

Optional parts of EW50



The EW50 consists of a 12-axis controller, two 6-axis Motorized stages and a connection cables.
This is the list of standard products that are necessary for use by customers.

We would appreciate it if you could consider the excess or deficiency at you and place an order at the same time as ordering EW50.

Please contact with us if you need custom parts.

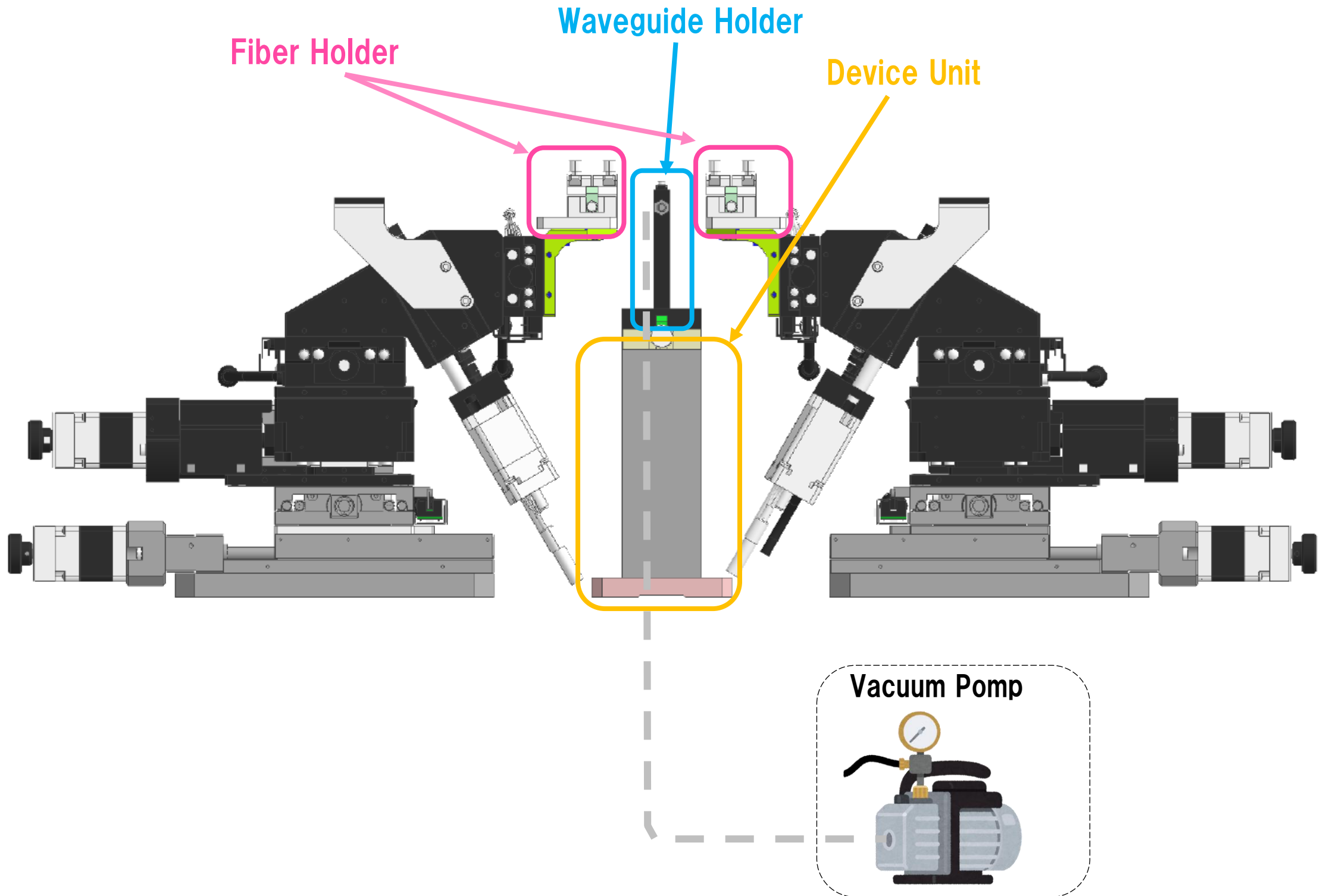
SURUGA SEIKI CO., LTD. SI SALES DEPARTMENT SI SALES UNIT

Issue:2023/8/1

Ver.1.0

EW50 Accessories List

Configuration of Accessories (EX)



EW50 Accessories List

Device unit fixed type: E1000-h

●Unit for the device holder. It can be specified the height for each 1mm.

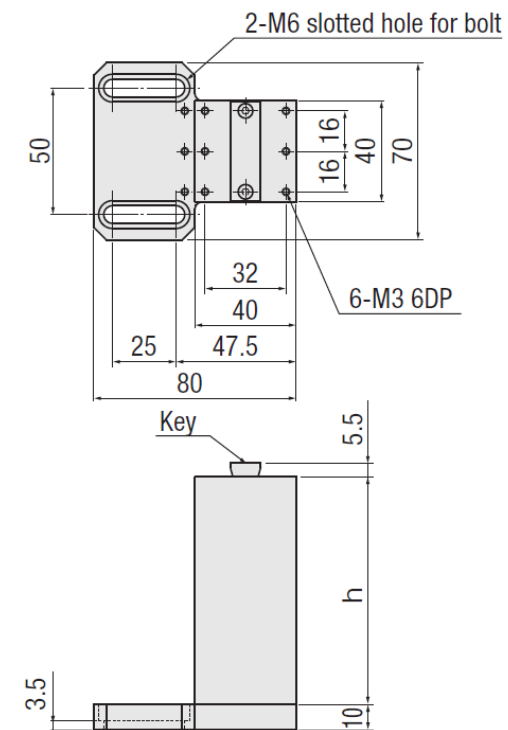


SPEC	
Model	E1000-h
Height	$h+15.5\text{mm}$
Base plate	A24-7
Main materials · Surface processing	Aluminium—Black alumite treatment

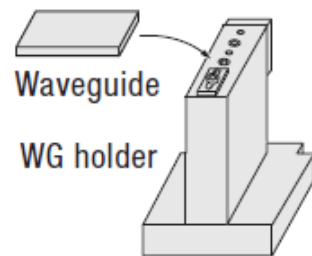
Accessory: Installation screws (Hexagon socket head 2 of M6-12)

Dimensional outline drawings

E1000-h

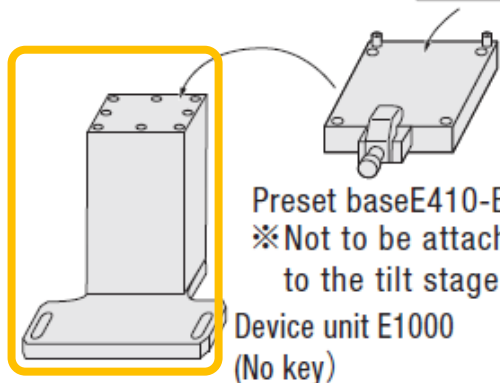


Example for using



Waveguide

WG holder



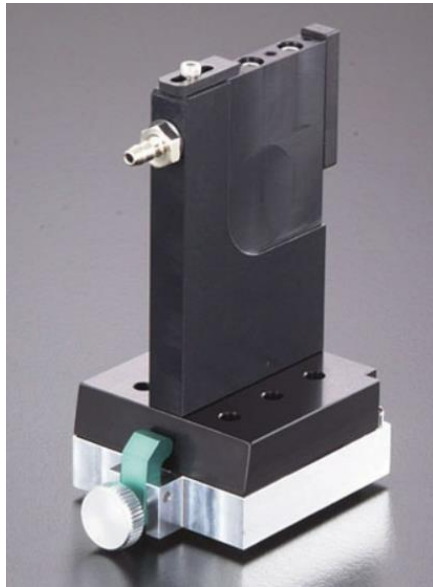
Preset base E410-B
※Not to be attachable to the tilt stage

Device unit E1000
(No key)

EW50 Accessories List

Preset Waveguide Holder Unit: E410

- This holder is combined with E410-B and E400.
- When a variety of element size, should be changed only E400 to match the size what you want.
- Install to the stage unit E1000.



SPEC				
Model	Absorption area	hold operation	Weight	Main materials · Surface processing
E410-6	6×38mm	Vacuuming + Mechanical clamp (Side)	0.14kg	Aluminium— Alumite finishing
E410-8	8×38mm		0.15kg	
E410-10	10×38mm		0.16kg	
E410-20	20×38mm		0.23kg	
E410-30	30×38mm		0.30kg	
E410-40	40×38mm		0.37kg	

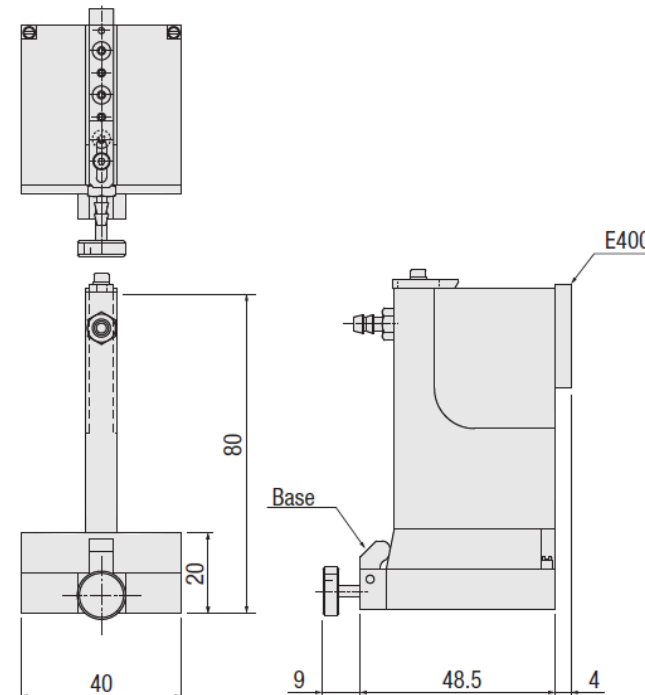
Accessory: 2m of silicon hose and installation screws (Hexagon socket head 4 of M3-10)

Model	Device attached surface	Hold operation	Weight	Main materials · Surface processing
E410-8N	8×38mm	Mechanical clamp	0.15kg	Aluminium— Alumite finishing
E410-10N	10×38mm		0.17kg	
E410-20N	20×38mm		0.23kg	

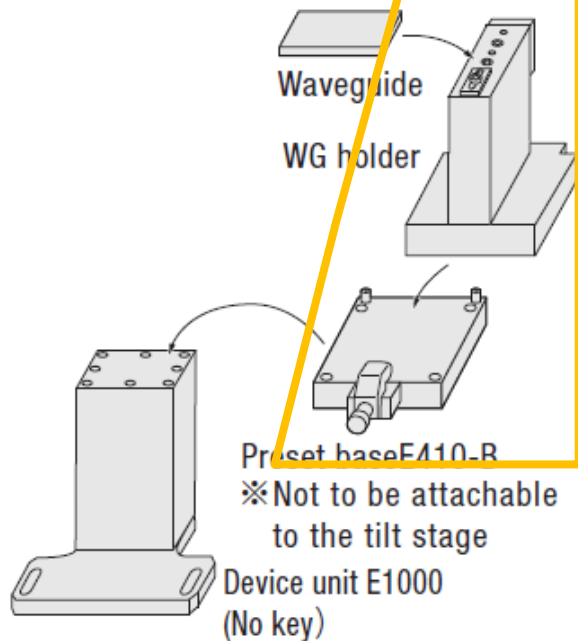
Accessory: Installation screws (Hexagon socket head 4 of M3-10)

Dimensional outline drawings

E410-6



Example for using



EW50 Accessories List

Preset wave guide holder (mechanical clamp type) : E 400

- Add the clamp from the upper side to E400. Improved holding power by mechanical clamp.
- No vacuum function.
- Install to the preset base plate E410-B.



