

Cartridge Heaters

Standard



- Widely used throughout the industry as a rugged dependable heat source
- High quality materials and craftsmanship
- 5 diameters offered as standard
- 12" standard high temperature leads



Diameter	Sheath Length	Volts	Watts	Watt Density	Part Number	
1/4" (.246" ± .002")	1 1/2"	120	75	94	CH41512-75	
		240	75	94	CH41524-75	
		120	100	125	CH41512-100	
	2"	120	150	118	CH42012-150	
		240	150	125	CH42024-150	
	2 1/2"	120	200	126	CH42512-200	
		240	200	126	CH42524-200	
	3"	120	200	105	CH43012-200	
		120	250	127	CH43012-250	
		240	250	127	CH43024-250	
	4"	120	300	110	CH44012-300	
		240	300	110	CH44024-300	
	5"	240	350	110	CH45024-350	
	6"	240	400	95	CH46024-400	
3/8" (.371" ± .002")	1"	120	70	88	CH61012-70	
	1 1/2"	120	100	86	CH61512-100	
		240	150	128	CH61524-150	
	2"	120	100	57	CH62012-100	
		120	150	85	CH62012-150	
		240	150	85	CH62024-150	
		120	200	172	CH62012-200	
		240	200	172	CH62024-200	
	2 1/4"	120	175	86	CH622512-175	
	2 1/2"	240	165	75	CH62524-165	
		240	185	80	CH62524-185	
		240	200	85	CH62524-200	
		240	250	106	CH62524-250	
	3"	240	300	117	CH62524-300	
		120	365	116	CH63012-365	
		240	200	68	CH63024-200	
		240	250	86	CH63024-250	
	3 1/2"	240	375	121	CH63024-375	
		120	425	114	CH63512-425	
		240	300	85	CH63524-300	
	4"	240	425	114	CH63524-425	
		120	500	116	CH64012-500	
		240	250	62	CH64024-250	
		240	350	85	CH64024-350	
			240	500	117	CH64024-500



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Diameter	Sheath Length	Volts	Watts	Watt Density	Part Number
3/8" (.371" ± .002")	4 1/2"	240	450	95	CH64524-450
	5"	120	650	118	CH65012-650
	5"	240	300	57	CH65024-300
	5 1/2"	240	550	93	CH65524-550
	6"	240	500	78	CH66024-500
	6"	240	600	94	CH66024-600
	6"	240	800	120	CH66024-800
	7"	240	600	80	CH67024-600
	7"	240	800	104	CH67024-800
	8"	120	1090	121	CH68012-1090
	8"	240	600	69	CH68024-600
	8"	240	900	102	CH68024-900
	9"	240	1000	100	CH69024-1000
	10"	240	600	54	CH610024-600
	10"	240	1000	91	CH610024-1000
10"	240	1350	119	CH610024-1350	
12"	240	750	55	CH612024-750	
12"	240	1000	75	CH612024-1000	
1/2" (.496" ± .002")	1 1/2"	120	190	97	CH81512-190
	2"	120	295	126	CH82012-295
	2"	240	200	86	CH82024-200
	2"	240	300	128	CH82024-300
	2 1/4"	120	150	55	CH822512-150
	2 1/4"	240	250	92	CH822524-250
	2 1/2"	120	390	120	CH82512-390
	2 1/2"	240	200	64	CH82524-200
	2 1/2"	240	250	80	CH82524-250
	2 1/2"	240	300	98	CH82524-300
	2 1/2"	240	400	128	CH82524-400
	3"	240	250	64	CH83024-250
	3"	240	300	77	CH83024-300
	3"	240	500	128	CH83024-500
	3 1/2"	240	500	107	CH83524-500
	3 1/2"	240	580	114	CH83524-580
	4"	120	685	117	CH84012-685
	4"	240	300	55	CH84024-300
	4"	240	500	92	CH84024-500
	4"	240	685	117	CH84024-685
	4 1/2"	240	650	103	CH84524-650
	5"	120	880	118	CH85012-880
5"	240	500	72	CH85024-500	
5"	240	750	108	CH85024-750	

