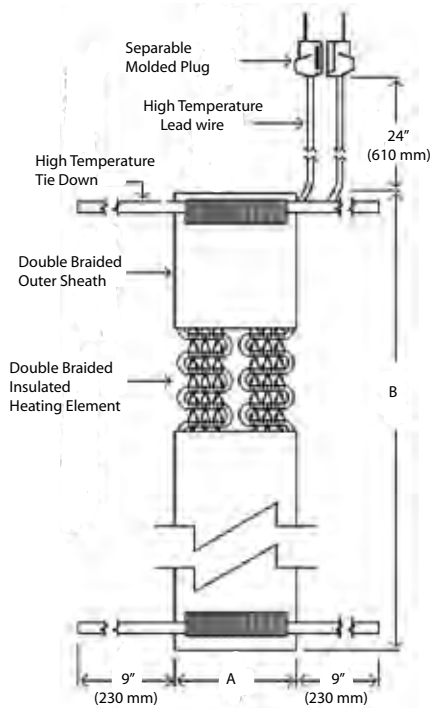


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Tape Heaters



The flexible design and high temperature capability of heating tapes provide an ideal solution. Heating tapes can be used on any surface or body requiring fast and efficient direct contact heating, up to temperatures of 1400°F/760°C.

Features:

- Multi-stranded resistance wire
- Serpentine woven heating element
- Silicone rubber, Fiberglass, or Samox® sheath
- Temperatures up to 1400°F/760°C
- Widths from 3/16" (4.76mm) to 3 1/4" (82.6mm)

Applications:

- Viscosity and temperature control
- Freeze protection
- Integrally heated tools
- Laboratory apparatus
- External heating of dies and tools
- Pilot plants
- Gas tubing

Heavy Insulated Tapes are suitable for use on conductive Surfaces.

Kapton Insulated tapes are well suited to industrial environments or any location where noisy power may be encountered.

Samox® Heavy Insulated 1400°F/ 760°C

Size A in (mm)	Size B in (mm)	Total Watts	Part No. 120VAC	Part No. 240VAC
.5 (13)	24 (610)	156	BWH051020L	TXBWH052020L*
.5 (13)	48 (1220)	313	BWH051040L	TXBWH052040L*
.5 (13)	72 (1830)	470	BWH051060L	TXBWH052060L*
.5 (13)	96 (2440)	627	BWH051080L	TXBWH052080L*
.5 (13)	120 (3050)	783	N/A	TXBWH052100L*
.5 (13)	144 (3660)	940	N/A	TXBWH052120L*
1 (25)	24 (610)	313	BWH101020L	TXBWH102020L*
1 (25)	48 (1220)	627	BWH101040L	TXBWH102040L*
1 (25)	72 (1830)	940	BWH101060L	TXBWH102060L*
1 (25)	96 (2440)	1245	BWH101080L	TXBWH102080L*

* Plug not included. Note: For a single power lead on opposite ends of the tape, remove the L from the part number.

Samox® Wide Heavy Insulated 1400°F/ 620°C

Size A in (mm)	Size B in (mm)	Total Watts	Part No. 120VAC	Part No. 240VAC
1.75 (44)	24 (610)	313	BWH171020L	TXBWH172020L*
1.75 (44)	48 (1220)	627	BWH171040L	TXBWH172040L*
1.75 (44)	72 (1830)	940	BWH171060L	TXBWH172060L*
1.75 (44)	96 (2440)	1254	BWH171080L	TXBWH172080L*
1.75 (44)	120 (3050)	1570	N/A	TXBWH172100L*
2.5 (64)	24 (610)	470	BWH251020L	TXBWH252020L*
2.5 (64)	48 (1220)	940	BWH251040L	TXBWH252040L*
2.5 (64)	72 (1830)	1411	BWH251060L	TXBWH252060L*
2.5 (64)	96 (2440)	1881	BWH251080L*	TXBWH252080L*
2.5 (64)	120 (3050)	2351	N/A	TXBWH252100L*
3.25 (83)	24 (610)	627	BWH321020L	TXBWH322020L*
3.25 (83)	48 (1220)	1254	BWH321040L	TXBWH322040L*
3.25 (83)	72 (1830)	1881	BWH321060L*	TXBWH322060L*
3.25 (83)	96 (2440)	2508	BWH321080L*	TXBWH322080L*
3.25 (83)	120 (3050)	3135	N/A	TXBWH322100L*

* Plug not included. Note: For a single power lead on opposite ends of the tape, remove the L from the part number.

Kapton® Insulated Fiberglass 482°F/ 250°C

Size A in (mm)	Size B in (mm)	Total Watts	Part No. 120VAC	Part No. 240VAC
1 (25)	24 (610)	144	TXIFG101002*	TXIFG102002*
1 (25)	48 (1220)	288	TXIFG101004*	TXIFG102004*
1 (25)	72 (1830)	432	TXIFG101006*	TXIFG102006*
1 (25)	96 (2440)	576	TXIFG101008*	TXIFG102008*
1 (25)	120 (3050)	720	TXIFG101010*	TXIFG102010*
1 (25)	144 (3660)	864	TXIFG101012*	TXIFG102012*

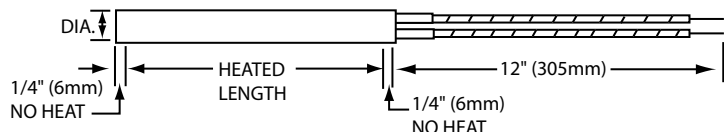
* Double Braid has Kapton insulation. Plug not included. Leads 36" No ground wire.

Grounded Fiberglass Heavy Insulated 482°F/ 250°C

Size A in (mm)	Size B in (mm)	Total Watts	Part No. 120VAC	Part No. 240VAC
1 (2.5)	24 (610)	230	TXBIH101020LG*	TXBIH102020LG*
1 (2.5)	48 (1220)	460	TXBIH101040LG*	TXBIH102040LG*
1 (2.5)	72 (1830)	690	TXBIH101060LG*	TXBIH102060LG*
1 (2.5)	96 (2440)	920	TXBIH101080LG*	TXBIH102080LG*
1 (2.5)	120 (3050)	1150	TXBIH101100LG*	TXBIH102100LG*

Standard heating tapes are also available in Silicon rubber, and Kapton Insulated Silicon Rubber Extrusions. Cut to length versions, Controllers and accessories can be found online at www.therm-xofcalifornia.com

Cartridge Heaters



Performance Capabilities

- Part temperatures to 1400°F (760°C) on Incoloy® sheath
- Part temperatures to 1000°F (540°C) on optional stainless steel sheath
- Watt densities to 400 W/in 2 (62 W/cm 2)

• **Incoloy® sheath** resists oxidation and corrosion from many chemicals, heat and atmospheres.

• **UL® and CSA approved flexible stranded wires**, with silicone-fiberglass oversleeve, insulate the wires to temperatures of 480°F (250°C).