E400-N

SPEC				
Model	Device attached surface	Hold operation	Weight	Main materials · Surface processing
E400-8N	8×38mm	Mechanical clamp	0.10kg	Aluminum- Black alumite treatment
E400-10N	10×38mm		0.12kg	
E400-20N	20×38mm		0.18kg	

Dimensional outline drawings

■ Example for using

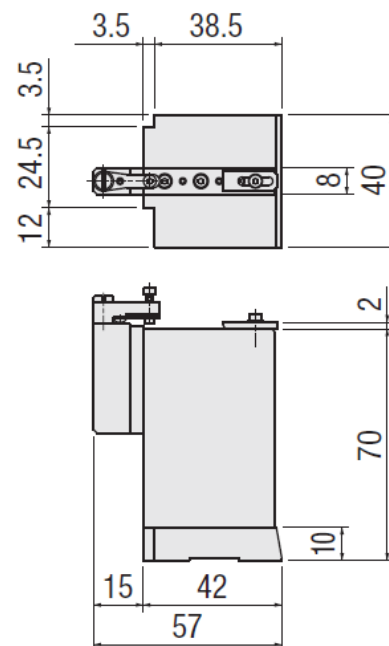
E410-B sold separately

Waveguide
WG holder

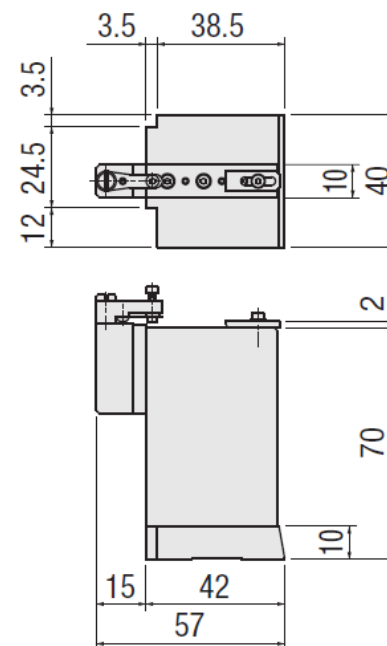
Preset base E410-B
※ Not to be attachable to the tilt stage

Device unit E1000 (No key)

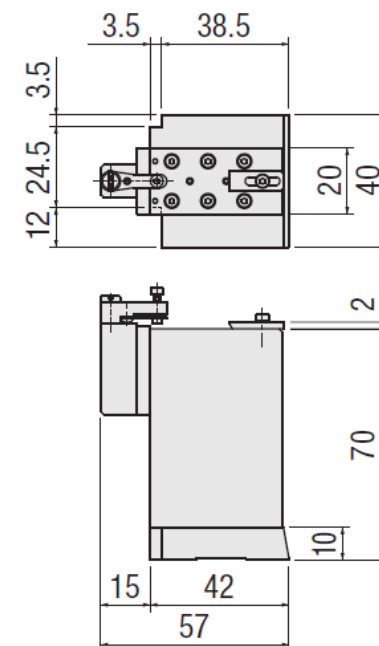
E400-8N



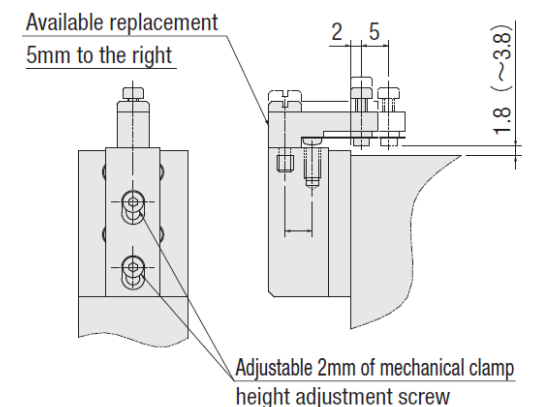
E400-10N



E400-20N



Details of the mechanical clamp

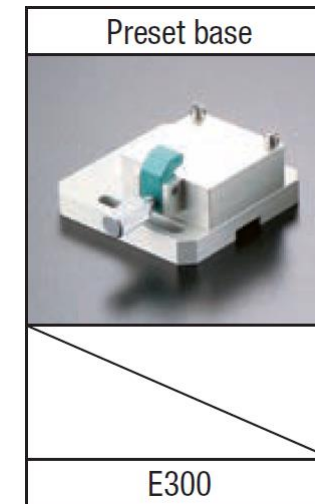
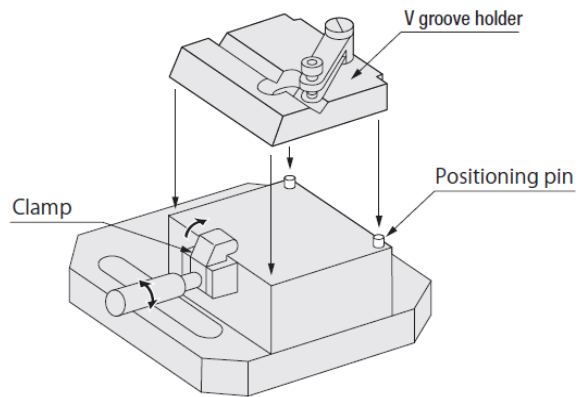


EW50 Accessories List

Preset type fiber holder

- The pre-set type holder is mounted on pre-set base.
Quick-release with mounting a positioning pin and clamp, and also it is good for the reproducibility of the position.

■ Example for using

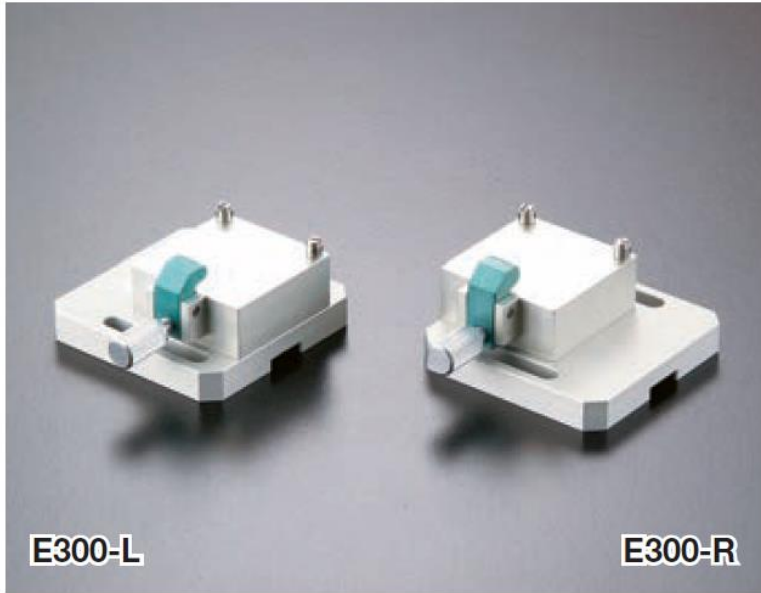


Preset style fiber holder	Preset style V groove holder	Preset style FA holder
E310	E330	E340

EW50 Accessories List

Preset Base: E300

- The preset holder installed on the base plate.
- Install to each stage unit.



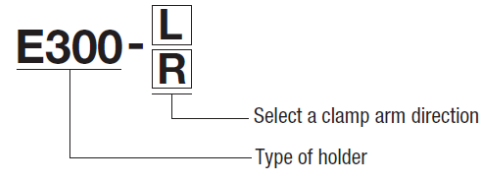
■ Example



■ Mounting



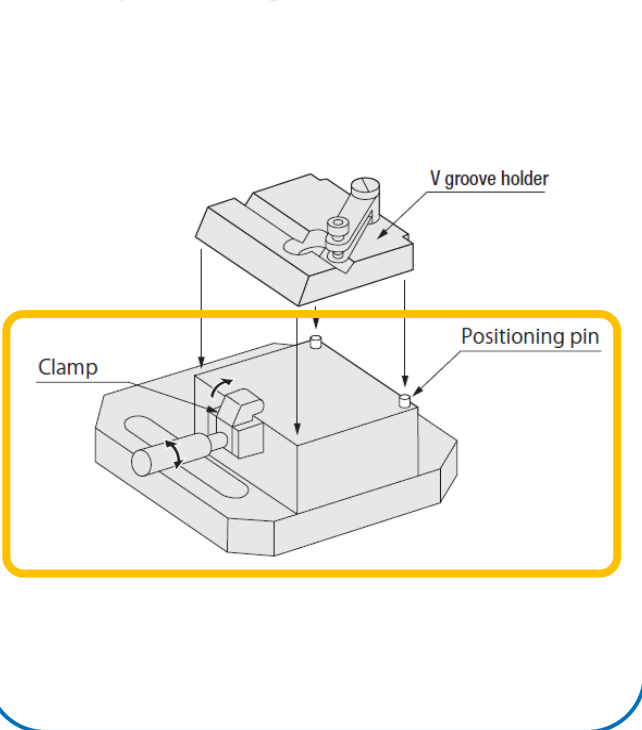
■ Model/ Option



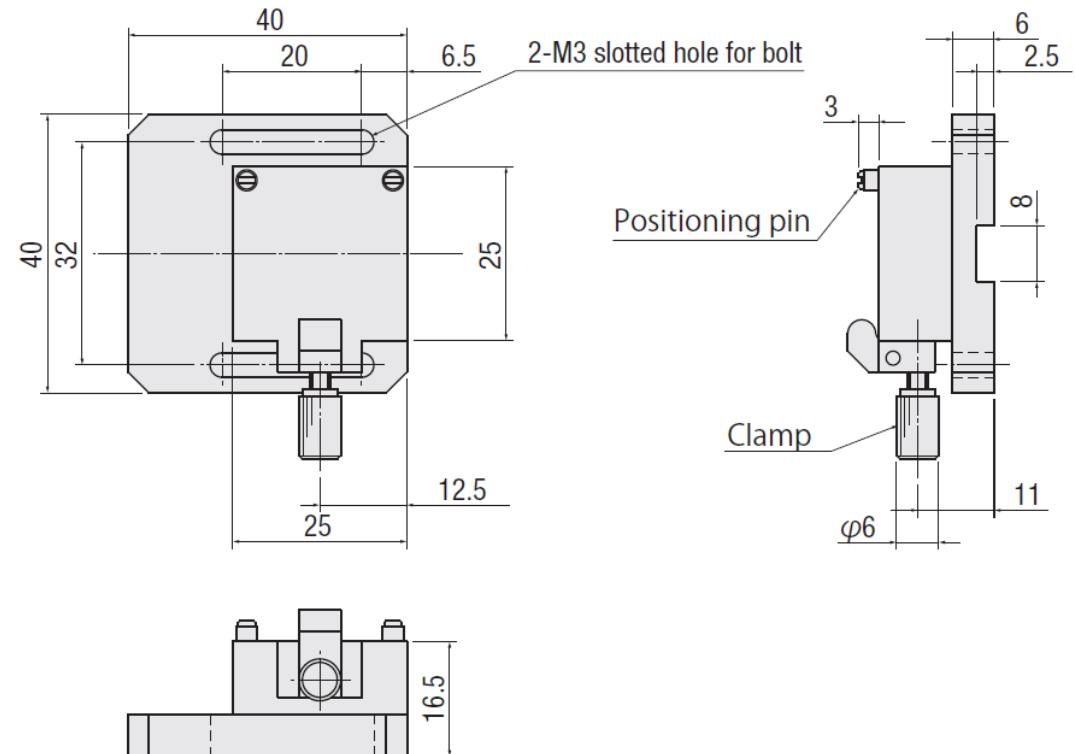
SPEC		
Model	E300-L	E300-R
Applicable holders	E310/ E330/ E340	
Mounting	Mechanical clamp	
Weight	0.05kg	
Main materials · Surface processing	Aluminium—Alumite finishing	

