	11	26	φ152	φ20	0.45
LHF-150	N	φ150	5 – 20	φ142	M151.1 P1	85	12	28	φ171	φ20	0.62

* For specifying options, please refer to “Conversion of Posts, Post Holders and Pedestal Bases of Holders”. [Reference](#) C007

Two Axis Lens Holders | LHCM

RoHS

Catalog
Code

W4512

Application
SystemsOptics &
Optical
CoatingsOpto-
Mechanics

Bases

Manual
StagesActuators &
AdjustersMotorized
StagesLight Sources &
Laser Safety

Index

Guide

Mirrors

Lenses

Prisms

Polarizers

Lasers

Beam Shaping
Diffusers

Filters

Shutter

Others

Fiber

Two-axis lens holders with compact centering mechanism.

The compact centering adjustment mechanism makes a low optical axis easy to accommodate.

Can be used for adjusting the focus point of a laser beam or the direction of a collimated beam.

- For Lens diameters from 10mm to 50.8mm.
- Deep enough to hold thick achromatic lenses.
- The thin frame allows optics to be placed close to the front and back of the lens.



Guide

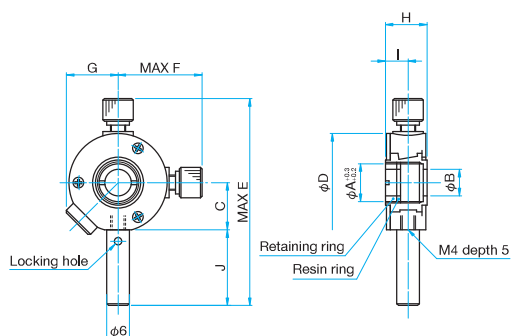
- ▶ Can be mounted on a dovetail stage or a micrometer adjustment stage to allow focus adjustment. Contact our Sales Division for recommendations regarding appropriate stages.
- ▶ Three-axis lens holders (ALHN-3RO) with high resolution lens centering adjustment and lockable adjusters are also available. [Reference](#) C042
- ▶ Five-axis lens holders (ALHN-5RO) with additional tip and tilt adjustments are also available. [Reference](#) C042
- ▶ Post length can be changed by specifying the post length when you place an order. Replacement of the post is free of charge, but we may charge the difference in price depending on the length. Contact our Sales Division for more information.

Attention

- ▶ The adjustment mechanism may not work properly when something heavy other than a lens is mounted.

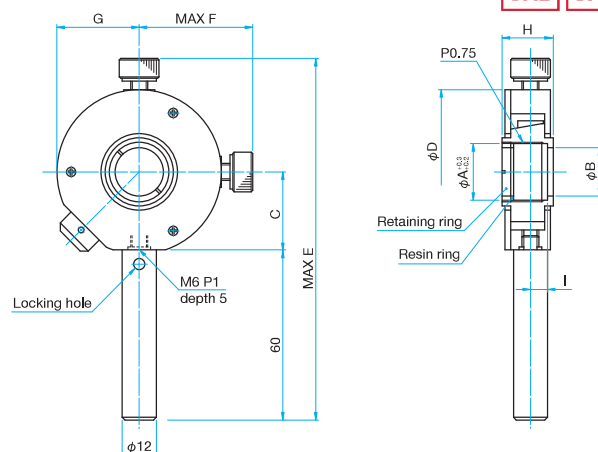
Outline Drawing

LHCM-10/12.7/15 M4 P0.7



Part Number	ϕD (mm)	MAX E (mm)	MAX F (mm)	G (mm)	H (mm)	I (mm)	J (mm)
LHCM-10	$\phi 26$	57	24	14	11	6	20
LHCM-12.7	$\phi 41$	83	32	22	13	7	30
LHCM-15	$\phi 41$	83	32	22	13	7	30

LHCM-20/25/25.4/30/40/50/50.8 M6 P1



Part Number	ϕD (mm)	MAX E (mm)	MAX F (mm)	G (mm)	H (mm)	I (mm)
LHCM-20	$\phi 58$	130	42	29	18	6
LHCM-25	$\phi 64$	137	46	32	18	6
LHCM-25.4	$\phi 64$	137	46	32	18	6
LHCM-30	$\phi 64$	137	46	32	18	6
LHCM-40	$\phi 78$	150	52	39	20	7
LHCM-50	$\phi 88$	160	57	44	20	7
LHCM-50.8	$\phi 88$	160	57	44	20	7