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Diameter	Sheath Length	Volts	Watts	Watt Density	Part Number
1/2" (.496" ± .002")	5"	240	880	118	CH85024-880
	5 1/2"	240	750	95	CH85524-750
	6"	240	500	58	CH86024-500
	6"	240	850	98	CH86024-850
	6"	240	1075	119	CH86024-1075
	6 1/2"	240	900	96	CH86524-900
	7"	240	1000	98	CH87024-1000
	8"	240	750	64	CH88024-750
		240	1000	86	CH88024-1000
		240	1470	121	CH88024-1470
	8 1/2"	120	1000	80	CH88512-1000
	9"	120	1000	76	CH89012-1000
	9 1/2"	240	1250	88	CH89524-1250
	10"	120	1000	67	CH810012-1000
		240	1500	100	CH810024-1500
		240	1860	122	CH810024-1860
	10 1/2"	240	1500	96	CH810524-1500
	11"	240	1750	106	CH811024-1750
12"	120	1000	56	CH812012-1000	
	240	1500	84	CH812024-1500	
	240	2000	112	CH812024-2000	
	240	2200	122	CH812024-2250	
5/8" (.621" ±.002")	2"	240	200	68	CH102024-200
		240	250	73	CH102024-250A
		240	250	85	CH102024-250B
		240	365	103	CH102024-365
	2 1/2"	240	400	102	CH102524-400
	3"	120	600	109	CH103012-600
		240	250	52	CH103024-250
		240	500	104	CH103024-500
	4"	120	850	114	CH104012-850
		240	500	73	CH104024-500
		240	750	110	CH104024-750
	4 1/2"	240	750	96	CH104524-750
	5"	240	500	57	CH105024-500
		240	750	86	CH105924-750
		240	1000	114	CH105024-1000
	5 1/2"	240	750	82	CH105524-750
	6"	120	1325	117	CH106012-1325
		240	850	79	CH106024-850
		240	1000	93	CH106024-1000
		240	1325	117	CH106024-1325



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Diameter	Sheath Length	Volts	Watts	Watt Density	Part Number
5/8" (.621" ± .002")	7"	240	800	104	CH107024-800
		120	1590	119	CH107012-1590
		240	1000	78	CH107024-1000
		240	1590	119	CH107024-1590
	7 1/2"	240	1000	73	CH107524-1000
	8"	120	1825	120	CH108012-1825
		240	1000	68	CH108024-1000
		240	1200	82	CH108024-1200
		240	1500	102	CH108024-1500
		240	1825	120	CH108024-1825
	9"	240	1250	75	CH109024-1250
	10"	240	1000	54	CH1010024-1000
	10"	240	1500	81	CH1010024-1500
	10"	240	2325	121	CH1010024-2325
	12"	240	1500	66	CH1012024-1500
12"	240	2000	89	CH1012024-2000	
12"	240	2800	121	CH1012024-2800	
3/4" (.746" ± .002")	2"	120	200	57	CH122012-200
	2 1/2"	240	350	74	CH122524-350
	3"	120	725	168	CH123012-725
	3"	240	400	68	CH123024-400
	3"	240	500	85	CH123024-500
	3"	240	600	102	CH123024-600
	3"	240	725	109	CH123024-725
	3 1/2"	240	550	72	CH123524-550
	4"	240	500	61	CH124024-500
	4"	240	750	91	CH124024-750
	4"	240	1000	117	CH124024-1000
	4"	240	1025	114	CH124024-1025
	4 1/2"	240	875	94	CH124524-875
	5"	240	850	80	CH125024-850
	5"	240	1000	95	CH125024-1000
	5"	240	1300	115	CH125024-1300
	5 1/2"	240	900	77	CH125524-900
	6"	240	1000	77	CH126024-1000
	6"	240	1250	96	CH126024-1250
	6 1/2"	240	1250	88	CH126524-1250

Cartridge Heaters

High Watt Density



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- 12" standard high temperature leads

Diameter	Sheath Length	Volts	Watts	Watt Density	Part Number
3/4" (.746" ± .002")	7"	240	1000	66	CH127024-1000
	7"	240	1500	98	CH127024-1500
	8"	240	1750	100	CH128024-1750
	8"	240	2000	114	CH128024-2000
	8"	240	2200	120	CH128024-2200
	9"	240	1800	90	CH129024-1800
	9"	240	2000	100	CH129024-2000
	10"	240	2000	90	CH1210024-2000
	10"	240	2250	112	CH1210024-2250
	12"	240	1500	55	CH1212024-1500

Watlube

Cartridge heater release and thermal conduction agent.

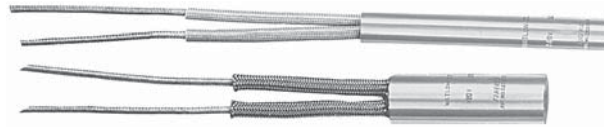
A protective lubricant for use when installing any cartridge heater. It provides a tighter fit, thus improving thermal conductance, permitting higher watt densities and extending heater life. As a barrier to high temperature oxidation, it assures easy removal of the heater after extended service. Simple to apply. Avoid contact with leads or end plug.