Accessory: Installation screw (hexagon socket head cap bolt 2 of M3-10)

■ Example for using



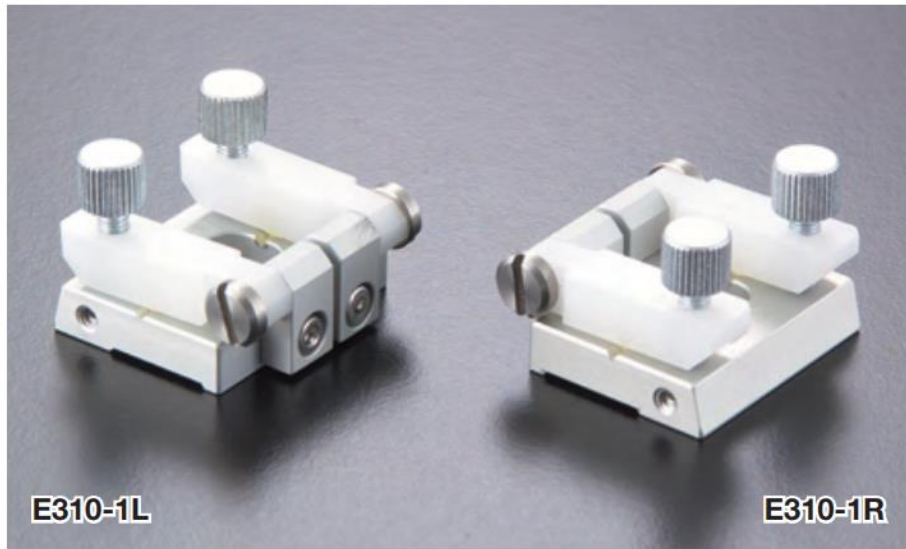
■ E300-L



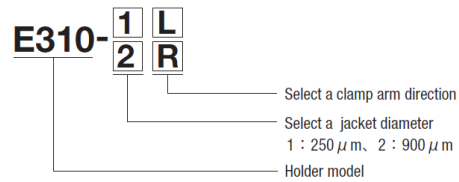
EW50 Accessories List

Preset Fiber Holder: E310

- Preset fiber holder.
- Install to the base plate E300.



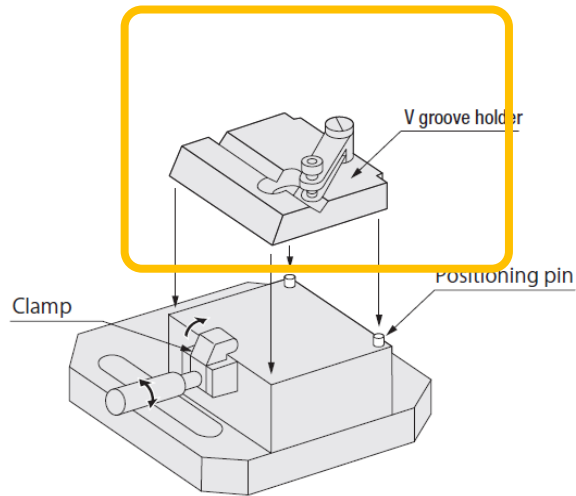
■Model/Option



SPEC		
Model	E310-1L/R	E310-2L/R
Clad diameter	125μm	
jacket diameter	250μm	900μm
Mounting	Magnetic force	
Weight	0.01kg	
Main materials · Surface processing	Aluminum-White alumite treatment	

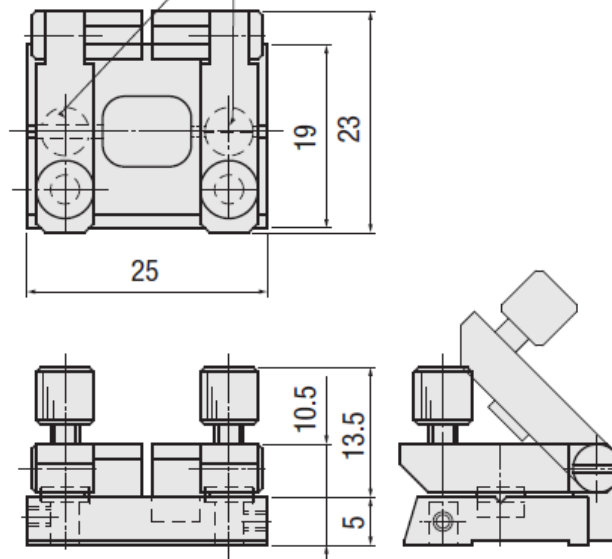
No surface treatment of V groove part

■Example for using



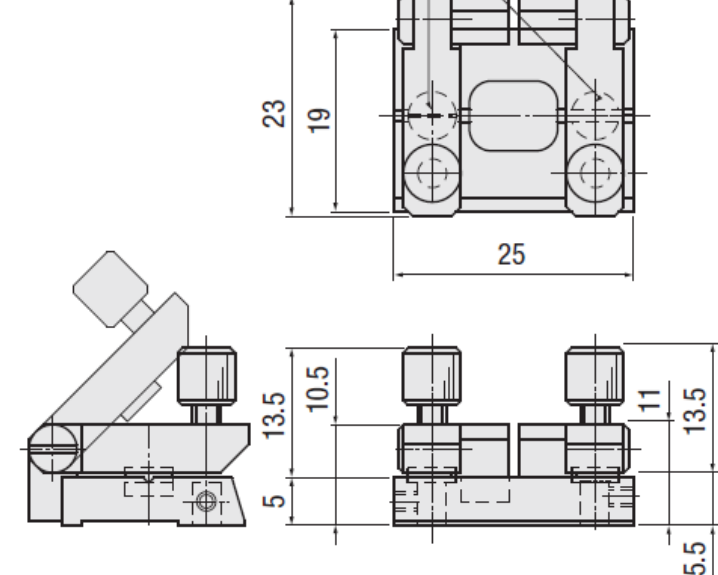
■E310-1L

Fiber jacket V groove for holding Fiber clad V groove for holding



■E310-1R

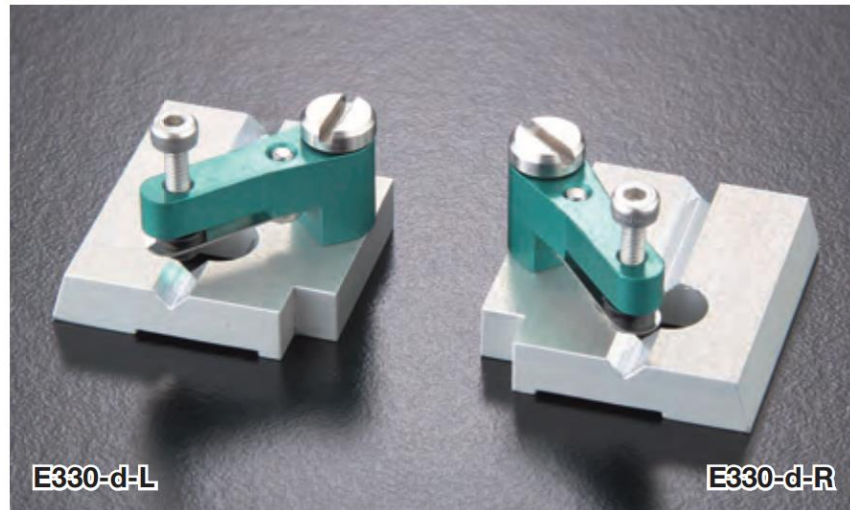
Fiber clad V groove for holding Fiber jacket V groove for holding



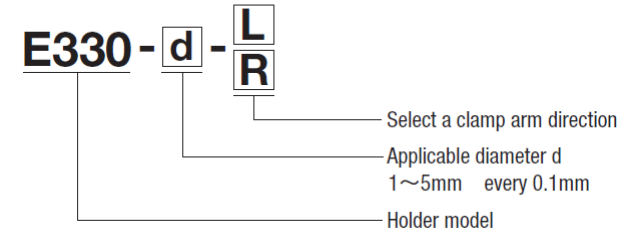
EW50 Accessories List

Preset type V-groove holder: E330

- Preset V groove holder for cylindrical elements.
- Install to the base plate E300.
- Please choose a compatible with element diameter (ϕd) when you order.