Dia. (in)	Len.	Volts	Watts	W/in2	Code No.	Dia. (in)	Len.	Volts	Watts	W/in2	Code No.	Dia. (in)	Len.	Volts	Watts	W/in2	Code No.
1/8	1 1/4	120	25	87	C1E14	3/8	1	120	55	95	G1A71	3/8	2 1/8	240	200	106	G2C13
	1 1/4	120	50	174	C1E13		1	120	100	172	G1A29		2 1/4	120	75	37	G2E88
	1 1/4	240	35	113	C1E42		1	120	150	259	G1A38		2 1/4	120	125	62	G2E89
	1 1/2	120	30	78	C1J5		1	240	200	344	G1A83		2 1/4	240	125	62	G2E138
	1 1/2	120	60	156	C1J6		1 1/4	120	100	115	G1E91		2 1/4	240	150	73	G2E68
	2	120	50	87	C2A4		1 1/4	120	125	144	G1E74		2 1/4	120	175	86	G2E90
1/4	2	120	100	174	C2A5	1 1/4	120	150	172	G1E92	2 1/4	120	250	123	G2E2		
	1	120	80	208	E1A51	1 1/4	240	150	172	G1E93	2 1/4	240	250	123	G2E78		
		120	100	260	E1A52	1 1/4	240	200	230	G1E94	2 1/4	120	300	148	G2E108		
		120	150	390	E1A53	1 1/4	240	200	230	G1E95	2 1/4	240	300	148	G2E12		
		240	100	250	E1A66	1 1/4	120	400	426	G1E99	2 1/4	240	300	148	G2E21		
		1 1/4	120	75	130	E1E41	1 5/16	120	100	104	G1F13	2 1/4	120	350	173	G2E91	
		1 1/4	120	100	173	E1E42	1 5/16	240	100	104	G1F15	2 1/4	240	350	173	G2E75	
		1 1/4	120	150	260	E1E43	1 5/16	240	150	160	G1F17	2 1/2	120	200	87	G2J110	
		1 1/4	240	225	390	E1E61	1 5/16	240	160	151	G1G23	2 1/2	240	200	87	G2J81	
		1 1/2	120	50	65	E1J39	1 7/16	120	100	94	G1H6	2 1/2	120	250	108	G2J46	
		1 1/2	120	100	130	E1J40	1 1/2	120	50	43	G1J25	2 1/2	240	250	108	G2J80	
		1 1/2	120	150	195	E1J41	1 1/2	120	75	65	G1J70	2 1/2	120	300	130	G2J118	
		1 1/2	240	175	228	E1J49	1 1/2	120	80	68	G1J66	2 1/2	240	300	130	G2J119	
	1 1/2	120	200	260	E1J42	1 1/2	120	100	86	G1J59	2 1/2	120	400	174	G2J26		
	1 1/2	240	200	260	E1J52	1 1/2	240	100	86	G1J110	2 1/2	240	400	174	G2J146		
	1 1/2	240	250	325	E1J35	1 1/2	240	125	106	G1J182	2 1/2	120	500	216	G2J109		
	2	120	80	68	E2A136	1 1/2	240	125	106	G1J182	2 1/2	240	500	216	G2J52		
	2	120	100	87	E2A55	1 1/2	120	150	129	G1J31	2 1/2	240	500	216	G2P9		
	2	240	125	108	E2A82	1 1/2	240	150	129	G1J39	2 13/16	120	60	22	G2P3		
	2	120	150	130	E2A56	1 1/2	240	150	129	G1J85	2 13/16	120	250	92	G2P5		
	2	240	150	130	E2A77	1 1/2	120	200	173	G1J85	2 13/16	240	300	110	G2P5		
	2	120	200	173	E2A57	1 1/2	240	200	173	G1J73	3	120	100	34	G3A55		
	2	240	200	173	E2A50	1 1/2	120	250	216	G1J86	3	240	100	34	G3A137		
	2	120	250	217	E2A72	1 1/2	240	250	216	G1J54	3	120	150	52	G3A121		
	2	240	250	215	E2A76	1 1/2	240	250	216	G1J54	3	240	150	52	G3A121		
	2	240	300	260	E2A83	1 3/4	120	125	86	G1N45	3	120	200	69	G3A61		
	2 1/2	120	250	159	E2J80	1 3/4	120	175	122	G1N46	3	240	200	69	G3A39		
	2 1/2	240	250	159	E2J49	1 3/4	120	250	172	G1N43	3	120	250	86	G3A52		
	3	120	100	52	E3A48	1 3/4	240	250	172	G1N32	3	240	250	86	G3A54		
	3	120	200	104	E3A49	1 13/16	240	150	98	G1P14	3	120	300	104	G3A73		
	3	240	200	104	E3A60	1 13/16	120	200	129	G1P15	3	240	300	104	G3A92		
	3	240	250	128	E3A124	1 13/16	240	250	161	G1P11	3	120	400	138	G3A44		
	3	120	300	156	E3A50	1 7/8	120	250	152	G1R14	3	240	400	138	G3A65		
	3	240	300	156	E3A51	2	120	50	29	G2A53	3	120	500	173	G3A119		
	4	120	100	37	E4A28	2	120	75	42	G2A192	3	240	500	173	G3A120		
	4	120	200	74	E4A29	2	120	100	57	G2A84	3	240	500	173	G3A120		
	4	240	200	74	E4A32	2	240	100	57	G2A76	3	240	600	208	G3A133		
	4	120	300	111	E4A30	2	240	100	57	G2A76	3 5/16	120	500	152	G3F24		
	4	240	300	111	E4A6	2	120	150	86	G2A56	3 1/2	120	250	72	G3J77		
	4 1/2	120	200	64	E4J30	2	240	150	86	G2A81	3 1/2	240	250	72	G3J65		
	5	240	350	101	E5A45	2	120	200	115	G2A127	3 1/2	120	300	87	G3J87		
	5	120	400	113	E5A57	2	240	200	115	G2A37	3 1/2	120	300	87	G3J68		
5	240	400	113	E5A34	2	120	250	144	G2A47	3 1/2	240	300	87	G3J68			
6	240	400	94	E6A46	2	240	250	144	G2A73	3 1/2	120	500	144	G3J22			
8	240	800	136	E8A76	2	240	300	172	G2A139	3 1/2	240	500	144	G3J63			
					2	240	300	172	G2A98	3 13/16	120	150	38	G3P8			
					2	120	400	230	G2A153	3 13/16	240	500	128	G3P3			
					2	240	400	230	G2A146	4	120	125	31	G4A54			
					2	120	500	282	G2A95	4	240	125	31	G4A163			
					2	240	500	282	G2A97	4	120	150	37	G4A78			
										4	120	175	43	G4A191			
										4 1/4	240	750	167	G4E15			