Specifications

Primary material: Aluminum
Finish: Black Anodized

Part Number	Options specified*	Compatible Optics Diameter ϕA [mm]	Compatible Optics Thickness t [mm]	Clear Aperture ϕB [mm]	Optical Axis Height C [mm]	Centering Adjustment Range [mm]	Weight [kg]
LHCM-10	N	$\phi 10$	1 – 6	$\phi 7$	12.5	$\phi 1$	0.03
LHCM-12.7	N	$\phi 12.7$	1 – 8	$\phi 10$	20	$\phi 2$	0.05
LHCM-15	N	$\phi 15$	1 – 8	$\phi 12$	20	$\phi 2$	0.05
LHCM-20	N/EE/UU	$\phi 20$	2 – 12	$\phi 17$	27.5	$\phi 3$	0.27
LHCM-25	N/EE/UU	$\phi 25$	2 – 12	$\phi 22$	30	$\phi 3$	0.28
LHCM-25.4	N/EE/UU	$\phi 25.4$	2 – 12	$\phi 22$	30	$\phi 3$	0.28
LHCM-30	N/EE/UU	$\phi 30$	2 – 12	$\phi 27$	30	$\phi 3$	0.28
LHCM-40	N/EE/UU	$\phi 40$	2 – 14	$\phi 36$	37.5	$\phi 3$	0.31
LHCM-50	N/EE/UU	$\phi 50$	2 – 14	$\phi 46$	42.5	$\phi 3$	0.36
LHCM-50.8	N/EE/UU	$\phi 50.8$	2 – 14	$\phi 46$	42.5	$\phi 3$	0.36

* For specifying options, please refer to "Conversion of Posts, Post Holders and Pedestal Bases of Holders". [Reference](#) C007

Retaining Rings/Resin Washers Retaining Ring Spanner Wrench

RR/DR
NRS

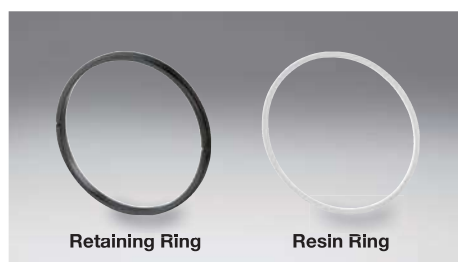
RR/DR

RoHS

Catalog Code

W4017

Accessories for mirror holders and lens holders.



Retaining Ring

Resin Ring

Guide

► Please contact our Sales Division regarding tapered retaining rings for beamsplitter holders.

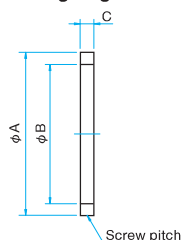
Attention

► We cannot guarantee our retaining rings will fit into non Opto-Sigma threaded holes.

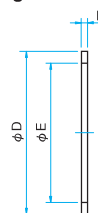
- Retaining rings and Resin rings are sold separately in sets of five.
- The retaining ring spanner wrench (NRS) is used to tighten the retaining rings.

Outline Drawing

Retaining ring



Resin ring



Retaining Ring					Primary material: Aluminum Finish: Black Anodized
Part Number	Quantity [Pieces]	Outer Diameter φA [mm]	Inner Diameter φB [mm]	Thickness C [mm]	Screw Pitch [mm]
RR-10-5	5	φ10.85	φ7	3	0.75
RR-12.7-5	5	φ13.55	φ9.7	3	0.75
RR-15-5	5	φ15.85	φ12	3	0.75
RR-20-5	5	φ20.85	φ17	3	0.75
RR-25-5	5	φ25.85	φ22	3	0.75
RR-25.4-5	5	φ26.25	φ22	3	0.75
RR-30-5	5	φ30.85	φ27	3	0.75
RR-38.1-5	5	φ38.95	φ35	3	0.75
RR-40-5	5	φ40.85	φ37	3	0.75
RR-50-5	5	φ50.85	φ46	3	0.75
RR-50.8-5	5	φ51.65	φ47	3	0.75
RR-52-5	5	φ52.85	φ48	3	0.75
RR-60-5	5	φ60.85	φ56	3	0.75
RR-80-5	5	φ81.1	φ75	3.5	1
RR-100-5	5	φ101.1	φ95	4	1
RR-130-5	5	φ131.1	φ124	4	1
RR-150-5	5	φ151.1	φ144	4	1

Resin Ring					Primary material: POM Finish: None
Part Number	Quantity [Pieces]	Outer Diameter φD [mm]	Inner Diameter φE [mm]	Thickness F [mm]	
DR-10-5	5	φ10	φ7	1	
DR-12.7-5	5	φ12.7	φ9.7	1	
DR-15-5	5	φ15	φ12	1	
DR-20-5	5	φ20	φ17	1	
DR-25-5	5	φ25	φ22	1	
DR-25.4-5	5	φ25.4	φ22	1	
DR-30-5	5	φ30	φ27	1	
DR-38.1-5	5	φ38.1	φ35	1	
DR-40-5	5	φ40	φ37	1	
DR-50-5	5	φ50	φ46	1	
DR-50.8-5	5	φ50.8	φ47	1	
DR-52-5	5	φ52	φ48	1	
DR-60-5	5	φ60	φ56	1	
DR-80-5	5	φ80	φ75	1.5	
DR-100-5	5	φ100	φ95	1.5	
DR-130-5	5	φ130	φ124	2	
DR-150-5	5	φ150	φ144	2	