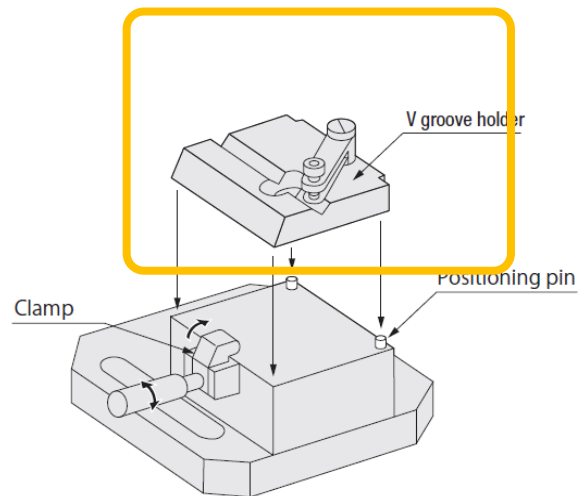
■Model/Option



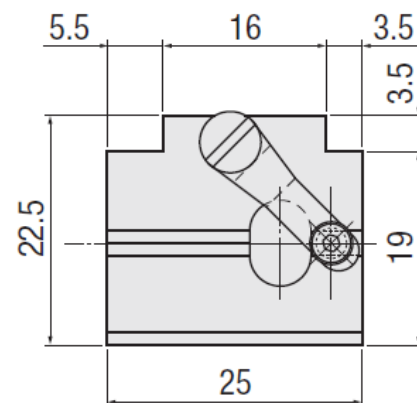
SPEC	
Model	E330-d-L/R
Applicable diameter (ϕd)	$\phi 1 \sim 5\text{mm}$ (every 0.1mm)
Mounting	Mechanical clamp
Weight	0.01kg
Main materials · Surface processing	Aluminium—Alumite finishing

No surface treatment of V groove part

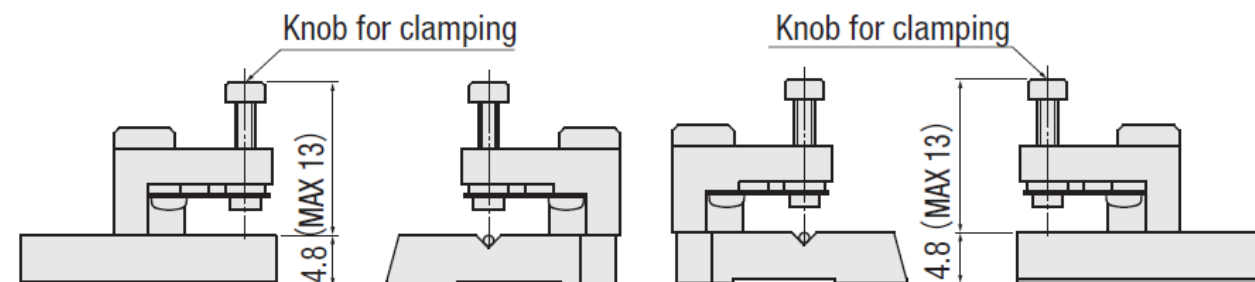
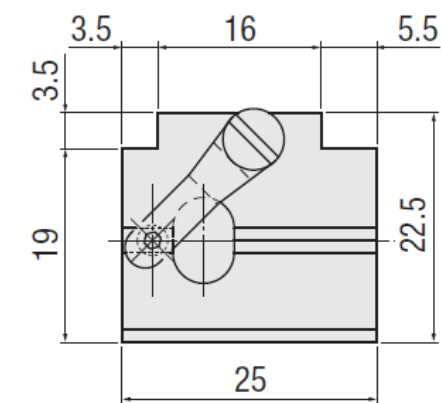
■Example for using



■E330-d-L



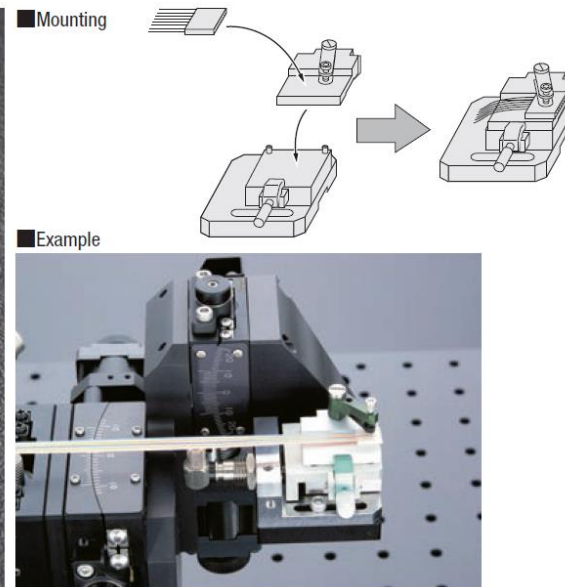
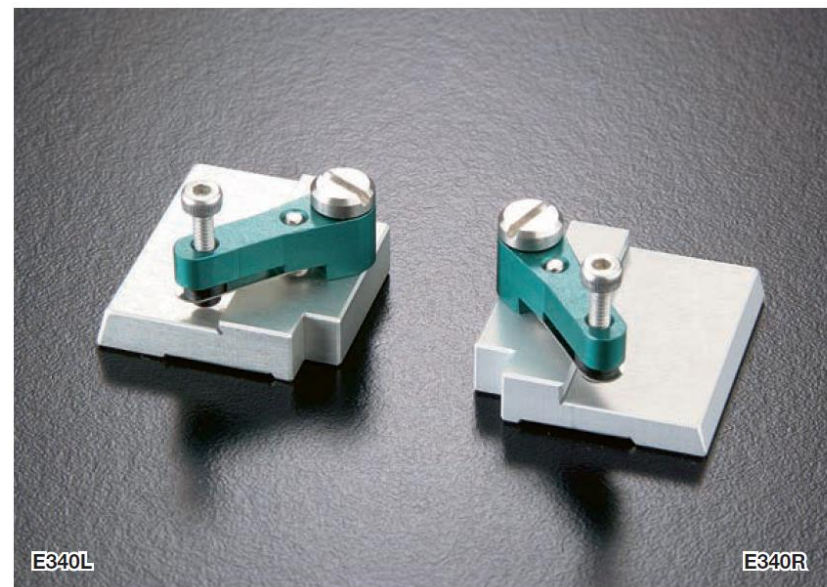
■E330-d-R



EW50 Accessories List

Preset type fiber array holder: E340

- Install to the base plate E300.
- Please choose a fiber array size when you order.



■ Model/Option

E340 $\begin{matrix} L \\ R \end{matrix}$ - $\begin{matrix} 1 \\ 2 \\ 3 \end{matrix}$ - $\begin{matrix} A \\ B \\ C \end{matrix}$

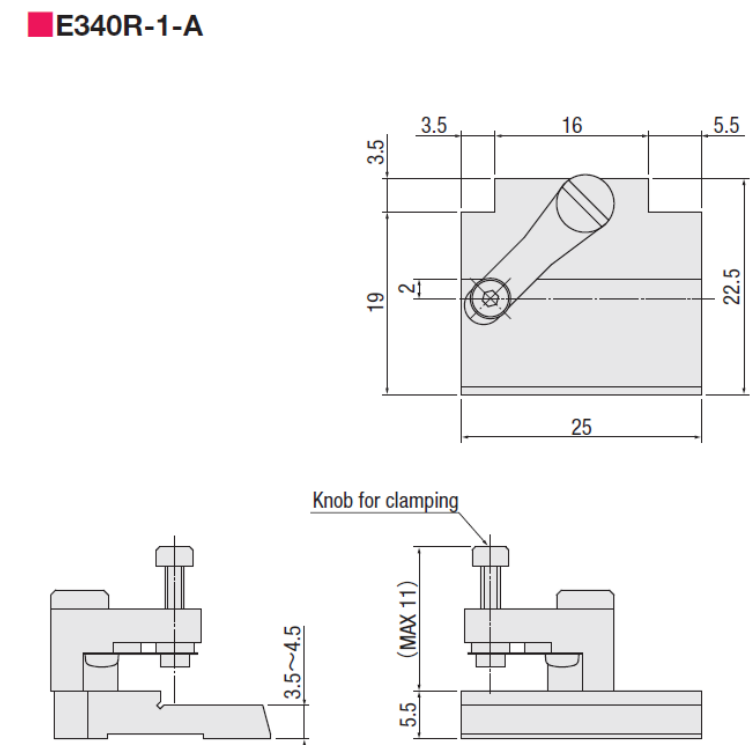
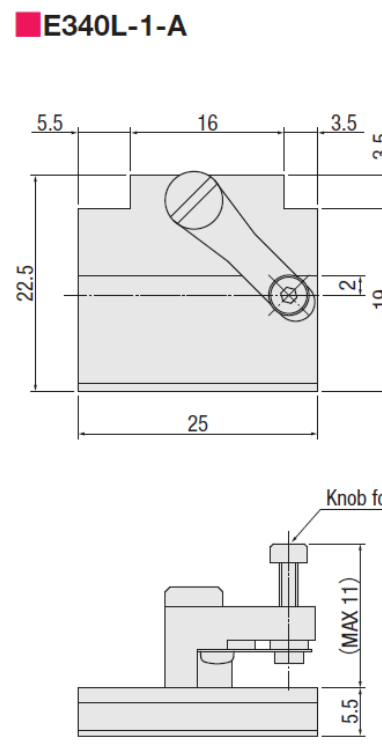
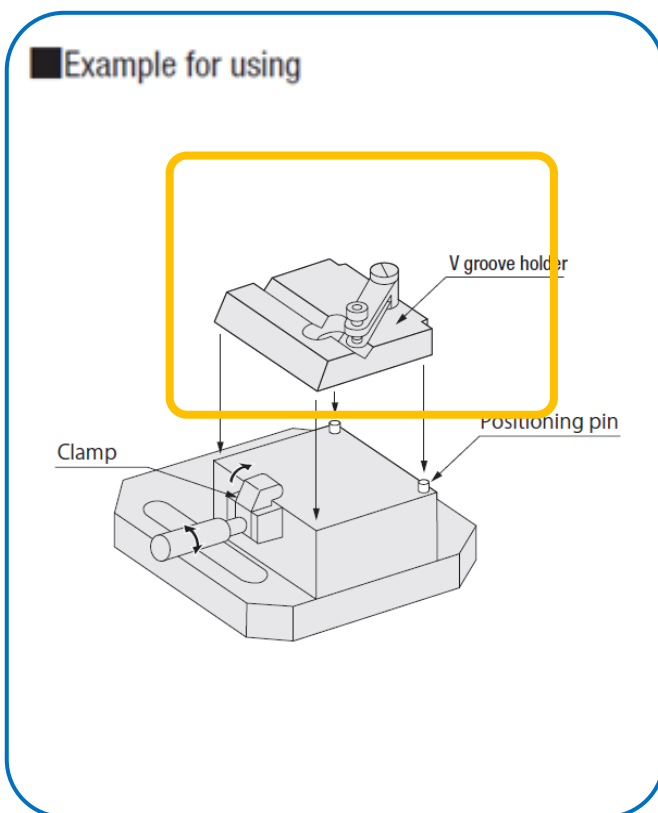
- Select a F.A. (W)
A : 3~5mm B : 5~8mm C : 8~12mm
- Select a F.A. (H)
1 : 1~1.5mm 2 : 2~2.5mm 3 : 3~3.5mm
- Select a clamp arm direction
Holder model

■ Fiber array size
Please use a fiber array bellows size or less.

L : min 3mm
W : 3~12mm
t : 1~1.5, 2~2.5, 3~3.5mm

※Please ask us for detail of the size.





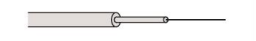
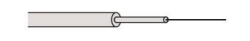
SPEC	
Model	E340L/R
F.A. size	(see the picture on the right)
Mounting	Mechanical clamp
Weight	0.01kg
Main materials · Surface processing	Aluminium—Alumite finishing











EW50 Accessories List

Fiber holder

- You can select according to the type of fiber to be used.
- All fiber holders can be attached to tilt tables and tilt stages.
- The keyway aligns the optical axis with the center of rotation of the stage. Mounting on the tilt stage is easy with two
- Some products require a separate vacuum device.