Cartridge Heaters

Dia. (in)	Len.	Volts	Watts	W/in2	Code No.	Dia. (in)	Len.	Volts	Watts	W/in2	Code No.	Dia. (in)	Len.	Volts	Watts	W/in2	Code No.
3/8	4 1/2	120	300	65	G4J54	1/2	1	120	50	65	J1A30	1/2	3 1/2	120	250	54	J3J44
	4 1/2	240	300	65	G4J33		1	120	150	193	J1A31		3 1/2	240	250	54	J3J64
	4 1/2	120	500	108	G4J55		1 1/4	120	50	43	J1E50		3 1/2	240	350	75	J3J65
	4 1/2	240	500	108	G4J37		1 1/4	120	125	107	J1E51		3 1/2	120	500	107	J3J45
	4 13/16	240	300	59	G4P11		1 1/4	240	125	107	J1E58		3 1/2	240	500	107	J3J46
	4 13/16	240	500	98	G4P3		1 1/4	240	200	172	J1E52		3 1/2	240	750	162	J3J63
	5	120	150	29	G5A68		1 1/4	240	250	212	J1E88		3 13/16	120	500	96	J3P9
	5	240	150	29	G5A56		1 1/2	120	50	32	J1J47		3 13/16	240	250	48	J3P2
	5	120	300	58	G5A69		1 1/2	120	150	97	J1J48		4	120	150	28	J4A117
	5	240	300	58	G5A70		1 1/2	240	150	97	J1J96		4	240	150	28	J4A122
	5	120	500	96	G5A38		1 1/2	120	200	128	J1J59		4	120	250	46	J4A118
	5	240	500	96	G5A71		1 1/2	240	200	128	J1J38		4	240	250	46	J4A90
	5	240	750	144	G5A67		2	120	75	32	J2A80		4	120	300	56	J4A63
	5	240	1000	192	G5A115		2	120	200	86	J2A49		4	240	300	56	J4A26
	5 1/4	240	200	45	G5E16		2	240	200	86	J2A75		4	120	350	65	J4A1
	5 1/2	240	600	104	G5J36		2	120	250	108	J2A85		4	240	350	65	J4A103
	5 1/2	240	1000	173	G5J45		2	240	250	108	J2A71		4	120	400	74	J4A139
	6	120	200	31	G6A80		2	120	300	128	J2A95		4	240	400	74	J4A68
	6	120	250	39	G6A40		2	240	300	128	J2A96		4	120	500	92	J4A16
	6	240	250	39	G6A92		2	120	400	171	J2A81		4	120	550	100	J4A242
	6	120	400	63	G6A81		2	240	400	171	J2A82		4	240	500	92	J4A92
	6	240	400	63	G6A82		2 1/4	120	75	28	J2E86		4	120	750	138	J4A198
	6	120	500	79	G6A125		2 1/4	120	125	46	J2E87		4	240	750	138	J4A119
	6	240	500	79	G6A59		2 1/4	120	250	92	J2E56		4	240	1000	184	J4A73
	6	120	600	94	G6A56		2 1/4	240	250	92	J2E69		4 1/2	120	500	80	J4J69
	6	240	600	94	G6A51		2 1/4	120	400	147	J2E114		4 1/2	240	500	80	J4J57
	6	240	750	117	G6A46		2 1/4	240	400	147	J2E115		4 1/2	120	750	120	J4J70
	6	240	1000	157	G6A83		2 1/4	120	500	184	J2E64		4 1/2	240	750	120	J4J32
	6 1/2	240	600	86	G6J23		2 1/4	240	500	184	J2E88		4 13/16	240	300	44	J4P3
	6 1/2	240	1000	144	G6J33		2 3/8	120	100	34	J2G35		4 13/16	240	1000	148	J4P6
	7	120	250	33	G7A40		2 3/8	240	100	34	J2G28		5	120	200	29	J5A85
	7	240	250	33	G7A32		2 3/8	120	250	86	J2G34		5	240	200	29	J5A74
	7	240	500	65	G7A30		2 3/8	240	250	86	J2G37		5	120	350	50	J5A86
	7	120	600	80	G7A41		2 3/8	120	500	172	J2G36		5	240	350	50	J5A63
	7	240	600	80	G7A42		2 3/8	240	500	172	J2G38		5	120	400	58	J5A98
	7	240	1000	133	G7A43		2 1/2	120	100	32	J2J67		5	240	400	58	J5A46
	7 1/2	240	600	74	G7J27		2 1/2	240	100	32	J2J57		5	120	500	72	J5A52
	7 1/2	240	1000	124	G7J28		2 1/2	120	250	81	J2J68		5	240	500	72	J5A45
	7 13/16	240	750	87	G7P5		2 1/2	240	250	81	J2J69		5	120	750	108	J5A121
	8	120	300	34	G8A54		2 1/2	120	300	96	J2J109		5	240	750	108	J5A72
	8	240	300	34	G8A47		2 1/2	240	300	96	J2J110		5	240	1000	143	J5A87
	8	120	400	45	G8A109		2 1/2	120	400	128	J2J81		5 1/2	240	200	25	J5J3
	8	120	500	58	G8A81		2 1/2	240	400	128	J2J82		5 1/2	120	500	64	J5J43
	8	240	500	58	G8A32		2 1/2	120	500	161	J2J66		5 1/2	240	500	64	J5J33
	8	120	600	69	G8A53		2 1/2	240	500	161	J2J70		5 1/2	240	650	83	J5J69
8	240	600	69	G8A37	2 9/16	120	350	108	J2K6	5 1/2	120	750	97	J5J44			
8	240	700	79	G8A98	2 9/16	240	300	93	J2K3	5 1/2	240	750	97	J5J45			
8	240	1000	115	G8A45	2 3/4	240	400	115	J2N43	5 3/4	120	700	86	J5N6			
8 5/8	240	500	52	G8L3	2 3/4	120	400	115	J2N45	5 3/4	240	700	86	J5N8			
9	240	1000	100	G9A37	3	120	125	32	J3A108	5 13/16	240	300	36	J5P10			
9 1/2	240	600	57	G9J20	3	240	125	32	J3A109	6	120	250	29	J6A114			
9 1/2	240	1000	96	G9J12	3	120	250	64	J3A107	6	240	250	29	J6A171			
10	120	400	36	G10A48	3	240	250	64	J3A89	6	240	300	35	J6A66			
10	120	600	43	G10A35	3	120	300	78	J3A65	6	240	350	41	J6A119			
10	240	600	54	G10A31	3	120	350	89	J3A173	6	120	500	59	J6A115			
10	240	1000	91	G10A32	3	240	300	78	J3A73	6	240	500	59	J6A94			
10 13/16	240	375	31	G10P5	3	120	400	104	J3A132	6	480	500	59	J6A301			
12	120	400	30	G12A45	3	240	400	104	J3A29	6	120	750	88	J6A99			
12	120	600	45	G12A29	3	120	500	129	J3A110	6	240	750	88	J6A90			
12	240	600	45	G12A46	3	240	500	129	J3A111	6	120	1000	117	J6A53			
					3	120	600	154	J3A51	6	240	1000	117	J6A36			
					3	240	600	154	J3A127	6 1/2	240	500	54	J6J45			
					3	120	750	193	J3A137	6 1/2	240	1000	108	J6J27			
					3	240	750	193	J3A112	7	120	250	25	J7A79			
					3	120	1000	254	J3A79	7	120	500	50	J7A80			

