

ЕЛЕКТРОЛУКС Electrolux

Cartridge Heaters: Low to Medium Watt Density



Applications:

Compressor Crankcase Heating, Copiers, Dies, Food Processing, Glue Pots, Heat Sealing, Hot Melt Adhesive, Labeling, Medical Equipment, Packaging, Photographic Processing, Plastic Molding, Platens, Wax Pots.

Features

- Electrolux Macedonia Precision Cartridge Heaters provide localized heat to restricted work areas requiring close thermal control. Dies, Platens, and a variety of other types of processing equipment are efficiently heated. Closely controlled work temperatures up to 1250°F are obtained by a combination of heater location and proper wattage output.
- Basic designs are readily adaptable to a wide variety of special requirements, sizes, or ratings.
- Maximum surface temperatures up to 1250°F.
- Designations are etched on the sheath to preserve accurate shape.
- Heating elements arranged just beneath outside surface for maximum heat transfer, minimum core temperature and faster heating.
- Where specified, units can be supplied liquid tight.
- Long, trouble free service.

Construction:



1. Heliarc welded end seal.
2. Mica.
3. Series 300 stainless steel sheath of precision dimensions and tolerances for intimate, stable, non-oxidizing contact with cavities machined for them.
4. Element wire situated in close proximity to outside surface for maximum heat transfer and minimum internal temperature while preserving good dielectric qualities.
5. Magnesium oxide packing.
6. Ceramic element support.
7. Ceramic cap.
8. Teflon insulated leads: 1/4" diameter.
Fiberglass leads: 5/16" - 3/4" diameter.
Post terminals: 15/16" - 2 3/8"

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Diameter: 1/8" (.124/.120)				5/32" (.155/.152)			3/16" (.186/.183)		
Maximum Amperage: 2 Not UL/CSA				2 Not UL/CSA			3.5		
Sheath Length	Cat.No.	Min. Watts	Max. Watts	Cat.No.	Min. Watts	Max. Watts	Cat.No.	Min. Watts	Max. Watts
1"	SC12-1	10	15	SC15-1	10	15	SC18-1	10	20
1 1/2"	SC12-1.5	10	25	SC15-1.5	10	25	SC18-1.5	10	32
2"	SC12-2	10	35	SC15-2	10	35	SC18-2	10	44
2 1/2"	SC12-2.5	10	45	SC15-2.5	10	45	SC18-2.5	10	55
3"	SC12-3	10	55	SC15-3	10	55	SC18-3	10	70
3 1/2"	SC12-3.5	10	65	SC15-3.5	10	65	SC18-3.5	10	80
4"	SC12-4	10	75	SC15-4	10	75	SC18-4	10	95
4 1/2"	SC12-4.5	10	85	SC15-4.5	10	85	SC18-4.5	10	107
5"	SC12-5	10	95	SC15-5	10	95	SC18-5	10	120
5/12"	SC12-5.5	10	105	SC15-5.5	10	105	SC18-5.5	10	132
6"	SC12-6	10	115	SC15-6	10	115	SC18-6	10	145
6 1/2"	SC12-6.5	10	125	SC15-6.5	10	125	SC18-6.5	10	157
7"	SC12-7	10	135	SC15-7	10	135	SC18-7	10	170
7 1/2"	SC12-7.5	10	145	SC15-7.5	10	145	SC18-7.5	10	182
8"	SC12-8	10	155	SC15-8	10	155	SC18-8	10	195
8 1/2"	SC12-8.5	10	165	SC15-8.5	10	165	SC18-8.5	10	207
9"	SC12-9	10	175	SC15-9	10	175	SC18-9	10	220
9 1/2"	SC12-9.5	10	185	SC15-9.5	10	185	SC18-9.5	10	232
10"	SC12-10	10	195	SC15-10	10	195	SC18-10	10	245
10 1/2"	SC12-10.5	10	205	SC15-10.5	10	205	SC18-10.5	10	257
11"	SC12-11	10	215	SC15-11	10	215	SC18-11	10	270
11 1/2"	SC12-11.5	10	225	SC15-11.5	10	225	SC18-11.5	10	282
12"	SC12-12	10	235	SC15-12	10	235	SC18-12	10	295
For longer lengths, compute wattage at: 10 watts per linear 1/2"				10 watts per linear 1/2"			12 watts per linear 1/2"		

