

375 High Temperature Strip Heaters

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

Watlow® begins construction by accurately placing a coiled, nickel-chromium element wire in the center of the heater. The element wire is then embedded in magnesium oxide (MgO)-based insulation compacted into a solid mass creating excellent heat conductivity and high dielectric strength. The heater is then enclosed in aluminized steel or 430 stainless steel sheathing.

Performance Capabilities

- Aluminized steel sheath temperatures up to 1100°F (595°C)
- 430 stainless steel sheath temperatures up to 1200°F (650°C)
- Watt densities up to 100 W/in² (15.5 W/cm²)
- UL® approved up to 240VAC (File No. E52951)
- CSA approved up to 480VAC (File No. LR7392)

Features and Benefits

Nickel-chromium element wire is centered in the heater

- Assures uniform heat

Aluminized steel sheath

- Operates at higher temperatures and resists corrosion better than iron-sheathed heaters
- Minimizes heat-up time

Optional 430 stainless steel sheath

- Meets temperature requirements that reach up to 1200°F (650°C)

Post terminals, welded to the element wire

- Produces strong, trouble-free connections

Rigid 3/8 in. (9.5 mm) thick design

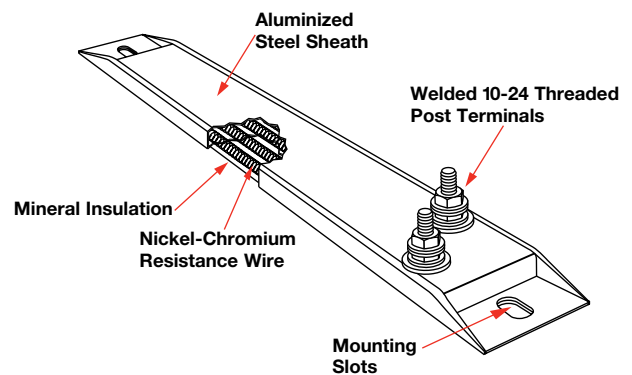
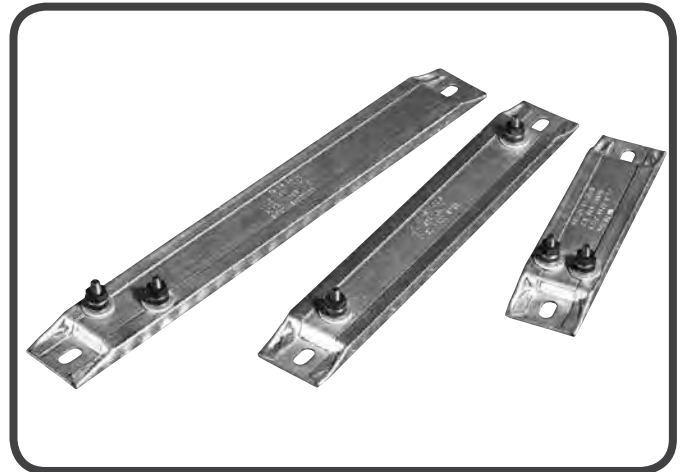
- Enables the heater to fit into many existing applications

Over 100 in-stock models in popular sizes and ratings

- Allows next day shipment

Available dimensions are 1 1/2 in. (38 mm) wide and 5 1/2 to 48 in. (140 to 1219 mm) long

- Fits a variety of application needs



Typical Applications

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

375 High Temperature Strip Heaters

Technical Data

Calculating Watt Density

Use the *Maximum Allowable Watt Density* graphs and formulas to ensure the allowable watt density for the heater does not exceed the specific application requirements. **Watt density is calculated for one side of the heater only.**