NRS

RoHS

Catalog Code

W4018

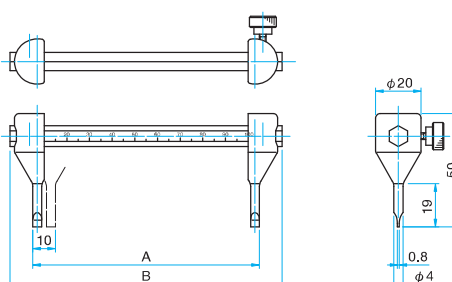
Spanner wrenches can be used on retaining rings of various diameters.
Optics can be securely fixed in holders without scratching the optics or retaining rings.



- The scale on the wrench correlates to the outer diameter of the lens to be fixed.

Outline Drawing

NRS



Specifications				Primary material Shaft: Stainless, Claw: Steel Finish Shaft: None, Claw: Chrome plating
Part Number	Size Used [mm]	A [mm]	B [mm]	
NRS-50	For φ10 – φ50	50	70	
NRS-100	For φ10 – φ100	100	120	
NRS-150	For φ10 – φ150	150	170	

Application
Systems

Optics &
Optical
Coatings

Opto-
Mechanics

Bases

Manual
Stages

Actuators &
Adjusters

MotORIZED
Stages

Light Sources &
Laser Safety

Index

Guide

Mirrors

Lenses

Prisms

Polarizers

Lasers

Beam Shaping
Diffusers

Filters

Shutter

Others

Fiber

Multi-axis lens holders are a convenient way to align a lens an optical axis. Can be used in adjusting the collimating lens for laser applications.

- Five-axis adjustment holder (ALHN-5RO) can adjust lenses for wavefront and intensity distribution.
- To focus a lens, rotate the lens tube with the lever while moving the tube forwards or backwards.
- The centering mechanism is fitted with a nut clamp, and the focus adjustment is fitted with a screw clamp.
- Singlet/doublets up to 28 mm thick can be used.



Guide

- ▶ Multi-axis lens holders (ALHN-3/ALHN-5) on a baseplate are available. [Reference](#) C043
- ▶ X-Y lens holders (LHCM) without a focus adjustment function are also available. [Reference](#) C040
- ▶ Post length can be changed by specifying the post length when you place an order. We may charge the difference in price depending on the length. Contact our Sales Division for more information.

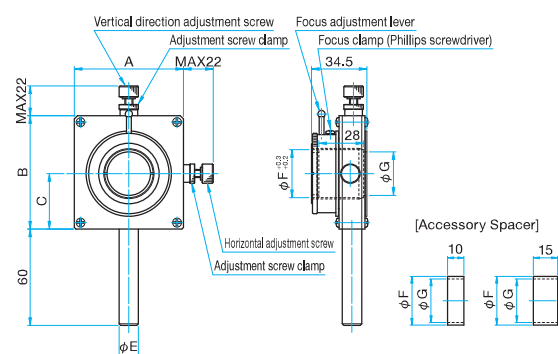
Attention

- ▶ Two spacers are included with these mounts to allow positioning of the lens within the lens tube.
- ▶ When the focal length of lens is long, adjustment does not work effectively because the focus adjustment range is too narrow. In such a case, please use the dovetail stages or optical benches.



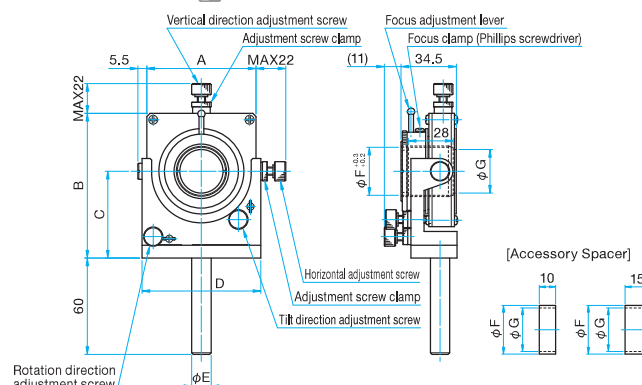
Outline Drawing

ALHN-3RO M6 P1



Part Number	A (mm)	B (mm)	C (mm)	φE (mm)	φF (mm)	φG (mm)
ALHN-25-3RO	68	70.5	34.5	φ12	φ25	φ22
ALHN-25.4-3RO	68	70.5	34.5	φ12	φ25.4	φ22
ALHN-30-3RO	68	70.5	34.5	φ12	φ30	φ27
ALHN-50-3RO	88	91	45	φ20	φ50	φ46
ALHN-50.8-3RO	88	91	45	φ20	φ50.8	φ46

