Quick Ship • *Same day shipment on all stock units.*

Strip Heaters

MI Strip

The Watlow MI strip is a thin, responsive heater that sets unmatched standards for performance and durability.
It makes use of the most advanced heater construction techniques, including embedding a nickel chromium element wire in Watlow's exclusive mineral insulation. Only 0.042 inches (1.067 mm) thick, this layer of insulation brings the element wire closer to the heater sheath.
The result is heat flows easily from the element wire to the sheath, thus allowing the wire to run cooler than conventional heaters.

Performance Capabilities

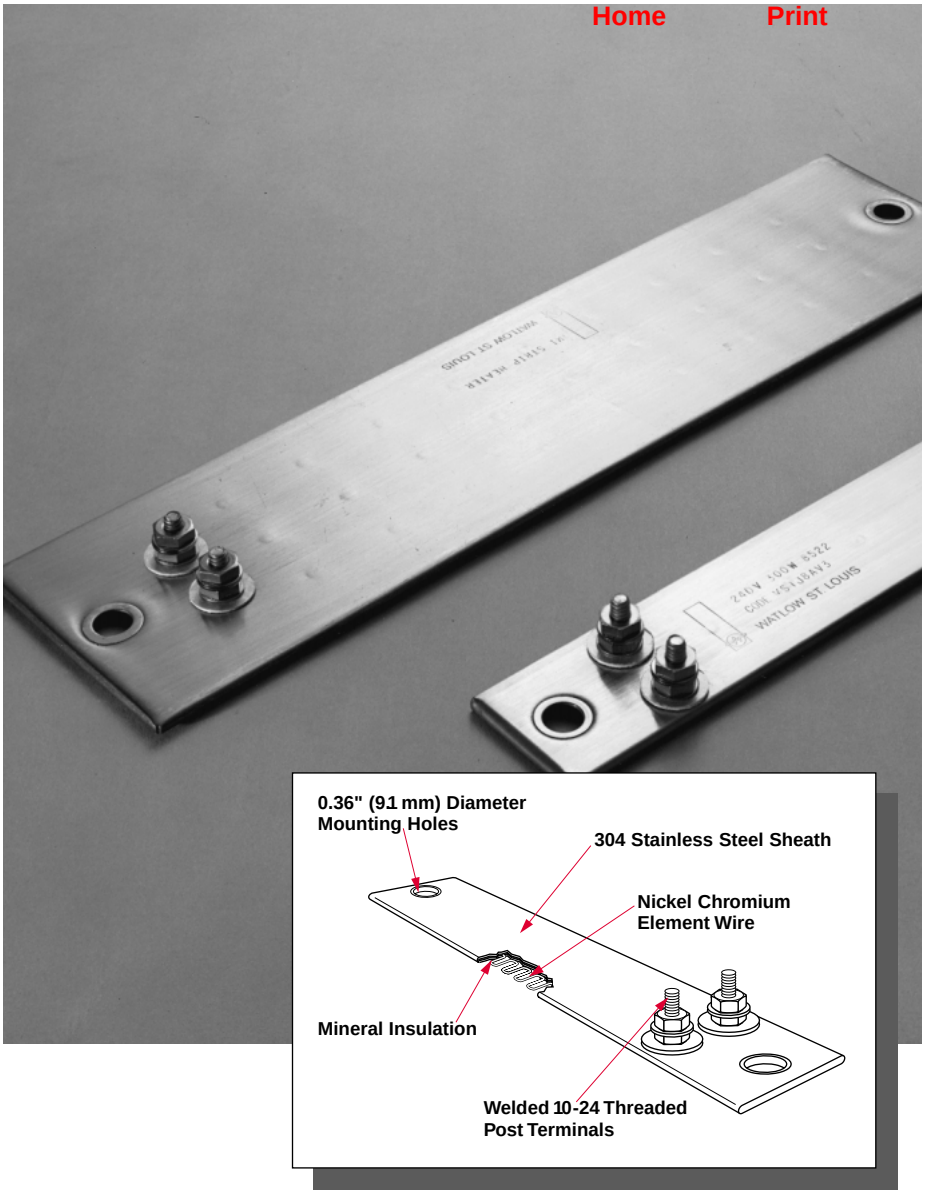
- Sheath temperatures to 1400°F (760°C)
- Watt densities to 100 W/in^2 (15.5 W/cm^2)
- Maximum voltage 480V~(ac)

Features and Benefits

- **Higher watt densities** than any other strip heater contribute to faster heat-up.
- **Exclusive mineral insulation** combines high dielectric strength and superior thermal conductivity which transfers heat rapidly to the sheath.
- **304 stainless steel sheath** is welded together at strategic points to maintain the high compaction of mineral insulation and produce a rigid heater.
- **UL® component recognition** is available in 250V~(ac) or less.

Applications

- Solder pots
- Zinc die-casting equipment
- Dies and mold heating
- High temperature resins
- Tank and platen heating
- Ovens
- Packaging equipment



How to Order

Please specify:

- Watlow code number
- Overall dimensions: length and width
- Wattage: see maximum allowable watt density graph
- Termination type (parallel or one-on-one)
- Mounting holes, if desired
- Quantity

If stock units do not meet specific application needs, Watlow can manufacture MI strip heaters to meet special requirements.

Availability

Stock: Same day shipment

Made-to-Order: Consult a Watlow sales engineer or authorized distributor.

MI Strip

Applications and Technical Data

Calculating Watt Density

Watt density is the amount of wattage per square inch of heated area. To determine watt density, divide the total wattage by the heated area.

$$\text{Watt Density} = \frac{\text{Total Watts}}{\text{Heated Area}}$$

To apply this equation we must define the term “heated area.” Heated area is the total contact surface of the heater less areas of no heat that are found around terminals, mounting holes, etc.

Heated Area =
Total Contact Area - No-Heat Area

To calculate the heated area:

1. Locate the **no-heat factor** from the chart on the right that corresponds to the type of heater being considered.
2. To use the formula below, insert the no heat factors, length and width (in inches).

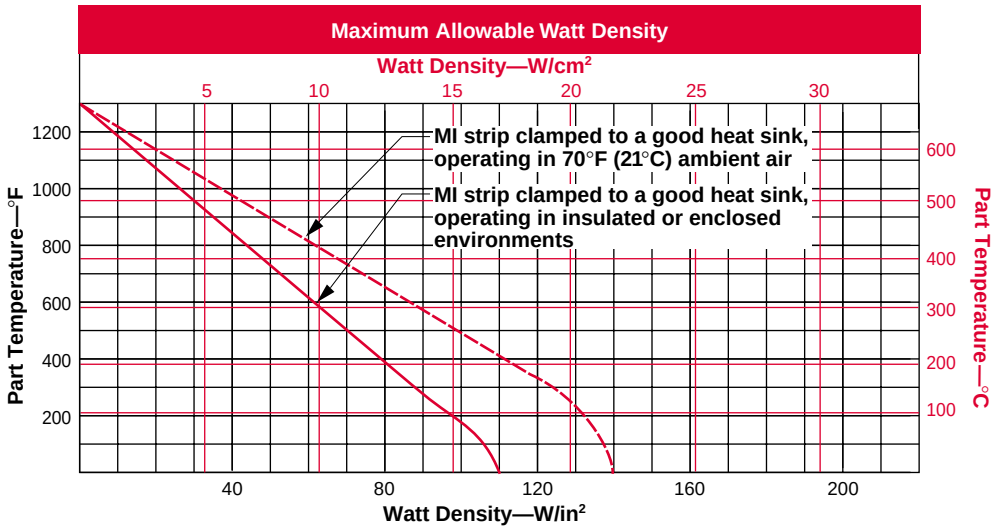
   Heated Area =
   (Length - No-Heat Factor)
   x Width

Type	Factor (inch)
1 in wide post term 1 on 1	1.56
1 in wide post term 1 on 1 with mounting holes	3.56
1 in wide post term 2 on 1	1.93
1 in wide post term 2 on 1 with mounting holes	3.93
For all other widths:	
2 on 1 post terminal	1.18
2 on 1 with mounting holes	3.18

Calculating Watt Density

The sketches on the next page and the graph on this page will help select the correct watt density for a particular application. First, refer to the sketches to determine the heated area of the heater. Then, use the watt density formula and graph to make sure that the maximum watt density of the heater will not be exceeded in the specific application.

$$\text{Watt Density} = \frac{\text{Wattage}}{\text{Heated Area}}$$



Strip Heaters

MI Strip

Applications and Technical Data

Specifications

Width: 1, 1.5 and 2 inches (25.4, 38.1, 50.8 mm)

Tolerance: ±1/32

Length: 8 to 30 inches (205 to 760 mm)

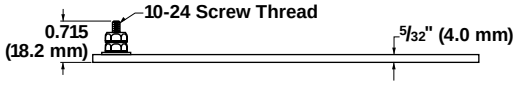
Tolerance: ±1/8

Terminations:

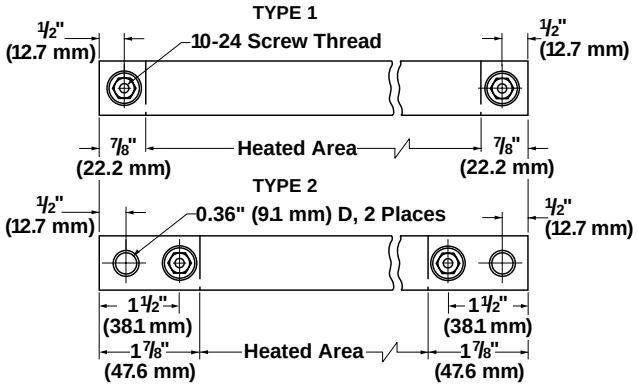
1 inch (25.4 mm) wide—post terminals one-on-one

1.5 to 2 inches (38.1 to 50.8 mm)—post terminals two-on-one

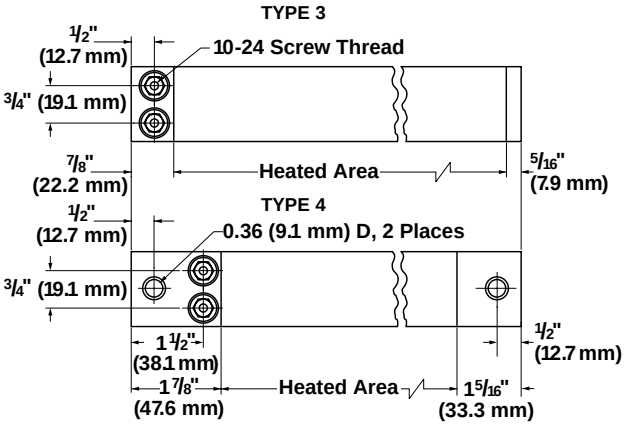
All Widths



1" (25.4 mm) Wide



1½"–2" (38.1–50.8 mm) Wide



Stock List (Parallel Terminals) Type 3 and 4 **F.O.B.: St. Louis, Missouri**

Width in. (mm)	Length in. (mm)	Volts	Power (Watts)	Watt Density W/in² (W/cm²)	Approximate Net. Wt. lbs. (kg)	Type	Code No.
1 ½ (38.1)	8 (203.2)	120	500	48 (7.4)	0.3 (015)	3	**MS1J8AS1**
1 ½ (38.1)	8 (203.2)	240	500	50 (7.8)	0.3 (015)	3	**MS1J8AS3**
1 ½ (38.1)	12 (304.8)	120	350	26 (4.0)	0.5 (0.2)	4	**MS1J12AV2** ①
1 ½ (38.1)	12 (304.8)	240	350	26 (4.0)	0.5 (0.2)	4	**MS1J12AV3** ①
1 ½ (38.1)	12 (304.8)	120	800	49 (7.6)	0.5 (0.2)	3	**MS1J12AS1**
1 ½ (38.1)	12 (304.8)	240	800	49 (7.6)	0.5 (0.2)	3	**MS1J12AS2**
1 ½ (38.1)	18 (457.2)	120	1000	40 (6.2)	0.8 (0.3)	3	**MS1J18AS1**
1 ½ (38.1)	18 (457.2)	240	1000	40 (6.2)	0.8 (0.3)	3	**MS1J18AS2**

① Denotes units with mounting holes. Mounting holes are 0.36 inches (9.14 mm) in diameter, and are intended for use with ¼ inch (6.35 mm) bolts. Centers of mounting holes are located ½ inch (12.7 mm) from the ends of the heater.
Note: Type 1 & 2 are made-to-order only.