Cartridge Heaters

Dia. (in)	Sheath Length	Volts	Watts	W/in2	Code No.	Dia. (in)	Sheath Length	Volts	Watts	W/in2	Code No.
1/2	7	240	500	50	J7A57	5/8	3 3/4	120	525	82	L3N12
	7	120	600	60	J7A50		3 3/4	240	525	82	L3N1
	7	240	600	60	J7A95		4	120	250	37	L4A99
	7	240	1000	99	J7A81		4	240	250	37	L4A104
	7 1/2	240	500	46	J7J25		4	240	400	58	L4A47
	7 1/2	240	1000	92	J7J26		4	240	500	73	L4A53
	8	120	300	26	J8A71		4	240	600	88	L4A44
	8	240	300	26	J8A111		4	240	750	110	L4A100
	8	120	500	43	J8A64		4	240	1000	146	L4A71
	8	240	500	43	J8A66		5	120	250	28	L5A76
	8	120	1000	86	J8A84		5	240	250	28	L5A107
	8	240	1000	86	J8A60		5	240	500	57	L5A24
	8	480	1000	86	J8A35		5	240	750	86	L5A31
	8	240	1500	129	J8A100		5	240	1000	114	L5A77
	8	240	2000	172	J8A101		5 3/8	120	800	84	L5G3
	8 1/2	240	300	24	J8J39		5 3/8	240	800	84	L5G1
	8 1/2	240	500	40	J8J30		6	120	300	28	L6A28
	8 1/2	240	1000	80	J8J28		6	240	300	28	L6A64
	9	240	500	38	J9A35		6	240	500	47	L6A73
	9	240	1000	76	J9A58		6	240	750	70	L6A70
	9 1/2	240	500	36	J9J14		6	240	1000	93	L6A71
	9 1/2	240	1000	72	J9J12		6	120	1500	139	L6A163
	10	120	500	34	J10A61		6	240	1500	140	L6A94
	10	240	500	34	J10A62		6 1/2	120	500	43	L6J43
	10	120	1000	68	J10A63		6 1/2	240	500	43	L6J55
	10	240	1000	68	J10A42		7	120	500	39	L7A42
	10	240	1500	102	J10A33		7	240	500	39	L7A15
	10	240	2000	136	J10A64		7	240	1000	79	L7A37
	11	240	1000	61	J11A60		7	240	1500	118	L7A12
	12	120	500	28	J12A63		8	120	500	34	L8A96
	12	240	500	28	J12A76		8	240	500	34	L8A46
	12	120	1000	56	J12A40		8	240	850	58	L8A115
	12	240	1000	56	J12A49		8	240	1000	68	L8A10
	12	480	1200	66	J12A215		8	240	1500	102	L8A37
12	240	1500	84	J12A37	8	240	2000	137	L8A80		
12	240	2000	112	J12A89	10	120	500	27	L10A51		
14	240	1000	48	J14A41	10	240	500	27	L10A40		
14	240	2300	110	J14A39	10	240	750	40	L10A69		
15	240	1500	66	J15A19	10	240	1000	54	L10A52		
16	240	1000	41	J16A12	10	480	1000	54	L10A193		
18	240	1500	55	J18A19	10	240	1500	81	L10A8		
18	240	1700	62	J18A23	10	240	2000	108	L10A50		
5/8	1 1/4	120	50	34	L1E26	12	120	500	22	L12A81	
	1 1/4	120	200	137	L1E24	12	240	500	22	L12A80	
	1 1/4	120	250	171	L1E27	12	240	900	40	L12A102	
	1 1/4	120	250	128	L1J23	12	120	1000	45	L12A82	
	1 1/2	240	250	128	L1J24	12	240	1000	45	L12A34	
	2	120	100	34	L2A48	12	120	1500	66	L12A147	
	2	120	200	68	L2A49	12	240	1500	67	L12A39	
	2	240	500	170	L2A54	12	240	2000	89	L12A63	
	2 1/4	120	100	29	L2E49	14	240	3700	140	L14A21	
	2 1/4	120	250	73	L2E50	15	240	750	27	L15A35	
	2 1/4	240	250	73	L2E12	15	240	2400	84	L15A20	
	2 1/4	120	350	103	L2E40	15	480	2500	88	L15A88	
	2 1/4	240	350	103	L2E51	15	240	4000	141	L15A41	
	2 3/8	120	280	77	L2G18	16	240	2500	82	L16A33	
	2 3/8	240	280	77	L2G19	16	240	4500	148	L16A40	
	3	120	150	31	L3A81	18	240	1500	44	L18A32	
	3	120	250	51	L3A82	18	240	3000	87	L18A34	
	3	240	250	51	L3A9	18	240	4700	137	L18A36	
	3	120	400	81	L3A94	20	240	1500	40	L20A19	
	3	120	500	102	L3A113	20	240	3500	92	L20A13	
	3	240	500	103	L3A33	20	480	3500	92	L20A96	
	3	240	750	154	L3A71	20	240	4700	123	L20A14	
						24	240	2000	44	L24A19	
						24	240	4700	102	L24A14	
					36	240	3000	43	L36A8		

Cartridge Heaters

Dia. (in)	Sheath Length	Volts	Watts	W/in2	Code No.
3/4	7	120	500	33	N7A15
	7	240	500	33	N7A1
	7	240	1000	66	N7A16
	8	120	500	28	N8A19
	8	240	500	28	N8A20
	8	240	1000	57	N8A21
	8	240	2000	114	N8A22
	10	240	1000	45	N10A15
	10	240	2000	90	N10A14
	12	240	1000	37	N12A15
	12	240	2000	74	N12A24
	12	480	2000	74	N12A198
	12	240	4000	148	N12A25
	13	240	1000	34	N13A26
	14	240	1250	40	N14A22
	14	240	2500	79	N14A20
	14	240	4500	142	N14A21
	15	240	1500	44	N15A26
	16	240	1800	49	N16A26
	16	240	4700	129	N16A18
	18	240	2000	49	N18A13
	18	240	5000	122	N18A15
	20	240	1150	25	N20A21
	20	240	2250	49	N20A22
	20	240	5250	115	N20A10
	24	240	1375	25	N24A24
	24	240	2750	50	N24A23
	24	480	2750	50	N24A78
	24	240	5500	100	N24A13
	36	240	2500	30	N36A4

Tolerances

Diameter:

1 inch units: ±0.003 inches (±0.076 mm)

All other units: ±0.002 inches (±0.0508 mm)

Length:

All units to 4 1/2 inches long: ± 3/32 inch (±2.4 mm)

1/8 inch diameter units over 4 1/2 inches long: ±3 percent

All other units over 4 1/2 inches long: ±2 percent

Wattage:

1/8 inch units: +10 percent, -15 percent

All other units: +5 percent, -10 percent

Component Recognition

File Numbers

UL ® component rated to 240V Å (ac) (file number E52951)

CSA component rated to 240V Å (ac) (file number LR7392)

VDE component rated to 240V Å (ac) (file number 10062-4911-0006)

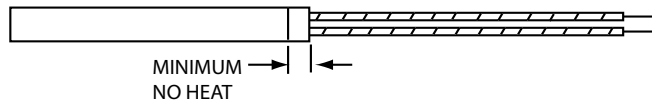
Note: Not all options are covered.

Dia.	Volts Max.	Amp Max.	Maximum Watts				
			120V 1-PH	240V 1-PH	480V 1-PH	240V 3-PH	480V 3-PH
1/8	240	3.1	360	720	—	—	—
1/4	240	4.4	525	1050	—	—	—
3/8	240	6.7	800	1600	—	*	—
1/2	240	9.7	1,160	2,320	—	*	—
5/8	480	23.0	2,760	5,520	11,000	—	—
3/4	480	23.0	2,760	5,520	11,000	9,550	19,100
1	480	23.0	2,760	5,520	11,000	9,550	19,100

* Consult factory

Patented Lead Adaptor (LA) method

allows same day shipment on more than 150,000 configurations of stock FIREROD heaters and lead combinations.



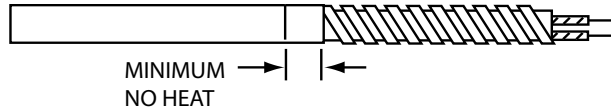
LA Stock

Termination Options

LA Swaged-in Flexible Leads

LA swaged-in flexible leads are used in applications where a high degree of flexing exists or the leads must be bent sharply adjacent to the heater without exposing or breaking the conductor. The stranded wire leads are connected internally and exit through the lead end. The overall length of the heater is extended by 3/16 inch (5 mm) bringing the total disk end no-heat to 7/16 inch. To order, specify length adder code D.

This LA option is not available on 1/8 inch (3 mm) diameter. On 1/8 inch (3 mm) diameter FIRERODs, leads are connected externally using a solid conductor lead wire. If stranded wire is desired on 1/8 inch (3 mm) diameter units, consult factory.