Size	Part Number
4 oz.	WATLUBE

Cartridge Heaters

Premium quality Cartridge Heaters- Incolloy® sheath provides optimum heat transfer.



12" standard glass covered leads.

Delivery: Standard leads from stock. Alternative lead terminations shipped within 72 hours.

Length	Volts	Watts	Watts /sq.in.	Part Number
1/8" diameter (nominal) actual 0.122" ± 0.002"				
1 1/4"	120	25	87	C1E14
	120	50	174	C1E13
	240	35	113	C1E42
1 1/2"	120	30	78	C1J5
	120	60	156	C1J6
2"	120	50	87	C2A4
	120	100	174	C2A5
1/4" diameter (nominal) actual 0.246" ± 0.002"				
1"	120	80	208	E1A51
	120	100	260	E1A52
	120	150	390	E1A53
	240	100	250	E1A66
1 1/4"	120	75	130	E1E41
	120	100	173	E1E42
	120	150	260	E1E43
1 1/2"	240	225	390	E1E61
	120	50	65	E1J39
	120	100	130	E1J40
	120	150	195	E1J41
1 1/2"	240	175	228	E1J49
	120	200	260	E1J42
	240	200	260	E1J52
	240	250	325	E1J35
2"	120	80	68	E2A136
	120	100	87	E2A55
	240	125	108	E2A82
	120	150	130	E2A56
	240	150	130	E2A77
	120	200	173	E2A57
	240	200	173	E2A50
	120	250	217	E2A72
	240	250	215	E2A76
240	300	260	E2A83	
2 1/2"	120	250	159	E2J80
	240	250	159	E2J49
3"	120	100	52	E3A48
	120	200	104	E3A49
	240	200	104	E3A60
	240	250	128	E3A124
	120	300	156	E3A50
	240	300	156	E3A51
4"	120	100	37	E4A28
	120	200	74	E4A29
	240	200	74	E4A32

Length	Volts	Watts	Watts /sq.in.	Part Number
1/4" diameter (cont) actual 0.246" ± 0.002"				
4"	120	300	111	E4A30
	240	300	111	E4A6
4 1/2"	120	200	64	E4J30
5"	240	350	101	E5A45
	120	400	113	E5A57
	240	400	113	E5A34
6"	240	400	94	E6A46
3/8" diameter (nominal) actual 0.371" ± 0.002"				
1"	120	55	95	G1A71
	120	100	172	G1A29
	120	150	259	G1A38
	240	200	344	G1A83
1 1/4"	120	100	115	G1E91
	120	125	144	G1E74
	120	150	172	G1E92
	240	150	172	G1E93
	120	200	230	G1E94
	240	200	230	G1E95
1 1/2"	120	400	426	G1E99
	120	100	104	G1F13
1 5/16"	240	100	104	G1F15
	120	150	160	G1F17
1 3/8"	240	160	151	G1G23
1 7/16"	120	100	94	G1H6
1 1/2"	120	50	43	G1J25
	120	75	65	G1J70
	120	80	68	G1J66
	120	100	86	G1J59
	240	100	86	G1J110
	240	125	106	G1J182
	120	150	129	G1J31
	240	150	129	G1J39
	120	200	173	G1J85
	240	200	173	G1J73
	120	250	216	G1J86
	240	250	216	G1J54
1 3/4"	120	125	86	G1N45
	120	175	122	G1N46
	120	250	172	G1N43
	240	250	172	G1N32
1 13/16"	240	150	98	G1P14
	120	200	129	G1P15
	240	250	161	G1P11
1 7/8"	120	250	152	G1R14

Cartridge Heaters



It is recommended that Watlube Heat Transfer Agent & Release Compound be used to improve thermal conductivity, reduce hot spots and increase heater life.