Mica Strip

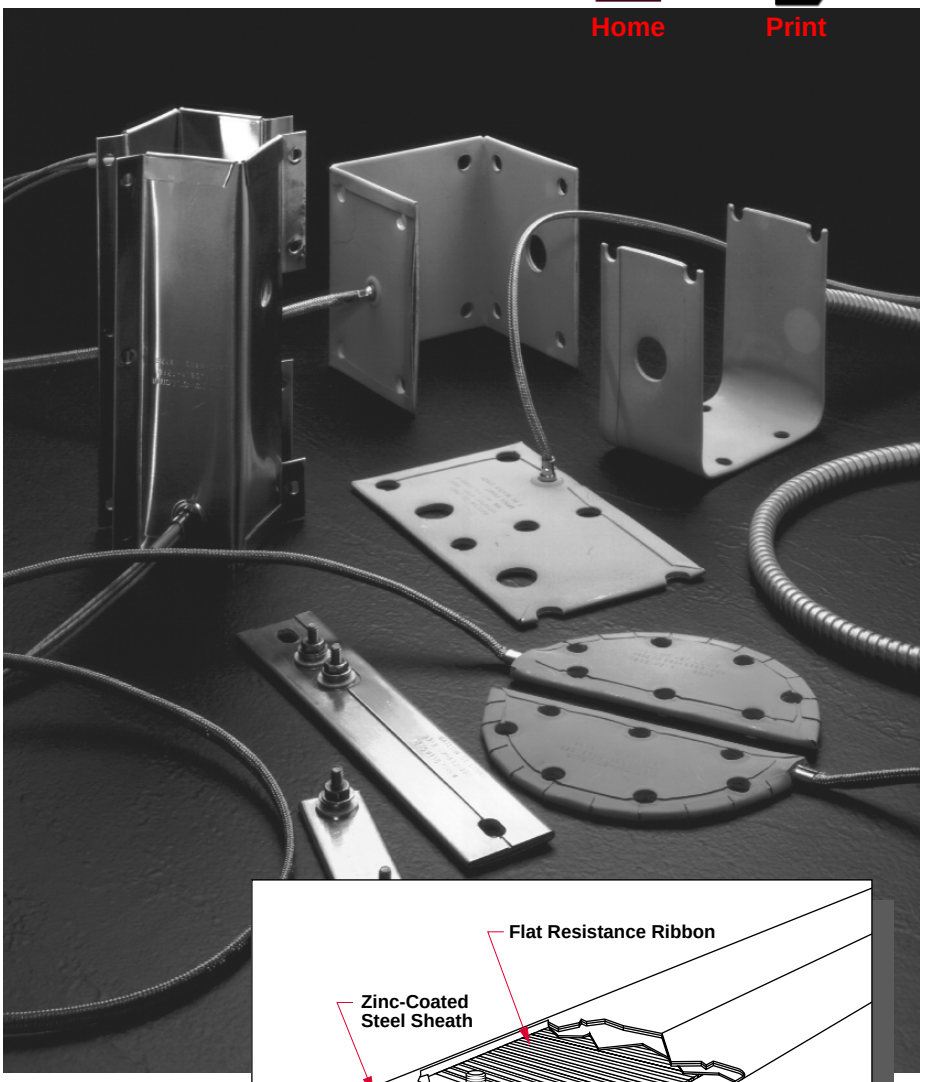
The Watlow mica strip heater is an economical and reliable source of heat for industrial equipment. A mere 15 mils (0.4 mm) thick mica insulator on both sides of the resistance element provides complete electrical insulation and offers little resistance to efficient heat flow. Plus mica withstands high voltage spikes, resists moisture and is inert to most chemicals.

Performance Capabilities

- Sheath temperatures to 900°F (480°C) on zinc-coated units
- Sheath temperatures of 1200°F (650°C) on stainless steel units
- Watt densities to 55 W/in^2 (8.5 W/cm^2)
- Maximum voltage 480V~(ac)

Features and Benefits

- **Low mass construction** heats up faster to provide quick response to control input.
- **Flat resistance ribbon** generates heat over a broad area. This design solution puts the heat source closer to the work.
- **Rust-resistant, zinc-coated steel sheath** is treated to improve emissivity. The strength of this material also gives the heater rigidity.
- **Optional stainless steel sheath** is available for more corrosive atmospheres.
- **Nickel-plated steel terminal posts** are securely riveted to ensure a positive, trouble-free connection to the resistance circuit.
- **Computer aided design engineering** assures the best combination of ribbon gauge, total wattage and winding spacing. This design combination maximizes heat transfer and life of the heater.



- **Excellent dielectric strength** is guaranteed because all incoming mica receives a quality control inspection.
- **UL® component recognition** is available for applications to 900°F (480°C) sheath temperature.

  File number E52951

Applications

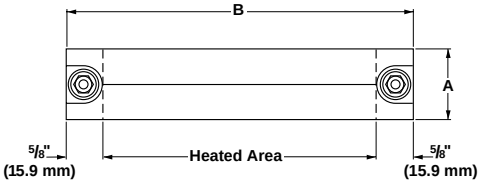
- Vulcanizing presses
- Sealing equipment
- Hot plates
- Hot stamping
- Dies and molds
- Thermoforming
- Tin melting
- Packaging equipment
- Food warming equipment

Strip Heaters

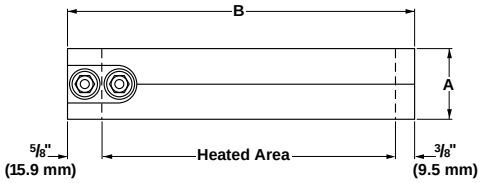
Mica Strip

Applications and Technical Data

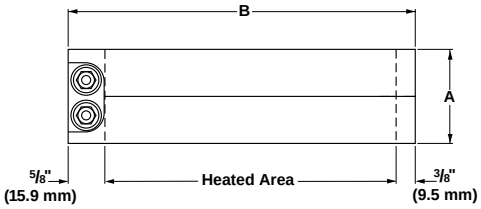
Type 1—Opposite Ends



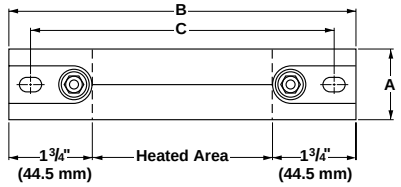
Type 2—Tandem



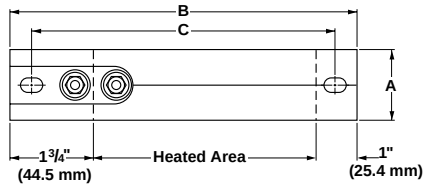
Type 3—Parallel Made-to-Order



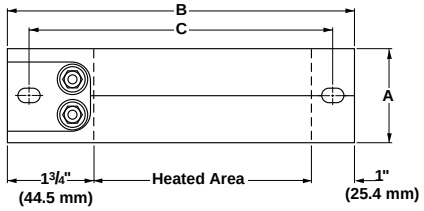
Type 4—Opposite Ends with Holes



Type 5—Tandem with Holes



Type 6—Parallel with Holes



Specify **Type** when ordering.

Physical Limitations of Lead Variations

Heater Type	Width				Length			
	Minimum		Maximum		Minimum		Maximum	
	in	(mm)	in	(mm)	in	(mm)	in	(mm)
Post Terminal								
Type 1 - Opposite ends	⅝	(15.8)	15	(381)	2	(50.8)	96①	(2438.4)
Type 2 - Tandem	⅝	(15.8)	15	(381)	2	(50.8)	96①	(2438.4)
Type 3 - Parallel	1½	(38.1)	15	(381)	2	(50.8)	96①	(2438.4)
Type 4 - Opposite ends with holes	⅝	(15.8)	15	(381)	5½	(139.7)	96①	(2438.4)
Type 5 - Tandem with holes	⅝	(15.8)	15	(381)	5½	(139.7)	96①	(2438.4)
Type 6 - Parallel with holes	1½	(38.1)	15	(381)	5½	(139.7)	96①	(2438.4)
Leads								
Type C, E. F, H	1	(25.4)	15	(381)	5½	(139.7)	96①	(2438.4)
Type K								
without mounting holes	1	(25.4)	15	(381)	5½	(139.7)	96①	(2438.4)
with mounting holes	1½	(38.1)	15	(381)	5½	(139.7)	96①	(2438.4)
European Plug								
Vertical	1	(25.4)	15	(381)	5½	(139.7)	96①	(2438.4)
Horizontal	2½	(63.5)	15	(381)	6¼	(159)	96①	(2438.4)
Three Phase	3	(76.2)	15	(381)	5½	(139.7)	96①	(2438.4)
Dual Voltage	3	(76.2)	15	(381)	5½	(139.7)	96①	(2438.4)
Terminal Box②								
Type 2 - Tandem	1½	(38.1)	15	(381)	4¼	(108)	96①	(2438.4)
Type 3 - Parallel	2½	(63.5)	15	(381)	4¼	(108)	96①	(2438.4)
Type 5 - Tandem with holes	1½	(38.1)	15	(381)	6¼	(159)	96①	(2438.4)
Type 6 - Parallel with holes	2½	(63.5)	15	(381)	6¼	(159)	96①	(2438.4)

① Consult the factory if you need to exceed 96 inches (2438.4 mm).
② Not available on stock heaters.

Note: Some combinations of maximum and minimums cannot occur on the same heater.

Terminations

Types 1 through 6, as illustrated, show the placement of terminals for Watlow mica strip heaters. However, please note Type 3 terminals are not available on stock units. Placement is specified in terms of length, width and center-to-center dimensions. These dimensions are as follows:

Length:
Tolerance: ±1/16 inch (1.6 mm)

Width:
Tolerance: ±1/16 inch (1.6 mm)

Thickness:
Nominal: 3/16 inch (4.7 mm)

Types 4, 5 and 6 have ⅜ inch x ¼ inch (9.5 mm x 6.3 mm) mounting slots. Letters A, B and C, called out in the illustrations, denote the following: A = width, B = overall length and C = center-to-center dimensions on mounting slots.

Mica Strip

Applications and Technical Data

Continued

Calculating Watt Density

Watt density is the amount of wattage per square inch of heated area. To determine watt density, divide the total wattage by the heated area.

$$\text{Watt Density} = \frac{\text{Total Watts}}{\text{Heated Area}}$$

To apply this equation we must define the term "heated area." Heated area is the total contact surface of the heater less areas of no heat that are found around terminals, mounting holes, etc.

Heated Area =
Total Contact Area - No-Heat Area

To calculate the heated area:

Heated Area =
(Length - No-Heat) x Width

Maximum Allowable Watt Density

The following derating factors are applicable to the **Maximum Allowable Watt Density** graph. Please review these factors and the graph to determine the maximum watt density for the application.

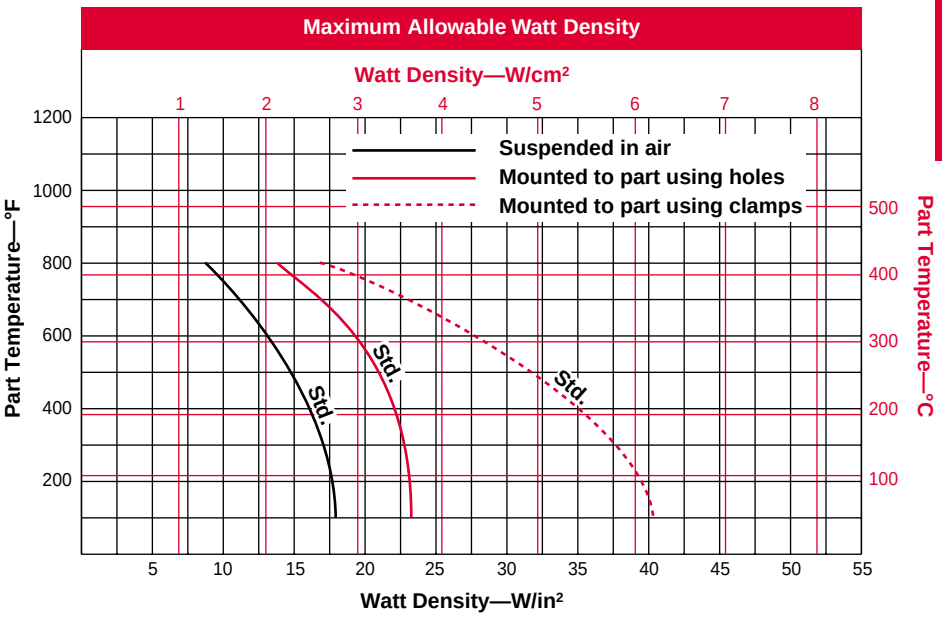
Derating Factors:

- For heaters mounted less than one inch (25 mm) apart on a metal part, derate by 5 percent.
- For heaters mounted within three inches (76 mm) of a reflective surface, derate by 10 percent.
- For heaters mounted two to six inches (51 to 150 mm) apart and radiating toward each other, derate by 10 percent.
- For heaters mounted within one inch (25 mm) of a reflective surface, derate by 20 percent.
- For heaters mounted less than two inches (51 mm) apart and radiating toward each other, derate by 20 percent.
- For termination Types 2 and 5, as well as lead Types C, E and H (see illustrations on **pages 234 and 236**) that are less than two inches (51 mm) wide, derate as follows: zinc-coated units by 10 percent and stainless steel units by 20 percent.

Application Hints

To maximize the performance of a mica strip heater, ensure:

- Small heaters with 5 in² (32.3 cm²) or less of heated area are 120V~(ac). These heaters can be wired in series for a 240V~(ac) power supply.
- The surface to be heated is clean and smooth, so that heat is transferred efficiently. Even small air gaps can cause hot spotting.
- Terminal post nuts are not overly tightened. Although the posts are securely riveted to the elements, excessive torque could break the connection.

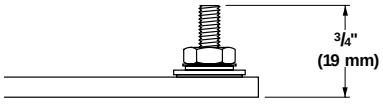


Strip Heaters

Mica Strip

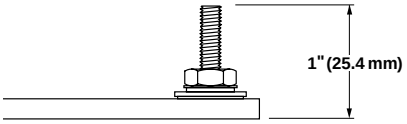
Termination Options

Post Terminals (Standard)



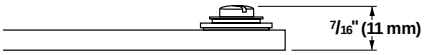
Post terminals have a threaded length of 7/16 inch (11 mm) and require approximately ¾ inch (19 mm) clearance. Specify **standard terminals** when ordering.

Long Terminals



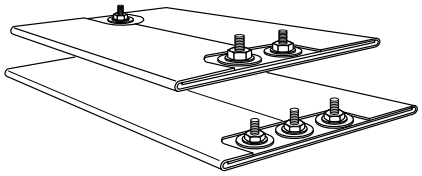
Longer terminals with 11/16 inch (17.5 mm) threaded lengths are available and require approximately one inch (25 mm) clearance. Specify **long terminals** when ordering.

Button Terminals



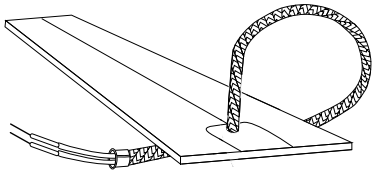
The slotted screw head terminals require only 7/16 inch (11 mm) clearance. Specify **button terminals** when ordering.

Three Terminal Construction



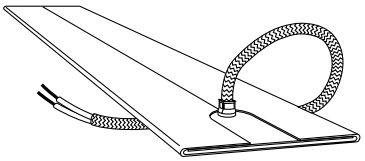
A third terminal can be added to provide dual voltage or three-heat operation. Or, it can be connected to the sheath for easy grounding. Specify **dual voltage** or **three-heat operation** when ordering.

Type E—Loose Metal Braided Leads



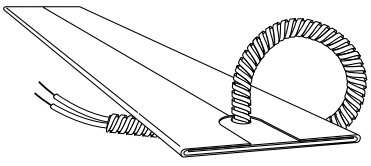
Loose metal braid encloses two fiberglass leads for good abrasion protection, lead flexibility, and wiring convenience. Leads are two inches (51 mm) longer than the braid. To order, specify **Type E** and **length**. Leads are two inches longer than braid.