Formulas

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

Heated Area

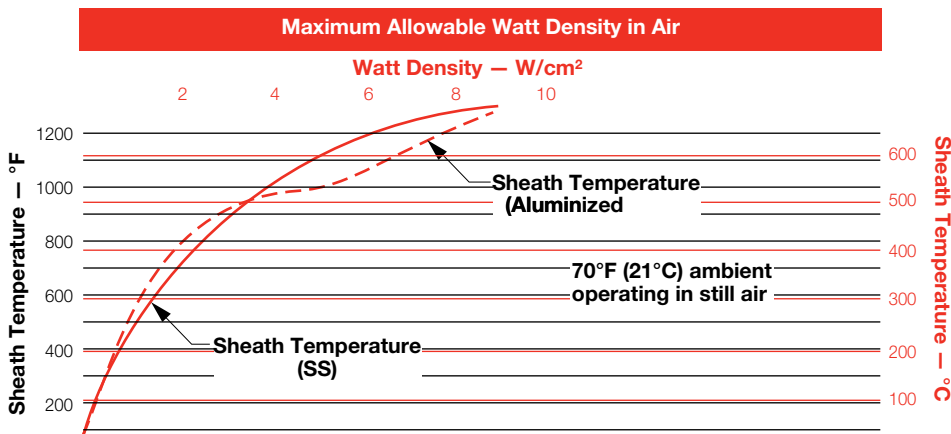
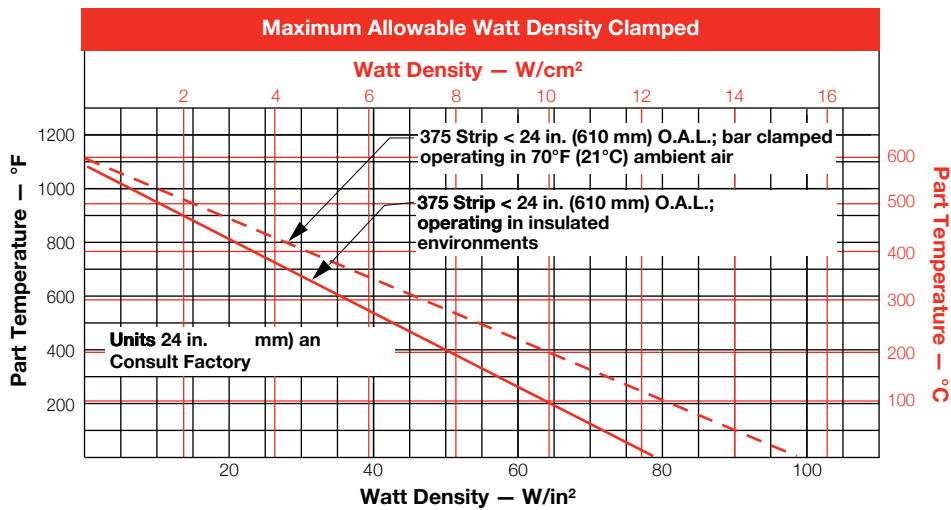
$$\begin{aligned} \text{(Offset Terminals)} &= [\text{Overall Length (A) x 1.5 in.}] - 6 \text{ in}^2 \\ &= [\text{Overall Length (A) x 38 mm}] - 38.7 \text{ cm}^2 \end{aligned}$$

Heated Area

$$\begin{aligned} \text{(Parallel Terminals)} &= [\text{Overall Length (A) x 1.5 in.}] - 4.7 \text{ in}^2 \\ &= [\text{Overall Length (A) x 38 mm}] - 30.3 \text{ cm}^2 \end{aligned}$$

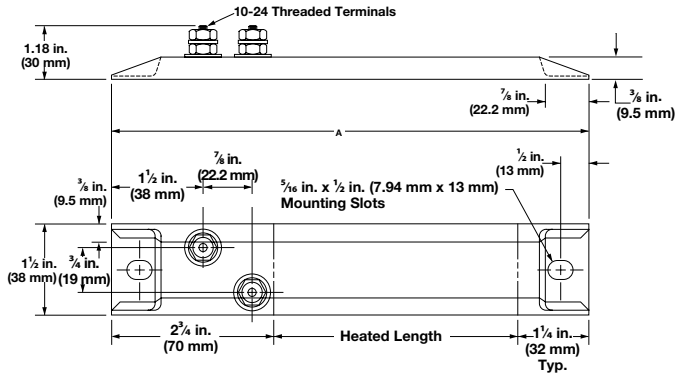
Heated Area

$$\begin{aligned} \text{(One-on-One Terminals)} &= [\text{Overall Length (A) x 1.5 in.}] - 6 \text{ in}^2 \\ &= [\text{Overall Length (A) x 38 mm}] - 38.7 \text{ cm}^2 \end{aligned}$$