Length	Volts	Watts	Watts /sq.in.	Part Number
$\frac{3}{8}$ " diameter (nominal) actual 0.371" \pm 0.002"				
2"	120	50	29	G2A53
	120	75	42	G2A192
	120	100	57	G2A84
	240	100	57	G2A76
	120	150	86	G2A56
	240	150	86	G2A81
	120	200	115	G2A127
	240	200	115	G2A37
	120	250	144	G2A47
	240	250	144	G2A73
	120	300	172	G2A139
	240	300	172	G2A98
	120	400	230	G2A153
	240	400	230	G2A146
	120	500	282	G2A95
	240	500	282	G2A97
2 $\frac{1}{8}$ "	240	200	106	G2C13
2 $\frac{1}{4}$ "	120	75	37	G2E88
	120	125	62	G2E89
	240	125	62	G2E138
	240	150	73	G2E68
	120	175	86	G2E90
	120	250	123	G2E2
	240	250	123	G2E78
	120	300	148	G2E108
	240	300	148	G2E12
	120	350	173	G2E91
240	350	173	G2E75	
2 $\frac{1}{2}$ "	120	200	87	G2J110
	240	200	87	G2J81
	120	250	108	G2J46
	240	250	108	G2J80
	120	300	130	G2J118
	240	300	130	G2J119
	120	400	174	G2J26
	240	400	174	G2J146
	120	500	216	G2J109
240	500	216	G2J52	
2 $\frac{3}{16}$ "	120	60	122	G2P9
	120	250	92	G2P3
	240	300	110	G2P5
3"	120	100	100	G3A55
	240	100	100	G3A137
	120	150	150	G3A121
	120	200	200	G3A61
	240	200	200	G3A39
	120	250	250	G3A52
	240	250	250	G3A54
	120	300	300	G3A73
	240	300	300	G3A92

Length	Volts	Watts	Watts /sq.in.	Part Number
$\frac{3}{8}$ " diameter (cont) actual 0.371" \pm 0.002				
3"	120	400	400	G3A44
	240	400	400	G3A65
	120	500	500	G3A119
	240	500	500	G3A120
	240	600	600	G3A133
3 $\frac{5}{16}$ "	120	500	152	G3F24
3 $\frac{1}{2}$ "	120	250	72	G3J77
	240	250	72	G3J65
	120	300	87	G3J87
	240	300	87	G3J68
	120	500	144	G3J22
240	500	144	G3J63	
3 $\frac{3}{16}$ "	120	150	38	G3P8
	240	500	128	G3P3
4"	120	125	31	G4A54
	240	125	31	G4A163
	120	150	37	G4A78
	120	175	43	G4A191
	120	250	62	G4A40
	240	250	62	G4A87
	120	300	74	G4A94
	240	300	74	G4A95
	120	400	99	G4A48
	240	400	99	G4A44
	240	450	109	G4A65
	120	500	123	G4A96
	240	500	123	G4A92
	120	550	134	G4A200
4 $\frac{1}{4}$ "	240	300	67	G4E25
	240	750	167	G4E15
4 $\frac{1}{2}$ "	120	300	65	G4J54
	240	300	65	G4J33
	120	500	108	G4J55
240	500	108	G4J37	
4 $\frac{13}{16}$ "	240	300	59	G4P11
	240	500	98	G4P3
5"	120	150	29	G5A68
	240	150	29	G5A56
	120	300	58	G5A69
	240	300	58	G5A70
	120	500	96	G5A38
	240	500	96	G5A71
240	750	144	G5A67	
240	1000	192	G5A115	
5 $\frac{1}{4}$ "	240	200	45	G5E16
5 $\frac{1}{2}$ "	240	600	104	G5J36
	240	1000	173	G5J45
6"	120	200	31	G6A80
	120	250	39	G6A40
	240	250	39	G6A92

Cartridge Heaters

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12" standard glass covered leads.

Delivery: Standard leads from stock. Alternative lead terminations shipped within 72 hours.

Length	Volts	Watts	Watts /sq.in.	Part Number
$\frac{3}{8}$ " diameter (cont) actual 0.371" \pm 0.002"				
6"	120	400	63	G6A81
	240	400	63	G6A82
	120	500	79	G6A125
	240	500	79	G6A59
	120	600	94	G6A56
	240	600	94	G6A51
	240	750	117	G6A46
6½"	240	1000	157	G6A83
	240	600	86	G6J23
	240	1000	144	G6J33
7"	120	250	33	G7A40
	240	250	33	G7A32
	240	500	65	G7A30
	120	600	80	G7A41
	240	600	80	G7A42
7½"	240	1000	133	G7A43
	240	600	74	G7J27
7⅜"	240	1000	124	G7J28
	240	750	87	G7P5
8"	120	300	34	G8A54
	240	300	34	G8A47
	120	400	45	G8A109
	120	500	58	G8A81
	240	500	58	G8A32
	120	600	69	G8A53
	240	600	69	G8A37
	240	700	79	G8A98
	240	1000	115	G8A45
	240	500	52	G8L3
9"	240	1000	100	G9A37
	240	600	57	G9J20
9½"	240	1000	96	G9J12
	120	400	36	G10A48
10"	120	600	54	G10A35
	240	600	54	G10A31
	240	1000	91	G10A32
	240	375	31	G10P5
10⅜"	120	400	30	G12A45
	120	600	45	G12A29
	240	600	45	G12A46
	240	1000	75	G12A47
12⅜"	240	1000	69	G12P3