ALHN-5RO M6 P1



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	φE (mm)	φF (mm)	φG (mm)
ALHN-25-5RO	68	90	54	74	φ12	φ25	φ22
ALHN-25.4-5RO	68	90	54	74	φ12	φ25.4	φ22
ALHN-30-5RO	68	90	54	74	φ12	φ30	φ27
ALHN-50-5RO	88	112.7	66.7	94	φ20	φ50	φ46
ALHN-50.8-5RO	88	112.7	66.7	94	φ20	φ50.8	φ46

Three-axis Post Type

Part Number	Options specified*	Compatible Optics Diameter [mm]	Compatible Optics Thickness [mm]	Centering Adjustment Range [mm]	Centering Adjustment Resolution [mm/rotation]	Focus Adjustment Range [mm]	Weight [kg]
ALHN-25-3RO	N/EE/UU	φ25	0 - 28	φ6	0.25	±3	0.31
ALHN-25.4-3RO	N/EE/UU	φ25.4	0 - 28	φ6	0.25	±3	0.31
ALHN-30-3RO	N/EE/UU	φ30	0 - 28	φ6	0.25	±3	0.31
ALHN-50-3RO	N/EE/UU	φ50	0 - 28	φ6	0.25	±3	0.5
ALHN-50.8-3RO	N/EE/UU	φ50.8	0 - 28	φ6	0.25	±3	0.5

* For specifying options, please refer to "Conversion of Posts, Post Holders and Pedestal Bases of Holders". [Reference](#) C007

Five-axis Post Type

Part Number	Options specified*	Compatible Optics Diameter [mm]	Compatible Optics Thickness [mm]	Centering Adjustment Range [mm]	Centering Adjustment Resolution [mm/rotation]	Tilt Range [°]	Tilt Resolution [°/rotation]	Tilt Resolution [°/rotation]	Focus Adjustment Range [mm]	Weight [kg]
ALHN-25-5RO	N/EE/UU	φ25	0 - 28	φ6	0.25	±4	±4	about 0.5	±3	0.46
ALHN-25.4-5RO	N/EE/UU	φ25.4	0 - 28	φ6	0.25	±4	±4	about 0.5	±3	0.46
ALHN-30-5RO	N/EE/UU	φ30	0 - 28	φ6	0.25	±4	±4	about 0.5	±3	0.46
ALHN-50-5RO	N/EE/UU	φ50	0 - 28	φ6	0.25	±3	±3	about 0.36	±3	0.72
ALHN-50.8-5RO	N/EE/UU	φ50.8	0 - 28	φ6	0.25	±3	±3	about 0.36	±3	0.72

* For specifying options, please refer to "Conversion of Posts, Post Holders and Pedestal Bases of Holders". [Reference](#) C007

Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

Motorized Stages

Light Sources & Laser Safety

Index

Guide

Mirrors

Lenses

Prisms

Polarizers

Lasers

Beam Shaping Diffusers

Filters

Shutter

Others

Fiber

Multi-axis lens holders are a convenient way to align a lens to the optical axis. These plate-type holders mount securely and provide a stable low optical axis.

- Five-axis adjustment type (ALHN-5) allows lens tilt adjustment for applications where achieving the best possible focusing is required.
- Lens focus adjustment is done by rotating the lens tube with the lever, moving the position of the lens forward or backward.
- The XY centering adjustments include locking nuts and the focus adjustment includes a locking screw.
- In addition to single lenses, thick lenses or combined lens tubes up to thickness 28mm can be mounted directly in the holder.



Guide

- ▶ Two axis lens holders (LHCM) without focus adjustment function are also available. [Reference](#) C040
- ▶ Two Axis lens holders (LHCM) for lenses $\phi 20\text{mm}$ or less are also available.
- ▶ Please contact our Sales Division if you require a specific optical axis height.

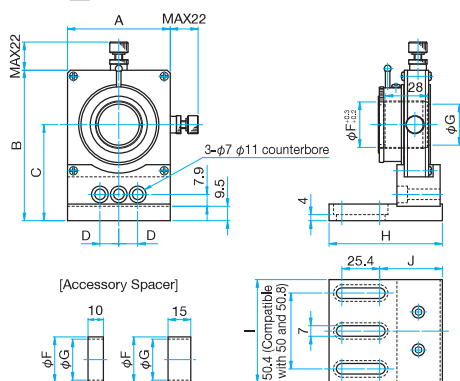
Attention

- ▶ Two spacers are included with these mounts to allow positioning of the lens within the lens tube.
- ▶ When the focal length of lens is long, adjustment does not work effectively because the focus adjustment range is too narrow. In such a case, please use the dovetail stages or optical benches.