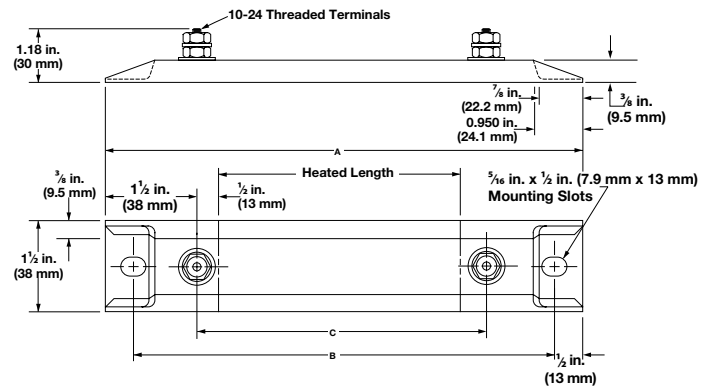
375 High Temperature Strip Heaters - Termination Options

Offset Terminals



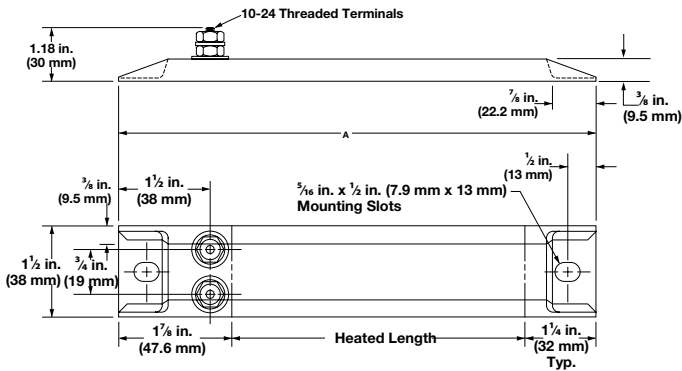
Two threaded 10-24 threaded post terminals offset from each other on the same end

One-on-One



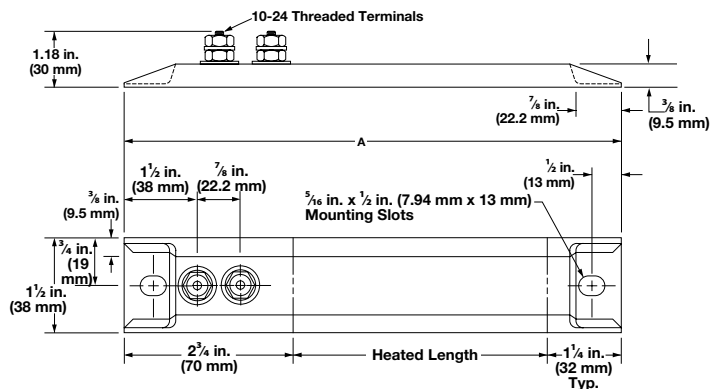
Two threaded 10-24 threaded Post terminals are placed one on each end.

Parallel Terminals



Two 10-24 threaded post terminals are side by side on one end.

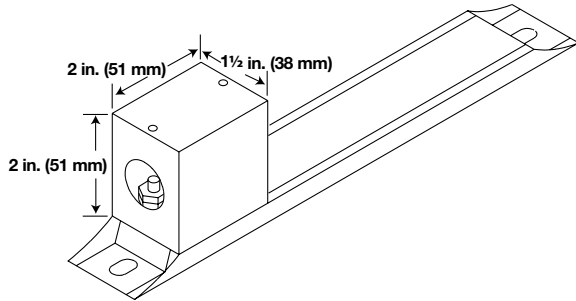
In-Line Terminals



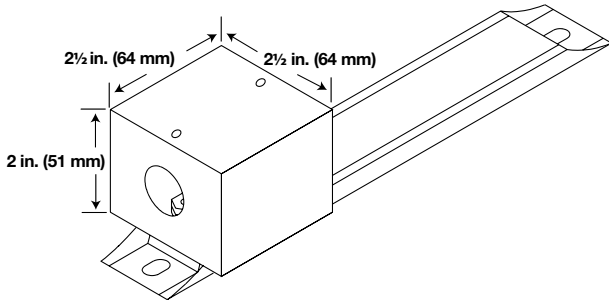
Two 10-24 threaded post terminals are in-line with each other on the same end.