Length	Volts	Watts	Watts /sq.in.	Part Number	
$\frac{1}{2}$ " diameter (cont) actual 0.496" \pm 0.002"					
1"	120	50	65	J1A30	
	120	150	193	J1A31	
1¼"	120	50	43	J1E50	
	120	125	107	J1E51	
	240	125	107	J1E58	
	240	200	172	J1E52	
	240	250	212	J1E88	
1½"	120	50	32	J1J47	
	120	150	97	J1J48	
	240	150	97	J1J96	
	120	200	128	J1J59	
2"	240	200	128	J1J38	
	120	75	32	J2A80	
	120	200	86	J2A49	
	240	200	86	J2A75	
	120	250	108	J2A85	
	240	250	108	J2A71	
	120	300	128	J2A95	
	240	300	128	J2A96	
	120	400	171	J2A81	
	240	400	171	J2A82	
2¼"	120	75	28	J2E86	
	120	125	46	J2E87	
	120	250	92	J2E56	
	240	250	92	J2E69	
	120	400	147	J2E114	
	240	400	147	J2E115	
	120	500	184	J2E6	
	240	500	184	J2E88	
	2⅜"	120	100	34	J2G35
		240	100	34	J2G28
120		250	86	J2G34	
240		250	86	J2G37	
120		500	172	J2G36	
240		500	172	J2G38	
2½"	120	100	32	J2J67	
	240	100	32	J2J57	
	120	250	81	J2J68	
	240	250	81	J2J69	
	120	300	96	J2J109	
	240	300	96	J2J110	
	120	400	128	J2J81	
	240	400	128	J2J82	

Cartridge Heaters



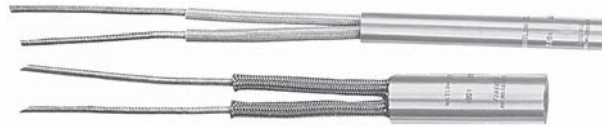
It is recommended that Watlube Heat Transfer Agent & Release Compound be used to improve thermal conductivity, reduce hot spots and increase heater life

Length	Volts	Watts	Watts /sq.in.	Part Number	
½" diameter (cont) actual 0.496" ± 0.002"					
2½"	120	500	161	J2J66	
	240	500	161	J2J70	
2⅞"	120	350	108	J2K6	
	240	300	93	J2K3	
2¾"	240	400	115	J2N43	
	120	400	115	J2N45	
	240	125	32	J3A108	
3"	240	125	32	J3A109	
	120	250	64	J3A107	
	240	250	64	J3A89	
	120	300	78	J3A65	
	120	350	89	J3A173	
	240	300	78	J3A73	
	120	400	104	J3A132	
	240	400	104	J3A29	
	120	500	129	J3A110	
	240	500	129	J3A111	
	120	600	154	J3A51	
	240	600	154	J3A127	
	120	750	193	J3A137	
	240	750	193	J3A112	
	120	1000	254	J3A79	
	3½"	120	250	54	J3J44
		240	250	54	J3J64
		240	350	75	J3J65
120		500	107	J3J45	
240		500	107	J3J46	
240		750	162	J3J63	
3⅜"	120	500	96	J3P9	
	240	250	48	J3P2	
4"	120	150	28	J4A117	
	240	150	28	J4A122	
	120	250	46	J4A118	
	240	250	46	J4A90	
	120	300	56	J4A63	
	240	300	56	J4A26	
	120	350	65	J4A1	
	240	350	65	J4A103	
	120	400	74	J4A139	
	240	400	74	J4A68	
	120	500	92	J4A16	
	120	550	100	J4A242	
	240	500	92	J4A92	
	120	750	138	J4A198	
240	750	138	J4A119		
4⅝"	120	550	92	J4F5	
4½"	120	550	80	J4J69	
	240	500	80	J4J57	
	120	750	120	J4J70	

