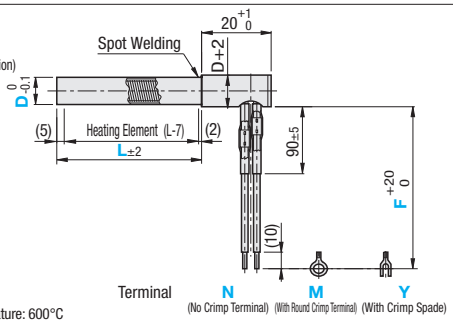
Cartridge Heaters
L-Shaped / L-Shaped, Knurled, Flanged

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

■L-Shaped

MCHL
MCHZL
(Break Resistant, Internal Connection)



M Material Heater : SUS304
Collar : SUS304
Lead Wire: See below
Terminal : Copper (Tin Plating)

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.

■L-Shaped

Part Number Type	D	L 1mm Increment	V (Voltage) Selection	W (Electric Power) 10W Increment	F (Lead Wire Length) Lead Wire Type	F (Lead Wire Length) 10mm Increment	Terminal	Electrical Power Density (W/cm²)
MCHL MCHZL	*6	50~250	100	50~500	B G T M	100~1000	N M Y	2≤W/cm²≤15 W/cm²=W/{Dπ(L-7)/100} (Calculate with the electrical power density of heat-generating part, not with the overall length.)
			200	100~600				
	8	50~400	100	50~600				
			200	50~1200				
	10	50~600	100	50~600				
			200	50~1200				
	12		100	50~800				
			200	50~1600				
	14		100	50~800				
			200	100~1600				

* D=6 is for MCHL only.

D	Heater Body Price MCHL L50~100	MCHL L101~200	MCHL L201~300	MCHL L301~400	MCHL L401~500	MCHL L501~600	MCHZL L50~100	MCHZL L101~200	MCHZL L201~300	MCHZL L301~400	MCHZL L401~500	MCHZL L501~600
6				-	-	-	-	-	-	-	-	-
8					-	-					-	-
10												
12												
14												

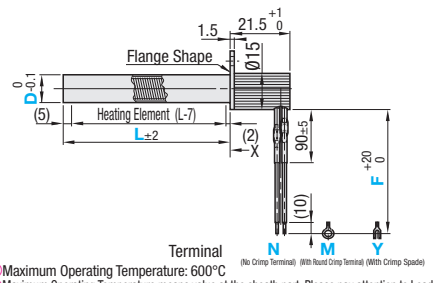
D	Additional Lead Wire Price (Body Price +) B	G	T	M	Additional Terminal Price (Body Price +) N	M	Y
6							
8							
10							
12							
14							

■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 collar at 180°C or less.
Keep the temperature around the lead wire exit at 130°C or less.

■L-Shaped, Knurled, Flanged

MCZLRA (Flange Shape A Break Resistant, Internal Connection)



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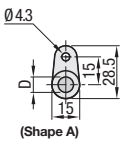

(Shape A)

M Material Heater : SUS304
Knurling : 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.

■L-Shaped, Knurled, Flanged

Part Number Type	D	L 1mm Increment	V (Voltage) Selection	W (Electric Power) 10W Increment	F (Lead Wire Length) Lead Wire Type	F (Lead Wire Length) 10mm Increment	Terminal	Electrical Power Density (W/cm²)
MCZLRA	8	50~400	100	50~600	B G T M	100~1000	N M Y	2≤W/cm²≤15 W/cm²=W/{Dπ(L-7)/100} (Calculate with the electrical power density of heat-generating part, not with the overall length.)
			200	50~1200				
	10	50~600	100	50~600				
			200	50~1200				
	12		100	50~800				
			200	50~1600				

D	Heater Body Price L50~100	L101~200	L201~300	L301~400	L401~500	L501~600	Additional Lead Wire Price (Body Price +) B	G	T	M	Additional Terminal Price (Body Price +) N	M	Y
8					-	-							
10													
12													

■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 collar at 180°C or less.
Keep the temperature around the lead wire exit at 130°C or less.

■Type of Lead Wire

Symbol	Type of Lead Wire	Heat Resistance Temperature	Features
B	Tin Plated Annealed Copper Fiber Glass Braided Wire	180°C	General Use
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

■Type of Terminal

Symbol	Type of Terminal	Nominal Screw
N	No Crimp Terminal	-
M	Crimp Terminal - Round	M4
Y	Crimp Spade	M4

Ordering Example

Part Number	-	L	-	V	-	W	-	F Lead Wire: Lead Wire Type	F Lead Wire: Length	-	Terminal
MCHL12	-	300	-	V100	-	W350	-	M	1000	-	Y