375 High Temperature Strip Heaters - Accessories

Terminal Box



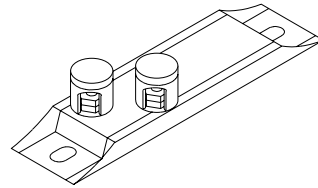
Available on in-line terminals only.



Available on offset terminals from stock and manufactured.

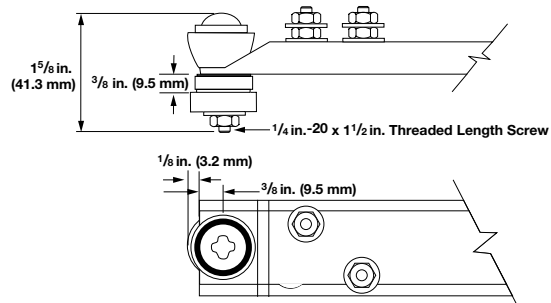
Metallic terminal boxes are available from stock on offset terminals. Terminal boxes act as a safety feature by covering the terminals. A conduit may be attached to the box through $\frac{7}{8}$ in. (22.2 mm) diameter holes in the ends of the box. To order, specify **terminal box**.

Ceramic Terminal Covers



Ceramic terminal covers offer a convenient and economic method to insulate post terminals. They are sized for standard posts with 10-24 screw thread size, supplied as an accessory item and shipped separately. Specify **Z-4918** and quantity.

Secondary In



Insulators are suitable when air heating and/or voltage to ground is a concern. A secondary insulation bushing kit, part number **Z5230**, contains one set of bushings for one heater. To accommodate bushings, $\frac{17}{32} \times \frac{11}{16}$ inch diameter mounting holes must be specified when ordering the heater.