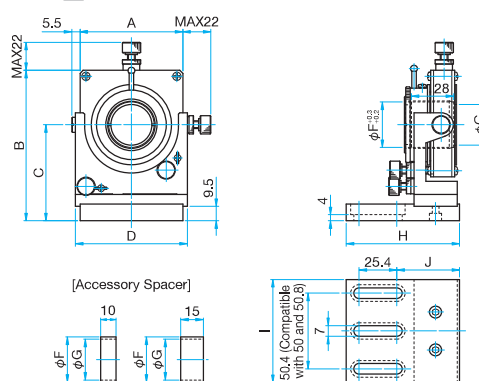
Outline Drawing

ALHN-3 Hexagonal socket head cap screw M6×10...3 screws



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	ϕF (mm)	ϕG (mm)	H (mm)	I (mm)	J (mm)
ALHN-25-3	68	99.5	63.5	12.5	$\phi 25$	$\phi 22$	75	68	41.3
ALHN-25.4-3	68	99.5	63.5	12.5	$\phi 25.4$	$\phi 22$	75	68	41.3
ALHN-30-3	68	99.5	63.5	12.5	$\phi 30$	$\phi 27$	75	68	41.3
ALHN-50-3	88	122.2	76.2	25	$\phi 50$	$\phi 46$	95	75	59.8
ALHN-50.8-3	88	122.2	76.2	25	$\phi 50.8$	$\phi 46$	95	75	59.8

ALHN-5 Hexagonal socket head cap screw M6×10...3 screws



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	ϕF (mm)	ϕG (mm)	H (mm)	I (mm)	J (mm)
ALHN-25-5	68	99.5	63.5	74	$\phi 25$	$\phi 22$	75	68	41.3
ALHN-25.4-5	68	99.5	63.5	74	$\phi 25.4$	$\phi 22$	75	68	41.3
ALHN-30-5	68	99.5	63.5	74	$\phi 30$	$\phi 27$	75	68	41.3
ALHN-50-5	88	122.2	76.2	94	$\phi 50$	$\phi 46$	95	75	59.8
ALHN-50.8-5	88	122.2	76.2	94	$\phi 50.8$	$\phi 46$	95	75	59.8

Three-axis Plate Type

Primary material: Aluminum
Finish: Black Anodized

Part Number	Compatible Optics Diameter [mm]	Compatible Optics Thickness [mm]	Centering Adjustment Range [mm]	Centering Adjustment Resolution [mm/rotation]	Focus Adjustment Range [mm]	Weight [kg]
ALHN-25-3	$\phi 25$	0 – 28	$\phi 6$	0.25	± 3	0.49
ALHN-25.4-3	$\phi 25.4$	0 – 28	$\phi 6$	0.25	± 3	0.49
ALHN-30-3	$\phi 30$	0 – 28	$\phi 6$	0.25	± 3	0.49
ALHN-50-3	$\phi 50$	0 – 28	$\phi 6$	0.25	± 3	0.78
ALHN-50.8-3	$\phi 50.8$	0 – 28	$\phi 6$	0.25	± 3	0.78

Five-axis Plate Type

Primary material: Aluminum
Finish: Black Anodized

Part Number	Compatible Optics Diameter [mm]	Compatible Optics Thickness [mm]	Centering Adjustment Range [mm]	Centering Adjustment Resolution [mm/rotation]	Tilt Range Tilt [°]	Tilt Resolution Tilt [°/rotation]	Tilt Resolution Rotation [°/rotation]	Focus Adjustment Range [mm]	Weight [kg]
ALHN-25-5	$\phi 25$	0 – 28	$\phi 6$	0.25	± 4	about 0.5	about 0.5	± 3	0.5
ALHN-25.4-5	$\phi 25.4$	0 – 28	$\phi 6$	0.25	± 4	about 0.5	about 0.5	± 3	0.5
ALHN-30-5	$\phi 30$	0 – 28	$\phi 6$	0.25	± 4	about 0.5	about 0.5	± 3	0.5
ALHN-50-5	$\phi 50$	0 – 28	$\phi 6$	0.25	± 3	about 0.36	about 0.36	± 3	0.75
ALHN-50.8-5	$\phi 50.8$	0 – 28	$\phi 6$	0.25	± 3	about 0.36	about 0.36	± 3	0.75

**Designed to hold lenses with a range of diameters at a consistent center height.
Best used in applications where different diameter lenses are swapped out often.**

- The three jaws of the holder will clamp edge of the lenses with spring pressure.
- Squeezing the levers towards each other will open the three jaws. Releasing the levers will close the jaws.
- The position of the three jaws is locked by tightening the clamp.