Wattage

Minimum Wattage

The following table should be used to determine the allowable voltage for low wattage miniature elements:

Size: Length	1/8" Diameter - 5/32" Diameter				3/16" Diameter			
	30v	60v	120v	230v	30v	60v	120v	230v
1"	.6w	2.5w	10w	NA	.8w	3w	12w	NA
1 1/2"	.6w	2.5w	10w	NA	.5w	2w	8w	30w
2"	.5w	2w	8w	27w	.4w	1.5w	6w	22w

NA - Not Available

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Diameter: 1/4" (.249/.245)				5/16" (.311/.307)			3/8" (.374/.370)		
Maximum Amperage: 3.5				6			6		
Sheath Length	Cat.No.	Min. Watts	Max. Watts	Cat.No.	Min. Watts	Max. Watts	Cat.No.	Min. Watts	Max. Watts
1"	SC25-1	10	25	SC32-1	10	35	SC37-1	10	35
1 1/2"	SC25-1.5	10	50	SC32-1.5	10	70	SC37-1.5	10	70
2"	SC25-2	10	75	SC32-2	10	105	SC37-2	10	105
2 1/2"	SC25-2.5	10	100	SC32-2.5	10	140	SC37-2.5	10	140
3"	SC25-3	10	125	SC32-3	10	175	SC37-3	10	175
3 1/2"	SC25-3.5	10	150	SC32-3.5	10	210	SC37-3.5	10	210
4"	SC25-4	10	175	SC32-4	10	245	SC37-4	10	245
4 1/2"	SC25-4.5	10	200	SC32-4.5	10	285	SC37-4.5	10	285
5"	SC25-5	10	225	SC32-5	10	325	SC37-5	10	325
5 1/2"	SC25-5.5	10	250	SC32-5.5	10	360	SC37-5.5	10	360
6"	SC25-6	10	275	SC32-6	10	395	SC37-6	10	395
6 1/2"	SC25-6.5	10	300	SC32-6.5	10	430	SC37-6.5	10	430
7"	SC25-7	10	325	SC32-7	10	465	SC37-7	10	465
7 1/2"	SC25-7.5	10	350	SC32-7.5	10	500	SC37-7.5	10	500
8"	SC25-8	10	375	SC32-8	10	535	SC37-8	10	535
8 1/2"	SC25-8.5	10	400	SC32-8.5	10	570	SC37-8.5	10	570
9"	SC25-9	10	425	SC32-9	10	605	SC37-9	10	605
9 1/2"	SC25-9.5	10	450	SC32-9.5	10	640	SC37-9.5	10	640
10"	SC25-10	10	475	SC32-10	10	675	SC37-10	10	675
10 1/2"	SC25-10.5	10	500	SC32-10.5	10	710	SC37-10.5	10	710
11"	SC25-11	10	525	SC32-11	10	745	SC37-11	10	745
11 1/2"	SC25-11.5	10	550	SC32-11.5	10	780	SC37-11.5	10	780
12"	SC25-12	10	575	SC32-12	10	815	SC37-12	10	815
For longer lengths, compute wattage at:									
25 watts per linear 1/2"				35 watts per linear 1/2"			35 watts per linear 1/2"		