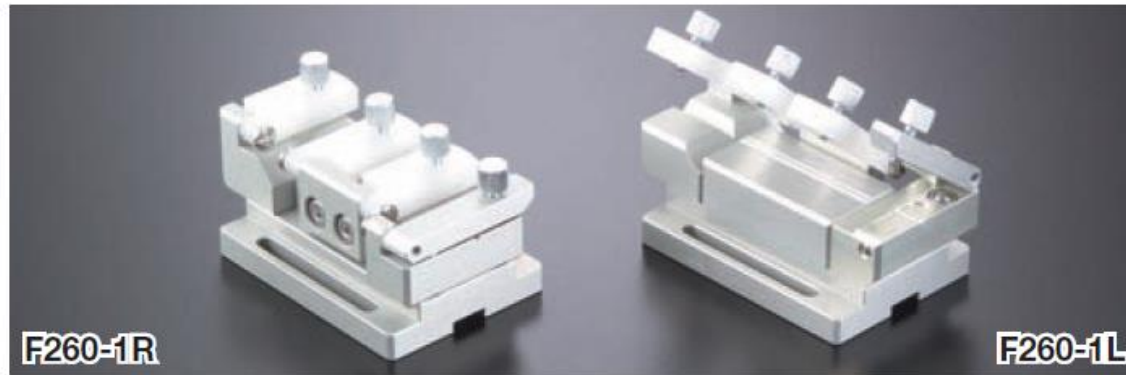
Fiber holder			
	Fiber holder	Rotation fiber holder	
Appearance			
Uses			
Model	F260	F264	F264N

Fiber holder				
	Fiber array holder	FC connector holder	Ferrule holder	Fiber holder with lens
Appearance				
Uses				
Model	F267	F261	F262	F268

EW50 Accessories List

Fiber Holder: F260

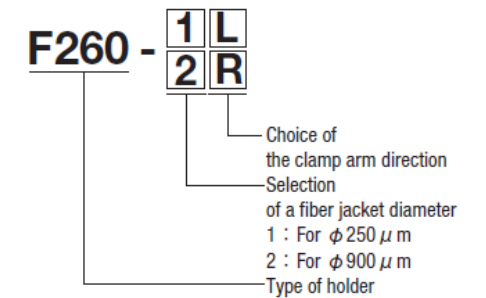
- This holder is to fix the core wire.
- Available for 250 μm and 900 μm of jacket's radius.



SPEC				
Model	F260-1		F260-2	
	L	R	L	R
Clad diameter	125~250μm			
Jacket diameter	250μm		900μm	
Fixing type	Magnetic force			
Weight	0.1kg			
Main materials · Surface processing	Aluminium—White alumite treatment			

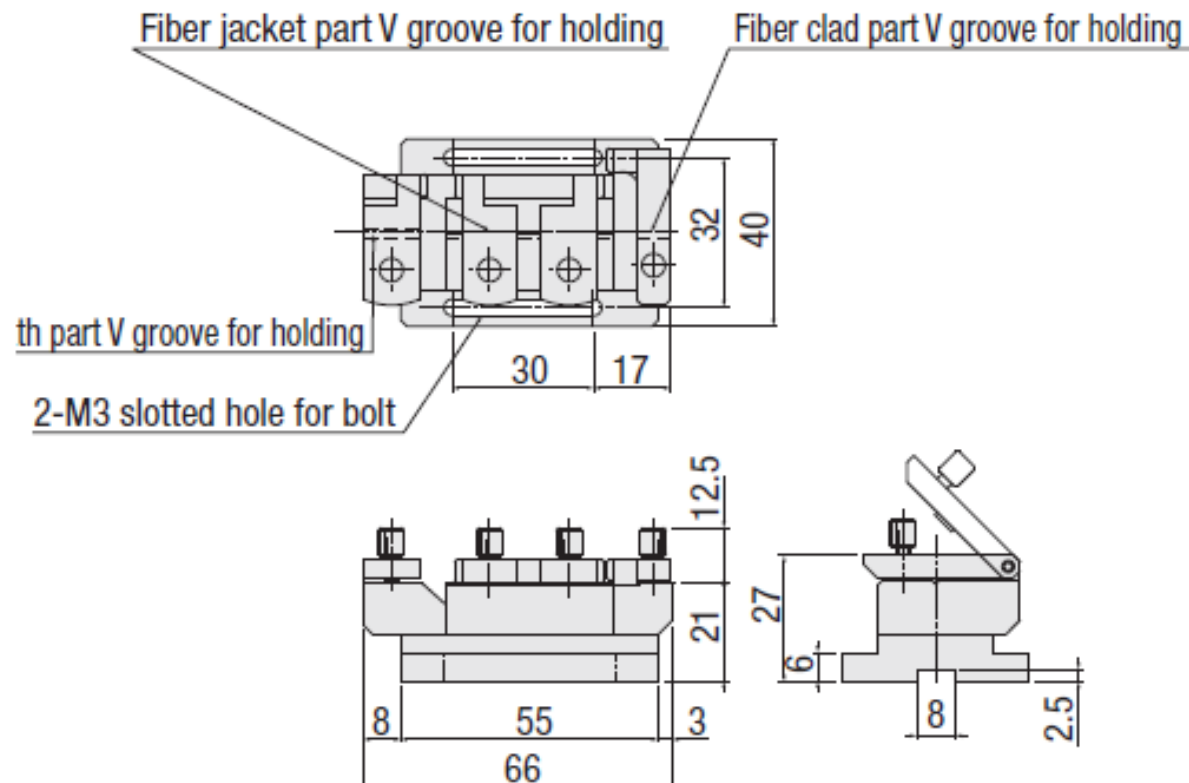
Accessory: Installation screws (Hexagon socket head 2 of M3-10)

Model/Option



Dimensional outline drawings

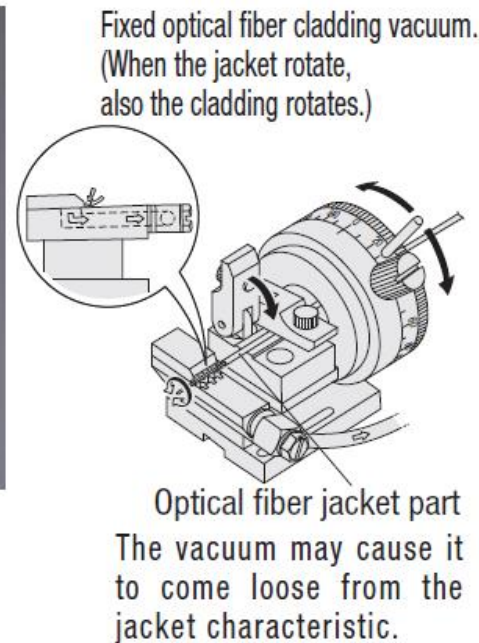
F260-L



EW50 Accessories List

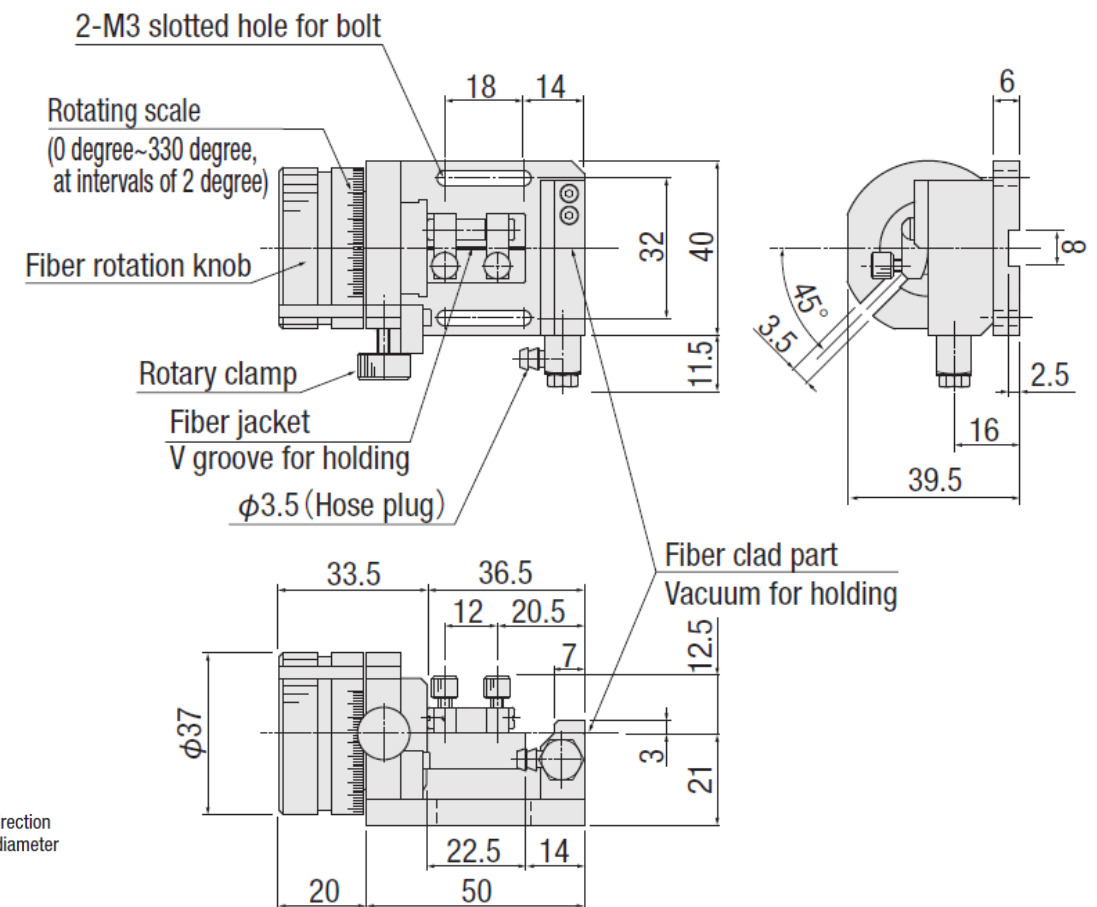
Rotation Fiber Holder:F264

- This holder is for polarization-preserving fiber rotation.
- The positional alignment amount of the tip of optical fibers at the rotating is so small because this holder will rotate based on a cladding of optical fiber.
- Cladding is fixed by vacuum pump, and the jacket is fixed at the two points by the magnet.
- Correspond to a jacket diameter 250 μm, 400 μm and 900 μm.
- A vacuum pump may be required when using this holder.