Type C—Metal Overbraid Leads



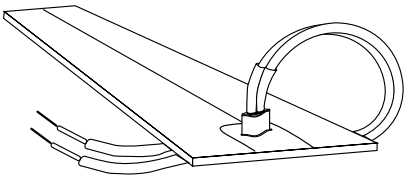
Each fiberglass-insulated lead wire exits in a single metal braid from the back of the heater. This arrangement offers abrasion protection, lead flexibility and convenient wiring for a neat installation. Minimum heater length is 5½ inches (140 mm). Specify **Type C** and **length** when ordering. Leads are two inches longer than braid.

Type H—Flexible Steel Hose Leads (Vertical)

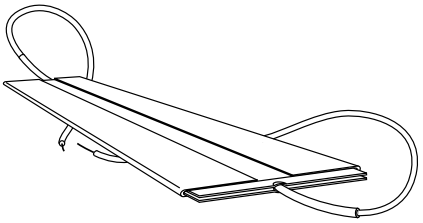


Galvanized, flexible steel hose gives superior mechanical protection where lead abrasion is a particular problem. Minimum heater length is 5½ inches (140 mm). Specify **Type H** and **lead length** when ordering, leads are typically two inches longer than hose.

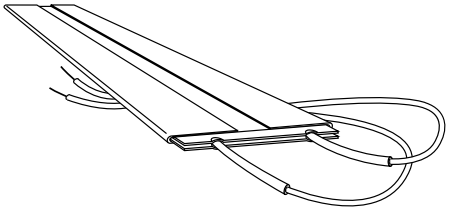
Type K—Flexible Leads



Two on One (Vertical)



One on One (Horizontal)



Two on One (Horizontal)

Type K has two fiberglass-insulated leads. These leads can exit one at each end or both at the same end, so please specify end termination when ordering. Type K is suitable for applications where lead abrasion is not a problem. Specify **Type K orientation** and **length** when ordering.

Strip Heaters

Mica Strip

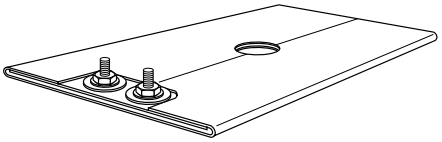
Options

External Finishing

Sheath Material

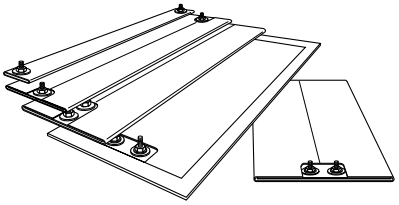
Please specify a stainless steel sheath when the part temperature reaches in excess of 700°F (370°C).

Holes or Slots



When required for instrumentation or mounting, holes or slots may be provided as a manufactured variation in nearly any location as long as there is at least one inch (25 mm) between the edge of the hole and one side of the heater. Dimensional drawing is required when ordering.

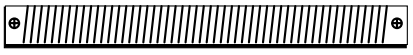
Widths



The 1½ inch (38 mm) wide heater is the most efficient size due to its maximum clamping effect. Heaters are available in widths from ⅝ inch (16 mm) to 24 inches (610 mm).

Heaters five inches (125 mm) wide and greater are constructed with end folds and a reinforcement shim rather than full folds. Units less than 1⅜ inches (35 mm) wide have the sheath seam on the side opposite the terminals.

Open Element

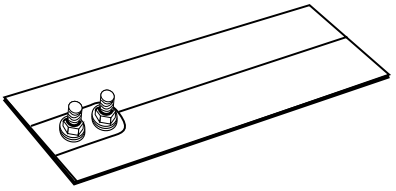


This economical heater design without the metal case is commonly used in laminating machines. The heater assembly is sandwiched between machine parts, eliminating the need for additional and expensive metal cases.

Distributed Wattage

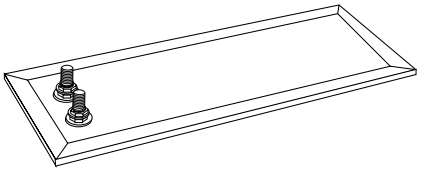
A mica strip heater can be designed with varying heat profile along the length for uneven heat distribution.

Butt Case



Recommended for heating applications where strip heater will be placed in a milled slot between two steel plates. Specify **butt case** construction when ordering.

Four Sides Closed



Mica strip heaters can be closed on all four sides to prevent contamination from getting inside the heater. Standard on strip heaters five inches wide and greater.

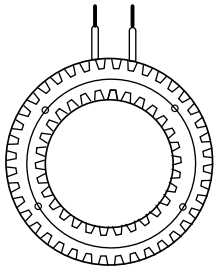
Strip Heaters

Mica Strip

Options

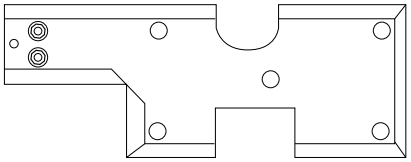
External Finishing

Ring Heaters



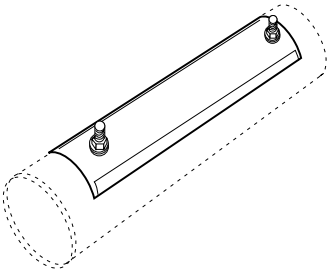
When ordering ring heaters, specify **inside** and **outside diameters**. If mounting holes are required, specify location and hole size.

Irregular Shapes



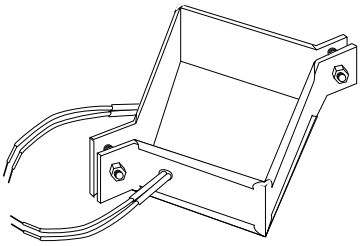
Mica strip heaters can be made into any practical shape and electrical rating. Examples include: cone, flat circular, square, rectangular, and hexagon.

Cross Section Formed



Strip heaters can be formed on a cross section for piping applications. Specify diameter of pipe on which heaters are to be mounted.

Square, Rectangular Bands



Square or Rectangular heaters are normally used for heating dies on plastic extruders, or the barrels of twin screw extruders. These can be made in either one or two piece construction (see illustrations).

Clamping Styles

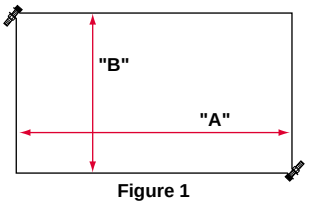


Figure 1

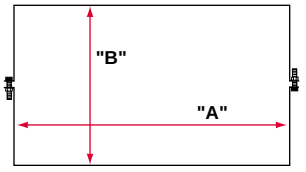


Figure 2

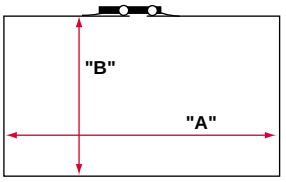
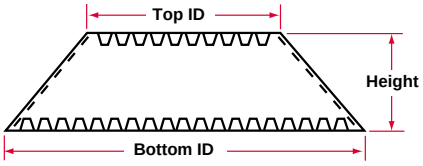


Figure 3

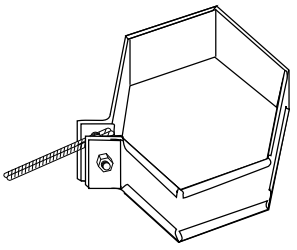
Refering to the illustrations, the preferred design is Figure 1 with bent-up flange clamping due to the uniform applied clamping force at the corners. Next is Figure 2, with bent-up flanges or built-in strapping brackets at the sides. The least preferred design is Figure 3, one-piece heater, due to the lack of uniform applied clamping force.

Cone Shapes



Cone shaped heaters are normally used for special heating applications when heat is required for hoppers or funnels. They are made strictly to customer specifications. The preferred method of attachment is with bent-up flange clamping.

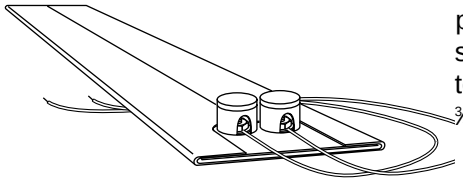
Hex Bands



Hex shaped heaters are used on the hex shaped portion of the nozzle on injection molding machines. A drawing is required when ordering.

Mica Strip

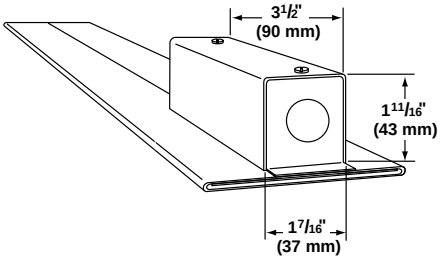
Options



Ceramic Terminal Covers

Ceramic terminal covers are a convenient, economical way to provide safety. Covers are sized for standard 7⁄16 inch (11 mm) long post terminals, that require approximately ¾ inch (19 mm) clearance.

The clearance, with ceramic cover cap, is 0.91 inch (23.1 mm). Excluding the thickness of the heater, the clearance is 0.75 inch (19 mm). Screw thread size is 10-24. To order, specify Watlow code number **Z-4918** and quantity.



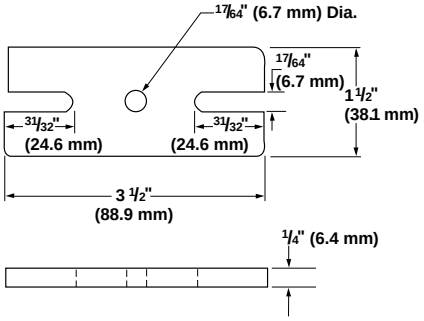
Metallic Terminal Box

A high quality metallic terminal box is welded to the heater sheath. Units with tandem terminals must be at least 1½ inches (38 mm) wide. Units with parallel terminals must be at least 4¼ inches (108 mm) wide. Minimum length is 4¼ inches (108 mm) without mounting holes or 6¼ inches (159 mm) with holes. When ordering specify **terminal box.**

Accessories

Clamping Variations

Clamping Bars

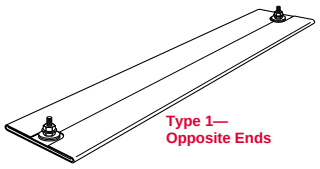


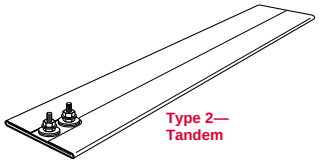
For maximum life and efficient operation, strip heaters must be firmly clamped to the part being heated. Clamping bars 3½ inch (90 mm) wide can be used to clamp strips with a maximum width of 3 inches (76 mm). Watlow recommends clamping every 6 inches (150 mm). Specify code number **MB101-1** and quantity when ordering clamping bars.