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Diameter: 1/2" (.499/.494)				5/8" (.624/.619)			3/4" (.749/.741)		
Maximum Amperage: 10				10			15		
Sheath Length	Cat.No.	Min. Watts	Max. Watts	Cat.No.	Min. Watts	Max. Watts	Cat.No.	Min. Watts	Max. Watts
1"	SC50-1	10	55	SC62-1	10	60			
1/2"	SC50-1.5	10	100	SC62-1.5	10	120	SC75-1.5	40	140
2"	SC50-2	10	145	SC62-2	10	180	SC75-2	40	210
2 1/2"	SC50-2.5	10	190	SC62-2.5	10	240	SC75-2.5	40	280
3"	SC50-3	10	235	SC62-3	10	300	SC75-3	40	350
3 1/2"	SC50-3.5	10	280	SC62-3.5	10	360	SC75-3.5	40	420
4"	SC50-4	10	325	SC62-4	10	420	SC75-4	40	490
4 1/2"	SC50-4.5	10	370	SC62-4.5	10	480	SC75-4.5	40	560
5"	SC50-5	10	415	SC62-5	10	540	SC75-5	40	630
5 1/2"	SC50-5.5	10	460	SC62-5.5	10	600	SC75-5.5	40	700
6"	SC50-6	10	505	SC62-6	10	660	SC75-6	40	770
6 1/2"	SC50-6.5	10	550	SC62-6.5	10	720	SC75-6.5	40	840
7"	SC50-7	10	595	SC62-7	10	780	SC75-7	40	910
7 1/2"	SC50-7.5	10	640	SC62-7.5	10	840	SC75-7.5	40	980
8"	SC50-8	10	685	SC62-8	10	900	SC75-8	40	1050
8 1/2"	SC50-8.5	10	730	SC62-8.5	10	960	SC75-8.5	40	1120
9"	SC50-9	10	775	SC62-9	10	1020	SC75-9	40	1190
9 1/2"	SC50-9.5	10	820	SC62-9.5	10	1080	SC75-9.5	40	1260
10"	SC50-10	10	865	SC62-10	10	1140	SC75-10	40	1330
10 1/2"	SC50-10.5	10	910	SC62-10.5	10	1200	SC75-10.5	40	1400
11"	SC50-11	10	955	SC62-11	10	1260	SC75-11	40	1470
11 1/2"	SC50-11.5	10	1000	SC62-11.5	10	1320	SC75-11.5	40	1540
12"	SC50-12	10	1045	SC62-12	10	1380	SC75-12	40	1610
For longer lengths, compute wattage at:									
45 watts per linear 1/2"				60 watts per linear 1/2"			70 watts per linear 1/2"		

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Diameter: 15/16" (936/928)				1" (999/991)			1 1/4" (1.249/1.241)		
Maximum Amperage: 25				25			30		
Sheath Length	Cat.No.	Min. Watts	Max. Watts	Cat.No.	Min. Watts	Max. Watts	Cat.No.	Min. Watts	Max. Watts
2"	SC93-2	50	280	SC1.0-2	50	280	SC1.2-2	100	350
2 1/2"	SC93-2.5	50	375	SC1.0-2.5	50	375	SC1.2-2.5	100	470
3"	SC93-3	50	470	SC1.0-3	50	470	SC1.2-3	100	590
3 1/2"	SC93-3.5	50	565	SC1.0-3.5	50	565	SC1.2-3.5	100	710
4"	SC93-4	50	660	SC1.0-4	50	660	SC1.2-4	100	830
4 1/2"	SC93-4.5	50	755	SC1.0-4.5	50	755	SC1.2-4.5	100	950
5"	SC93-5	50	850	SC1.0-5	50	850	SC1.2-5	100	1070
5 1/2"	SC93-5.5	50	945	SC1.0-5.5	50	945	SC1.2-5.5	100	1190
6"	SC93-6	50	1040	SC1.0-6	50	1040	SC1.2-6	100	1310
6 1/2"	SC93-6.5	50	1135	SC1.0-6.5	50	1135	SC1.2-6.5	100	1430
7"	SC93-7	50	1230	SC1.0-7	50	1230	SC1.2-7	100	1550
7 1/2"	SC93-7.5	50	1325	SC1.0-7.5	50	1325	SC1.2-7.5	100	1670
8"	SC93-8	50	1420	SC1.0-8	50	1420	SC1.2-8	100	1790
8 1/2"	SC93-8.5	50	1515	SC1.0-8.5	50	1515	SC1.2-8.5	100	1910
9"	SC93-9	50	1610	SC1.0-9	50	1610	SC1.2-9	100	2030
9 1/2"	SC93-9.5	50	1705	SC1.0-9.5	50	1705	SC1.2-9.5	100	2150
10"	SC93-10	50	1800	SC1.0-10	50	1800	SC1.2-10	100	2270
10 1/2"	SC93-10.5	50	1895	SC1.0-1.5	50	1895	SC1.2-10.5	100	2390
11"	SC93-11	50	1990	SC1.0-11	50	1990	SC1.2-11	100	2510
11 1/2"	SC93-11.5	50	2085	SC1.0-11.5	50	2085	SC1.2-11.5	100	2630
12"	SC93-12	50	2180	SC1.0-12	50	2180	SC1.2-12	100	2750
For longer lengths, compute wattage at:									
95 watts per linear 1/2"				95 watts per linear 1/2"			120 watts per linear 1/2"		

