

Jacket (Mantle) Heaters

■ Standard jacket (mantle) heater

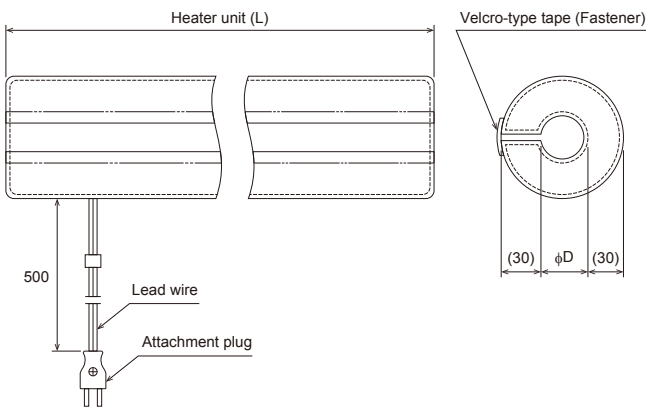
With an easily attachable standard jacket (mantle) heater as well as convenience and ease for use, the products have been used in various fields such as heating piping (pipe) and baking vacuum apparatus.

Features

- Excellent thermal shock resistance thanks to the highly heat-resistant inner insulator in particular allows continuous operation for long periods of time.
- Easily-modified heater materials make it possible to manufacture complex shaped heaters.
- Having diverse applications, this type of heater is widely used for heating or heat retention in fields ranging from industry to research.



Shapes



Standard product specifications

Insulator	Glass fiber
Heating wire	Glass coated nichrome wire
Voltage	100 VAC (*1)
Inner diameter	$\phi 20$ to $\phi 100$
Length	100 to 1500 mm
Connector	With single lead 100 V flat attachment plug
Max. operating temperature	400°C (*2)

*1 Custom-made heaters of 200 V specifications are available on request.

*2 The outer surfaces of the heaters, the fasteners and the Velcro-type tapes are designed to withstand up to 150°C. The attachment plug must be used at an ambient temperature of 50°C or lower.

Standard products

Model	Voltage (V)	Capacity (W)	Watt density (W/cm ²)	Inner diameter (D) (ϕ)	Length (L) (mm)
P2-1☆	100 (*)	100	1.6	20	100
P2-2		100	0.8		200
P2-3☆		150	1.6		300
P2-5		200	0.6		500
P2-10		300	0.5		1000
P2-15		500	0.5		1500
P3-1☆		100 (*)	100		1.1
P3-2	150		0.8	200	
P3-3☆	200		0.7	300	
P3-5	300		0.6	500	
P3-10	400		0.4	1000	
P3-15	600		0.4	1500	

Model	Voltage (V)	Capacity (W)	Watt density (W/cm ²)	Inner diameter (D) (ϕ)	Length (L) (mm)
P5-1	100 (*)	150	1.0	50	100
P5-2		200	0.6		200
P5-3		300	0.6		300
P5-5		400	0.5		500
P5-10		500	0.3		1000
P5-15		800	0.3		1500
P10-1		100 (*)	300		1.0
P10-2	400		0.6	200	
P10-3	400		0.4	300	
P10-5	500		0.3	500	
P10-10	800		0.3	1000	
P10-15	1200		0.3	1500	

* Custom-made heaters of 200 V specifications are available on request.

* For specifications not listed above, consult our sales representative.

The model numbers marked with ☆ indicate standard products in stock. (The model numbers without ☆ indicate made-to-order products.)

■ Custom-made jacket (mantle) heater

We can customize heaters to meet your specifications (drawings or objects you want to heat) from one unit.

Our heaters have been time-tested and widely used for many types of semiconductor manufacturing equipment and clean rooms.

Features

- Custom-made products are available to meet your specific needs, regardless of the order quantity.
- The heater can be freely designed and manufactured, for example the thickness or arrangement of the thermal insulator, enabling the heater to be installed in awkward places.
- Since the heater is composed of flexible heat-resistant fiber, it easily fits the object to be heated, efficiently applies heat to the object and keeps the heat in it.
- The lightweight design allows the heater to be attached/detached easily, making it easy to attach other devices such as a temperature controller.

Example of shapes



Clean room type



Rectangular type



L-shaped special piping type

* Since the heater is made to order, we visit the customer's site to confirm the customer's needs including specifications and shape. Please feel free to contact us.

Confirmation items on specifications of special order product

Item	Condition	Item	Condition
Usage environment		Sample product	AVL N/A
		Allowable thickness of heat insulator	mm
		Lead wire length	mm
Operating voltage	V	Presence of temperature sensor	AVL N/A Type
Electrical capacity	W	Connectors	AVL N/A
Operating temperature	°C	Temperature controlling method	
Dimensional outline drawing of product to be heated	AVL N/A	Accessories	

Other important information

Precautions for use

- This product is for industrial use only. For details, contact our sales representative.
- To regulate the surface temperature of the heater, this product must be used in conjunction with a temperature controlling device such as a temperature controller.
- This product is intended for indoor use; it does not have a waterproof design. Do not expose the product to water or other liquid.
- When installing the heater on an object to be heated, if the heater does not come into close contact with the object, the heat-transfer coefficient decreases, causing excessive heat in the heating wire. This may result in early breakage of the heating wire.
- Since this product is composed of highly hygroscopic materials, care must be taken when it is stored in a humid place.
- Handle this product with care since glass fiber is easily damaged when it is rubbed, or caught on a sharp pointed object.



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