Dimensional outline drawings

F264-L

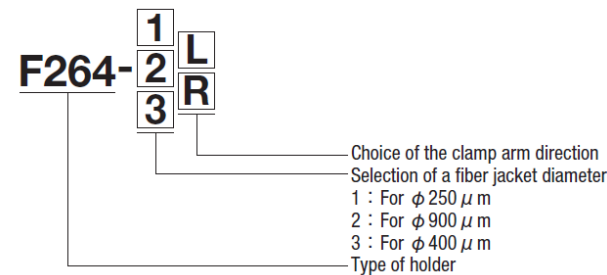


SPEC						
Model	F264-1		F264-2		F264-3	
	L	R	L	R	L	R
Clad diameter	125μm					
Jacket diameter	250μm		900μm		400μm	
Fixing type	Vacuuming and magnetic force					
Travel distance	360° (2° scale)					
Weight	0.2kg					
Main materials • Surface processing	Aluminium—White alumite treatment			Stainless※		

(※Fiber clad part)

Accessory: 2m of silicon hose and installation screws (Hexagon socket head 2 of M3-10)

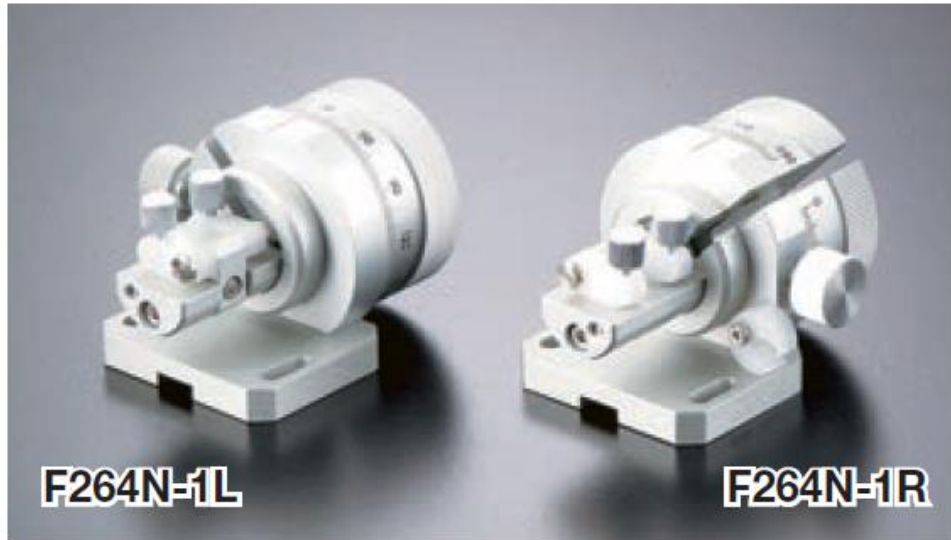
Model/Option



EW50 Accessories List

Rotation Fiber Holder:F264

●Without vacuum on the tip.

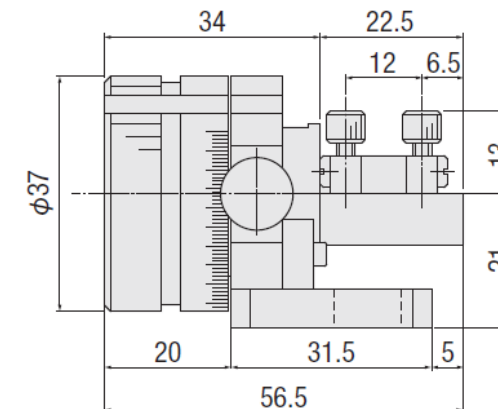
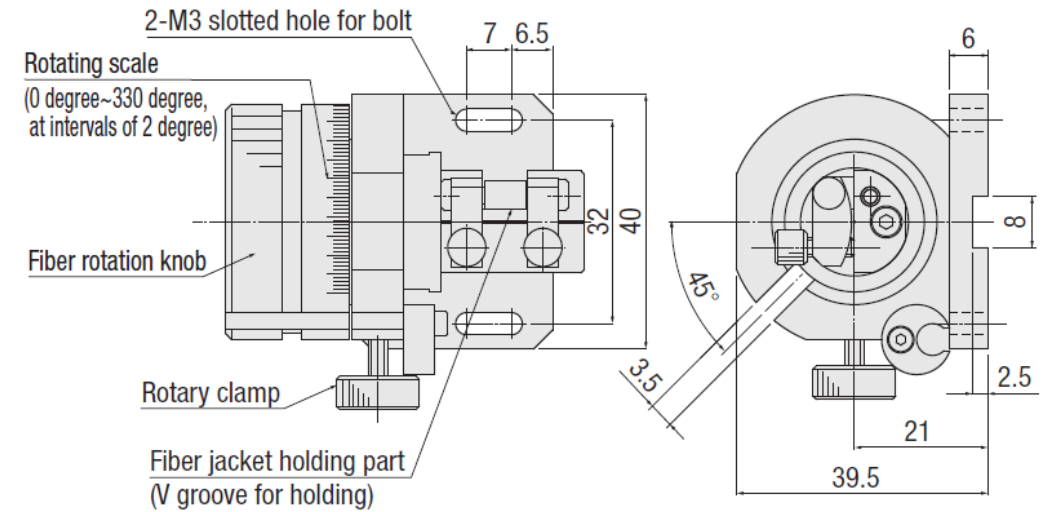


■Tilt stage mounted example



Dimensional outline drawings

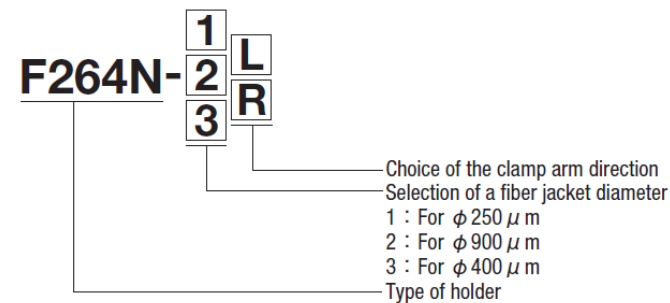
F264N-L



SPEC						
Model	F264N-1		F264N-2		F264N-3	
	L	R	L	R	L	R
Jacket diameter	250 μ m		900 μ m		400 μ m	
Fixing type	Magnetic force					
Travel distance	360° (2° scale)					
Weight	0.1kg					
Main materials · Surface processing	Aluminum-White alumite treatment					

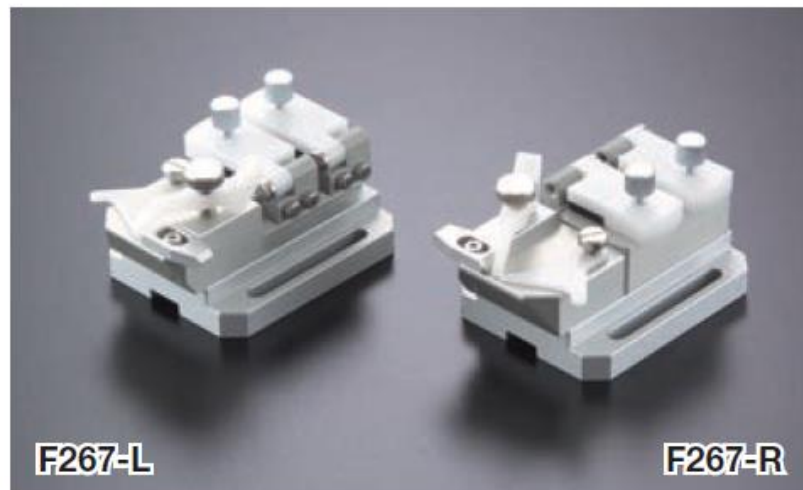
Accessory: Installation screws (Hexagon socket head 2 of M3-10)

■Model/Option



Fiber Array Holder: F267

- Holder for fixing the fiber array.
- Fix the fiber array with mechanical clamp from upper.
- The only 3~8mm fiber array can be fixed. Other sizes may be mounted with any parts change.

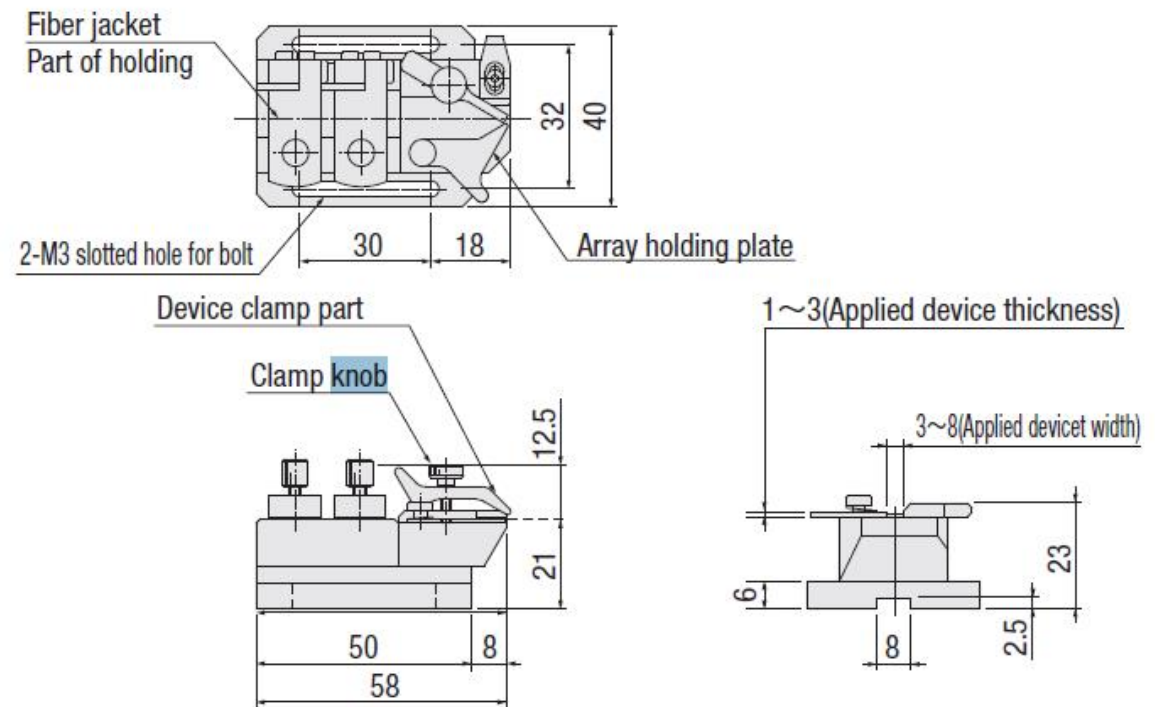


Example of mounting the fiber array



Dimensional outline drawings

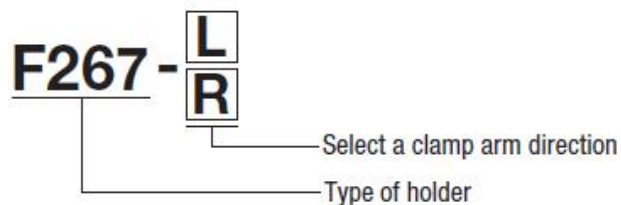
F267-L



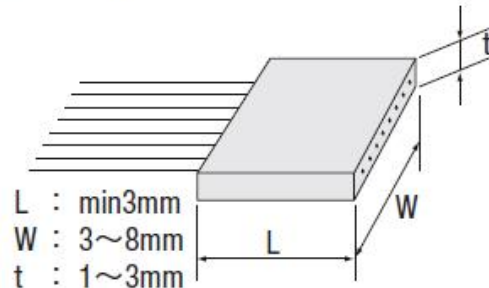
SPEC	
Model	F267
	L R
Fixing type	Mechanical clamp
Weight	0.09kg
Main materials · Surface processing	Aluminum · White alumite treatment

Accessory: Installation screws (Hexagon socket head 2 of M3-10)