Guide

- ▶ Post length can be changed. If the length of post is specified at the time of purchase, this product will be delivered after replacing posts.
- ▶ Post length can be changed by specifying the post length when you place an order. We may charge the difference in price depending on the length. Contact our Sales Division for more information.

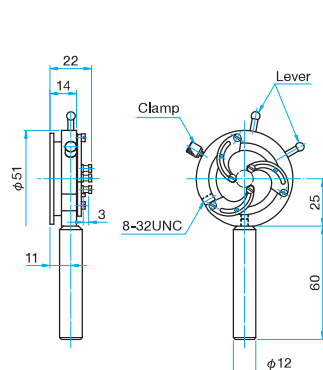
Attention

- ▶ Thin lenses may tilt and fall out from the holders when they are held with excessive spring pressure.
- ▶ ALHN lens holders are recommended when precise lens manipulation is required. [Reference](#) C042

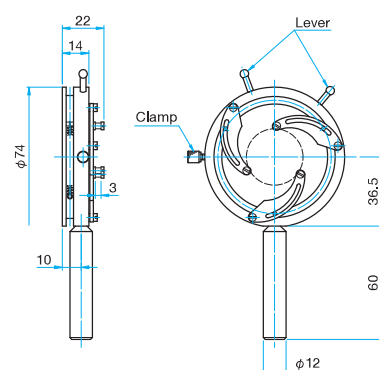


Outline Drawing

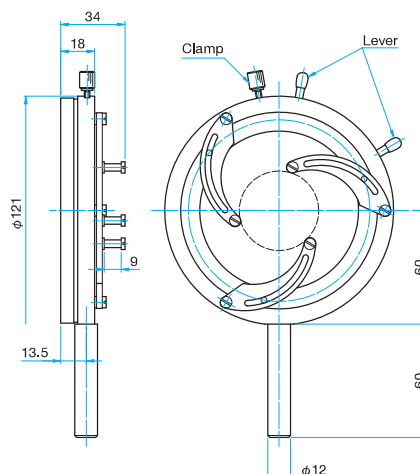
SLH-25 M4 P0.7 with taper



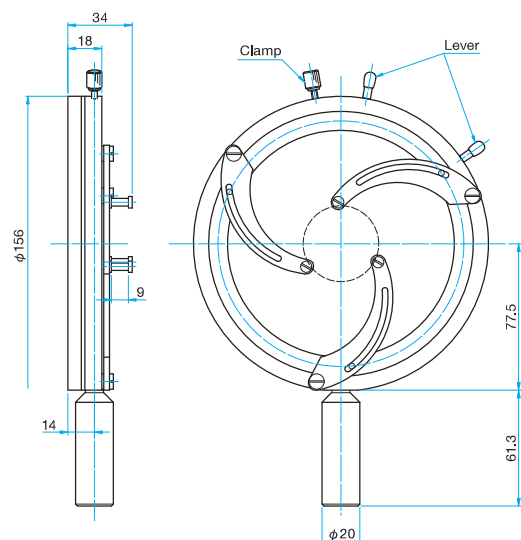
SLH-50 M4 P0.7 with taper



SLH-80 M6 P1



SLH-120 M6 P1 with taper



Specifications				Primary material: Aluminum Finish: Black Anodized
Part Number	Options specified*	Compatible Optics Diameter [mm]	Compatible Optics Thickness [mm]	Weight [kg]
SLH-25	EE/UU	φ5 – φ25	1 – 3	0.10
SLH-50	—	φ30 – φ50	1 – 3	0.15
SLH-80	EE/UU	φ25 – φ80	1 – 9	0.35
SLH-120	—	φ40 – φ110	1 – 9	0.70

* For specifying options, please refer to "Conversion of Posts, Post Holders and Pedestal Bases of Holders". [Reference](#) C007

Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

MotORIZED Stages

Light Sources & Laser Safety

Index

Guide

Mirrors

Lenses

Prisms

Polarizers

Lasers

Beam Shaping Diffusers

Filters

Shutter

Others

Fiber

Small Lens Claws | MLH

RoHS

Catalog
Code

W4021

Mounts designed to hold small diameter lenses of $\phi 15\text{mm}$ or less.

- The spring-loaded arm holds the lenses.
- MLH-10 allows small lenses to be held close to each other.
- MLH-10 can be installed with cross clamps (CCHN). [▶ WEB Reference](#) **Catalog Code** W6054



Guide

- ▶ Micro Lens Claws (MLH-SF) are available for micro lenses with diameter of $\phi 5\text{mm}$ or less. [Reference](#) C047
- ▶ Post length can be changed by specifying the post length when you place an order. We may charge the difference in price depending on the length. Contact our Sales Division for more information.