LA Stock

Straight Protection Options

LA Straight Stainless Steel Hose

LA straight stainless steel hose provides the best protection against abrasion from sharp edges. It also offers ease of handling and wiring in abrasive environments. Unless specified a 12-inch (305 mm) hose is supplied. Leads are two inches (51 mm) longer than hose. Minimum lead end no-heat required is 5/8 inch (16 mm). Option adds 3/8 inch (9 mm) to overall length on stock units. To order, specify option code H.

Right angle s/s hose also available on 3/8" dia. and larger.

LA Straight Stainless Steel Braid

LA straight stainless steel braid is designed to protect leads from abrasion against sharp edges. It is the most flexible of Watlow's protective lead arrangements. Unless specified a 12-inch (305 mm) braid is supplied. Leads are two inches (51 mm) longer than braid. Minimum lead end no-heat required is 5/8 inch (16 mm). Option adds 3/8 inch (9 mm) to overall length on stock units. To order, specify option code C.

Right angle s/s braid also available on 3/8" dia. and larger.

Cable Heaters

Versatile, Standard Cable Heaters

The versatile Watlow cable heater can be formed to a variety of shapes as dictated by its many applications. Cable heaters are small diameter, high performance units, fully annealed and readily bent to a multitude of configurations.

Performance Capabilities

- Continuous operating temperatures to 1200°F (650°C) with intermittent operating periods achieving up to 1500°F (815°C). Dependant on type of element wire used.
- Sheath watt densities on the cable to 30 W/in² (4.65 W/cm²), and as high as 75 W/in² (11.62 W/cm²) within factory approved conditions.

Features and Benefits

- High ductility allows the heater to be cold-formed into almost any shape.
- **The heater's low mass** allows for quick response to both heating and cooling.
- **The heater can be isolated or sealed from the process environment** with optional compression fittings or HTF adaptor seals. Optional testing is available to guarantee the integrity of all surfaces and seams.
- **Standard 304 stainless steel**, optional 316L stainless steel or Inconel® 600, provide high temperature corrosion and oxidation resistance.
- **The heater sheath can be brazed** allowing the permanent attachment of mounted fittings to the heater.
- **Ranging from 0.040 inch (1 mm) to 0.188 inch (5 mm) diameter**, the cable heater packs a lot of heat into a tiny space. Lengths range from 3/4 inch (19 mm) to over 70 feet (2134 cm).
- **Internal construction options** allow internal thermocouples and no-heat sections. (Not available in all sizes.)
- **Cable heaters can operate in unusual environments**, including cryogenic and sub-freezing temperatures, high vacuum, and gaseous and liquid immersion conditions.



How to Order

To order your stock cable heater, specify:

- Watlow code number and/or voltage and wattage specifications
- Forming options (required information):
 - Straight** - standard option unless otherwise specified
 - Nozzle** - coil I.D., coil width, lead orientation
 - Distributed nozzle** - coil I.D., coil width, lead orientation, number of zones
 - Sinuated** - height, width, bend radius, lead orientation
 - Starwound** - coil O.D., coil width, lead orientation
 - Flat spiral** - spiral I.D., spiral width, lead orientation
- Lead wire options (required information):
 - Standard** - 14 inch crimped-on fbg unless otherwise noted
 - Fiberglass** - various lengths available
 - Teflon®** - various lengths available

- Lead protection options (required information):

Standard - 12 inch crimped-on stainless steel hose unless otherwise noted

SS hose - various lengths available

SS braid - various lengths available

Fiberglass braid - various lengths available

- Internal thermocouple option:

Type J thermocouple
See stock product list for available units.

- Special adders

If the stock units do not meet application needs, consult Therm-x for a quote on made-to-order units.

Availability

Stock: Straight units can be formed on request requiring one to two working days, contingent upon quantity and required options.

Made-to-Order: Delivery dependent on complexity of order. Consult Therm-x for price and delivery.

Go online for application data & technical data
www.therm-x.com
search "cable heater"

Cable Heaters

Cable Heater Stock Units (Internal Thermocouple Not Available)

Straight Cable Length in (mm)	Volts	Watts	Watt Density		No-Heat Length		Lead Wire	Lead Protection	Code Number
			W/in ²	W/cm ²	in	(mm)			
0.062-inch Diameter Round (with ±10 percent wattage tolerance)									
24 (609.6)	120	240	51	(7.9)	0.00	(0.00)	14" (355.6 mm)	12" (304.8 mm)	62H24A6X
36 (914.4)	120	400	57	(8.8)	0.00	(0.00)	Fiberglass	SS hose	62H36A5X
56 (1422.4)	120	330	30	(4.7)	0.00	(0.00)	unless otherwise specified	unless otherwise specified	62H56A4X
65 (1651.0)	120	500	39	(6.0)	0.00	(0.00)	specified	specified	62H65A3X
0.094-inch Diameter Round (with ±5 percent wattage tolerance)									
30 (762.0)	230	125	17	(2.6)	5.00	(127.00)	36" (914.4 mm)	Lead protection	94PC30A1X
30 (762.0)	230	250	34	(5.3)	5.00	(127.00)	swaged-in	not available Teflon® leads only	94PC30A2X
0.125 inch Diameter Round (with ±10 percent wattage tolerance)									
18 (457.2)	240	250	35	(5.4)	1.50	(38.10)	14" (355.6 mm)	12" (304.8 mm)	125CH18A4X
19 (482.6)	120	165	21	(3.3)	1.50	(38.10)	Fiberglass	SS hose	125CH19A1X
24 (609.6)	120	275	29	(4.5)	1.50	(38.10)	unless otherwise specified	unless otherwise specified	125CH24A1X
24 (609.6)	240	275	29	(4.5)	1.50	(38.10)	specified	specified	125CH24A14X
38 (965.2)	240	325	21	(3.3)	1.50	(38.10)			125CH38A1X
38 (965.2)	120	175	12	(1.9)	1.50	(38.10)			125CH38A2X
47 (1193.8)	240	260	14	(2.2)	1.50	(38.10)			125CH47A1X
47 (1193.8)	120	235	12	(1.9)	1.50	(38.10)			125CH47A2X
47 (1193.8)	120	375	20	(3.1)	1.50	(38.10)			125CH47A3X
47 (1193.8)	240	345	19	(2.9)	1.50	(38.10)			125CH47A4X
65 (1651.0)	240	420	16	(2.5)	1.50	(38.10)			125CH65A1X
65 (1651.0)	240	675	27	(4.2)	1.50	(38.10)			125CH65A2X
95 (2413.0)	240	1000	28	(4.3)	0.00	(0.00)	48" (1219 mm)	Lead protection	125CH93A1X
126 (3200.4)	240	1500	30	(4.7)	0.00	(0.00)	swaged-in	is available	125H126A4A
150 (3810.0)	240	2000	34	(5.3)	0.00	(0.00)	Fiberglass	upon request	125H150A3A
223 (5664.2)	240	3000	34	(5.3)	0.00	(0.00)	leads only		125H223A1A
0.128 inch Square Cross-Section (with ±10 percent wattage tolerance)									
12 304.8	120	200	36	5.6	1.50	(38.10)	14" (355.6 mm)	12" (304.8 mm)	125PS12A24A
12 304.8	240	200	36	5.6	1.50	(38.10)	Fiberglass	SS hose	125PS12A23A
20 508.0	120	300	31	4.8	1.50	(38.10)	unless otherwise specified	unless otherwise specified	125PS20A37A
20 508.0	240	300	31	4.8	1.50	(38.10)	specified	specified	125PS20A38A
30 762.0	120	450	30	4.7	1.50	(38.10)			125PS30A47A
30 762.0	240	450	30	4.7	1.50	(38.10)			125PS30A48A
38 965.2	240	600	31	4.8	1.50	(38.10)			125PS38A23A

