# **Motorized Large Precision Gimbal Mirror Holder**







Gimbal-type motorized mirror holder for mirrors of 150 mm dia. or larger. Tilt adjustment of large mirrors can be done by remote control.

- The mirror is fixed at the tip by three plastic screws from the mirror insertion surface, making it possible to accommodate mirrors of various thicknesses.
- A coarse adjustment mechanism is provided on the axis in the direction of the tilt, allowing the mirror to be clamped at any 360° position.
- The mirror mount is compatible with both metric and inch standards with similar mirror sizes, and can be easily

switched with the included pin.



## Guide

- Two D15D15A cables (D15D15A-CA-3) must be purchased separately for connection to the controller.
- Parts for fixing the cable are included. Use as necessary.
- If vertical mounting is desired, please contact our sales representative.
- Manual large precision gimbal mirror holders (MHD series) are also available.





We can also manufacture automatic mirror holders in your specified size. Please contact our sales department.

# **Attention**

- When replacing a mirror, use a wrench to remove the mirror holder bracket, and then insert the mirror.
- Do not over-tighten the plastic screws on the mirror holder, as this may distort the mirror and reduce surface accuracy.
- When loosening the coarse clamp portion, hold the mirror mount firmly by hand.

#### Motorized Large Precision Gimbal Mirror Holder MHDM Series Lineup List

Part Number	Compatible Optics Diameter	Compatible Optics Thickness	Optical Axis Height	Load Capacity	Primary material	Finish	Weight
MHDM-150	ф150mm、ф152.4mm	5 - 28mm	160mm	9.8N(1.0kgf)	Aluminum	Black anodized	11kg
MHDM-200	ф200mm、ф203.2mm	20 - 44mm	180mm	36.3N(3.7kgf)	Aluminum	Black anodized	13.5kg
MHDM-254	ф250mm、ф254mm	40 - 54mm	210mm	71.5N(7.3kgf)	Aluminum	Black anodized	15.5kg
MHDM-300	ф300mm、ф304.8mm	40 - 54mm	240mm	98.0N(10.0kgf)	Aluminum	Black anodized	17.5kg

# MHDM Features at Glance

CE compliant

Compatible Optics Diameter can be selected from 4 types (Compatible with both metric and inch standards)

Part Number	Compatible Optics Diameter	Compatible Optics Thickness		
MHDM-150	ф150mm、ф152.4mm	5 - 28mm		
MHDM-200	ф200mm、ф203.2mm	20 - 44mm		
MHDM-254	ф250mm、ф254mm	40 - 54mm		
MHDM-300	ф300mm、ф304.8mm	40 - 54mm		

Includes a handle for easy installation and carrying

5-phase stepping motor 0.75A/phase PK545-NBW (□42mm) adopt

Parts for fixing cables are included. Please use as needed.

Lower Plate25mm, 1" (25.4mm) pitch for mounting











MHDM-150

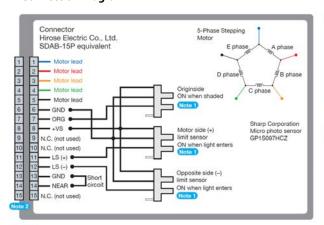
MHDM-200

MHDM-254

MHDM-300

Specifications							
Part Number		MHDM-150	MHDM-200	MHDM-254	MHDM-300		
Compatible Optics Diameter [mm]		ф150、ф152.4	ф200、ф203.2	φ250、φ254	ф300、ф304.8		
Compatible Optics Thickness [mm]		5 - 28	20 - 44	40 - 54	40 - 54		
Optical Axis Height [mm]		160	180	210	240		
Adjustment Range Tilt [ ° ]		±4.5	±3.8	±3.1	±2.7		
Adjustment Range Rotation [ ° ]		±4.5	±3.8	±3.1	±2.7		
Primary material		Aluminum	Aluminum	Aluminum	Aluminum		
Finish		Black anodized	Black anodized	Black anodized	Black anodized		
Accuracy Specifications	Resolution (Full) [ " ]	3.6	3.1	2.5	2.2		
	Resolution (Half) [ " ]	1.8	1.55	1.25	1.1		
	MAX Speed [ °/sec ]	2	1.7	1.4	1.2		
	Positional Repeatability [ ° ]	0.05	0.05	0.05	0.05		
	Lost Motion [ ° ]	0.05	0.05	0.05	0.05		
	Minimum Incremental Motion (reference) [mdeg]	0.5	0.5	0.5	0.5		
	Load Capacity [N]	9.8 (1.0kgf)	36.3 (3.7kgf)	71.5 (7.3kgf)	98.0(10.0kgf)		
Motor	Туре	5-phase stepping motor 0.75 A/phase ( Oriental Motor Co., Ltd. )					
	Motor Part Number	PK545-NBW (□42mm)					
	Step Angle	0.72°					
Weight [kg]		11	13.5	15.5	17.5		

# **■** Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor.

Motorized stages are not fitted with origin and proximity origin sensors.

Note 2 Compatible cable connector: DDK Ltd. 17JE-13150



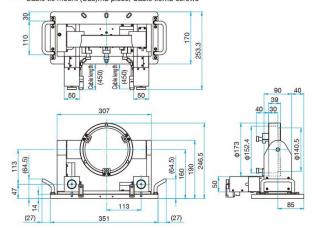




# **Outline Drawing**

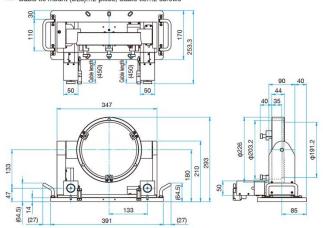
## MHDM-150

Hexagonal socket head cap screw M6×18...4 screws, M6×15...2 screws Cable tie mount (CL8)...2 piece, Cable tie...2 screws



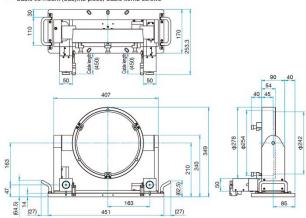
## MHDM-200

Hexagonal socket head cap screw M6×18...4 screws, M6×15...2 screws Cable tie mount (CL8)...2 piece, Cable tie...2 screws

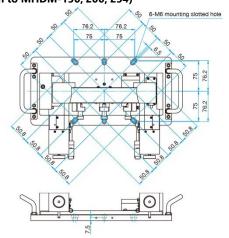


# MHDM-254

Hexagonal socket head cap screw M6×18...4 screws, M6×15...2 screws Cable tie mount (CL8)...2 piece, Cable tie...2 screws

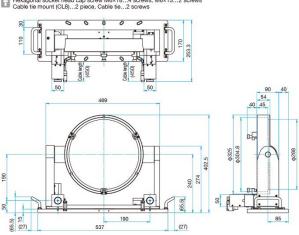


Dimensions of mounting area (common to MHDM-150, 200, 254)



## MHDM-300

Hexagonal socket head cap screw M6×18...4 screws, M6×15...2 screws Cable tie mount (CL8)...2 piece, Cable tie...2 screws



# Dimensions of mounting area (MHDM-300)