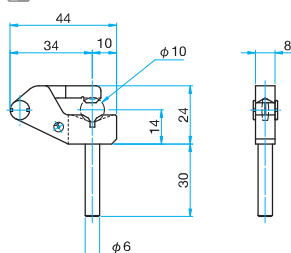
Attention

- ▶ Different diameters affect the center point of the lens in relation to the optical axis..
- ▶ To mount a lens in MLH-10: place the lens on a flat surface and gently release the clamp to secure the lens.

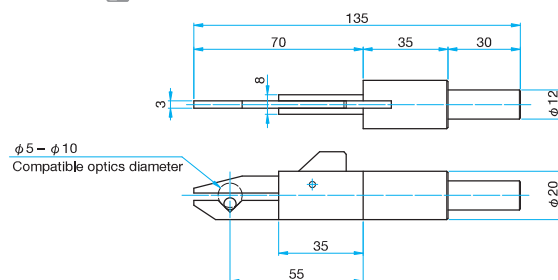


Outline Drawing

MLH-15 M4 P0.7



MLH-10 M6 P1



Specifications

Primary material: Aluminum
Finish: Black Anodized

Part Number	Compatible Optics Diameter [mm]	Compatible Optics Thickness [mm]	Weight [kg]
MLH-15	$\phi 5 - \phi 15$	1 - 6	0.02

Specifications

Primary material: Aluminum
Finish: Black Anodized

Part Number	Compatible Optics Diameter [mm]	Weight [kg]
MLH-10	$\phi 5 - \phi 10$	0.15

Application
Systems

Optics &
Optical
Coatings

Opto-
Mechanics

Bases

Manual
Stages

Actuators &
Adjusters

MotORIZED
Stages

Light Sources &
Laser Safety

Index

Guide

Mirrors

Lenses

Prisms

Polarizers

Lasers

Beam Shaping
Diffusers

Filters

Shutter

Others

Fiber

Holders for micro lenses of $\phi 3\text{mm}$ or less.

Designed to hold small optics at the end of a long and thin arm to allow other optical elements to be placed close to the element being held. Typical uses include collimator lenses for fiber or laser diodes.

- A light spring force holds the optic securely in place.
 - Optics can be mounted easily and securely by clamping an optic in the groove at the end of the arm.
 - The MLH-10ADP-2 is an adapter to mount the MLH-SF on a fiber holder (FOP), enabling adjustment of position and tilt.
- Reference** C076
- The MLH-10ADP-2 can also mount on a $\square 40\text{mm}$ XYZ stage (TSD-405L), enabling precision position adjustment of optics. **WEB Reference** **Catalog Code** W7078



Guide

- ▶ A tapped M6 screw hole on the end of the MLH-SF allows the holder to be directly mounted on a post.
- ▶ Because there is no step on the arm, lens of thickness 2mm or higher can be fixed.

Attention

- ▶ Because the tip of the arm has a V groove, rectangular optics can be mounted tilted. Either fix at a position away from the V groove, or fix with the optic glued to the flat plane on the top of the arm.
- ▶ The MLH-10ADP-2 cannot be mounted on two-axis pinholes/objective holders (TAT) other than the FOP.
- ▶ When the MLH-10ADP-2 is mounted on an FOP, it is necessary to remove the FOP adapter. Delivery of MLH-10ADP-2 and MLH-SF assembled on the FOP is available. Contact our International Sales Division for more information.

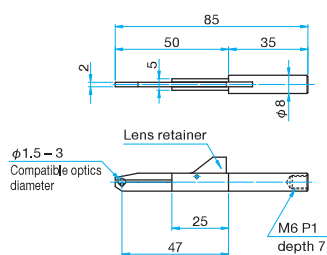
Specifications

Primary material: Aluminum
Finish: Black Anodized

Part Number	Compatible Optics Diameter [mm]	Weight [kg]
MLH-SF	$\phi 1.5 - \phi 3$	0.02
MLH-10ADP-1	—	0.06
MLH-10ADP-2	—	0.01

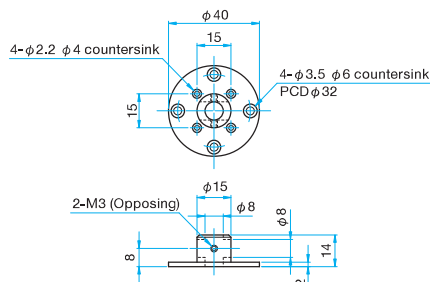
Outline Drawing

MLH-SF



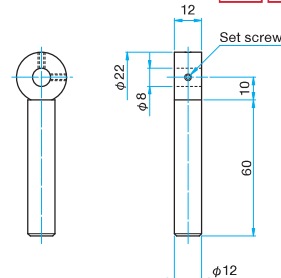
MLH-10ADP-2

Countersunk head screw
M2x4...4 screws, M3x6...4 screws



MLH-10ADP-1

M6 P1



Example of Use

Fixed Micro Lens Claws

Assembled with the MLH-SF and MLH-10ADP-1. When fixing microscopic lenses simply



Micro Lens Claws with four-axis adjustment mechanism

Example of mounting the MLH-SF and MLH-10ADP-2 assembly on a fiber holder (FOP-2DM). Configured for up/down left/right position adjustment of devices such as microscopic prisms, and tilt adjustment of device surfaces



Refer to the fiber holder (FOP).