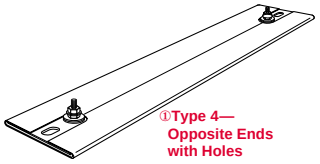
Strip Heaters

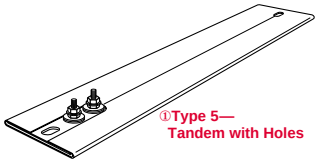
F.O.B.: St. Louis, Missouri

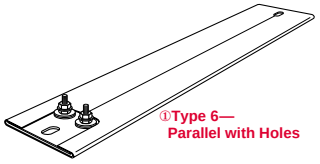
Mica Strip


Type 1—
Opposite Ends


Type 2—
Tandem


①Type 4—
Opposite Ends
with Holes


①Type 5—
Tandem with Holes


①Type 6—
Parallel with Holes

Width in (mm)	Overall Length in (mm)	Type	Ctr-to-Ctr Mtg Holes in (mm)	Volts	Power (Watts)	Watt Density W/in² (W/cm²)	Approx. Net Weight lbs (kg)	Avail.	Code No.
1 (25.4)	3½ (88.9)	1	— —	120	50	22 (3.4)	0.09 (0.04)	Stk	**S1A3JP1**
	6 (152.4)	1	— —	120	100	21 (3.3)	0.17 (0.08)	Stk	**S1A6AP1**
	6 (152.4)	1	— —	240	100	21 (3.3)	0.17 (0.08)	Stk	**S1A6AP2**
	12 (304.8)	4	11 (279.4)	120	175	21 (3.3)	0.33 (0.15)	Stk	**S1A12AT1**
	12 (304.8)	4	11 (279.4)	240	175	21 (3.3)	0.33 (0.15)	Stk	**S1A12AT2**
	6 (152.4)	5	5¼ (133.4)	120	100	20 (3.1)	0.17 (0.08)	Stk	**S1A6AU1**②
1½ (38.1)	18 (457.2)	1	— —	120	750	30 (4.6)	0.75 (0.34)	Stk	**S1J18AP1**
	6 (152.4)	2	— —	120	250	33 (5.1)	0.25 (0.11)	Stk	**S1J6AR1**
	8 (203.2)	2	— —	120	400	37 (5.7)	0.33 (0.15)	Stk	**S1J8AR1**
	8 (203.2)	2	— —	240	400	37 (5.7)	0.33 (0.15)	Stk	**S1J8AR2**
	12 (304.8)	2	— —	120	500	30 (4.6)	0.50 (0.23)	Stk	**S1J12AR1**
	12 (304.8)	2	— —	240	500	30 (4.6)	0.50 (0.23)	Stk	**S1J12AR2**
	14 (355.6)	2	— —	120	500	25 (3.9)	0.58 (0.26)	Stk	**S1J14AR1**
	14 (355.6)	2	— —	240	500	25 (3.9)	0.58 (0.26)	Stk	**S1J14AR2**
	18 (457.2)	2	— —	120	800	31 (4.8)	0.75 (0.34)	Stk	**S1J18AR1**
	18 (457.2)	2	— —	240	800	31 (4.8)	0.75 (0.34)	Stk	**S1J18AR2**
	24 (609.6)	2	— —	120	1000	29 (4.5)	1.0 (0.45)	Stk	**S1J24AR1**
	24 (609.6)	2	— —	240	1000	29 (4.5)	1.0 (0.45)	Stk	**S1J24AR2**
	8 (203.2)	4	7 (177.8)	120	150	22 (3.4)	0.33 (0.15)	Stk	**S1J8AT1**
	12 (304.8)	4	11 (279.4)	120	250	20 (3.1)	0.50 (0.23)	Stk	**S1J12AT1**
	12 (304.8)	4	11 (279.4)	240	250	20 (3.1)	0.50 (0.23)	Stk	**S1J12AT2**
	18 (457.2)	4	17 (431.8)	240	500	23 (3.6)	0.75 (0.34)	Stk	**S1J18AT1**
	5½ (139.7)	5	4½ (114.3)	120	125	30 (4.6)	0.23 (0.11)	Stk	**S1J5JU1**
	7½ (190.5)	5	6½ (165.1)	120	150	21 (3.3)	0.32 (0.15)	Stk	**S1J7JU1**
	8 (203.2)	5	7 (177.8)	120	150	19 (2.9)	0.33 (0.15)	Stk	**S1J8AU1**
	8 (203.2)	5	7 (177.8)	240	150	19 (2.9)	0.33 (0.15)	Stk	**S1J8AU2**
	8 (203.2)	5	7 (177.8)	120	175	22 (3.4)	0.33 (0.15)	Stk	**S1J8AU3**
	8 (203.2)	5	7 (177.8)	240	175	22 (3.4)	0.33 (0.15)	Stk	**S1J8AU4**
	8 (203.2)	5	7 (177.8)	120	250	32 (5.0)	0.33 (0.15)	Stk	**S1J8AU5**
	8 (203.2)	5	7 (177.8)	240	250	32 (5.0)	0.33 (0.15)	Stk	**S1J8AU6**
	10 ½ (266.7)	5	9 ½ (241.3)	120	250	22 (3.4)	0.42 (0.19)	Stk	**S1J10JU1**
	10 ½ (266.7)	5	9 ½ (241.3)	240	250	22 (3.4)	0.42 (0.19)	Stk	**S1J10JU2**
	12 (304.8)	5	11 (279.4)	120	250	18 (2.8)	0.50 (0.23)	Stk	**S1J12AU1**
	12 (304.8)	5	11 (279.4)	240	250	18 (2.8)	0.50 (0.23)	Stk	**S1J12AU2**
	12 (304.8)	5	— —	120	150	11 (1.7)	0.50 (0.23)	Stk	**S1J12AU10**③
	12 (304.8)	5	— —	240	150	11 (1.7)	0.50 (0.23)	Stk	**S1J12AU11**③
	15 ¼ (387.4)	5	14 ¼ (362.0)	240	500	27 (4.2)	0.63 (0.29)	Stk	**S1J15EU1**
	17 ⅞ (454.0)	5	16 ⅞ (428.6)	120	375	17 (2.6)	0.75 (0.34)	Stk	**S1J17RU1**
	17 ⅞ (454.0)	5	16 ⅞ (428.6)	120	500	22 (3.4)	0.75 (0.34)	Stk	**S1J17RU2**
	17 ⅞ (454.0)	5	16 ⅞ (428.6)	240	500	22 (3.4)	0.75 (0.34)	Stk	**S1J17RU3**
	21 (533.4)	5	20 (508.0)	240	650	24 (3.7)	0.87 (0.39)	Stk	**S1J21AU1**
	23 ¾ (603.3)	5	22 ¾ (577.9)	120	500	16 (2.5)	0.99 (0.45)	Stk	**S1J23NU1**
	23 ¾ (603.3)	5	22 ¾ (577.9)	240	500	16 (2.5)	0.99 (0.45)	Stk	**S1J23NU2**
	23 ¾ (603.3)	5	22 ¾ (577.9)	120	750	24 (3.7)	0.99 (0.45)	Stk	**S1J23NU3**
	23 ¾ (603.3)	5	22 ¾ (577.9)	240	750	24 (3.7)	0.99 (0.45)	Stk	**S1J23NU4**
	25 ½ (647.7)	5	24 ½ (622.3)	240	650	19 (2.9)	1.10 (0.50)	Stk	**S1J25JU1**
	30 ½ (774.7)	5	29 ½ (749.3)	240	800	19 (2.9)	1.30 (0.59)	Stk	**S1J30JU1**
2½ (63.5)	6 ½ (165.1)	6	5 ½ (139.7)	120	225	24 (3.7)	0.45 (0.20)	Stk	**S2J6JV1**
	6 ½ (165.1)	6	5 ½ (139.7)	240	225	24 (3.7)	0.45 (0.20)	Stk	**S2J6JV2**
	8 ½ (215.9)	6	7 ½ (190.5)	120	350	24 (3.7)	0.59 (0.27)	Stk	**S2J8JV1**
	8 ½ (215.9)	6	7 ½ (190.5)	240	350	24 (3.7)	0.59 (0.27)	Stk	**S2J8JV2**
	25 ½ (647.7)	6	24 ½ (622.3)	120	1000	18 (2.8)	1.78 (0.81)	Stk	**S2J25JV1**
	25 ½ (647.7)	6	24 ½ (622.3)	240	1000	18 (2.8)	1.78 (0.81)	Stk	**S2J25JV2**

① Mounting slots on stock heaters are ½ x 5⁄16 inch (12.7 x 7.9 mm). On made-to-order units, mounting slots are ⅜ x ¼ inch (9.5 x 6.3 mm).
② This unit has ⅜ x ¼ inch (9.5 x 6.3 mm) mounting holes.
③ Heaters with code numbers **S1J12AU10** and **S1J12AU11** have zinc-coated steel sheath. All other heaters have stainless steel sheath.

How to Order

To order stock mica strip heater, specify:

- Quantity
- Watlow code number

Availability

Stock: Same day shipment

Made-to-Order: If stock units do not meet application needs, Watlow can manufacture mica strip heaters to special requirements. Please consult a Watlow sales engineer or authorized distributor.

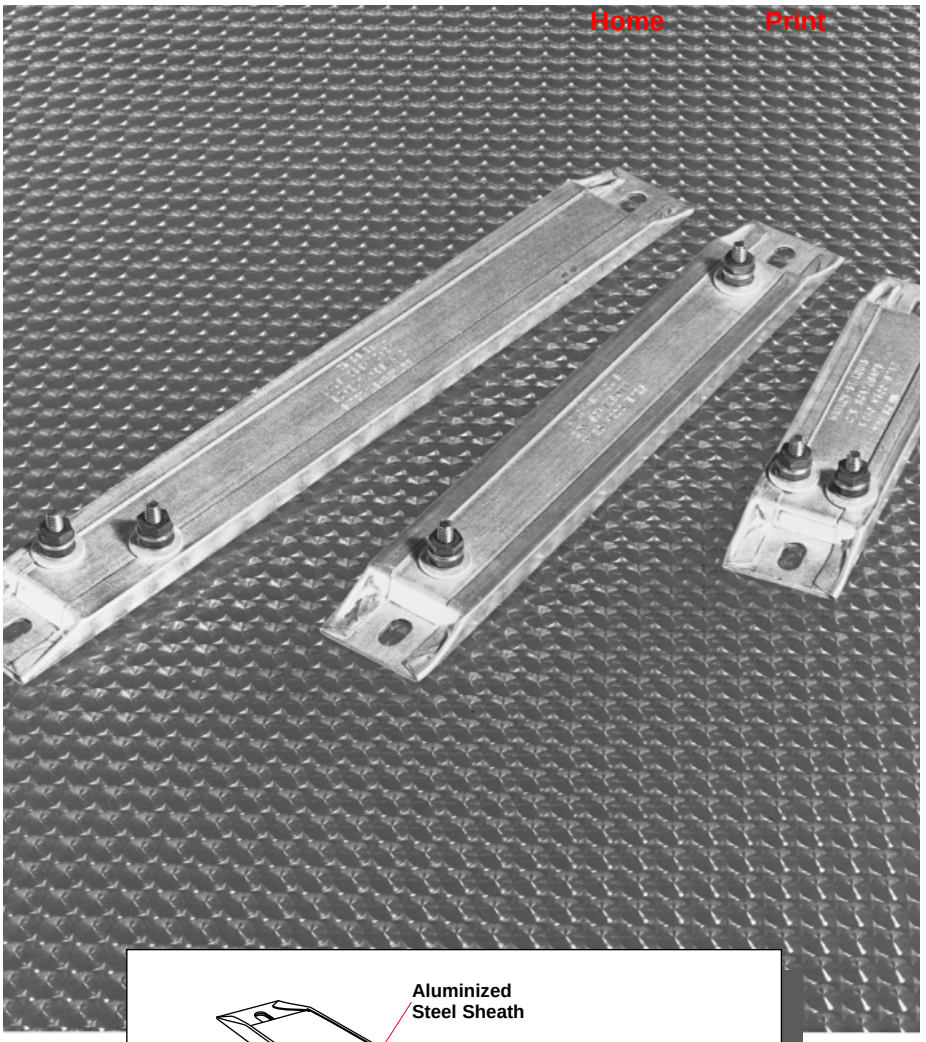
Quick Ship • Next day shipment on all stock units.

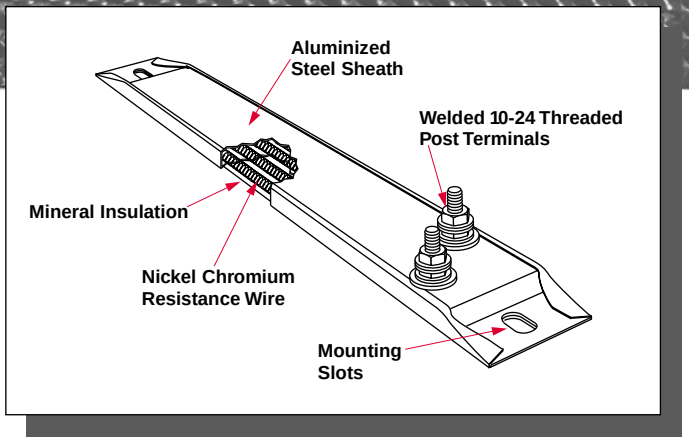
Strip Heaters

375 Strip

Aptly named for its 0.375 inch (9.5 mm) thickness, the Watlow 375 strip is a rugged heater capable of both high temperatures and high watt densities.

Its ruggedness comes from the design and use of choice materials. Watlow begins construction by accurately placing a coiled, nickel-chrome element wire in the center of the heater. The element wire is then embedded in MgO-based insulation ... compacted into a solid mass that results in excellent heat conductivity and high dielectric strength. Finally, the heater is enclosed in aluminized steel sheathing.





Performance Capabilities

- Aluminized steel sheath temperatures to 1100°F (595°C)
- Stainless steel sheath temperatures to 1200°F (650°C)
- Watt densities to 130 W/in^2 (20.2 W/cm^2)
- UL® approved to 240V~(ac) (File No. E52951)
- CSA approved to 600V~(ac) (File No. LR7392)

Features and Benefits

- **Nickel-chrome element wire** is centered in the heater to uniformly heat the strip.
- **Aluminized steel sheath** operates at higher temperatures and resists corrosion better than iron-sheathed heaters.
- **Optional 430 stainless steel sheath** is available for applications where temperatures reach 1200°F (650°C).
- **Post terminals, welded to the element wire**, produce strong, trouble-free connections.
- **Rigid ⅜ inch (9.5 mm) thick design** enables the 375 strip heater to fit into many existing applications.
- **Available dimensions** are 1½ inches (38 mm) wide, and 5½ (140 mm) to 48 inches (1220 mm) long.
- **Next day shipment is available on 106 in-stock models** in popular sizes and ratings.

Applications

- Food warming
- Freeze and moisture protection
- Tank and platen heating
- Packaging
- Dies and mold heating
- Autoclaves
- Ovens

375 Strip

Applications and Technical Data

Calculating Watt Density

Use the *Maximum Allowable Watt Density* graphs and formulas to ensure that the allowable watt density for the heater will not be exceeded in your application.

Watt density is calculated for one side of the heater only.

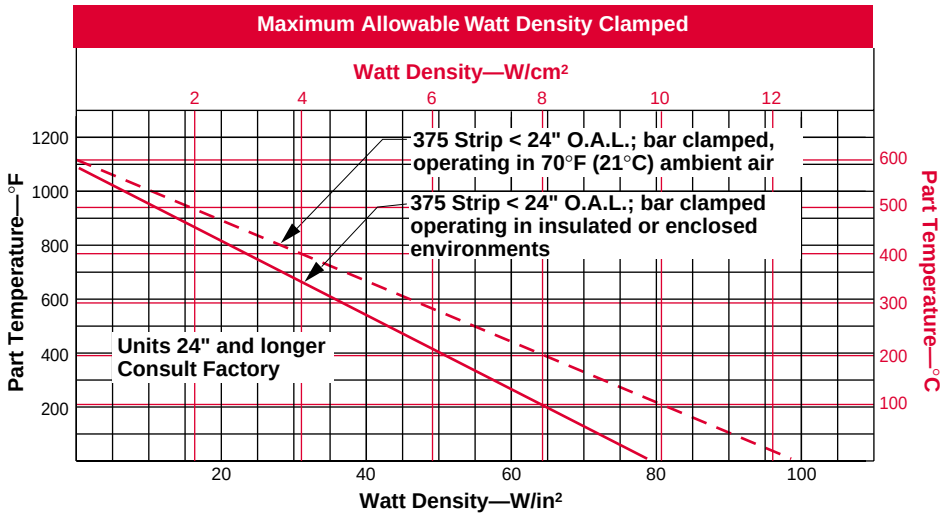
Formulas:

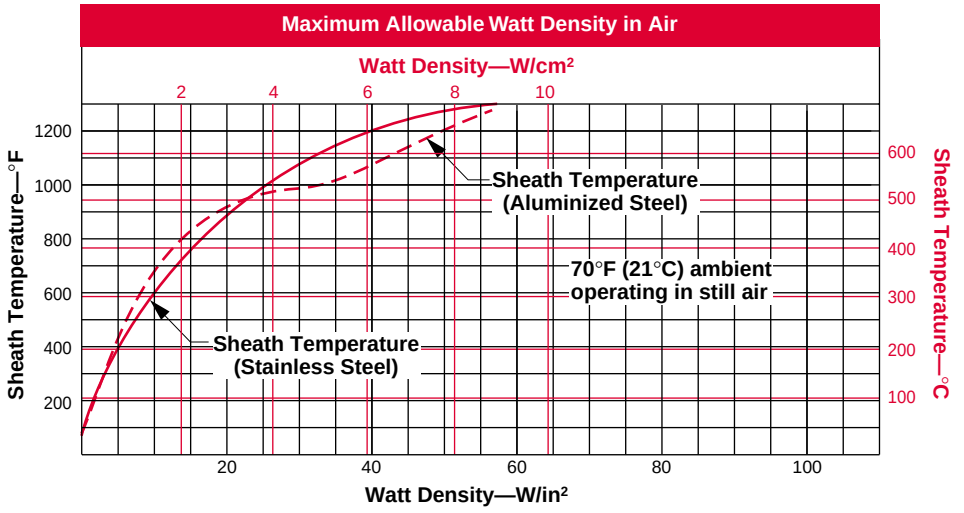
$$\text{Watt Density} = \frac{\text{Wattage}}{\text{Heated Area}}$$

Heated Area
(Offset Terminals) = [Overall Length (A) x 1.5 in] - 6 in^2
= [Overall Length (A) x 38.1 mm] - 38.7 cm^2

Heated Area
(Parallel Terminals) = [Overall Length (A) x 1.5 in] - 4.7 in^2
= [Overall Length (A) x 38.1 mm] - 30.3 cm^2

Heated Area
(One-on-One Terminals) = [Overall Length (A) x 1.5 in] - 6.4 in^2
= [Overall Length (A) x 38.1 mm] - 41.3 cm^2





Strip Heaters

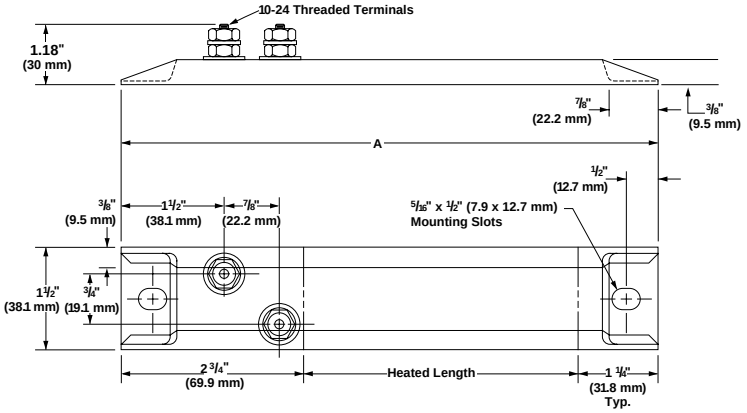
375 Strip

Termination Options

* Tab removal available from stock or manufactured.

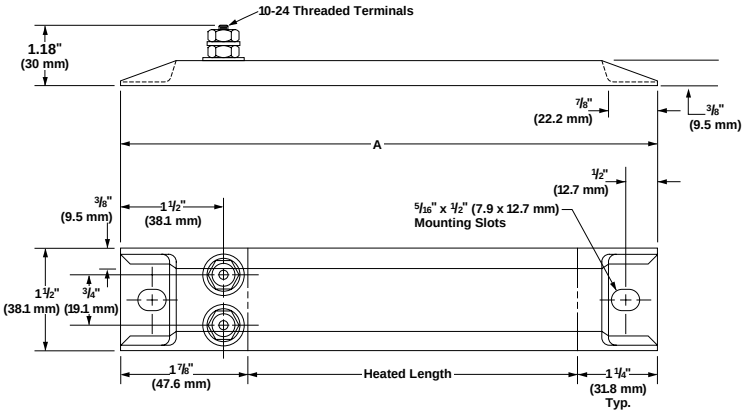
Offset Terminals*

Two 10-24 threaded post terminals are offset from each other on the same end.



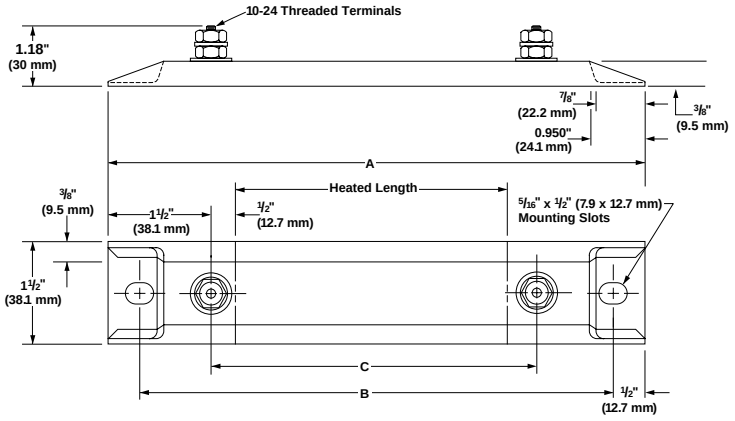
Parallel Terminals*

Two 10-24 threaded post terminals are used; both terminals on one end.



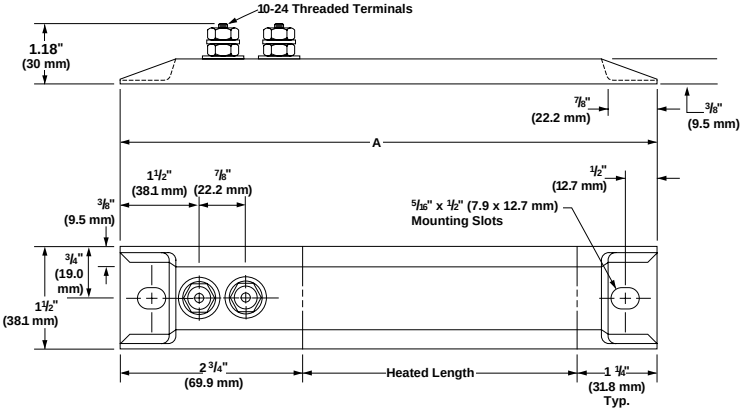
One-on-One Terminals*

Two 10-24 threaded post terminals are placed one on each end.



In-Line Terminals*

Two 10-24 threaded post terminals are in-line with each other on the same end.



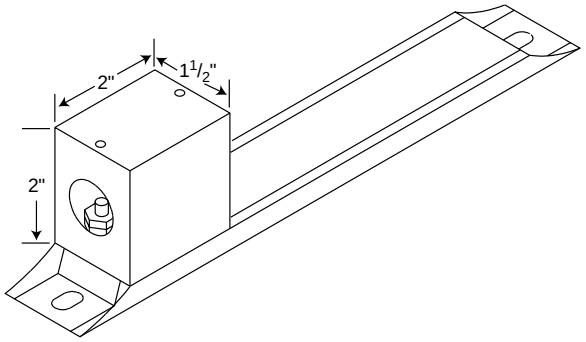
Strip Heaters

375 Strip

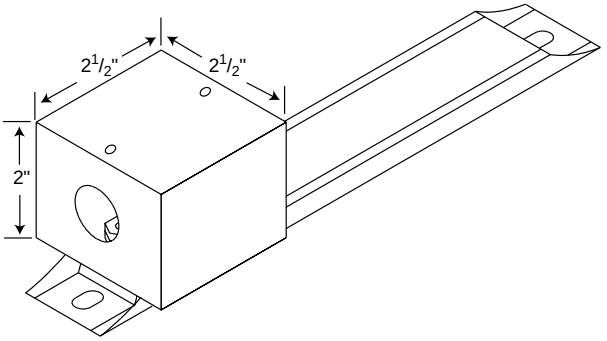
Termination Options

Continued

Variations



Available in in-line terminals only.



Available on offset terminals from stock and manufactured.

Metallic Terminal Boxes

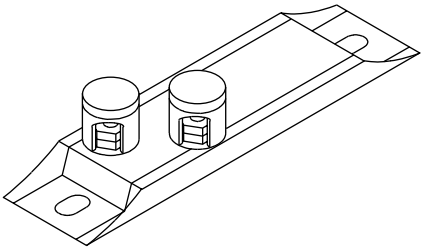
Metallic terminal boxes are available on offset terminals from stock. Terminal boxes act as a safety feature by covering the terminals.

Conduit may be attached to the box through ⅞ inch (22 mm) diameter holes in the ends of the box. To order, specify terminal box.

Accessories

Ceramic Terminal Covers

A convenient and economic way to insulate post terminals. Sized for standard length posts. 10-24 screw thread size. These are supplied as an accessory item and shipped separately. Specify **Z-4918** and quantity.



How to Order

To order your **stock** 375 strip heater, specify:

- Quantity
- Watlow code number
- Removal of mounting tabs, if desired

If stock units do not meet application needs, Watlow can manufacture 375 strip heaters to special requirements.

For **made-to-order** units, please specify, in addition to above information:

- Width
- Heater length, including mounting tabs
- Terminal type (offset, parallel or one-on-one)

Availability

Stock: Next day shipment

Made-to-Order: Please consult your Watlow sales engineer or authorized distributor.

Note: 5/16 inch (7.9 mm) x ½ inch (12.7 mm) mounting slots are supplied on all 375 strip heaters. Tabs can be removed upon request. Also, note Watlow code number specifies that the 375 strip heater comes with an aluminized steel sheath. If you require a special sheath material, such as stainless steel, please consult your sales engineer or authorized distributor for material availability.

① Chromalox® and Wellman® part numbers are used as a cross reference to help you select the equivalent Watlow code number. Chromalox® sizes 27 inches and longer, and all Wellman® sizes, will have mounting slot center to center distances ⅛ inch less than Watlow spacing.

Strip Heaters

F.O.B.: St. Louis, Missouri

375 Strip

Width in (mm)	Length in (mm)	Term.	Volts	Power (Watts)	Watt Density W/in² (W/cm²)	Approx. Net Wt. lbs (kg)	Avail.	Code No.	Chromolox® Code No.①		Wellman® Code No.①	
									Rust Resist. Iron Sheath	Chrome Stl. Sheath	Aluminized Steel Sheath	Chrome Stl. Sheath
1½ (38.1)	5½ (139.7)	Parallel	120	125	35 (5.4)	0.4 (0.18)	Stk	**SGA1J5JP1**	PT-512	—	—	—
	5½ (139.7)	Parallel	120	250	70 (10.8)	0.4 (0.18)	Stk	**SGA1J5JP2**	—	PT-502	—	—
	6 (153.0)	Parallel	120	150	35 (5.4)	0.4 (0.18)	Stk	**SGA1J6AP2**	PT-615	—	—	—
	6 (153.0)	Parallel	240	150	35 (5.4)	0.4 (0.18)	Stk	**SGA1J6AP3**	PT-615	—	—	—
	6 (153.0)	Parallel	120	300	70 (10.8)	0.4 (0.18)	Stk	**SGA1J6AP4**	—	PT-603	—	—
	6 (153.0)	Parallel	240	300	70 (10.8)	0.4 (0.18)	Stk	**SGA1J6AP5**	—	PT-603	—	—
	7½ (190.5)	Offset	120	150	29 (4.5)	0.5 (0.23)	Stk	**SGA1J7J01**	OT-715	—	SS1041	—
	7½ (190.5)	Offset	240	150	29 (4.5)	0.5 (0.23)	Stk	**SGA1J7J02**	OT-715	—	SS1052	—
	7½ (190.5)	Offset	240	200	38 (5.9)	0.5 (0.23)	Stk	**SGA1J7J03**	—	OT-702	—	SS2052
	8 (203.2)	Offset	120	150	25 (3.9)	0.5 (0.23)	Stk	**SGA1J8A01**	OT-815	—	SS1061	—
	8 (203.2)	Offset	240	150	25 (3.9)	0.5 (0.23)	Stk	**SGA1J8A05**	OT-815	—	SS1072	—
	8 (203.2)	Offset	120	175	29 (4.5)	0.5 (0.23)	Stk	**SGA1J8A06**	OT-817	—	SS1081	—
	8 (203.2)	Offset	240	175	29 (4.5)	0.5 (0.23)	Stk	**SGA1J8A07**	OT-817	—	SS1092	—
	8 (203.2)	Offset	120	250	42 (6.5)	0.5 (0.23)	Stk	**SGA1J8A02**	—	OT-802	—	SS2061
	8 (203.2)	Offset	240	250	42 (6.5)	0.5 (0.23)	Stk	**SGA1J8A08**	—	OT-802	—	SS2072
	8 (203.2)	Offset	120	400	67 (10.4)	0.5 (0.23)	Stk	**SGA1J8A09**	—	OT-804	—	SS2081
	8 (203.2)	Offset	240	400	67 (10.4)	0.5 (0.23)	Stk	**SGA1J8A010**	—	OT-804	—	SS2092
	8 (203.2)	Offset	120	500	83 (12.9)	0.5 (0.23)	Stk	**SGA1J8A03**	—	—	—	—
	8 (203.2)	Offset	240	500	83 (12.9)	0.5 (0.23)	Stk	**SGA1J8A04**	—	—	—	—
	8 (203.2)	1-on-1	120	150	24 (3.7)	0.5 (0.23)	Stk	**SGA1J8AT1**	S-815	—	SD1021	—
	8 (203.2)	1-on-1	240	150	24 (3.7)	0.5 (0.23)	Stk	**SGA1J8AT2**	S-815	—	SD1032	—
	9½ (241.3)	1-on-1	120	200	23 (3.6)	0.6 (0.27)	Stk	**SGA1J9JT1**	S-920	—	SD1041	—
	10½ (266.7)	Offset	120	250	26 (4.0)	0.7 (0.32)	Stk	**SGA1J10J01**	OT-1025	—	SS1101	—
	10½ (266.7)	Offset	240	250	26 (4.0)	0.7 (0.32)	Stk	**SGA1J10J02**	OT-1025	—	SS1102	—
	10½ (266.7)	Offset	120	350	36 (5.6)	0.7 (0.32)	Stk	**SGA1J10J08**	—	OT-1003	—	SS2101
	10½ (266.7)	Offset	240	350	36 (5.6)	0.7 (0.32)	Stk	**SGA1J10J05**	—	OT-1003	—	SS2112
	10½ (266.7)	Offset	120	400	41 (6.4)	0.7 (0.32)	Stk	**SGA1J10J06**	—	OT-1004	—	SS2131
	10½ (266.7)	Offset	240	400	41 (6.4)	0.7 (0.32)	Stk	**SGA1J10J07**	—	OT-1004	—	SS2132
	12 (304.8)	Offset	120	250	21 (3.3)	0.8 (0.32)	Stk	**SGA1J12A01**	OT-1225	OT-1202	SS1141	—
	12 (304.8)	Offset	240	250	21 (3.3)	0.8 (0.32)	Stk	**SGA1J12A02**	OT-1225	OT-1202	SS1152	—
	12 (304.8)	Offset	120	350	29 (4.5)	0.8 (0.36)	Stk	**SGA1J12A05**	—	OT-1203	—	SS2141
	12 (304.8)	Offset	240	350	29 (4.5)	0.8 (0.36)	Stk	**SGA1J12A06**	—	OT-1203	—	SS2152
	12 (304.8)	Offset	120	500	42 (6.5)	0.8 (0.36)	Stk	**SGA1J12A03**	—	OT-1205	—	SS2161
	12 (304.8)	Offset	240	500	42 (6.5)	0.8 (0.36)	Stk	**SGA1J12A04**	—	OT-1205	—	SS2172
	12 (304.8)	1-on-1	120	250	20 (3.1)	0.8 (0.36)	Stk	**SGA1J12AT1**	S-1225	S-1202	SD1061	SD2071
	12 (304.8)	1-on-1	240	250	20 (3.1)	0.8 (0.36)	Stk	**SGA1J12AT2**	S-1225	S-1202	SD1072	SD2082
	12 (304.8)	1-on-1	240	500	40 (6.2)	0.8 (0.36)	Stk	**SGA1J12AT3**	—	S-1205	—	SD2122
	14 (355.6)	Offset	120	300	20 (3.1)	0.9 (0.41)	Stk	**SGA1J14A02**	OT-1430	—	SS1181	—
	14 (355.6)	Offset	240	300	20 (3.1)	0.9 (0.41)	Stk	**SGA1J14A01**	OT-1430	—	SS1192	—
	14 (355.6)	Offset	120	500	33 (5.1)	0.9 (0.41)	Stk	**SGA1J14A03**	—	OT-1405	—	SS2181
	14 (355.6)	Offset	240	500	33 (5.1)	0.9 (0.41)	Stk	**SGA1J14A04**	—	OT-1405	—	SS2192
	14 (355.6)	1-on-1	120	300	20 (3.1)	0.9 (0.41)	Stk	**SGA1J14AT1**	S-1430	—	SD1131	—
	15¼ (387.4)	Offset	120	325	19 (2.9)	1.0 (0.45)	Stk	**SGA1J15E02**	OT-1532	—	SS1201	—
	15¼ (387.4)	Offset	240	325	19 (2.9)	1.0 (0.45)	Stk	**SGA1J15E03**	OT-1532	—	SS1212	—
	15¼ (387.4)	Offset	240	500	30 (4.6)	1.0 (0.45)	Stk	**SGA1J15E04**	—	OT-1505	—	SS2212
	17⅞ (454.0)	Offset	120	350	17 (2.6)	1.2 (0.54)	Stk	**SGA1J17R04**	OT-1835	—	SS1221	SS2221
	17⅞ (454.0)	Offset	240	350	17 (2.6)	1.2 (0.54)	Stk	**SGA1J17R05**	OT-1835	—	SS1232	SS2232
	17⅞ (454.0)	Offset	120	375	18 (2.8)	1.2 (0.54)	Stk	**SGA1J17R06**	OT-1837	—	SS1241	—
	17⅞ (454.0)	Offset	240	375	18 (2.8)	1.2 (0.54)	Stk	**SGA1J17R07**	OT-1837	—	SS1252	—
	17⅞ (454.0)	Offset	120	500	24 (3.7)	1.2 (0.54)	Stk	**SGA1J17R01**	OT-1850	—	SS1261	SS2241
	17⅞ (454.0)	Offset	240	500	24 (3.7)	1.2 (0.54)	Stk	**SGA1J17R02**	OT-1850	—	SS1272	SS2252