375 High Temperature Strip Heaters - Heater Part Numbers

Width in. (mm)	Length in. (mm)	Term.	Volts	Power (Watts)	Watt Density W/in ² (W/cm ²)	Approx. Net Wt. lbs (kg)	Part Number	Chromalox® Part No. ①		Wellman® Part No. ①	
								Rust Resist. Iron Sheath	Sheath	Aluminized Steel Sheath	Sheath
1 1/2 (38)	5 1/2 (140)	Parallel	120	125	35 (5.4)	0.4 (0.18)	SGA1J5JP1	PT-512	—	—	—
	5 1/2 (140)	Parallel	120	250	70 (10.8)	0.4 (0.18)	SGA1J5JP2	—	PT-502	—	—
	6 (152)	Parallel	120	150	35 (5.4)	0.4 (0.18)	SGA1J6AP2	PT-615	—	—	—
	6 (152)	Parallel	240	150	35 (5.4)	0.4 (0.18)	SGA1J6AP3	PT-615	—	—	—
	6 (152)	Parallel	120	300	70 (10.8)	0.4 (0.18)	SGA1J6AP4	—	PT-603	—	—
	6 (152)	Parallel	240	300	70 (10.8)	0.4 (0.18)	SGA1J6AP5	—	PT-603	—	—
	7 1/2 (191)	Offset	120	150	29 (4.5)	0.5 (0.23)	SGA1J7JO1	OT-715	—	SS1041	—
	7 1/2 (191)	Offset	240	150	29 (4.5)	0.5 (0.23)	SGA1J7JO2	OT-715	—	SS1052	—
	7 1/2 (191)	Offset	240	200	38 (5.9)	0.5 (0.23)	SGA1J7JO3	—	OT-702	—	SS2052
	8 (203)	Offset	120	150	25 (3.9)	0.5 (0.23)	SGA1J8AO1	OT-815	—	SS1061	—
	8 (203)	Offset	240	150	25 (3.9)	0.5 (0.23)	SGA1J8AO5	OT-815	—	SS1072	—
	8 (203)	Offset	120	175	29 (4.5)	0.5 (0.23)	SGA1J8AO6	OT-817	—	SS1081	—
	8 (203)	Offset	240	175	29 (4.5)	0.5 (0.23)	SGA1J8AO7	OT-817	—	SS1092	—
	8 (203)	Offset	120	250	42 (6.5)	0.5 (0.23)	SGA1J8AO2	—	OT-802	—	SS2061
	8 (203)	Offset	240	250	42 (6.5)	0.5 (0.23)	SGA1J8AO8	—	OT-802	—	SS2072
	8 (203)	Offset	120	400	67 (10.4)	0.5 (0.23)	SGA1J8AO9	—	OT-804	—	SS2081
	8 (203)	Offset	240	400	67 (10.4)	0.5 (0.23)	SGA1J8AO10	—	OT-804	—	SS2092
	8 (203)	Offset	120	500	83 (12.9)	0.5 (0.23)	SGA1J8AO3	—	—	—	—
	8 (203)	Offset	240	500	83 (12.9)	0.5 (0.23)	SGA1J8AO4	—	—	—	—
	8 (203)	1-on-1	120	150	24 (3.7)	0.5 (0.23)	SGA1J8AT1	S-815	—	SD1021	—
	8 (203)	1-on-1	240	150	24 (3.7)	0.5 (0.23)	SGA1J8AT2	S-815	—	SD1032	—
	9 1/2 (241)	1-on-1	120	200	23 (3.6)	0.6 (0.27)	SGA1J9JT1	S-920	—	SD1041	—
	10 1/2 (267)	Offset	120	250	26 (4.0)	0.7 (0.32)	SGA1J10JO1	OT-1025	—	SS1101	—
	10 1/2 (267)	Offset	240	250	26 (4.0)	0.7 (0.32)	SGA1J10JO2	OT-1025	—	SS1102	—
	10 1/2 (267)	Offset	120	350	36 (5.6)	0.7 (0.32)	SGA1J10JO8	—	OT-1003	—	SS2101
	10 1/2 (267)	Offset	240	350	36 (5.6)	0.7 (0.32)	SGA1J10JO5	—	OT-1003	—	SS2112
	10 1/2 (267)	Offset	120	400	41 (6.4)	0.7 (0.32)	SGA1J10JO6	—	OT-1004	—	SS2131
	10 1/2 (267)	Offset	240	400	41 (6.4)	0.7 (0.32)	SGA1J10JO7	—	OT-1004	—	SS2132
	12 (305)	Offset	120	250	21 (3.3)	0.8 (0.32)	SGA1J12AO1	OT-1225	OT-1202	SS1141	—
	12 (305)	Offset	240	250	21 (3.3)	0.8 (0.32)	SGA1J12AO2	OT-1225	OT-1202	SS1152	—
	12 (305)	Offset	120	350	29 (4.5)	0.8 (0.36)	SGA1J12AO5	—	OT-1203	—	SS2141
	12 (305)	Offset	240	350	29 (4.5)	0.8 (0.36)	SGA1J12AO6	—	OT-1203	—	SS2152
	12 (305)	Offset	120	500	42 (6.5)	0.8 (0.36)	SGA1J12AO3	—	OT-1205	—	SS2161
	12 (305)	Offset	240	500	42 (6.5)	0.8 (0.36)	SGA1J12AO4	—	OT-1205	—	SS2172
	12 (305)	1-on-1	120	250	20 (3.1)	0.8 (0.36)	SGA1J12AT1	S-1225	S-1202	SD1061	SD2071
	12 (305)	1-on-1	240	250	20 (3.1)	0.8 (0.36)	SGA1J12AT2	S-1225	S-1202	SD1072	SD2082
12 (305)	1-on-1	240	500	40 (6.2)	0.8 (0.36)	SGA1J12AT3	—	S-1205	—	SD2122	
14 (356)		120	300	20 (3.1)	0.9 (0.41)	SGA1J14AO2	OT-1430	—	SS1181	—	
14 (356)		240	300	20 (3.1)	0.9 (0.41)	SGA1J14AO1	OT-1430	—	SS1192	—	
14 (356)	Offset	120	500	33 (5.1)	0.9 (0.41)	SGA1J14AO3	—	OT-1405	—	SS2181	
14 (356)	Offset	240	500	33 (5.1)	0.9 (0.41)	SGA1J14AO4	—	OT-1405	—	SS2192	
14 (356)	1-on-1	120	300	20 (3.1)	0.9 (0.41)	SGA1J14AT1	S-1430	—	SD1131	—	
15 1/4 (387)	Offset	120	325	19 (2.9)	1.0 (0.45)	SGA1J15EO2	OT-1532	—	SS1201	—	
15 1/4 (387)	Offset	240	325	19 (2.9)	1.0 (0.45)	SGA1J15EO3	OT-1532	—	SS1212	—	
15 1/4 (387)	Offset	240	500	30 (4.6)	1.0 (0.45)	SGA1J15EO4	—	OT-1505	—	SS2212	