Reference C076

Micro Lens Claws with two-axis adjustment mechanism

Example of mounting the MLH-SF and MLH-10ADP-2 assembly on a fiber holder (FOP-1). Configuration enables optical axis adjustment of microscopic lenses



Refer to the fiber holder (FOP).

Reference C076

Micro Lens Claws with three-axis adjustment mechanism

Example of mounting the MLH-SF and MLH-10ADP-2 assembly on a XYZ Axis Translation Stages (TSD-405SL)



Refer to the XYZ Axis Translation Stages (TSD-405SL).

WEB Reference **Catalog Code** W7078

Application
SystemsOptics &
Optical
CoatingsOpto-
Mechanics

Bases

Manual
StagesActuators &
AdjustersMotorized
StagesLight Sources &
Laser Safety

Index

Guide

Mirrors

Lenses

Prisms

Polarizers

Lasers

Beam Shaping
Diffusers

Filters

Shutter

Others

Fiber

Mounts for rectangular optics.

- The space saving sliding clamp allows optics to be placed in close proximity. The top and bottom of the lens mounting area is made of cork to prevent lenses from slipping. .



Guide

- Post length can be changed by specifying the post length when you place an order. We may charge the difference in price depending on the length. Contact our Sales Division for more information.

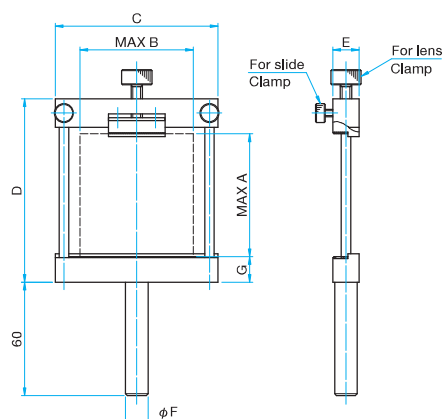
Attention

- Make sure to tighten the slide clamps along the two poles before tightening the lens clamp.
- Not recommended for round lenses. Use LHA [Reference](#) C044

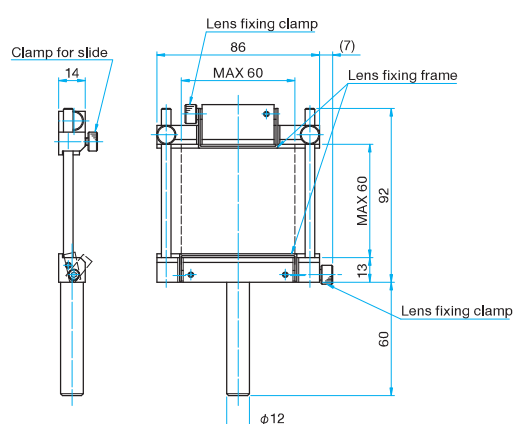


Outline Drawing

CHA M6 P1



CHA-60F M6 P1



Normal Type

Primary material: Aluminum
Finish: Black Anodized

Part Number	Options specified*	Compatible Optics Thickness [mm]	Compatible Optics Dimensions		C [mm]	D [mm]	E [mm]	ϕF [mm]	G [mm]	Weight [kg]
			MAX A	MAX B						
CHA-25	N/EE/UU	MAX6,5	30	25	40	45	12	ϕ12	9	0,1
CHA-60	N/EE/UU	MAX7,5	65	60	86	93	14	ϕ12	13.5	0,2
CHA-130	—	MAX7,5	55	130	160	82	14	ϕ20	12.5	0,5

* For specifying options, please refer to "Conversion of Posts, Post Holders and Pedestal Bases of Holders". [Reference](#) C007

Flexible Type

Primary material: Aluminum
Finish: Black Anodized

Part Number	Options specified*	Compatible Optics Thickness [mm]	Compatible Optics Dimensions		Weight [kg]
			MAX (vertical) [mm]	MAX (horizontal) [mm]	
CHA-60F	N/UU	MAX9,5	60	60	0,19

* For specifying options, please refer to "Conversion of Posts, Post Holders and Pedestal Bases of Holders". [Reference](#) C007