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Wellman® is a registered tradename of Wellman Thermal Systems Corp.
Chromolox® is a registered tradename of Chromolox Industrial Heaters Products.

Strip Heaters

F.O.B.: St. Louis, Missouri

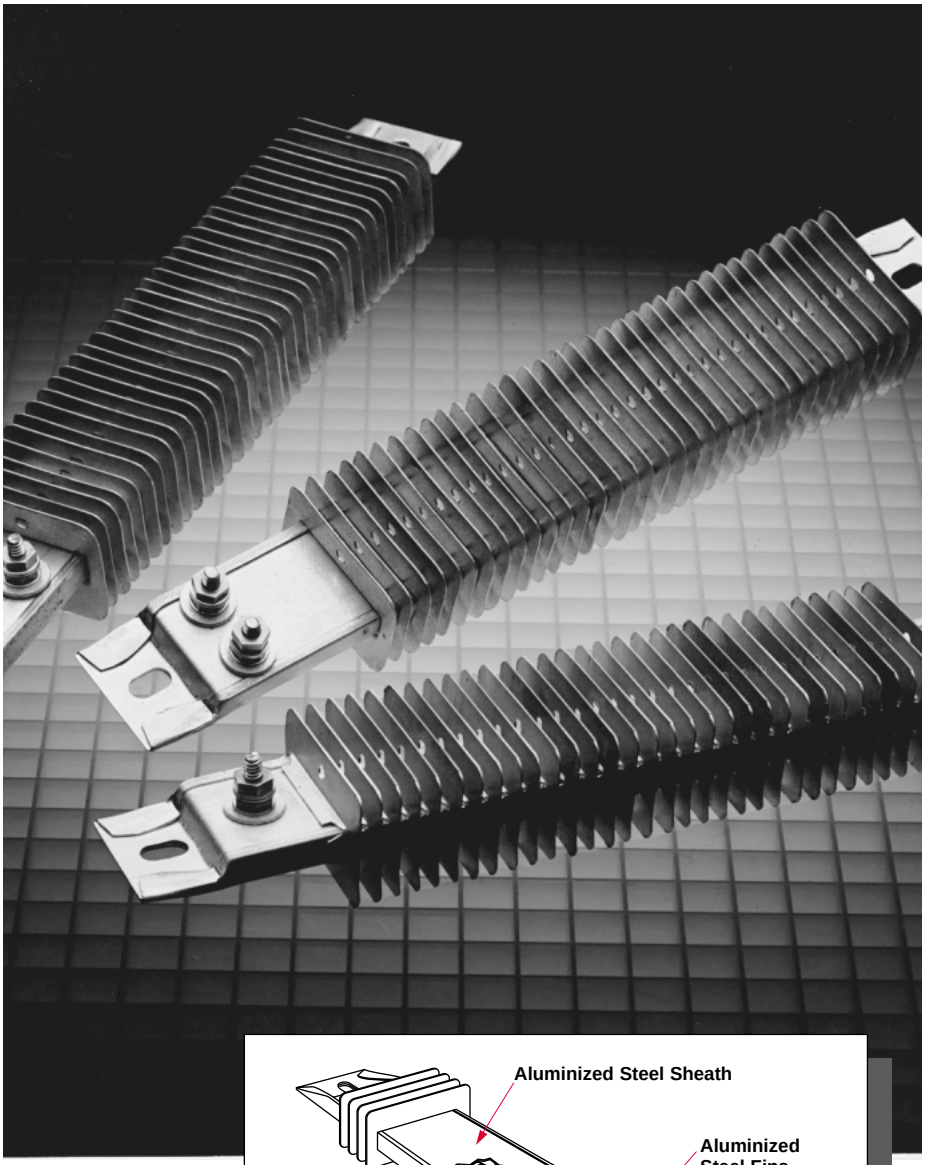
375 Strip

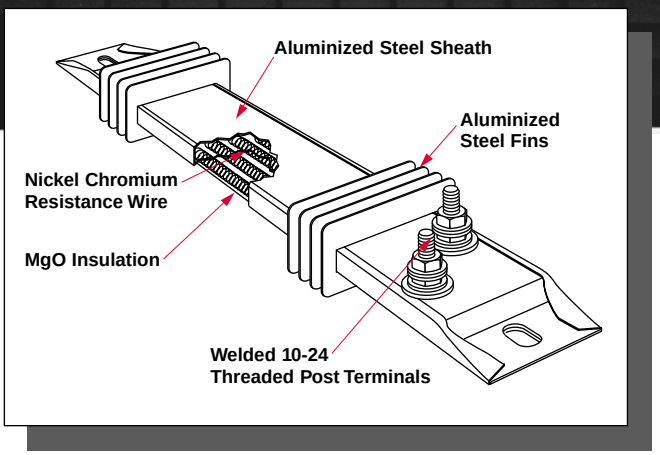
Width in (mm)	Length in (mm)	Term.	Volts	Power (Watts)	Watt Density W/in² (W/cm²)	Approx. Net Wt. lbs (kg)	Avail.	Code No.	Chromolox® Code No. ①		Wellman® Code No. ①	
									Rust Resist. Iron Sheath	Chrome Stl. Sheath	Aluminized Steel Sheath	Chrome Stl. Sheath
1½ (38.1)	17⅞ (454.0)	Offset	120	750	36 (5.6)	1.2 (0.54)	Stk	**SGA1J17R09**	—	OT-1807	—	SS2261
	17⅞ (454.0)	Offset	240	750	36 (5.6)	1.2 (0.54)	Stk	**SGA1J17R08**	—	OT-1807	—	SS2272
	17⅞ (454.0)	Offset	120	1000	48 (7.4)	1.2 (0.54)	Stk	**SGA1J17R010**	—	OT-1801	—	SS2281
	17⅞ (454.0)	Offset	240	1000	48 (7.4)	1.2 (0.54)	Stk	**SGA1J17R03**	—	OT-1801	—	SS2292
	17⅞ (454.0)	1-on-1	120	500	24 (3.7)	1.2 (0.54)	Stk	**SGA1J17RT1**	S-1850	S-1805	SD1211	SD2171
	17⅞ (454.0)	1-on-1	240	500	24 (3.7)	1.2 (0.54)	Stk	**SGA1J17RT2**	S-1850	S-1805	SD1222	SD2182
	17⅞ (454.0)	1-on-1	240	750	35 (5.4)	1.2 (0.54)	Stk	**SGA1J17RT3**	—	S-1807	—	SD2202
	17⅞ (454.0)	1-on-1	120	1000	47 (7.3)	1.2 (0.54)	Stk	**SGA1J17RT4**	—	S-1801	—	SD2211
	17⅞ (454.0)	1-on-1	240	1000	47 (7.3)	1.2 (0.54)	Stk	**SGA1J17RT5**	—	S-1801	—	SD2222
	19½ (495.3)	Offset	240	350	15 (2.3)	1.3 (0.59)	Stk	**SGA1J19J06**	OT-1935	—	SS1301	—
	19½ (495.3)	Offset	120	500	22 (3.4)	1.3 (0.59)	Stk	**SGA1J19J07**	OT-1950	OT-1905	—	SS2301
	19½ (495.3)	Offset	240	500	22 (3.4)	1.3 (0.59)	Stk	**SGA1J19J04**	OT-1950	OT-1905	—	SS2312
	19½ (495.3)	Offset	240	750	32 (5.0)	1.3 (0.59)	Stk	**SGA1J19J08**	—	OT-1907	—	—
	19½ (495.3)	Offset	240	1000	43 (6.7)	1.3 (0.59)	Stk	**SGA1J19J01**	—	OT-1901	—	SS2332
	19½ (495.3)	1-on-1	240	750	32 (5.0)	1.3 (0.59)	Stk	**SGA1J19JT1**	—	S-1907	—	SD2262
	21 (533.4)	Offset	120	500	20 (3.1)	1.4 (0.64)	Stk	**SGA1J21A01**	OT-2150	—	SS1341	—
	21 (533.4)	Offset	240	500	20 (3.1)	1.4 (0.64)	Stk	**SGA1J21A02**	OT-2150	—	SS1352	—
	21 (533.4)	Offset	120	750	29 (4.5)	1.4 (0.64)	Stk	**SGA1J21A03**	—	OT-2107	—	SS2341
	21 (533.4)	Offset	240	750	29 (4.5)	1.4 (0.64)	Stk	**SGA1J21A04**	—	OT-2107	—	SS2352
	21 (533.4)	1-on-1	120	500	19 (2.9)	1.4 (0.64)	Stk	**SGA1J21AT1**	S-2050	S-2005	SD1291	SD2291
	23¾ (603.3)	Offset	120	500	17 (2.6)	1.5 (0.68)	Stk	**SGA1J23N05**	OT-2450	OT-2405	SS1361	SS2361
	23¾ (603.3)	Offset	240	500	17 (2.6)	1.5 (0.68)	Stk	**SGA1J23N06**	OT-2450	OT-2405	SS1372	SS2372
	23¾ (603.3)	Offset	120	750	25 (3.9)	1.5 (0.68)	Stk	**SGA1J23N01**	OT-2475	OT-2407	SS1391	SS2381
	23¾ (603.3)	Offset	240	750	25 (3.9)	1.5 (0.68)	Stk	**SGA1J23N02**	OT-2475	OT-2407	SS1402	SS2392
	23¾ (603.3)	Offset	120	1000	34 (5.3)	1.5 (0.68)	Stk	**SGA1J23N07**	—	OT-2401	—	SS2401
	23¾ (603.3)	Offset	240	1000	34 (5.3)	1.5 (0.68)	Stk	**SGA1J23N03**	—	OT-2401	—	SS2412
	23¾ (603.3)	Offset	240	1500	51 (7.9)	1.5 (0.68)	Stk	**SGA1J23N04**	—	OT-2415	—	—
	23¾ (603.3)	1-on-1	240	250	8 (1.2)	1.5 (0.68)	Stk	**SGA1J23NT1**	S-2425	—	SD1322	—
	23¾ (603.3)	1-on-1	240	500	17 (2.6)	1.5 (0.68)	Stk	**SGA1J23NT3**	S-2450	S-2404	SD1342	SD2322
	23¾ (603.3)	1-on-1	240	750	25 (3.9)	1.5 (0.68)	Stk	**SGA1J23NT5**	—	S-2407	—	SD2352
	23¾ (603.3)	1-on-1	120	1000	33 (5.1)	1.5 (0.68)	Stk	**SGA1J23NT6**	—	S-2401	—	SD2361
	23¾ (603.3)	1-on-1	240	1000	33 (5.1)	1.5 (0.68)	Stk	**SGA1J23NT7**	—	S-2401	—	SD2372
	23¾ (603.3)	1-on-1	240	1500	50 (7.7)	1.5 (0.68)	Stk	**SGA1J23NT8**	—	S-2415	—	—
	25½ (647.7)	Offset	120	500	16 (2.5)	1.7 (0.77)	Stk	**SGA1J25J01**	OT-2550	—	SS1421	—
	25½ (647.7)	Offset	240	500	16 (2.5)	1.7 (0.77)	Stk	**SGA1J25J02**	OT-2550	—	SS1432	—
	25½ (647.7)	Offset	120	750	23 (3.6)	1.7 (0.77)	Stk	**SGA1J25J03**	OT-2575	OT-2507	SS1441	SS2421
	25½ (647.7)	Offset	240	750	23 (3.6)	1.7 (0.77)	Stk	**SGA1J25J04**	OT-2575	OT-2507	SS1452	SS2432
	25½ (647.7)	Offset	240	1000	31 (4.8)	1.7 (0.77)	Stk	**SGA1J25J05**	—	OT-2501	—	SS2452
	26¾ (679.5)	Offset	240	700	21 (3.3)	1.7 (0.77)	Stk	**SGA1J26N01**	OT-2670	—	SS1472	—
	26¾ (679.5)	Offset	240	1000	29 (4.5)	1.7 (0.77)	Stk	**SGA1J26N02**	—	OT-2601	—	SS2472
	30½ (774.7)	Offset	120	750	19 (2.9)	2.0 (0.91)	Stk	**SGA1J30J02**	OT-3075	OT-3007	SS1481	—
	30½ (774.7)	Offset	240	750	19 (2.9)	2.0 (0.91)	Stk	**SGA1J30J03**	OT-3075	OT-3007	SS1492	SS2482
	30½ (774.7)	1-on-1	240	750	19 (2.9)	2.0 (0.91)	Stk	**SGA1J30JT1**	S-3075	S-3007	SD1452	—
	33½ (850.9)	Offset	240	750	17 (2.6)	2.2 (1.0)	Stk	**SGA1J33J01**	OT-3375	OT-3307	SS1522	SS2522
	33½ (850.9)	1-on-1	240	1000	22 (3.4)	2.2 (1.0)	Stk	**SGA1J33JT1**	—	S-3301	—	SD2472
	35⅞ (911.2)	Offset	120	1000	21 (3.3)	2.3 (1.0)	Stk	**SGA1J35R04**	OT-3610	SS1531	SS1531	—
	35⅞ (911.2)	Offset	240	1000	21 (3.3)	2.3 (1.0)	Stk	**SGA1J35R03**	OT-3610	—	SS1542	SS2532
	35⅞ (911.2)	Offset	240	1500	31 (4.8)	2.3 (1.0)	Stk	**SGA1J35R01**	—	OT-3601	SS2552	—
	35⅞ (911.2)	1-on-1	240	1000	21 (3.3)	2.3 (1.0)	Stk	**SGA1J35RT1**	S-3610	S-3601	SD1492	SD2492
	38½ (977.9)	Offset	120	1000	19 (2.9)	2.5 (1.1)	Stk	**SGA1J38J02**	OT-3810	OT-3801	SS1581	SS2561
	38½ (977.9)	Offset	240	1500	29 (4.5)	2.5 (1.1)	Stk	**SGA1J38J03**	—	OT-3815	—	—
	42½(1079.5)	Offset	240	1500	26 (4.0)	2.8 (1.3)	Stk	**SGA1J42J01**	—	OT-4315	SS1632	SS2632
	47⅞(1216.0)	Offset	240	2250	34 (5.3)	3.1 (1.4)	Stk	**SGA1J47R01**	—	OT-4822	—	—