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Diameter: 1.90" (1.890/1.910)				2 3/8" (2.365/2.385)		
Maximum Amperage: 40				40		
Sheath Length	Cat.No.	Min. Watts	Max. Watts	Cat.No.	Min. Watts	Max. Watts
6"	SC1.9-6	500	1400			
7"	SC1.9-7	500	1700			
8"	SC1.9-8	500	1960	SC2.3-8	500	2300
9"	SC1.9-9	500	2240	SC2.3-9	500	2650
10"	SC1.9-10	500	2500	SC2.3-10	500	3000
12"	SC1.9-12	500	3100	SC2.3-12	500	3630
14"	SC1.9-14	500	3650	SC2.3-14	500	4300
16"	SC1.9-16	500	4200	SC2.3-16	500	5000
18"	SC1.9-18	500	4750	SC2.3-18	500	5600
20"	SC1.9-20	500	5300	SC2.3-20	500	6270
22"	SC1.9-22	500	5900	SC2.3-22	500	6930
24"	SC1.9-24	500	6450	SC2.3-24	500	7600
26"	SC1.9-26	500	7000	SC2.3-26	500	8250
28"	SC1.9-28	500	7550	SC2.3-28	500	8900
30"	SC1.9-30	500	8100	SC2.3-30	500	9570
32"	SC1.9-32	500	8700	SC2.3-32	500	10250
34"	SC1.9-34	500	9250	SC2.3-34	500	10900
36"	SC1.9-36	500	9800	SC2.3-36	500	11550
38"	SC1.9-38	500	10350	SC2.3-38	500	12200
40"	SC1.9-40	500	10900	SC2.3-40	500	12870
42"	SC1.9-42	500	11500	SC2.3-42	500	13530
44"	SC1.9-44	500	12000	SC2.3-44	500	14200
46"	SC1.9-46	500	12600	SC2.3-46	500	14850
48"	SC1.9-48	500	13200	SC2.3-48	500	15500
For longer lengths, compute wattage at: 280 watts per linear 1"				330 watts per linear 1"		

Wattage

The maximum wattage's listed are computed at 60 watts per square inch of heated surface. With proper fit in a heat sink, long life may be expected at this watt density. Consult factory for higher watt density applications. Lower watt density will result in longer life. Any wattage within standard limits may be ordered without affecting price.

Voltage

Standard voltages are either 120V or 240V (subject to limits above). Lower voltages are available.

Termination

All units up to 15/16" diameter, within published amperage limits, are manufactured with 6" (type SF1) leads, longer length leads are available. Standard insulation on 1/4" units is Teflon (200°C); Fiberglass (250°C) is standard on units 5/16" diameter and larger. All units 15/16" and larger are manufactured with post terminals (type SF-3). Optional Type SF1 leads are available. Stock units supplied with 12" leads.

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Tolerances

Wattage tolerances are held to +5%, -10% at rated voltage. Diameter is always .001" less, but not more than .009" less, than the nominal (fractional) heater diameter except for 1.90" and 2 3/8" diameters. This sizing is maintained so that all units are a slide fit into a standard reamed hole of the size ordered. Thermal action will expand the unit to a snug fit for best heat conduction. If close hole tolerances are not maintained, operating life may be drastically reduced. See specific heater size for exact tolerances. Length tolerances are $\pm 2\%$ with a 1/16" minimum. Consult factory for closer tolerances.