Model/Option



Compatible with fiber array size



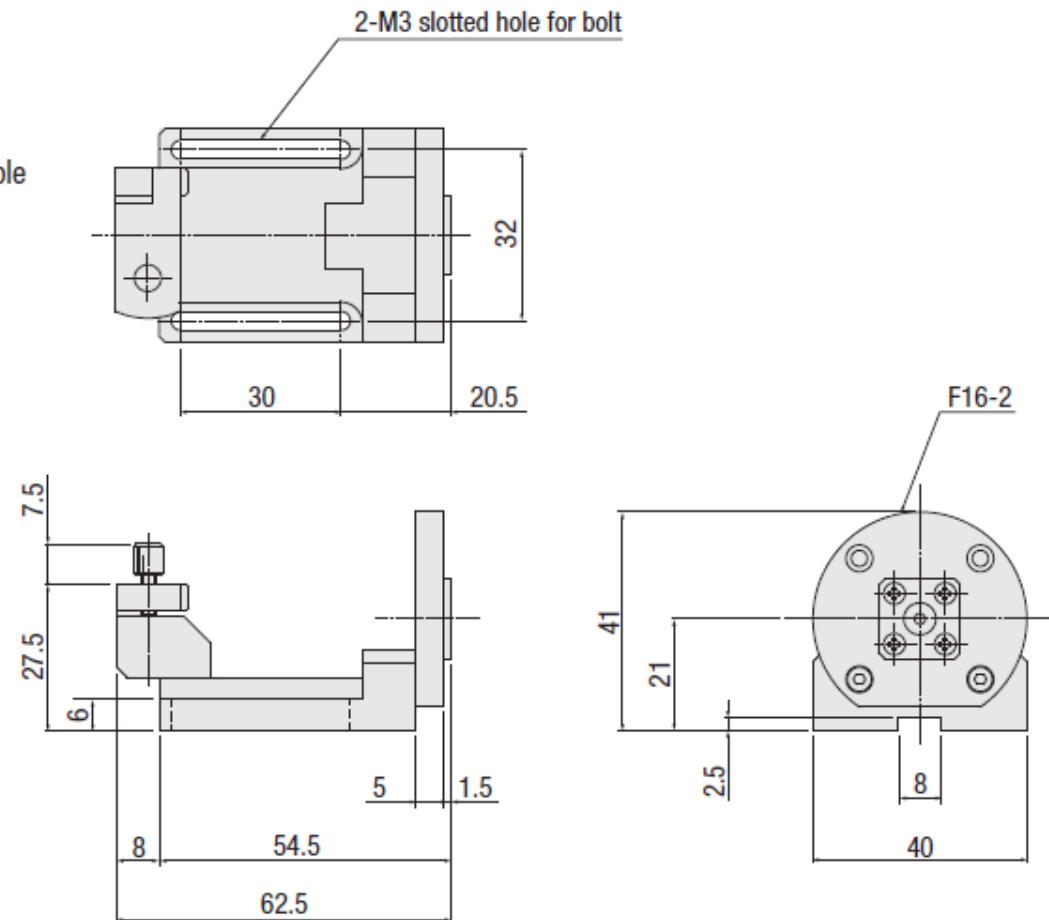
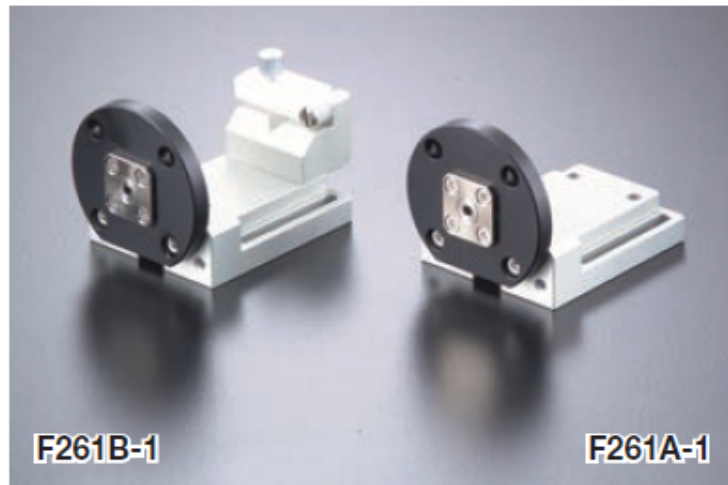
FC Connector Holder: F261



- Holder for fixing the fiber with FC connector.
- This is a combination of adaptor F16 for a connector and bracket A54 for element adaptor.
- There are two types, one with sheath hold part and the other without sheath hold the part.
- The ferrule end-face is positioned off approx.5mm the receptacle when a FC connector is inserted.

Dimensional outline drawings

F261B-1



SPEC		
Model	F261A-1	F261B-1
Applicable fiber	Fiber with FC connector	
Adaptor	F16-2	F16-2
The hold part for sheath	No	Yes
Weight	0.06kg	0.07kg
Main materials · Surface processing	Aluminium—Alumite finishing	

Accessory: Installation screws (Hexagon socket head 2 of M3-10)

■ Model/Option

F261 **A**/**B** - 1

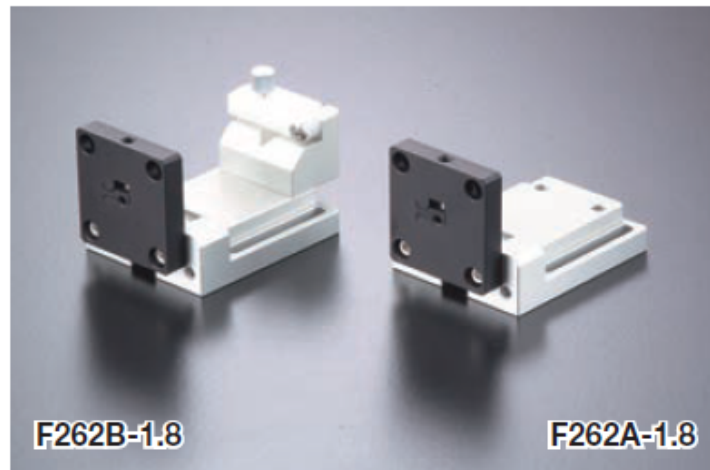
Select the hold part for sheath

A : N/A B : A

Type of holder

Ferrule Holder: F262

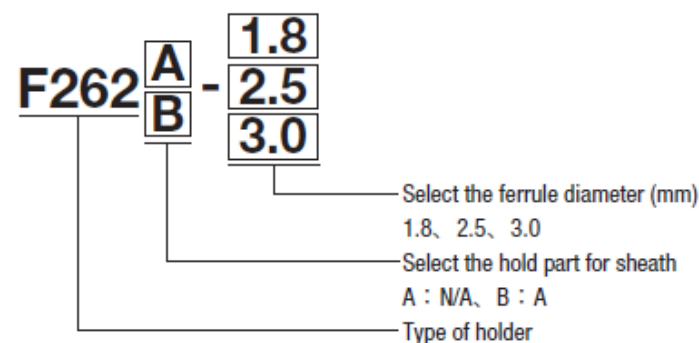
- Holder for fixing the optical fiber with ferrule.
- This is a combination of adaptor F15 for ferrule and bracket A54 for element adaptor.
- There are two types, one with sheath hold part and the other without sheath hold the part.
- Non-standard hole diameter is available. Please contact us for more information. Ferrule into the hole and tentatively fasten it using an Allen wrench. It is fixed by surface contact without damaging ferrule.



SPEC						
Model	F262A-1.8	F262A-2.5	F262A-3.0	F262B-1.8	F262B-2.5	F262B-3.0
Applicable diameter (φd)	1.8mm	2.5mm	3.0mm	1.8mm	2.5mm	3.0mm
Adaptor	F15-1.8	F15-2.5	F15-3.0	F15-1.8	F15-2.5	F15-3.0
The hold part for sheath	No			Yes		
Weight	0.06kg			0.07kg		
Main materials · Surface processing	Aluminium—Alumite finishing					

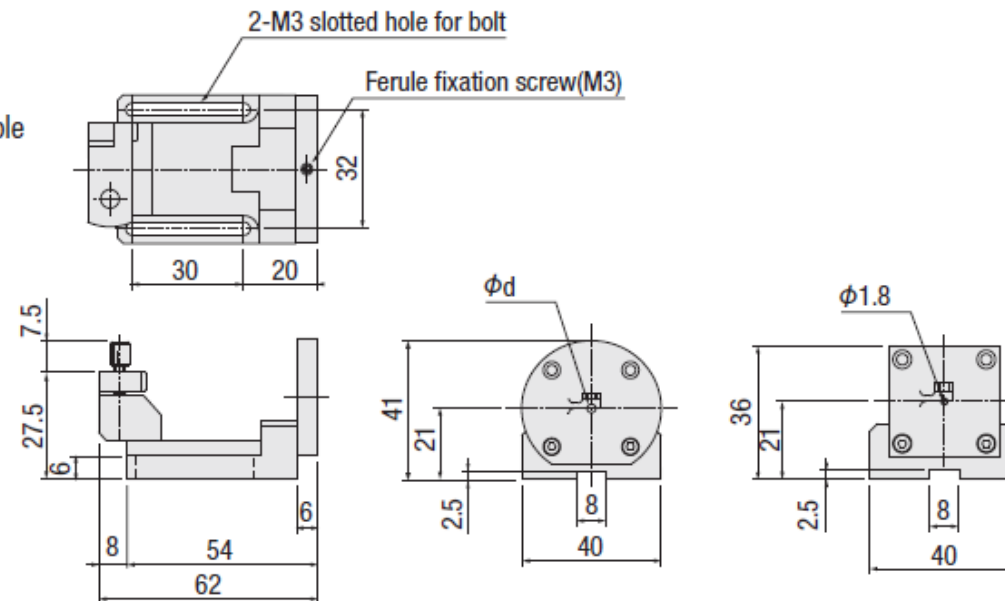
Accessory: Installation screws (Hexagon socket head 2 of M3-10)

■ Model/Option



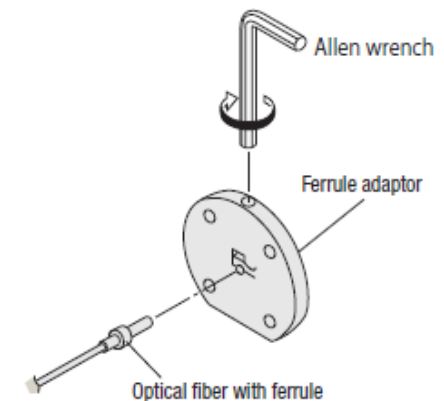
Dimensional outline drawings

■ F262B

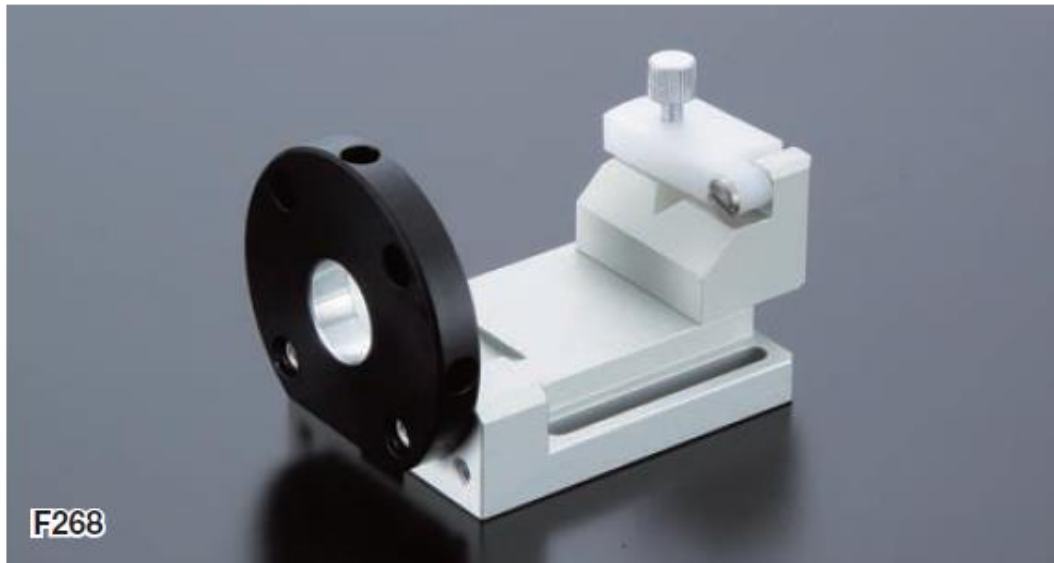


■ Mounting

Ferrule into the hole and tentatively fasten it using an Allen wrench. It is fixed by surface contact without damaging ferrule.