Strip Heaters

375 Finned Strip

Like its 375 strip counterpart, the 375 finned strip heater is constructed of highly-compacted MgO-based insulation, which conducts heat efficiently from the nickel-chrome element wire to the sheath. Two inch wide (51 mm) aluminized steel fins are attached in a way that maximizes surface contact so that heat is displaced and transferred into the air faster.





Performance Capabilities

- Aluminized steel sheath temperatures to 1100°F (595°C)
- UL® approved to 240V~(ac) (File No. E52951)
- CSA approved to 600V~(ac) (File No. LR7392)

Features and Benefits

- **Nickel-chrome element wire** is centered in the heater to uniformly heat the strip.
- **Aluminized steel sheath** operates at higher temperatures and resists corrosion better than iron-sheathed heaters.
- **Optional 430 stainless steel sheath** is available for more corrosive environments.
- **Welded post terminals** produce strong, trouble-free connections.
- **Rigid ⅜-inch (9.5 mm) thick design** enables the 375 finned strip heater to fit into many existing applications.
- **Available lengths** from 5½ inches (140 mm) to 48 inches (1220 mm).

Applications

- Shrink tunnels
- Duct heaters
- Space heaters
- Drying ovens
- Incubators
- Air heating
- Load bank resistors
- Heat curing
- Ink drying
- Food warmers
- Moisture protection
- Process welding
- Dehumidifiers
- Stress relieving ovens

Strip Heaters

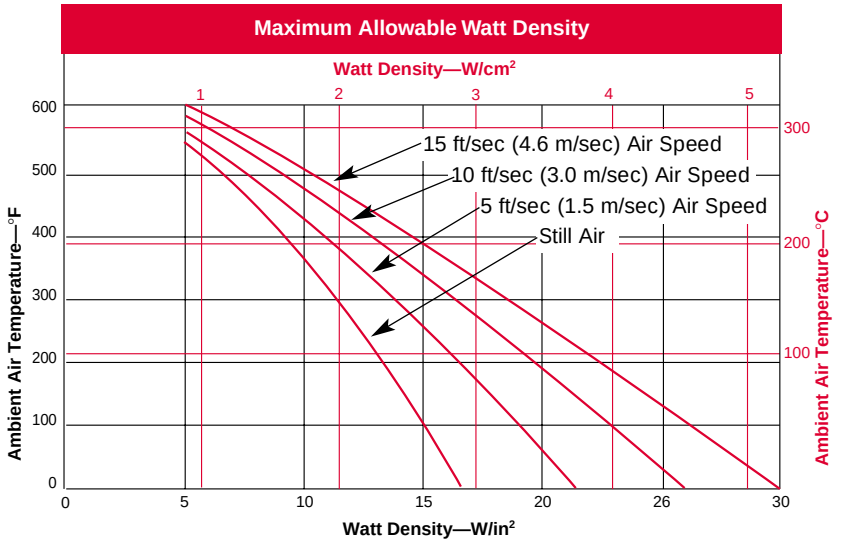
375 Finned Strip

Applications and Technical Data

Calculating Watt Density

Use the graph and formulas to make certain that the maximum allowable watt density for the heater will not be exceeded in the application.

Open air watt density is calculated for total heated surface area.



Formulas:

$$\text{Watt Density} = \frac{\text{Wattage}}{\text{Heated Area}}$$

Heated Area
(Offset Terminals) = [Overall Length (A) - 4.00 in.] x 3.75 in.
= [Overall Length (A) - 101.6 mm] x 95.25 mm

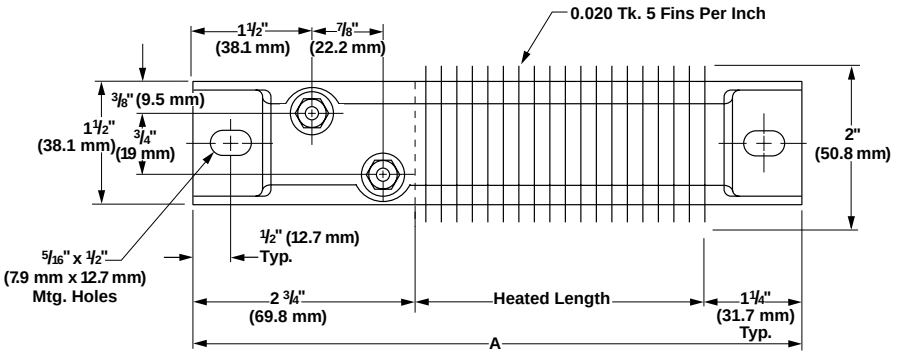
Heated Area
(Parallel Terminals) = [Overall Length (A) - 3.12 in.] x 3.75 in.
= [Overall Length (A) - 79.25 mm] x 95.25 mm

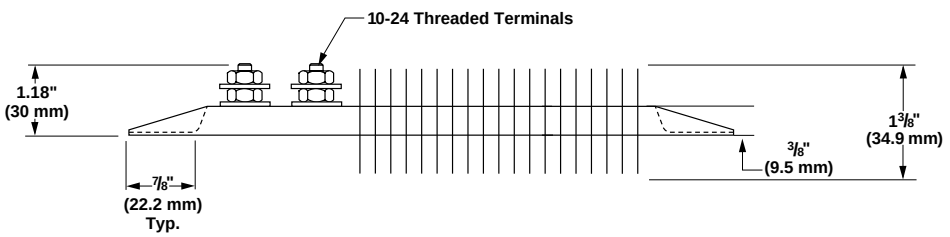
Heated Area
(One-on-One Terminals) = [Overall Length (A) - 4.25 in.] x 3.75 in.
= [Overall Length (A) - 107.95 mm] x 95.25 mm

Termination Options

Offset Terminals

Two 10-24 threaded post terminals are offset from each other on the same end.



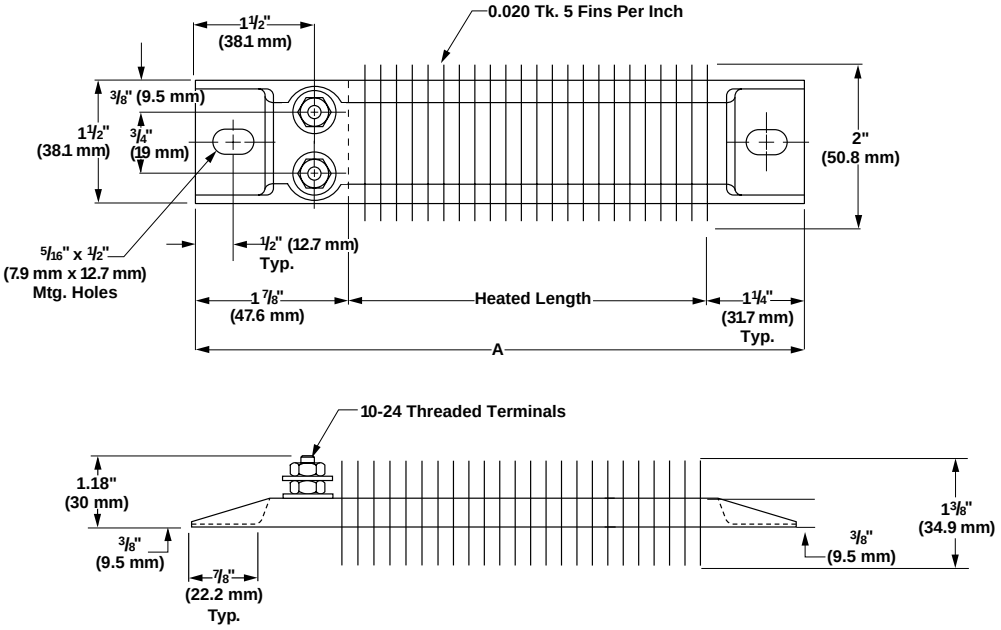


375 Finned Strip

Termination Options
Continued

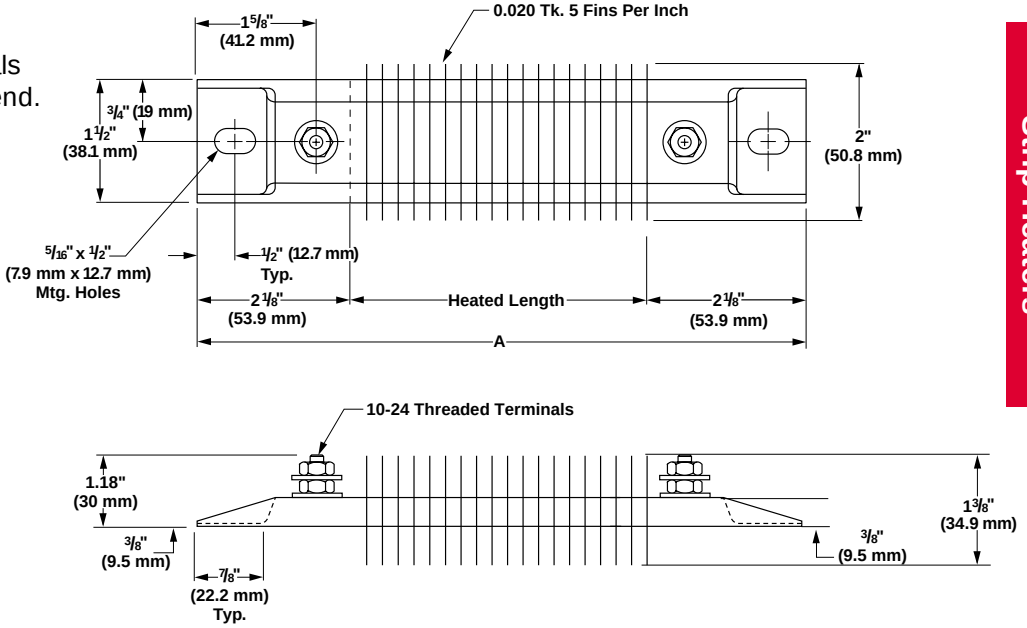
Parallel Terminals

Two 10-24 threaded post terminals are used; both terminals on one end.