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Note: 5/16 in. x 1/2 in. (7.9 mm x 13 mm) mounting holes are supplied on all 375 strip heaters as standard, larger mounting holes may be provided 17/32 in. x 11/16 in. (13.5 mm x 17.5 mm).

Note that the Watlow part number specifies that the 375 strip heater includes an aluminized steel sheath. If a special sheath material is required, such as stainless steel, please contact your Watlow representative for material availability.

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Width in. (mm)	Length in. (mm)	Term.	Volts	Power (Watts)	Watt Density W/in ² (W/cm ²)	Approx. Net Wt. lbs (kg)	Part Number	Chromalox® Part No. ①		Wellman® Part No. ①	
								Rust Resist. Iron Sheath	Sheath	Aluminized Steel Sheath	C Sheath
1 1/2 (38)	17 7/8 (454)	Offset	120	350	17 (2.6)	1.2 (0.54)	SGA1J17RO4	OT-1835	—	SS1221	SS2221
	17 7/8 (454)	Offset	240	350	17 (2.6)	1.2 (0.54)	SGA1J17RO5	OT-1835	—	SS1232	SS2232
	17 7/8 (454)	Offset	120	375	18 (2.8)	1.2 (0.54)	SGA1J17RO6	OT-1837	—SS1261	SS2241	—
	17 7/8 (454)	Offset	240	375	18 (2.8)	1.2 (0.54)	SGA1J17RO7	OT-1837	—	SS1252	—
	17 7/8 (454)	Offset	120	500	24 (3.7)	1.2 (0.54)	SGA1J17RO1	OT-1850	—	SS1261	SS2241
	17 7/8 (454)	Offset	240	500	24 (3.7)	1.2 (0.54)	SGA1J17RO2	OT-1850	—	SS1272	SS2252
	17 7/8 (454)	Offset	120	750	36 (5.6)	1.2 (0.54)	SGA1J17RO9	—	OT-1807	— SS2261	—
	17 7/8 (454)	Offset	240	750	36 (5.6)	1.2 (0.54)	SGA1J17RO8	—	OT-1807	— SS2272	—
	17 7/8 (454)	Offset	120	1000	48 (7.4)	1.2 (0.54)	SGA1J17RO10	—	OT-1801	— SS2281	—
	17 7/8 (454)	Offset	240	1000	48 (7.4)	1.2 (0.54)	SGA1J17RO3	—	OT-1801	— SS2292	—
	17 7/8 (454)	1-on-1	120	500	24 (3.7)	1.2 (0.54)	SGA1J17RT1	S-1850	S-1805	SD1211	SD2171
	17 7/8 (454)	1-on-1	240	500	24 (3.7)	1.2 (0.54)	SGA1J17RT2	S-1850	S-1805	SD1222	SD2182
	17 7/8 (454)	1-on-1	240	750	35 (5.4)	1.2 (0.54)	SGA1J17RT3	—	S-1807	— SD2202	—
	17 7/8 (454)	1-on-1	120	1000	47 (7.3)	1.2 (0.54)	SGA1J17RT4	—	S-1801	— SD2211	—
	17 7/8 (454)	1-on-1	240	1000	47 (7.3)	1.2 (0.54)	SGA1J17RT5	—	S-1801	— SD2222	—
	19 1/2 (496)	Offset	240	350	15 (2.3)	1.3 (0.59)	SGA1J19JO6	OT-1935	—	SS1301	—
	19 1/2 (496)	Offset	120	500	22 (3.4)	1.3 (0.59)	SGA1J19JO7	OT-1950	OT-1905	— SS2301	—