Fiber Holder with Lens: F268

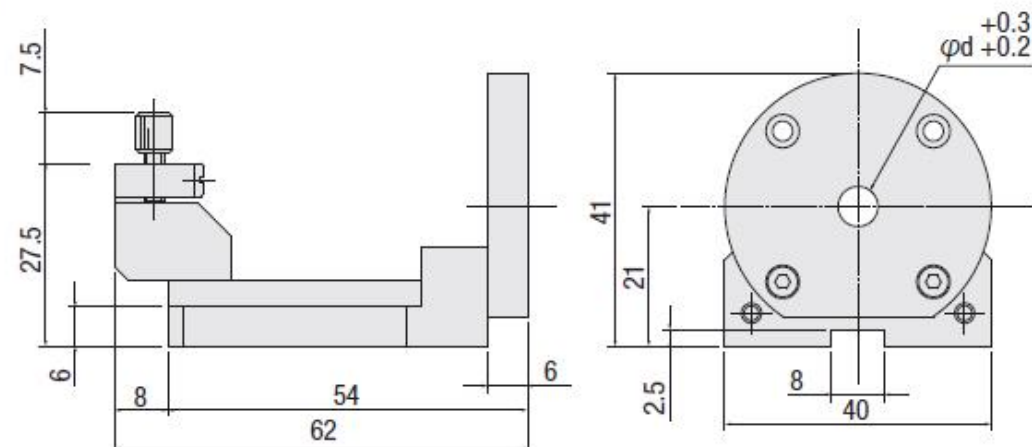
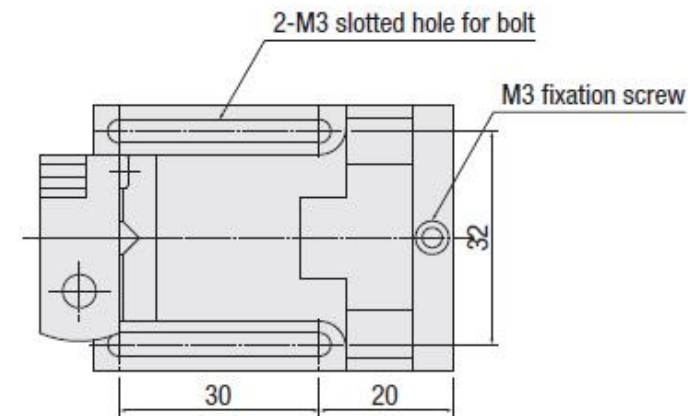


- Holder for fixing the cylindrical elements such as optical fiber with a lens.
- This is a combination of adaptor F510C for a lens and bracket A54 for element adaptor.
- Please choose a compatible with element diameter (φd) when you order.

F268-d

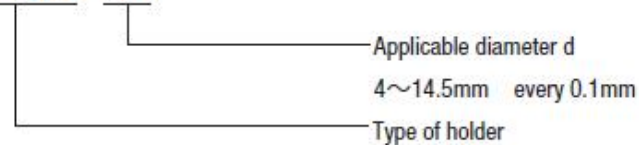
SPEC	
Model	F268-d
Applicable diameter (φd)	$\varphi 4 \sim \varphi 14.5\text{mm}$ (every 0.1mm)
Adaptor	F510C-d
Weight	0.08kg
Main materials · Surface processing	Aluminium—Alumite finishing φd part: No treatment

Accessory: Installation screw (hexagon socket head cap bolt 2 of M3-10)



Model/Option

F268-d



EW50 Accessories List

Vacuum pump: V10A (cannot be sold to the European region as it is not CE declared)

Vacuum pump for rotating fiber holders (F263, F264, F265, FS266) and waveguide holders (F270, F271, F272, F273, F274, E400, E410). Since this pump is a linear motor driven free piston system, it is compact, lightweight, low noise, low vibration, and oilless, so you can use it with confidence.



SPEC	
Model	V10A
Ultimate vacuum	-33.3kPa
Open flow rate	6ℓ/min
Electricity consumption	15/14W
Rated time	Continuous
Service time	5,000 hours
Discharge and inhalation size	Coupler for φ4 hose
Power supply	AC100V 50/60Hz
Power code	2.5m (Inlet with ground wire)
Power switch	Locker switch
Size	135(L)×91(W)×146(H)mm
Weight	1.5kg

※2m tube is attached to a vacuum pump.
 ※2m tube is attached to a manihold and release valve.

- Ultimate vacuum Indicates the degree of vacuum when the pump is operated with the suction port closed.
 - Flow rate when open Indicates the flow rate when the degree of vacuum is 0 . (reference amount)
 - Power consumption Indicates the maximum input power within the range up to the ultimate vacuum.
 - Rated time Indicates the time the product can be used within the coil temperature limit of 115° C .
 - Durable time When the discharge flow rate is higher than the rated flow rate when used under the rated conditions.
 Refers to the cumulative usage time from 10 % to 20 % or less.
- Conditions of use (how to use, replacement of consumable parts), place of use, ambient temperature
 Please note that the service life may vary depending on factors such as

-Vacuum pump set: EV10A



A vacuum pump set for fiber holders and device holders. Use the release valve attached to the breadboard.

■ Configurations

Product name	Model
Vacuum pump	V10A
Release valve	V11-5A
Plate	E10

Accessory : Two tubes, screws (hexagon-headed bolt 4 of M4-22)
 (hexagon-headed bolt 2 of M6-14)

- Vacuum tweezers: V12A

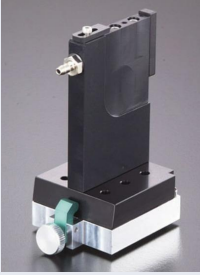



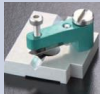



V12A using the vacuum pump V10A can be used as a suction pin with your fingertips. It is easy to use, as if it had been set, and can pick up and move minute parts, lenses, etc. This product is a set of vacuum pump V10A and tweezers. Purchase tweezers only Please inquire separately if you wish to.




■ Configurations

SPEC	
Model	V12A
Vacuum pump	V10A
Tweezers	Tweezers with valve φ12×144.5mm 18g
Accessory	Tube 2m Needle φ1.0mm Pad φ4 φ6mm Tweezers Stand

EW50 Accessory List Check Sheet




product name		Product No	specification	quantity	
Device unit fixed type		E1000-h	h=		
Waveguide holder	Preset type (E410-B included) 	E410-6	6×38mm	Vacuum + Mechanical clamp	
		E410-8	8×38mm		
		E410-10	10×38mm		
		E410-20	20×38mm		
		E410-30	30×38mm		
		E410-40	40×38mm		
		E410-8N	8×38mm	Mechanical clamp	
		E410-10N	10×38mm		
		E410-20N	20×38mm		
	Mechanical clamp 	Preset base	E410-B	—	
		Waveguide holder	E400-8N	8×38mm	
			E400-10N	10×38mm	
	E400-20N	20×38mm			
Fiber holder	Preset formula	Preset base 	E300-L	—	
			E300-R	—	
		Fiber holder 	E310-1L	Fiber= φ 250 μ m	
			E310-1R		
			E310-2L		
		V-groove holder 	E310-2R	Fiber = φ 900 μ m	
	E330-dL		d=		
	Array holder 	E330-dR	d=		
		E340-L	t=	W=	
E340-R	t=		W=		
Vacuum pumps (excluding Europe)	Vacuum pump		V10A		
	Vacuum pump set		EV10A		
	Vacuum tweezers		V12A		

EW50 Accessory List Check Sheet

product name		Product No		Specification		quantity
Fiber holder F2_ series	Fiber holder 	F260-1L	Mechanical	Fiber cladding 125-250 μm --	Fiber jacket 250 μm	
		F260-1R			Fiber jacket 900 μm	
		F260-2L			Fiber jacket 250 μm	
		F260-2R			Fiber jacket 900 μm	
	Rotating fiber holder 	F264-1L	Vacuum type	Fiber cladding 125 μm	Fiber jacket 250 μm	
		F264-1R			Fiber jacket 900 μm	
		F264-2L			Fiber jacket 400 μm	
		F264-2R			Fiber jacket 250 μm	
		F264-3L			Fiber jacket 900 μm	
		F264-3R			Fiber jacket 400 μm	
	Rotating fiber holder 	F264N-1L	Mechanical	Fiber cladding 125 μm	Fiber jacket 250 μm	
		F264N-1R			Fiber jacket 900 μm	
		F264N-2L			Fiber jacket 400 μm	
		F264N-2R			Fiber jacket 250 μm	
		F264N-3L			Fiber jacket 900 μm	
		F264N-3R			Fiber jacket 400 μm	

product name		Product No	specification		quantity		
Fiber holder F2_ series	Fiber array holder	F267-L	Mechanical	L=MIN 3mm, W=3-8mm, t=1-3mm			
		F267-R					
	FC connector holder	F261A-1	Sheath hold	No			
		F261B-1		Yes			
	Ferrule holder	F262A-1.8	Sheath hold	No	φ d = 1.8mm		
		F262A-2.5			φ d = 2.5mm		
		F262A-3.0			φ d = 3.0mm		
		F262B-1.8		Yes	φ d = 1.8mm		
		F262B-2.5			φ d = 2.5mm		
		F262B-3.0			φ d = 3.0mm		
	Fiber holder with lens	F268-d	Mechanical	d= φ 4 to 14.5mm (0.1mm Setp)	d =		

EW50 replacement parts

product name		Product No	specification	quantity
EW50 	12 axis controller 	DA1000-JP	Designed for Japan	
		DA1000-EU	Designed for Europe	
		DA1000-TW	Designed for Taiwan	
		DA1000-US	Designed for North America	
		DA1000-CN	Designed for Chinese specification	
	6 axis stage 	EW10-STL10	Motorized stage unit L	
		EW10-STR10	Motorized stage unit L	
	Connection cable	D214-3-3R2	28 standard motor cable (3m)	
		D214-3-3RE2	28 standard encoder cable (3m)	
		D214-3-3R2H	28 high resolution motor cable (3 m)	
		D214-3-3RE2H	28 high resolution encoder cable (3 m)	
		D214-3-3RS	Sensor cable (3 m)	