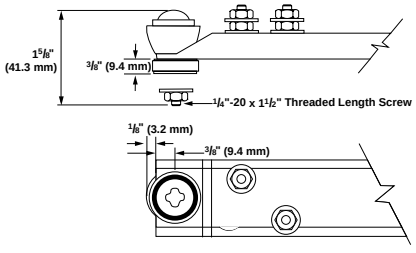
One-on-One Terminals

Two 10-24 threaded post terminals are used; one terminal on each end.



Secondary Insulation Bushings

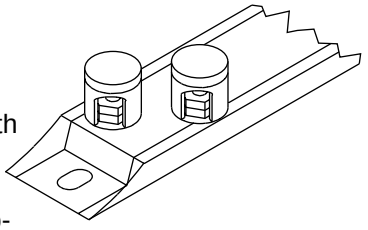
Insulators are suitable for use when air heating and/or voltage to ground is a concern. Secondary insulation bushing kit part number **Z5230** contains one set of bushings for one heater. To accommodate the bushings, 17/32 x 11/16 inch



diameter mounting holes **must** be specified when ordering.

Ceramic Terminal Covers

A convenient and economical way to insulate post terminals. Sized for standard length posts. 10-24 screw thread size. These are supplied as an accessory item and shipped separately. Specify **Z-4918** and quantity.



Strip Heaters

F.O.B.: St. Louis, Missouri

375 Finned Strip

How to Order

To order stock 375 finned strip heater, specify:

- 375 finned strip
- Quantity
- Watlow code number
- Voltage
- Wattage
- Removal of mounting tabs, if desired

If stock units do not meet application needs, Watlow can manufacture 375 finned strip heaters to special requirements. For **made-to-order** units, please specify, in addition to above information:

- Width
- Length, including mounting tabs
- Terminal type (offset, parallel or one-on-one)

Availability

Assembly Stock: Shipment within three working days

Made-to-Order: Please consult your Watlow sales engineer or authorized distributor.

Width inches (mm)	Termination	Length inches (mm)	Volts	Power (Watts)	W/in² (W/cm²)	Approx. Net Wt. lbs (kg)	Availability	Code No.
1½ (38.1)	Parallel	5½ (139.7)	120	125	14 (2.1)	0.5 (0.23)	Assy. Stock	**SGA1J5JY2**
	Parallel	5½ (139.7)	120	250	28 (4.3)	0.5 (0.23)	Assy. Stock	**SGA1J5JY3**
	Parallel	6 (152.4)	120	150	14 (2.1)	0.5 (0.23)	Assy. Stock	**SGA1J6AY1**
	Parallel	6 (152.4)	240	150	14 (2.1)	0.5 (0.23)	Assy. Stock	**SGA1J6AY2**
	Parallel	6 (152.4)	120	300	28 (4.3)	0.5 (0.23)	Assy. Stock	**SGA1J6AY3**
	Parallel	6 (152.4)	240	300	28 (4.3)	0.5 (0.23)	Assy. Stock	**SGA1J6AY4**
	Offset	7½ (190.5)	120	150	12 (1.8)	0.7 (0.32)	Assy. Stock	**SGA1J7JW1**
	Offset	7½ (190.5)	240	150	12 (1.8)	0.7 (0.32)	Assy. Stock	**SGA1J7JW2**
	Offset	7½ (190.5)	240	200	15 (2.3)	0.7 (0.32)	Assy. Stock	**SGA1J7JW3**
	Offset	8 (203.2)	120	150	10 (1.5)	0.7 (0.32)	Assy. Stock	**SGA1J8AW2**
	Offset	8 (203.2)	240	150	10 (1.5)	0.7 (0.32)	Assy. Stock	**SGA1J8AW3**
	Offset	8 (203.2)	120	175	12 (1.8)	0.7 (0.32)	Assy. Stock	**SGA1J8AW4**
	Offset	8 (203.2)	240	175	12 (1.8)	0.7 (0.32)	Assy. Stock	**SGA1J8AW5**
	Offset	8 (203.2)	120	250	17 (2.6)	0.7 (0.32)	Assy. Stock	**SGA1J8AW6**
	Offset	8 (203.2)	240	250	17 (2.6)	0.7 (0.32)	Assy. Stock	**SGA1J8AW7**
	Offset	8 (203.2)	120	400	27 (4.2)	0.7 (0.32)	Assy. Stock	**SGA1J8AW8**
	Offset	8 (203.2)	240	400	27 (4.2)	0.7 (0.32)	Assy. Stock	**SGA1J8AW9**
	Offset	8 (203.2)	120	500	33 (5.1)	0.7 (0.32)	Assy. Stock	**SGA1J8AW10**
	Offset	8 (203.2)	240	500	33 (5.1)	0.7 (0.32)	Assy. Stock	**SGA1J8AW11**
	Offset	10½ (266.7)	120	250	10 (1.5)	0.9 (0.40)	Assy. Stock	**SGA1J10JW1**
	Offset	10½ (266.7)	240	250	10 (1.5)	0.9 (0.40)	Assy. Stock	**SGA1J10JW2**
	Offset	10½ (266.7)	120	350	14 (2.1)	0.9 (0.40)	Assy. Stock	**SGA1J10JW3**
	Offset	10½ (266.7)	240	350	14 (2.1)	0.9 (0.40)	Assy. Stock	**SGA1J10JW4**
	Offset	10½ (266.7)	120	400	16 (2.5)	0.9 (0.40)	Assy. Stock	**SGA1J10JW5**
	Offset	10½ (266.7)	240	400	16 (2.5)	0.9 (0.40)	Assy. Stock	**SGA1J10JW6**

CONTINUED

Note: 375 finned strip heaters with one-on-one terminations are available only as a manufactured item. Please contact a Watlow sales engineer for additional information.

Note: 5/16 x ½ inch (7.9 x 12.7 mm) mounting slots are supplied on all 375 finned strip heaters. Tabs can be removed upon request.

Strip Heaters

375 Finned Strip

Width inches (mm)	Termination	Length inches (mm)	Volts	Power (Watts)	W/in² (W/cm²)	Approx. Net Wt. lbs (kg)	Availability	Code No.
1½ (38.1)	Offset	12 (304.8)	120	250	8 (1.2)	1.0 (0.45)	Assy. Stock	**SGA1J12AW1**
	Offset	12 (304.8)	240	250	8 (1.2)	1.0 (0.45)	Assy. Stock	**SGA1J12AW2**
	Offset	12 (304.8)	120	350	12 (1.8)	1.0 (0.45)	Assy. Stock	**SGA1J12AW3**
	Offset	12 (304.8)	240	350	12 (1.8)	1.0 (0.45)	Assy. Stock	**SGA1J12AW4**
	Offset	12 (304.8)	120	500	17 (2.6)	1.0 (0.45)	Assy. Stock	**SGA1J12AW5**
	Offset	12 (304.8)	240	500	17 (2.6)	1.0 (0.45)	Assy. Stock	**SGA1J12AW6**
	Offset	14 (355.6)	120	300	8 (1.2)	1.2 (0.54)	Assy. Stock	**SGA1J14AW1**
	Offset	14 (355.6)	240	300	8 (1.2)	1.2 (0.54)	Assy. Stock	**SGA1J14AW2**
	Offset	14 (355.6)	120	500	13 (2.0)	1.2 (0.54)	Assy. Stock	**SGA1J14AW3**
	Offset	14 (355.6)	240	500	13 (2.0)	1.2 (0.54)	Assy. Stock	**SGA1J14AW4**
	Offset	15¼ (387.4)	120	325	8 (1.2)	1.4 (0.64)	Assy. Stock	**SGA1J15EW1**
	Offset	15¼ (387.4)	240	325	8 (1.2)	1.4 (0.64)	Assy. Stock	**SGA1J15EW2**
	Offset	15¼ (387.4)	240	500	12 (1.8)	1.4 (0.64)	Assy. Stock	**SGA1J15EW3**
	Offset	17⅞ (454.0)	120	350	8 (1.2)	1.6 (0.73)	Assy. Stock	**SGA1J17RW1**
	Offset	17⅞ (454.0)	240	350	8 (1.2)	1.6 (0.73)	Assy. Stock	**SGA1J17RW2**
	Offset	17⅞ (454.0)	120	375	9 (1.4)	1.6 (0.73)	Assy. Stock	**SGA1J17RW3**
	Offset	17⅞ (454.0)	240	375	9 (1.4)	1.6 (0.73)	Assy. Stock	**SGA1J17RW4**
	Offset	17⅞ (454.0)	120	500	12 (1.8)	1.6 (0.73)	Assy. Stock	**SGA1J17RW5**
	Offset	17⅞ (454.0)	240	500	12 (1.8)	1.6 (0.73)	Assy. Stock	**SGA1J17RW6**
	Offset	17⅞ (454.0)	120	750	18 (2.8)	1.6 (0.73)	Assy. Stock	**SGA1J17RW7**
	Offset	17⅞ (454.0)	240	750	18 (2.8)	1.6 (0.73)	Assy. Stock	**SGA1J17RW8**
	Offset	17⅞ (454.0)	120	1000	24 (3.7)	1.6 (0.73)	Assy. Stock	**SGA1J17RW9**
	Offset	17⅞ (454.0)	240	1000	24 (3.7)	1.6 (0.73)	Assy. Stock	**SGA1J17RW10**
	Offset	19½ (495.3)	240	350	6 (.9)	1.7 (0.77)	Assy. Stock	**SGA1J19JW2**
	Offset	19½ (495.3)	120	500	9 (1.4)	1.7 (0.77)	Assy. Stock	**SGA1J19JW3**
	Offset	19½ (495.3)	240	500	9 (1.4)	1.7 (0.77)	Assy. Stock	**SGA1J19JW4**
	Offset	19½ (495.3)	240	750	13 (2.0)	1.7 (0.77)	Assy. Stock	**SGA1J19JW5**
	Offset	19½ (495.3)	240	1000	17 (2.6)	1.7 (0.77)	Assy. Stock	**SGA1J19JW6**
	Offset	21 (533.4)	120	500	8 (1.2)	1.9 (0.86)	Assy. Stock	**SGA1J21AW3**
	Offset	21 (533.4)	240	500	8 (1.2)	1.9 (0.86)	Assy. Stock	**SGA1J21AW4**
	Offset	21 (533.4)	120	750	12 (1.8)	1.9 (0.86)	Assy. Stock	**SGA1J21AW5**
	Offset	21 (533.4)	240	750	12 (1.8)	1.9 (0.86)	Assy. Stock	**SGA1J21AW6**

CONTINUED

Note: 375 finned strip heaters with one-on-one terminations are available only as a manufactured item. Please contact a Watlow sales engineer for additional information.

Note: 5/16 x ½ inch (7.9 x 12.7 mm) mounting slots are supplied on all 375 finned strip heaters. Tabs can be removed upon request.

Strip Heaters

375 Finned Strip

Width inches (mm)	Termination	Length inches (mm)	Volts	Power (Watts)	W/in² (W/cm²)	Approx. Net Wt. lbs (kg)	Availability	Code No.
1½ (38.1)	Offset	23¾ (603.3)	240	500	7 (1.0)	2.1 (0.95)	Assy. Stock	**SGA1J23NW3**
	Offset	23¾ (603.3)	240	750	10 (1.5)	2.1 (0.95)	Assy. Stock	**SGA1J23NW5**
	Offset	23¾ (603.3)	120	1000	14 (2.1)	2.1 (0.95)	Assy. Stock	**SGA1J23NW6**
	Offset	23¾ (603.3)	240	1000	14 (2.1)	2.1 (0.95)	Assy. Stock	**SGA1J23NW7**
	Offset	23¾ (603.3)	240	1500	20 (3.1)	2.1 (0.95)	Assy. Stock	**SGA1J23NW8**
	Offset	25½ (647.7)	120	500	6 (.9)	2.3 (1.0)	Assy. Stock	**SGA1J25JW2**
	Offset	25½ (647.7)	240	500	6 (.9)	2.3 (1.0)	Assy. Stock	**SGA1J25JW3**
	Offset	25½ (647.7)	120	750	9 (1.4)	2.3 (1.0)	Assy. Stock	**SGA1J25JW4**
	Offset	25½ (647.7)	240	750	9 (1.4)	2.3 (1.0)	Assy. Stock	**SGA1J25JW5**
	Offset	25½ (647.7)	240	1000	12 (1.8)	2.3 (1.0)	Assy. Stock	**SGA1J25JW6**
	Offset	26¾ (679.5)	240	700	8 (1.2)	2.4 (1.1)	Assy. Stock	**SGA1J26NW2**
	Offset	26¼ (679.5)	240	1000	12 (1.8)	2.4 (1.1)	Assy. Stock	**SGA1J26NW3**
	Offset	30½ (774.7)	120	750	8 (1.2)	2.7 (1.2)	Assy. Stock	**SGA1J30JW1**
	Offset	30½ (774.7)	240	750	8 (1.2)	2.7 (1.2)	Assy. Stock	**SGA1J30JW2**
	Offset	33½ (850.9)	240	750	7 (1.0)	3.0 (1.4)	Assy. Stock	**SGA1J33JW1**
	Offset	35⅞ (911.2)	120	1000	8 (1.2)	3.2 (1.5)	Assy. Stock	**SGA1J35RW1**
	Offset	35⅞ (911.2)	240	1000	8 (1.2)	3.2 (1.5)	Assy. Stock	**SGA1J35RW2**
	Offset	35⅞ (911.2)	240	1500	13 (2.0)	3.2 (1.5)	Assy. Stock	**SGA1J35RW3**
	Offset	38½ (977.9)	120	1000	8 (1.2)	3.4 (1.5)	Assy. Stock	**SGA1J38JW2**
	Offset	38½ (977.9)	240	1500	11 (1.7)	3.4 (1.5)	Assy. Stock	**SGA1J38JW3**
	Offset	42½ (1079.5)	240	1500	10 (1.5)	3.8 (1.7)	Assy. Stock	**SGA1J42JW1**
	Offset	47⅞ (1216.0)	240	2250	16 (2.4)	4.3 (2.0)	Assy. Stock	**SGA1J47RW2**

Note: 375 finned strip heaters with one-on-one terminations are available only as a manufactured item. Please contact a Watlow sales engineer for additional information.

Note: 5/16 x ½ inch (7.9 x 12.7 mm) mounting slots are supplied on all 375 finned strip heaters. Tabs can be removed upon request.