Cable Heater Stock Units (Type J Internal Thermocouple)

Straight Cable Length in (mm)	Volts	Watts	Watt Density		No-Heat Length		Lead Wire	Lead Protection	Code Number
			W/in ²	(W/cm ²)	in	(mm)			
0.125-inch Diameter Round (with ±10 percent wattage tolerance), Thermocouple located in center of heated section.									
24 (609.6)	120	275	29	(4.5)	1.50	(38.10)	48" (1219 mm)	Lead protection	125CH24A13X
38 (965.2)	120	175	12	(1.9)	1.50	(38.10)	swaged-in	is available	125CH38A18X
47 (1193.8)	120	235	13	(2.0)	1.50	(38.10)	Fiberglass	upon request	125CH47A21X
65 (1651.0)	240	675	26	(4.0)	1.50	(38.10)	leads only		125CH65A26X

NEW OFFERING

0.157-inch Diameter Round (with ±10 percent wattage tolerance), Thermocouple located at the disk end of the cable.

124 (3149.6)	240	1500	25	(3.9)	0.00	(0.00)	48" (1219 mm)	Lead protection	157CH124AX
150 (3810.0)	240	2000	27	(4.2)	0.00	(0.00)	swaged-in	is available	157CH150AX
220 (5588.0)	240	3000	28	(4.3)	0.00	(0.00)	Fiberglass	upon request	157CH220AX

0.128 inch Square Cross-Section (with ±10 percent wattage tolerance), Thermocouple located in center of heated section.

12 (304.8)	240	200	36	(5.6)	1.50	(38.10)	48" (1219 mm)	Lead protection	125PS12A22A
20 (508.0)	120	300	31	(4.8)	1.50	(38.10)	swaged-in	is available	125PS20A35A
20 (508.0)	240	300	31	(4.8)	1.50	(38.10)	Fiberglass	upon request	125PS20A36A
30 (762.0)	240	450	30	(4.7)	1.50	(38.10)	leads only		125PS30A46A
38 (965.2)	240	600	31	(4.8)	1.50	(38.10)			125PS38A24A

Silicon Rubber Heaters

Silicone Rubber:

This rugged, moisture and chemical-resistant material is easily bonded or cemented to parts. Watlow silicone rubber heaters can handle temperatures up to 500°F(260°C). Many styles of these heaters are available with UR ® , cUR ® and VDE recognition.

How to Order

To order stock silicone rubber heaters, specify the Watlow code number and the quantity. To order a heater with options, specify the code number, quantity and options desired (See next page) . Consult Therm-x before combining options. Stock items are Factory stock Columbia, MO.

Go online to www.therm-x.com for complete application and technical data. Search for Flex Heater



Width in(mm)	Length in(mm)	Watts	Avail	120V Å (ac) Code No.	240V Å (ac) Code No.
1 (25)	2 (50)	10	Stock	010020C1	010050C2 010100C2 010150C2 010200C2
	3 (75)	15	Stock	010030C1	
	4 (100)	20	Stock	010040C1	
	5 (125)	25	Stock	010050C1	
	5 (125)	25	Stock		
	10 (255)	50	Stock	010100C1	
	10 (255)	50	Stock		
	15 (380)	75	Stock	010150C1	
	15 (380)	75	Stock		
	20 (510)	100	Stock	010200C1	
	20 (510)	100	Stock		
	25 (635)	125	Stock	010250C1	
	30 (760)	150	Stock	010300C1	
	35 (890)	175	Stock	010350C1	
	40 (1015)	200	Stock	010400C1	
	80 (2030)	400	Stock	010800C1	
120 (3050)	600	Stock	010F10C1		
2 (50)	2 (50)	20	Stock	020020C1	020050C2 020100C2 020150C2 020200C2
	5 (125)	50	Stock	020050C1	
	5 (125)	50	Stock		
	10 (255)	100	Stock	020100C1	
	10 (255)	100	Stock		
	15 (380)	150	Stock	020150C1	
	15 (380)	150	Stock		
	20 (510)	200	Stock	020200C1	
	20 (510)	200	Stock		
	25 (635)	250	Stock	020250C1	
	30 (760)	300	Stock	020300C1	
	35 (890)	350	Stock	020350C1	
	40 (1015)	400	Stock	020400C1	
	3 (75)	3 (75)	45	Stock	
5 (125)		75	Stock	030050C1	
5 (125)		75	Stock		
10 (255)		150	Stock	030100C1	
10 (255)		150	Stock		
15 (380)		225	Stock	030150C1	
15 (380)		225	Stock		
20 (510)		300	Stock	030200C1	
20 (510)		300	Stock		
25 (635)		375	Stock	030250C1	
30 (760)		450	Stock	030300C1	
35 (890)		525	Stock	030350C1	
40 (1015)		600	Stock	030400C1	

Width in(mm)	Length in(mm)	Watts	Avail	120V Å (ac) Code No.	240V Å (ac) Code No.
4 (100)	4 (100)	80	Stock	040040C1	040050C2 040100C2 040150C2 040200C2
	5 (125)	100	Stock	040050C1	
	5 (125)	100	Stock		
	10 (255)	200	Stock	040100C1	
	10 (255)	200	Stock		
	15 (380)	300	Stock	040150C1	
	15 (380)	300	Stock		
	20 (510)	400	Stock	040200C1	
	20 (510)	400	Stock		
	25 (635)	500	Stock	040250C1	
	30 (760)	600	Stock	040300C1	
	35 (890)	700	Stock	040350C1	
40 (1015)	800	Stock	040400C1		
5 (125)	5 (125)	125	Stock	050050C1	050050C2 050100C2 050150C2 050200C2
	5 (125)	125	Stock		
	10 (255)	250	Stock	050100C1	
	10 (255)	250	Stock		
	15 (380)	375	Stock	050150C1	
	15 (380)	375	Stock		
	20 (510)	500	Stock	050200C1	
	20 (510)	500	Stock		
	25 (635)	625	Stock	050250C1	
	30 (760)	750	Stock	050300C1	
	35 (890)	875	Stock	050350C1	
	40 (1015)	1000	Stock	050400C1	
6 (150)	5 (125)	150	Stock	060050C1	060050C2 060100C2 060150C2 060200C2
	5 (125)	150	Stock		
	10 (255)	300	Stock	060100C1	
	10 (255)	300	Stock		
	15 (380)	450	Stock	060150C1	
	15 (380)	450	Stock		
	20 (510)	600	Stock	060200C1	
	20 (510)	600	Stock		
	25 (635)	750	Stock	060250C1	
	30 (760)	900	Stock	060300C1	
	35 (889)	1050	Stock	060350C1	
	40 (1016)	1200	Stock	060400C1	

Approx. net weight: 8 ounces/ft² (0.24 g/cm²). Standard thickness: 0.055 inch. Standard lead length: 12 inches UL 1180 Teflon ® . Silicone rubber wire-wound elements rated at 5 W/in². UL ® Component Recognition (UR ®).