Length	Volts	Watts	Watts /sq.in.	Part Number
½" diameter (cont) actual 0.496" ± 0.002"				
4½"	240	750	120	J4J32
4⅜"	240	300	44	J4P3
	240	1000	148	J4P6
5"	120	200	29	J5A85
	240	200	29	J5A74
	120	350	50	J5A86
	240	350	50	J5A63
	120	400	58	J5A98
	240	400	58	J5A46
	120	500	72	J5A52
	240	500	72	J5A45
	120	750	108	J5A121
	240	750	108	J5A72
	240	1000	143	J5A87
	5½"	240	200	25
120		500	64	J5J43
240		500	64	J5J33
240		650	83	J5J69
120		750	97	J5J44
240		750	97	J5J45
5¾"	120	700	86	J5N6
	240	700	86	J5N8
5⅞"	240	300	36	J5P10
6"	120	250	29	J6A114
	240	250	29	J6A171
	240	300	35	J6A66
	240	350	41	J6A119
	120	500	59	J6A115
	240	500	59	J6A94
	120	750	88	J6A99
	240	750	88	J6A90
	120	1000	117	J6A53
	240	1000	117	J6A36
6½"	240	500	54	J6J45
	240	1000	108	J6J27
7"	120	250	25	J7A79
	120	500	50	J7A80
	240	500	50	J7A57
	120	600	60	J7A50
	240	600	60	J7A95
	240	1000	99	J7A81
7½"	240	500	46	J7J25
	240	1000	92	J7J26
8"	120	300	26	J8A71
	240	300	26	J8A111
	120	500	43	J8A64
	240	500	43	J8A66
	120	1000	86	J8A84
	240	1000	86	J8A60
240	1500	129	J8A100	

Cartridge Heaters

Premium quality Cartridge Heaters- Incolloy® sheath provides optimum heat transfer.



12" standard glass covered leads

Length	Volts	Watts	Watts /sq.in.	Part Number
½" diameter (cont) actual 0.496" ± 0.002"				
8"	240	2000	172	J8A101
8½"	240	300	24	J8J39
	240	500	40	J8J30
	240	1000	80	J8J28
9"	240	500	38	J9A35
	240	1000	76	J9A58
9½"	240	500	36	J9J14
	240	1000	72	J9J12
10"	120	500	34	J10A61
	240	500	34	J10A62
	120	1000	68	J10A63
	240	1000	68	J10A42
	240	1500	102	J10A33
11"	240	1000	61	J11A60
	120	500	28	J12A63
12"	240	500	28	J12A76
	120	1000	56	J12A40
	240	1000	56	J12A49
	240	1500	84	J12A37
	240	2000	112	J12A89
	240	1000	48	J14A41
14"	240	2300	110	J14A39
	240	1500	66	J15A19
15"	240	1000	41	J16A12
18"	240	1500	55	J18A19
	240	1700	62	J18A23
⅝" diameter (nominal) actual 0.621" ± 0.002"				
1¼"	120	50	34	L1E26
	120	200	137	L1E24
	120	250	171	L1E27
1½"	120	250	128	L1J23
	240	250	128	L1J24
2"	120	100	34	L2A48
	120	200	68	L2A49
	240	500	170	L2A54
2¼"	120	100	29	L2E49
	120	250	73	L2E50
	240	250	73	L2E12
	120	350	103	L2E40
	240	350	103	L2E51
2¾"	120	280	77	L2G18
	240	280	77	L2G19
3"	120	150	31	L3A81

Length	Volts	Watts	Watts /sq.in.	Part Number
⅝" diameter (cont) actual 0.621" ± 0.002"				
3"	120	250	51	L3A82
	240	250	51	L3A9
	120	400	81	L3A94
	120	500	102	L3A113
	240	500	102	L3A33
	240	750	154	L3A71
3¾"	120	525	82	L3N12
	240	525	82	L3N1
4"	120	250	37	L4A99
	240	250	37	L4A104
	240	400	58	L4A47
	240	500	73	L4A53
	240	600	88	L4A44
	240	750	110	L4A100
5"	240	1000	146	L4A71
	120	250	28	L5A76
	240	250	28	L5A107
	240	500	57	L5A24
	240	750	86	L5A31
	240	1000	114	L5A77
5¾"	120	800	84	L5G3
	240	800	84	L5G1
6"	120	300	28	L6A28
	240	300	28	L6A64
	240	500	47	L6A73
	240	750	70	L6A70
	240	1000	93	L6A71
	120	1500	139	L6A163
6½"	240	1500	139	L6A94
	120	500	43	L6J43
7"	240	500	43	L6J55
	120	500	39	L7A42
	240	500	39	L7A15
8"	240	1000	79	L7A37
	240	1500	118	L7A12
	120	500	34	L8A96
	240	500	34	L8A46
	240	850	58	L8A115
	240	1000	68	L8A10
10"	240	1500	102	L8A37
	240	2000	137	L8A80
	120	500	27	L10A51
	240	500	27	L10A40
3"	240	750	40	L10A69