	19 1/2 (496)	Offset	240	500	22 (3.4)	1.3 (0.59)	SGA1J19JO4	OT-1950	OT-1905	— SS2312	—
	19 1/2 (496)	Offset	240	750	32 (5.0)	1.3 (0.59)	SGA1J19JO8	—	OT-1907	— —	—
	19 1/2 (496)	Offset	240	1000	43 (6.7)	1.3 (0.59)	SGA1J19JO1	—	OT-1901	— SS2332	—
	19 1/2 (496)	1-on-1	240	750	32 (5.0)	1.3 (0.59)	SGA1J19JT1	—	S-1907	— SD2262	—
	21 (533)	Offset	120	500	20 (3.1)	1.4 (0.64)	SGA1J21AO1	OT-2150	—	SS1341	—
	21 (533)	Offset	240	500	20 (3.1)	1.4 (0.64)	SGA1J21AO2	OT-2150	—	SS1352	—
	21 (533)	Offset	120	750	29 (4.5)	1.4 (0.64)	SGA1J21AO3	—	OT-2107	— SS2341	—
	21 (533)	Offset	240	750	29 (4.5)	1.4 (0.64)	SGA1J21AO4	—	OT-2107	— SS2352	—
	21 (533)	1-on-1	120	500	19 (2.9)	1.4 (0.64)	SGA1J21AT1	S-2050	S-2005	SD1291	SD2291
	23 3/4 (603)	Offset	120	500	17 (2.6)	1.5 (0.68)	SGA1J23NO5	OT-2450	OT-2405	SS1361	SS2361
	23 3/4 (603)	Offset	240	500	17 (2.6)	1.5 (0.68)	SGA1J23NO6	OT-2450	OT-2405	SS1372	SS2372
	23 3/4 (603)	Offset	120	750	25 (3.9)	1.5 (0.68)	SGA1J23NO1	OT-2475	OT-2407	SS1391	SS2381
	23 3/4 (603)	Offset	240	750	25 (3.9)	1.5 (0.68)	SGA1J23NO2	OT-2475	OT-2407	SS1402	SS2392
	23 3/4 (603)	Offset	120	1000	34 (5.3)	1.5 (0.68)	SGA1J23NO7	—	OT-2401	— SS2401	—
	23 3/4 (603)	Offset	240	1000	34 (5.3)	1.5 (0.68)	SGA1J23NO3	—	OT-2401	— SS2412	—
23 3/4 (603)	Offset	240	1500	51 (7.9)	1.5 (0.68)	SGA1J23NO4	—	OT-2415	— —	—	
23 3/4 (603)	1-on-1	240	250	8 (1.2)	1.5 (0.68)	SGA1J23NT1	S-2425	—	SD1322	—	
23 3/4 (603)	1-on-1	240	500	17 (2.6)	1.5 (0.68)	SGA1J23NT3	S-2450	S-2404	SD1342	SD2322	
23 3/4 (603)	1-on-1	240	750	25 (3.9)	1.5 (0.68)	SGA1J23NT5	—	S-2407	— SD2352	—	
23 3/4 (603)	1-on-1	120	1000	33 (5.1)	1.5 (0.68)	SGA1J23NT6	—	S-2401	— SD2361	—	
23 3/4 (603)	1-on-1	240	1000	33 (5.1)	1.5 (0.68)	SGA1J23NT7	—	S-2401	— SD2372	—	
23 3/4 (603)	1-on-1	240	1500	50 (7.8)	1.5 (0.68)	SGA1J23NT8	—	S-2415	— —	—	
25 1/2 (648)	Offset	120	500	16 (2.5)	1.7 (0.77)	SGA1J25JO1	OT-2550	—	SS1421	—	
25 1/2 (648)	Offset	240	500	16 (2.5)	1.7 (0.77)	SGA1J25JO2	OT-2550	—	SS1432	—	
25 1/2 (648)	Offset	120	750	23 (3.6)	1.7 (0.77)	SGA1J25JO3	OT-2575	OT2507	SS1441	SS2421	
25 1/2 (648)	Offset	240	750	23 (3.6)	1.7 (0.77)	SGA1J25JO4	OT-2575	OT-2507	SS1452	SS2432	
25 1/2 (648)	Offset	240	1000	31 (4.8)	1.7 (0.77)	SGA1J25JO5	—	OT-2501	— SS2452	—	