Silicon Rubber Heaters

Flexible Heaters Silicon Rubber

Wire Wound Stock Heaters

Coding Configuration Options

Use wire wound # from
Previous page

To order, complete the code number

With the information below:

0

Modification Options
0 = None
A = PSAS Bottom
B = PSAS Top
E = With Plate. Heater on Side Opposite Flange
F = With Plate. Heater on Flange Side
G = Flaps + Grommets
H = Flaps + Boot Hooks
J = Flaps + Latch Fasteners
K = PSAS and Low Loss
L = Low Loss
M = Low Loss + Flaps + Grommets
N = Low Loss + Flaps + Boot Hooks
P = Low Loss + Flaps + Latch Fasteners
R = 1/16 inch Sponge
S = 1/8 inch Sponge
T = 1/4 inch Sponge
U = 3/8 inch Sponge
V = 1/2 inch Sponge
W = PSAS + 1/16 inch Sponge
Y = PSAS + 1/8 inch Sponge
1 = PSAS + 1/4 inch Sponge
2 = PSAS + 3/8 inch Sponge
3 = PSAS + 1/2 inch Sponge
4 = Tip Plugs
6 = Tip Plugs/PSAS

•Heaters with flaps must be minimum 10 inches long.

Availability

Stock: Same day shipment of orders received by 11:00 a.m. CST. Stock with Options: Shipment in five working days or less. Not all options are available with stock heaters.

Made-to-Order: Consult Therm-x.

For made-to-order units, Therm-x will need the following application information from you:

- Size (dimensions)
- Voltage
- Wattage/watt density
- Operating temperature
- Options (leads, thermostats, attachment techniques, etc.)
- Will heater be subject to flexing?
- Agency approvals
- Quantity

Sensors
Type LOC WIR
0 = None
L = T10 STD STD
M = T10 STD ALT
N = T10 ALT STD
P = T10 ALT ALT
R = T207 STD STD
S = T207 STD ALT
T = T207 ALT STD
U = T207 ALT ALT
V = T207E on heater STD
W = T207E Remote STD
Y = B200 STD STD
1 = B200 STD ALT
2 = B200 ALT STD
3 = B200 ALT ALT
4 = JSTD STD STD
6 = JALT STD STD
7 = KSTD STD STD

•For thermostats, standard location is as shown in catalog; standard wiring is integral or series with the heater; alternate location is rotated parallel with heater width; alternate wiring is separate leads for pilot control.

•For thermocouples, J standard is Teflon[®] insulation; J alternate is fiberglass insulation; K standard is fiberglass insulation.

T10 Set °F* 0 = None A = 125 B = 150 E = 175 F = 200 G = 225 H = 250 J = 275 K = 300 T207 Set °F* 0 = None 1 = 40/55 2 = 60/75 3 = 95/110 4 = 145/1600 B200 Set °F* 0 = None 2 = 500 3 = 330 T/C Length 0 = None A = 8 in B = 12 in E = 18 in F = 24 in G = 30 in H = 36 in J = 40 in K = 4 ft L = 5 ft M = 6 ft N = 7 ft P = 8 ft R = 9 ft S = 10 ft T = 12 ft U = 15 ft V = 18 ft W = 20 ft Y = 22 ft 1 = 25 ft 2 = 30 ft

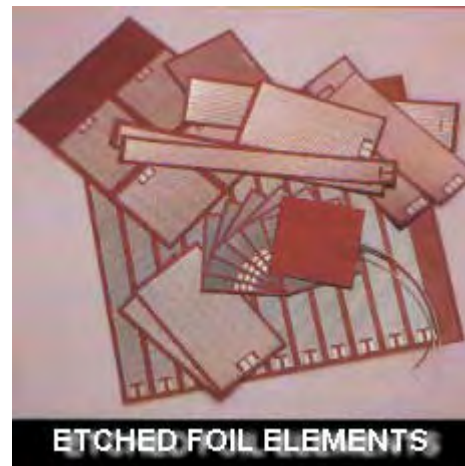
Lead Insulation
0 = None
1 = 1180 Teflon [®]
2 = 1180 cUR [®]
3 = 3133 22 GA
4 = 3134 18 GA
6 = 1199 cUR [®]
7 = HPN
8 = 6 foot HPN
Set
9 = Type E Teflon [®]
A = 1180VDE*
B = 1199VDE*

Lead Length
A = 8 in
B = 12 in
E = 18 in
F = 24 in
G = 30 in
H = 36 in
J = 40 in
K = 4 ft
L = 5 ft
M = 6 ft
N = 7 ft
P = 8 ft
R = 9 ft
S = 10 ft
T = 12 ft
U = 15 ft
V = 18 ft
W = 20 ft
Y = 22 ft
1 = 25 ft
2 = 30 ft

Kapton Heaters

Etched Foil Elements

Etched foil FEP bonded heaters operate at temperatures to 450°F and are stocked in rectangular, square and round shapes. The maximum thickness is .008" except at the lead exit. 120 and 28 Volts are standard. PSA, (Pressure Sensitive Adhesive), offers a simple way to install the heaters under 250°F. Lead wires are 12" long Teflon insulated to UL 1180. All heaters are tested for resistance and 1250 Volt dielectric. Leads exit from the center of the narrow portion of the rectangular units. Center of one edge on square units and the outer edge of round units



Type TRKH Rectangle 120V 12" Leads

Width	Length	5W/in2	Part#	Price \$	W/PSA	Price \$
1	4	20	TRKH010405	23.00	TRKH010405P	25.00
1	6	30	TRKH010605	24.00	TRKH010605P	27.00
1	12	60	TRKH011205	26.00	TRKH011205P	30.00
2	2	20	TRKH020205	23.00	TRKH020205P	25.00
2	4	40	TRKH020405	24.00	TRKH020405P	26.00
2	12	120	TRKH021205	32.00	TRKH021205P	36.00
3	3	45	TRKH030305	24.00	TRKH030305P	28.00
3	6	90	TRKH030605	28.00	TRKH030605P	32.00
3	12	180	TRKH031205	37.00	TRKH031205P	42.00
4	4	80	TRKH040405	26.00	TRKH040405P	31.00
4	8	160	TRKH040805	35.00	TRKH040805P	38.00
4	12	240	TRKH041205	45.00	TRKH041205P	48.00

Operating Temperatures From -60° To 450° Degrees F

Maximum thickness of heater .008", with PSA .009".

Maximum thickness at leads .110"

Watts per square inch - 5 watts per square inch

Self Adhesive - Optional PSAS

Leads - Teflon insulated leads (UL 1180) 12" long typically 22 AWG (Wire gauge varies with heater)

Dielectric strength 1250V

Minimum Bending radius 1"

These elements are ideal for enduser, test and development applications. For heaters designed specific to your process or application, call Therm-x we provide quick turn competitively priced heaters for all quantities.

Type TRKL Rectangle 28V 12" Leads

Width	Length	5W/in2	Part#	Price \$	W/PSA	Price \$
0.5	2	5	TRKH.50205L	\$23.00	TRKH.50205LP	24.00
1	1	5	TRKH010105L	\$23.00	TRKH010105LP	24.00
1	5	25	TRKH010505L	\$24.00	TRKH010505LP	25.00
2	2	20	TRKH020205L	\$24.00	TRKH020205LP	25.00

Type TRKR Round 120V 12" Leads

Width	5W/in2	Part#	Price \$	W/PSA	Price \$
2	30	TRKR0210	24.00=	TRKR0210P	26.00
4	60	TRKR0405	27.00	TRKR0405P	37.00
6	140	TRKR0605	40.00	TRKR0605P	42.00
8	250	TRKR0805	46.00	TRKR0805P	52.00
10	380	TRKR1005	56.00	TRKR1005P	60.00
12	560	TRKR1205	60.00	TRKR1205P	74.00

To use these stock heaters to create custom watt densities, use a variable power supply. Call Therm-x for assistance selecting the correct model.