Cartridge Heaters



It is recommended that Watlube heat transfer agent & release compound be used to improve thermal conductivity, reduce hot spots and increase heater life (see bottom of page)

Length	Volts	Watts	Watts /sq.in.	Part Number
$\frac{5}{8}$ " diameter (cont) actual 0.621" \pm 0.002"				
10"	240	1000	54	L10A52
	240	1500	81	L10A8
	240	2000	108	L10A50
12"	120	500	22	L12A81
	240	500	22	L12A80
	240	900	40	L12A102
	120	1000	45	L12A82
	240	1000	45	L12A34
	120	1500	66	L12A147
	240	1500	67	L12A39
14"	240	2000	89	L12A63
	240	3700	140	L14A21
15"	240	750	27	L15A35
	240	2400	84	L15A20
	240	4000	141	L15A41
16"	240	2500	82	L16A33
	240	4500	148	L16A40
18"	240	1500	44	L18A32
	240	3000	87	L18A34
	240	4700	137	L18A36
20"	240	1500	40	L20A19
	240	3500	92	L20A13
	240	4700	123	L20A14
24"	240	2000	44	L24A19
	240	4700	102	L24A14
36"	240	3000	43	L36A8
$\frac{3}{4}$ " diameter (nominal) actual 0.746" \pm 0.002"				
2"	120	200	49	N2E8
3"	120	250	43	N3A11
	240	500	85	N3A12
4"	120	250	31	N4A16
	240	500	61	N4A17
5"	240	1000	122	N4A15
	120	300	28	N5A19
	240	500	47	N5A12
6"	240	1000	95	N5A20
	120	500	39	N6A19
	240	500	39	N6A20
	240	1000	78	N6A21
7"	240	1500	116	N6A82
	240	2000	155	N6A22
	120	500	33	N7A15
	240	500	33	N7A1
8"	240	1000	66	N7A16
	120	500	28	N8A19
	240	500	28	N8A20
10"	240	1000	57	N8A21
	240	2000	114	N8A22
10"	240	1000	45	N10A15
	240	2000	90	N10A14

Length	Volts	Watts	Watts /sq.in.	Part Number
$\frac{3}{4}$ " diameter (cont) actual 0.621" \pm 0.002"				
12"	240	1000	37	N12A15
	240	2000	74	N12A24
	240	4000	148	N12A25
13"	240	1000	34	N13A26
14"	240	1250	40	N14A22
	240	2500	79	N14A20
	240	4500	142	N14A21
15"	240	1500	44	N15A26
16"	240	1800	49	N16A26
	240	4700	129	N16A18
18"	240	2000	49	N18A13
	240	5000	122	N18A15
20"	240	1150	25	N20A21
	240	2250	49	N20A22
	240	5250	115	N20A10
24"	240	1375	25	N24A24
	240	2750	50	N24A23
	240	5500	100	N24A13
36"	240	2500	30	N36A4

Watlube

Cartridge heater release and thermal conduction agent.

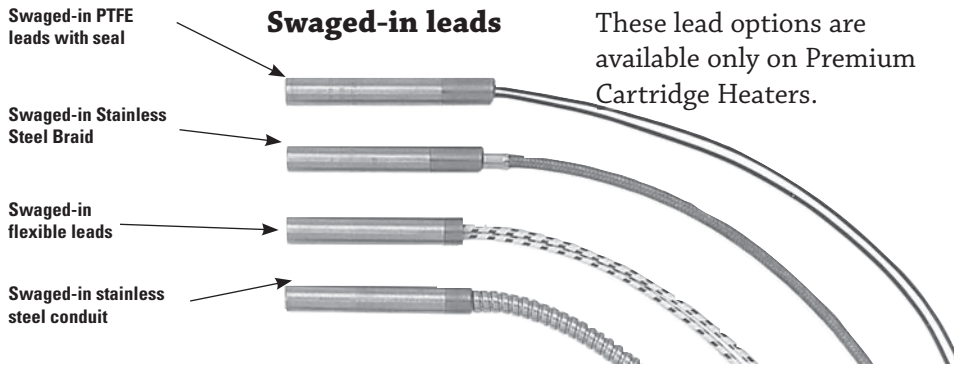
A protective lubricant for use when installing any cartridge heater. It provides a tighter fit, thus improving thermal conductance, permitting higher watt densities and extending heater life. As a barrier to high temperature oxidation, it assures easy removal of the heater after extended service. Simple to apply. Avoid contact with leads or end plug.



