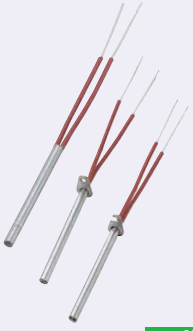


# Cartridge Heaters

## Stranded Wire

Be sure to refer to "Precautions for Use" in the Cartridge Heater Overview on P.1605.

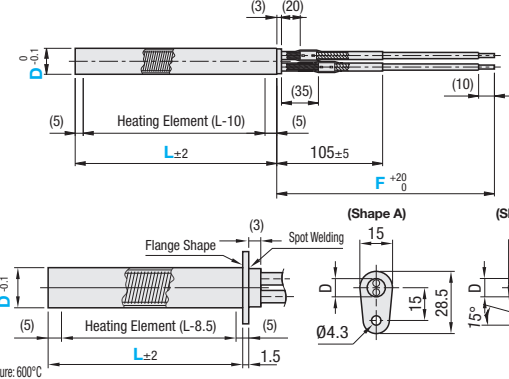


**MCHZ**  
(No Flange)

**MCHZA**  
(Flange Shape A)

**MCHZB**  
(Flange Shape B)

**RoHS 10**



Terminal

- N** (No Crimp Terminal)
- M** (With Round Crimp Terminal)
- Y** (With Crimp Spade)

Material  
Heater : SUS304  
Lead Wire : See Below  
Terminal : Copper (Tin Plating)  
Flange : Stainless Steel

Maximum Operating Temperature: 600°C  
Maximum Operating Temperature means value at the sheath part. Please pay attention to Lead Wire Heat Resistance Temperature and be sure to put the lead wire out of the mounting hole.

Terminal

- N** (No Crimp Terminal)
- M** (With Round Crimp Terminal)
- Y** (With Crimp Spade)

### Stranded Wire

Part Number Type	D	L 1mm Increment	V (Voltage) Selection		W (Electric Power) 10W Increment		F (Lead Wire Length) Lead Wire Type   10mm Increment		Terminal	Electrical Power Density (W/cm <sup>2</sup> )
			100	200	50~ 600	50~ 1200	B G T M	100~1000		
<b>MCHZ</b> <b>MCHZA</b> <b>MCHZB</b>	8	50~400	100	200	50~ 600	50~ 1200	B G T M	100~1000	N M Y	$2 \leq W/cm^2 \leq 15$ $W/cm^2 = W / (D\pi(L-10) * / 100)$ * For Flanged Type (L-8.5) (Calculate with the electrical power density of heat-generating part, not with the overall length.)
	10	50~600	100	200	50~ 600	50~ 1200				
	12		100	200	50~ 800	50~ 1600				
	*14		100	200	50~ 800	100~1600				

\* D:14 is for MCHZ only

### Type of Lead Wire

Symbol	Selection	Heat Resistance Temperature	Features
<b>B</b>	Tin Plated Annealed Copper Fiber Glass Braided Wire	180°C	General Use
<b>G</b>	Silicon Rubber + Tin Plated Annealed Copper Wire	180°C	For chemical and water resistant items
<b>T</b>	Teflon + Nickel Plated Annealed Copper Wire	260°C	For chemical, water and weather resistant items
<b>M</b>	Mica Polyimide-Wound Silica + Nickel Coated Copper Wire	400°C	For heat resistant items

### Type of Terminal

Symbol	Type of Terminal	Nominal Screw
<b>N</b>	No Crimp Terminal	-
<b>M</b>	Crimp Terminal - Round	M4
<b>Y</b>	Crimp Terminal - Y-Shaped	M4



Ordering Example

Part Number - L - V - W - F Lead Wire - Terminal

MCHZ12 - 170 - V200 - W200 - B 1000 - M

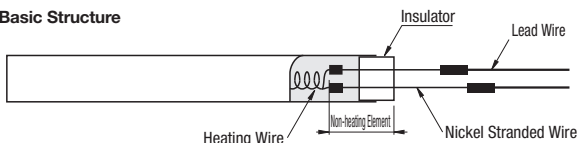
Part Number Type	D	Heater Body Price					Flanged Type Additional Price (Body Price +)		Additional Lead Wire Price (Body Price +)				Additional Terminal Price (Body Price +)			
		L50-100	L101-200	L201-300	L301-400	L401-500	L501-600	Shape A	Shape B	B	G	T	M	N	M	Y
<b>MCHZ</b> <b>MCHZA</b> <b>MCHZB</b>	8															
	10															
	12															
	*14															

\* D:14 is for MCHZ only

### Features of the Cartridge Heater - Stranded Wire

- The wires are less prone to breakage.
- The cartridge heater (break resistant internal connection type) employs a connection with heat-generating wire and nickel stranded wire in the sheath and a connection with nickel stranded wire and lead wire outside the sheath.
- As the nickel pins are not exposed, the heater is more resistant against bending.

### Basic Structure



### Precautions for Use

- Do not let the heaters run idle in the atmosphere. If the heater is used with some or the whole of the heating element projected from the heated objects, the wire may break or ignite due to abnormal heating.
- Do not repeatedly bend the connection part between the nickel stranded wire and the lead wire. (Do not bend repeatedly.)
- Do not pull the connection part between the nickel stranded wire and the lead wire. (Forcibly pulling on it could result in breakage.)
- Keep the temperature around the lead wire exit at 130°C or less.
- Do not bend repeatedly.
- When bending the wire, be careful not to expose the stranded wire.
- Do not apply any load to the insulator.



Example