Air Heaters

Flameless Electric Air Heaters: Designed to heat flowing air up to 1500F. This highly efficient heater can be accurately controlled with a variable voltage source or with automatic temperature controls.

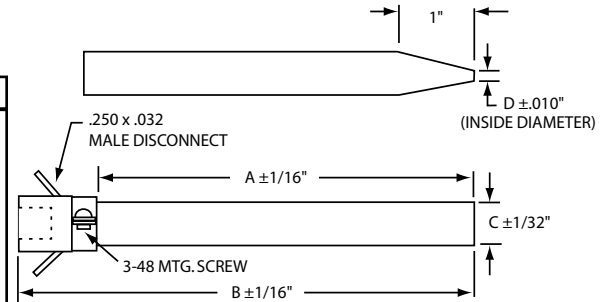
Construction: High quality Fe-Cr-Al alloy designed for 1950°F continuous use element temperature assures long life. The precision made element is supported on a statite insulator and placed in either a quartz or cordierite ceramic envelope to provide an extremely efficient heater.

Style 001 Performance Series

Standard Heater Specifications: Wattage at Standard Voltages

Part #	Type	A	B	C	D	60V	120V	240V
CO001-10001	OPEN	6.875	8.25	.410	-	115	465	1850
CO001-10002	NOZZLE	7.875	9.25	.410	.065	115	465	*
CO001-10003	OPEN	7.75	9.125	.410	-	210	850	*
CO001-10004	NOZZLE	8.75	10.125	.410	.065	210	850	*
CO001-10005	OPEN	3.875	5.25	.410	-	240	960	*
CO001-10006	NOZZLE	4.875	6.25	.410	.065	240	960	*
CO001-10007	OPEN	3.875	5.25	.410	-	480	*	*
CO001-10008	NOZZLE	4.875	6.25	.410	.065	480	*	*
CO001-10009	OPEN	6.875	8.25	.594	-	290	1150	4650
CO001-10010	NOZZLE	7.875	9.25	.594	.115	290	1150	*

Standard Wattage Tolerances +5%, -10% * Not Recommended



Standard Outer Casing - quartz
Standard - female 1/4-18NPT
Option - 3/8 OD Tubing Fitting.
 Add "T" to end of part #.

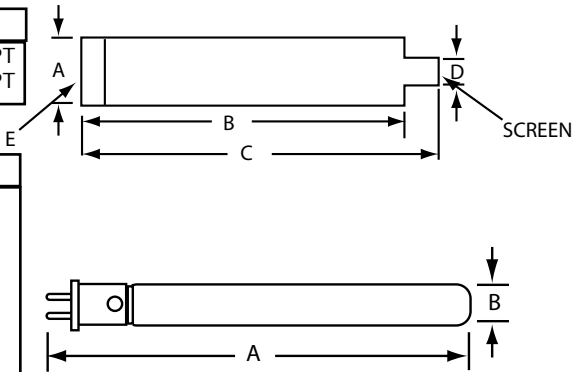
Style 003 Performance Series

Exchanger Housings - Triple pass air flow for improved efficiency and cool outer shell

Part#	Sylvania #	Type	A	B	C	D	E
CO00310026	029763	10" House	1-1/2"	9"	10"	11/16"	3/8"NPT
CO00310027	057088	13" House	2-1/8"	11-7/8"	12-7/8"	1-3/8"	3/4"NPT

Replaceable Elements - Standard Wattage Tolerances +5%, -10%

Part#	Sylvania#	Type	A	B	60V	120V	240V
10" HOUSING							
CO00310028	029765	2000W	8-3/16"	5/8"	125	500	2000
CO00310029	029766	2800W	8-3/16"	5/8"	175	700	2800
CO00310030	029767	3600W	8-3/16"	5/8"	225	900	3600
13" HOUSING							
CO00310031	040291	5000W	10-3/4"	1-1/4"	312	1250	5000
CO00310032	040292	6000W	10-3/4"	1-1/4"	375	1500	6000



Style 003 Flanged Version

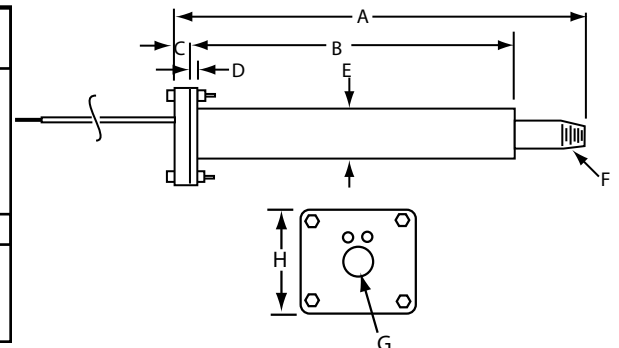
Gasketed flanged inlet for strong air tight seal.

Pipe thread connections at both inlet and outlet end for in-line applications.

Triple pass heat exchanger housing which maximizes transfer efficiency while maintaining a cool outer shell.

Replaceable heating elements with wattage choices.

HOUSING#	A	B	C	D	E	F	G	H
CO00310182	(13-3/16)	(11-7/16)	(3/4)	(1/4)	(2-1/8)	(1-1/4NPT)	(3/4NPT)	(4)
ELEMENT#		WATTS		VOLTS				
CO00310028		2000		240				
CO00310029		2800		240				
CO00310030		3600		240				
CO00310181	11-3/16	8-11/16	1/2	1/4	1-1/2	1/2NPT	3/8NPT	2-1/2
ELEMENT#		WATTS		VOLTS				
CO00310031		5000		240				
CO00310032		6000		240				



Other Heaters

MI Barrel and Nozzle

The MI Band is a high performance heater. Its performance and name are derived from Watlow's exclusive mineral insulation—a material that has much higher thermal conductivity than the mica and hard ceramic insulators used in conventional heaters.

Performance Capabilities

- Heater operating temperatures to 1400°F (760°C)
- Watt densities to 230 W/in² (35.6 W/cm²) available on small diameter nozzle bands
- Watt densities to 100 W/in² (15.5 W/cm²) available on large diameter barrel bands

THINBAND® Mica Barrel and Nozzle

The THINBAND® heater is Watlow's patented redesign of the mica band.

THINBAND heaters deliver fast and install easily, keeping costs down and machines running.

Watlow's stocklist and OEM cross-reference part list is the largest in the industry. Go online for the complete list as well as over 40 pages of application and technical data



www.therm-x.com
Search "band heater"



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.

Performance Capabilities

- Sheath temperatures to 1400°F (760°C)
- Watt densities to 100 W/in² (15.5 W/cm²)
- Maximum voltage 480V Å (ac)

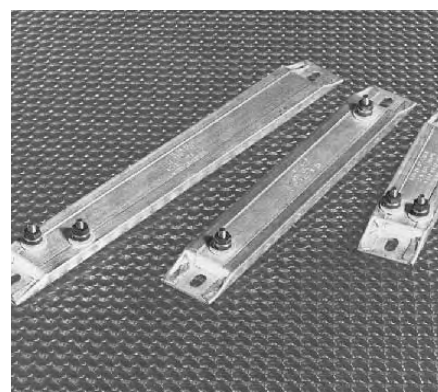


Mica Strip

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.

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/in² (8.5 W/cm²)
- Maximum voltage 480V Å (ac)



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. The element wire is embedded in MgO-based insulation, compacted into a solid mass that results in excellent heat conductivity and high dielectric strength.

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/in² (20.2 W/cm²)

Application data, specifications and stock-list
www.therm-x.com Search "strip heater"