Size	Part Number
4 oz.	WATLUBE

Cartridge Heaters

Lead Options



These lead options are available only on Premium Cartridge Heaters.

For customers having special requirements, we offer the lead options shown on these pages. These swaged-in, flexible leads offer a wide choice in terms of capacity, cost, size, durability and ease of installation. Available from stock in any diameter with any lead length.

These lead adaptations are of improved construction and will stand up to extra heavy usage. Unheated sections are reduced up to one-half the area, resulting in lower watt densities and consequent longer life. Leads are flexible over their full length.

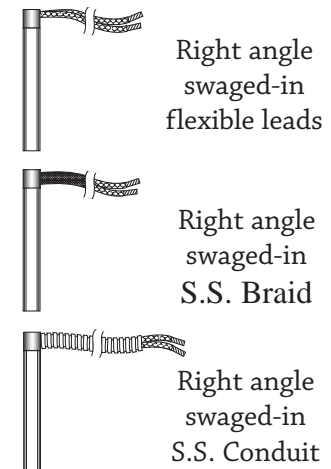
Modification Type	Length Dia.	Length added to heater	Std. Unheated portion	Std. lead length
Swaged-in flex leads	all	3/16"	7/16"	10"
Swaged-in S.S. Braid	1/4"	3/4"	1"	14"
	3/8"			
	1/2"			
	5/8"			
	3/4"			
Swaged-in PTFE	All Exc. 1/4" Dia.	3/4"	1"	10"
	1/4"			
Swaged-in S.S. Conduit	3/8"	3/8"	5/8"	14"
	1/2"			
	5/8"			
	3/4"			

Right Angle Swaged-In Leads

For applications where space is limited or confining, swaged-in flexible leads are also offered in right angle configuration with lead wires exiting at side of sheath.



These lead options are available only on Premium Cartridge Heaters.



Modification Type	Dia.	Length added to heater	Unheated portion	Std. lead length
Rt. angle Swaged-in Flex leads	3/8"	3/8"	5/8"	10"
	others	7/16"	1 1/16"	
Rt. angle Swaged-in S.S. Braid	3/8"	9/16"	13/16"	14"
	1/2"			
	5/8"			
	3/4"			
Rt. angle Swaged-in S.S. conduit	3/8"	9/16"	13/16"	14"
	1/2"			
	5/8"			
	3/4"			

Cartridge Heaters

Thermocouple



- 36" standard high temperature leads
- 48" standard J calibration thermocouple
- Pin leads with high temperature sleeving



Diameter	Sheath Length	Volts	Watts	Part Number
1/4" .246" (± .002")	1 1/2"	240	200	CH41524-200T
	1 3/4"	240	200	CH417524-200T
	2"	240	200	CH42024-200T
	2 1/2"	240	200	CH42524-200T
	3"	240	200	CH43024-200T
	3 1/2"	240	250	CH43524-250T
	4"	240	250	CH44024-250T
	5"	240	250	CH45024-250T
3/8" .371" (± .002")	1 1/2"	240	200	CH61524-200T
	1 3/4"	240	200	CH617524-200T
	1 3/4"	240	250	CH617524-250T
	2"	240	200	CH62024-200T
	2"	240	250	CH62024-250T
	2 1/2"	240	250	CH62524-250T
	3"	240	260	CH63024-260T
	3"	240	300	CH63024-300T
	3 1/2"	240	320	CH63524-320T
	3 1/2"	240	350	CH63524-350T
	4"	240	370	CH64024-370T
	4 1/2"	240	420	CH64524-420T
	5"	240	300	CH65024-300T
	5"	240	470	CH65024-470T
	5 1/2"	240	525	CH65524-525T
	6"	240	575	CH66024-575T
	6 1/2"	240	625	CH66524-625T
	7"	240	675	CH67024-675T
	7 1/2"	240	724	CH67524-724T
	8"	240	775	CH68024-775T
8 1/2"	240	835	CH68524-835T	
9"	240	885	CH69024-885T	
9 1/2"	240	940	CH69524-940T	
10"	240	990	CH610024-990T	
1/2" .496" (± .002")	1 3/4"	240	230	CH817524-230T
	2 1/2"	240	280	CH82524-280T
	3"	240	500	CH83024-500T
	3 1/2"	240	420	CH83524-420T
	4"	240	490	CH84024-490T
	4 1/2"	240	550	CH84524-550T
	5"	240	625	CH85024-625T
	5 1/2"	240	700	CH85524-700T
	6"	240	775	CH86024-775T
6 1/2"	240	850	CH86524-850T	

