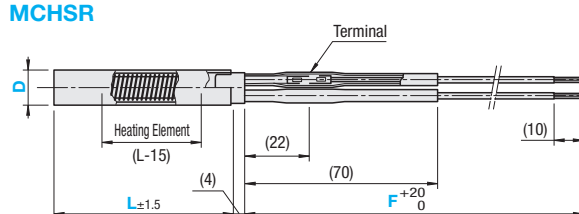


Cartridge Heaters

Configurable L, W and F

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



MCHSR

Terminal

Heating Element (L-15)

(4)

(22)

(70)

(10)

$L \pm 1.5$

$F \begin{smallmatrix} +20 \\ 0 \end{smallmatrix}$

D Tolerance	
D	Tolerance
6 8 10 12 14 16 18	-0.02 -0.08
6.25 9.42 12.6 15.77 18.95	+0.05 0

M Material : SUS304
Heater Equivalent
Terminal : Copper
Lead Wire : See Below
Insulation Tube Heat Resistance Temperature : 180°C

For D6, 6.25, 8, 9.42, the position of the terminal (22) is (17) and (37) with shifting two terminals.
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.

Configurable L, W and F

Part Number Type	L 5mm Increments	V (Voltage) Selection	W (Electric Power) 10W Increment	F (Lead Wire) Lead Wire Type 10mm Increment	Electrical Power Density (W/cm ²)	Unit Price								
						L50-100	L101-200	L201-300	L301-400	L401-500	L501-600			
MCHSR	6 (1/4 inch)	50-250	100	50-500	G (Silicon Rubber Wire)	2 ≤ W/cm ² ≤ 15 W/cm ² = W/(Dm(L-15)/100) (Calculate with the electrical power density of heat-generating part, not with the overall length.)								
			110	50-500										
			200	60-600										
			220	80-600										
			100	50-500										
			110	50-500										
	8 (3/8 inch)	50-400	100	50-600			T (Teflon Wire)							
			110	50-600										
			200	50-1200										
			220	70-1200										
			100	50-600										
			110	50-600										
	10	50-600	100	50-600			*M (Silica Wire)							
			110	50-600										
			200	50-1200										
			220	70-1200										
			100	50-800										
			110	50-800										
	12 (1/2 inch)	50-600	100	50-800										
			110	50-800										
			200	50-1600										
			220	70-1600										
			100	50-800										
			110	50-800										
14 (5/8 inch)	50-600	100	50-800											
		110	50-800											
		200	60-1600											
		220	80-1600											
		100	50-800											
		110	50-800											
15.77 (5/8 inch)	50-600	100	50-800											
		110	50-800											
		200	70-1600											
		220	90-1600											
		100	50-800											
		110	50-800											
16	50-600	100	50-800											
		110	50-800											
		200	60-1600											
		220	90-1600											
		100	50-800											
		110	50-800											
18	50-600	100	50-800											
		110	50-800											
		200	100-1600											
		220	130-1600											
		100	50-800											
		110	50-800											
18.95 (3/4 inch)	50-600	100	50-800											
		110	50-800											
		200	100-1600											
		220	130-1600											
		100	50-800											
		110	50-800											

The specified increment for the L dimension has been changed to a 5 mm increment.

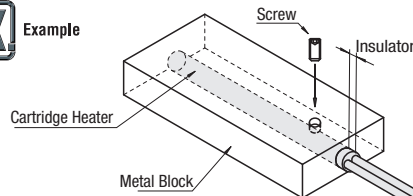
Lead Wire Type

Symbol	Lead Wire Type	Heat Resistance Temperature	Features
G	Silicon Rubber + Tin Plated Annealed Copper Wire	180°C	For chemical and water resistant items
T	Teflon + Nickel Plated Annealed Copper Wire	260°C	For chemical, water and weather resistant items
*M	Mica Polyimide-Wound Silica + Nickel Coated Copper Wire	400°C	For heat resistant items

Ordering Example: **Part Number** - **L** - **V** - **W** - **F** Lead Wire - **Terminal**