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Note: 5/16 in. x 1/2 in. (7.9 mm x 13 mm) mounting holes are supplied on all 375 strip heaters as standard, larger mounting holes may be provided 17/32 in. x 11/16 in. (13.5 mm x 17.5 mm).

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								Rust Resist. Iron Sheath	Sheath	Aluminized Steel Sheath	C Sheath
1 1/2 (38)	26 3/4 (680)	Offset	240	700	21 (3.3)	1.7 (0.77)	SGA1J26NO1	OT-2670	—	SS1472	—
	26 3/4 (680)	Offset	240	1000	29 (4.5)	1.7 (0.77)	SGA1J26NO2	—	OT-2601	—	SS2472
	30 1/2 (775)	Offset	120	750	19 (2.9)	2.0 (0.91)	SGA1J30JO2	OT-3075	OT-3007	SS1481	—
	30 1/2 (775)	Offset	240	750	19 (2.9)	2.0 (0.91)	SGA1J30JO3	OT-3075	OT-3007	SS1492	SS2482
	30 1/2 (775)	1-on-1	240	750	19 (2.9)	2.0 (0.91)	SGA1J30JT1	S-3075	S-3007	SD1452	—
	33 1/2 (851)	Offset	240	750	17 (2.6)	2.2 (1.0)	SGA1J33JO1	OT-3375	OT-3307	SS1522	SS2522
	33 1/2 (851)	1-on-1	240	1000	22 (3.4)	2.2 (1.0)	SGA1J33JT1	—	S-3301	—	SD2472
	35 7/8 (911)	Offset	120	1000	21 (3.3)	2.3 (1.0)	SGA1J35RO4	OT-3610	—	SS1531	—
	35 7/8 (911)	Offset	240	1000	21 (3.3)	2.3 (1.0)	SGA1J35RO3	OT-3610	—	SS1542	SS2532
	35 7/8 (911)	Offset	240	1500	31 (4.8)	2.3 (1.0)	SGA1J35RO1	—	OT-3601	SS2552	—
	35 7/8 (911)	1-on-		1000	21 (3.3)	2.3 (1.0)	SGA1J35RT1	S-3610	S-3601	SD1492	SD2492
	38 1/2 (978)	Offset	120	1000	19 (2.9)	2.5 (1.1)	SGA1J38JO2	OT-3810	OT-3801	SS1581	SS2561
	38 1/2 (978)	Offset	240	1500	29 (4.5)	2.5 (1.1)	SGA1J38JO3	—	OT-3815	—	—
	42 1/2 (1080)	Offset	240	1500	26 (4.0)	2.8 (1.3)	SGA1J42JO1	—	OT-4315	SS1632	SS2632
	47 7/8 (1216)	Offset	240	2250	34 (5.3)	3.1 (1.4)	SGA1J47RO1	—	OT-4822	—	—

①Chromalox® and Wellman® part numbers are used as a cross reference to help select the equivalent Watlow part number. Chromalox® sizes 27 in. (686 mm) and longer, and all Wellman® sizes have mounting slot center to center distances 1/8 in. (3.2 mm) less than Watlow spacing.

Note: 5/16 in. x 1/2 in. (7.9 mm x 13 mm) mounting holes are supplied on all 375 strip heaters as standard, larger mounting holes may be provided 17/32 in. x 11/16 in. (13.5 mm x 17.5 mm).

Note that the Watlow part number specifies that the 375 strip heater includes an aluminized steel sheath. If a special sheath material is required, such as stainless steel, please contact your Watlow representative for material availability.