MCHSR12.6 - **60** - **V200** - **W80** - **T** **500**

Example

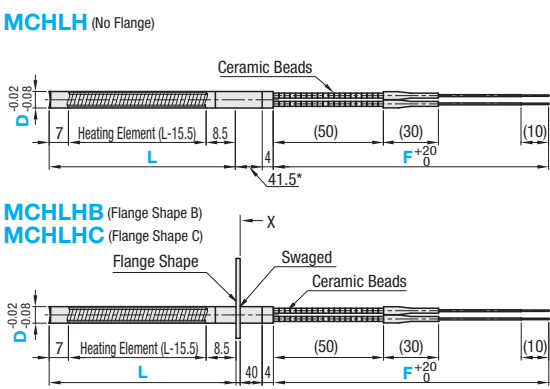


Precautions for Use
Do not let the heaters run idle in the atmosphere. If the heater is used with some or the whole of the heating element projected from the heated objects, the wire may break or ignite due to abnormal heating.

Cartridge Heaters

High Temperature, Configurable L & W

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



MCHLH (No Flange)

Ceramic Beads

Heating Element (L-15.5)

8.5

(50)

(30)

(10)

$D \begin{smallmatrix} -0.02 \\ -0.08 \end{smallmatrix}$

7

L

4

41.5°

$F \begin{smallmatrix} +20 \\ 0 \end{smallmatrix}$

MCHLHB (Flange Shape B)

MCHLHC (Flange Shape C)

Flange Shape

Swaged

Ceramic Beads

Heating Element (L-15.5)

8.5

(50)

(30)

(10)

$D \begin{smallmatrix} -0.02 \\ -0.08 \end{smallmatrix}$

7

L

40

4

$F \begin{smallmatrix} +20 \\ 0 \end{smallmatrix}$

1.5

<Arrow View X>

Shape B

Shape C

5

13

29

18

D

D_1

D

Terminal

N (No Crimp Terminal)

M (With Round Crimp Terminal)

Y (With Crimp Spade)

M Material : Incoloy
Heater : SUS304
Flange : SUS304
Lead Wire : Glass Fiber Coating
Lead Wire Heat Resistance Temperature : 180°C

When inserting MCHLH into the hot plate, ensure that the 41.5 part does not enter a hole.
Maximum Operating Temperature: 900°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.

Part Number Type	D	L 1mm Increment	V (Voltage) Selection	W (Electric Power) 10W Increment	F (Lead Wire Length) 10mm Increment	Terminal	Electrical Power Density (W/cm ²)
MCHLH MCHLHB MCHLHC	8	50-200	100	110	300-1000	N M Y	2 ≤ W/cm ² ≤ 10 W/cm ² = W/(Dm(L-15.5)/100) (Calculate with the electrical power density of heat-generating part, not with the overall length.)
			200	220			
	10	50-300	100	110			
			200	220			
	12	50-300	100	110			
			200	220			

D	Heater Body Price						Additional Terminal Price (Body Price +)		
	MCHLH			MCHLHB, MCHLHC			N	M	Y
	L50-100	L101-200	L201-300	L50-100	L101-200	L201-300			
8									
10									
12									

Ordering Example: **Part Number** - **L** - **V** - **W** - **F** - **Terminal**

MCHLHB8 - **150** - **V200** - **W250** - **F500** - **M**

Type of Terminal

Symbol	Type of Terminal	Nominal Screw	Flanged Type Dimension	
			D	Shape C D1
N	No Crimp Terminal	-	8	14
M	Crimp Terminal - Round	M4	10	16
Y	Crimp Terminal - Y-Shaped	M4	10	16
			12	18

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.
- Keep the temperature around the lead wire exit at 250°C or less.
- Because the ceramic beads are very fragile, be sure to follow the bend dimensions on the right. Do not apply strong impacts.

Allowable Bending Dimension

D	R	A
8	12	20
10	12	20
12	18	25

Features

- High temperature resistant heater with max. operating temperature of 900°C.
- Maintains high insulation even at high-temperature region of 700°C to 900°C, and presents long-life.