



Cartridge Heaters

Low to Medium Watt Density

U.L. Recognized – E56973
C.S.A. Certified 016386-0-000

CARTRIDGE



Applications:

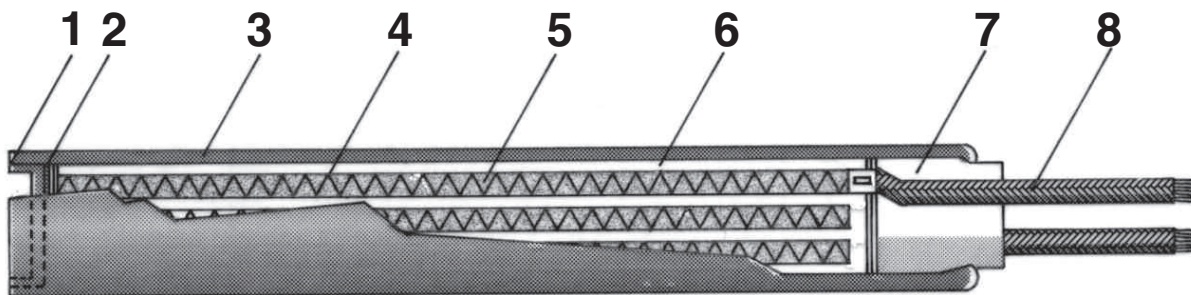
Compressor Crankcase Heating, Copiers, Dies, Food Processing, Glue Pots, Heat Sealing, Hot Melt Adhesive, Labeling, Medical Equipment, Packaging, Photographic Processing, Plastic Molding, Platens, Wax Pots.

Features:

- Hotwatt Precision Cartridge Heaters provided 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 (677°C).
- 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.
- Made in U.S.A.
- 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: ¼" diameter
Fiberglass leads: ⅜" – ¾" diameter
Post terminals: ⅛" – 2⅜"





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▼ **Manufactured Items** ▼

Round

| 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 | 105 |
| 5" | SC12-5 | 10 | 95 | SC15-5 | 10 | 95 | SC18-5 | 10 | 120 |
| 5 1/2" | 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"**

• Lengths longer than those listed may be ordered.

Wattage

Minimum Wattage

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

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

NA-Not Available

▼ **IN STOCK ITEMS** ▼

Diameter: 1/8"

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|----------|-------|-------|---------------------------------|----------------------|
| 1" | SC12-1 | 10 | 120 | 35 | .01 |
| 1" | SC12-1 | 15 | 120 | 50 | .01 |
| 1 1/2" | SC12-1.5 | 20 | 120 | 40 | .03 |
| 1 1/2" | SC12-1.5 | 25 | 120 | 50 | .03 |
| 2" | SC12-2 | 35 | 120 | 50 | .06 |

Diameter: 5/32"

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|----------|-------|-------|---------------------------------|----------------------|
| 1" | SC15-1 | 10 | 120 | 25 | .05 |
| 1 1/2" | SC15-1.5 | 20 | 120 | 35 | .07 |
| 2" | SC15-2 | 35 | 120 | 40 | .09 |

Diameter: 3/16"

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|----------|-------|-------|---------------------------------|----------------------|
| 1 1/2" | SC18-1.5 | 30 | 120 | 40 | .07 |
| 2" | SC18-2 | 35 | 120 | 35 | .09 |
| 3" | SC18-3 | 65 | 120 | 40 | .11 |
| 4" | SC18-4 | 90 | 120 | 40 | .13 |
| 4" | SC18-4 | 60 | 120 | 25 | .13 |
| 4" | SC18-4 | 100 | 120 | 45 | .13 |



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CARTRIDGE
Manufactured Items

| Diameter: | | ¼" (.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 |
| 1½" | 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 |
| 2½" | 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 |
| 3½" | 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 |
| 4½" | 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 |
| 5½" | 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 |
| 6½" | 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 |
| 7½" | 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 |
| 8½" | 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 |
| 9½" | 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 |
| 10½" | 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 |
| 11½" | 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 ½"**
 • Lengths longer than those listed may be ordered.

35 watts per linear ½"

35 watts per linear ½"

IN STOCK ITEMS

Diameter: ¼"

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|-----------|-------|-------|---------------------------------|----------------------|
| 1" | SC25-1 | 20 | 120 | 35 | .01 |
| 1¼" | SC25-1.25 | 20 | 120 | 25 | .01 |
| 1½" | SC25-1.5 | 7 | 120 | 7 | .02 |
| 1½" | SC25-1.5 | 12 | 120 | 12 | .02 |
| 1½" | SC25-1.5 | 30 | 120 | 30 | .02 |
| 1½" | SC25-1.5 | 30 | 240 | 30 | .02 |
| 1½" | SC25-1.5 | 50 | 120 | 50 | .02 |
| 1½" | SC25-1.5 | 50 | 240 | 50 | .02 |
| 2" | SC25-2 | 12 | 120 | 9 | .03 |
| 2" | SC25-2 | 50 | 120 | 35 | .03 |
| 2" | SC25-2 | 50 | 240 | 35 | .03 |
| 2¼" | SC25-2.25 | 20 | 120 | 12 | .03 |
| 2¼" | SC25-2.25 | 75 | 240 | 50 | .03 |
| 2½" | SC25-2.5 | 20 | 120 | 9 | .04 |
| 2½" | SC25-2.5 | 65 | 120 | 35 | .04 |
| 2½" | SC25-2.5 | 65 | 240 | 35 | .04 |

Diameter: ¼" (continued)

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|----------|-------|-------|---------------------------------|----------------------|
| 3" | SC25-3 | 25 | 120 | 11 | .05 |
| 3" | SC25-3 | 100 | 240 | 45 | .05 |
| 3½" | SC25-3.5 | 25 | 120 | 9 | .06 |
| 3½" | SC25-3.5 | 90 | 120 | 35 | .06 |
| 3½" | SC25-3.5 | 90 | 240 | 35 | .06 |
| 4" | SC25-4 | 25 | 120 | 10 | .07 |
| 4" | SC25-4 | 110 | 120 | 40 | .07 |
| 4" | SC25-4 | 110 | 240 | 40 | .07 |
| 4½" | SC25-4.5 | 25 | 120 | 7 | .08 |
| 4½" | SC25-4.5 | 110 | 120 | 30 | .08 |
| 4½" | SC25-4.5 | 110 | 240 | 30 | .08 |
| 7" | SC25-7 | 40 | 120 | 8 | .12 |
| 7" | SC25-7 | 150 | 120 | 29 | .12 |
| 7" | SC25-7 | 150 | 240 | 29 | .12 |



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▼ IN STOCK ITEMS (Continued) ▼

Diameter: $\frac{3}{8}$ "

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|----------|-------|-------|------------------------------------|----------------------------|
| 1" | SC37-1 | 30 | 120 | 40 | .04 |
| 1½" | SC37-1.5 | 10 | 120 | 5 | .07 |
| 1½" | SC37-1.5 | 30 | 120 | 20 | .07 |
| 1½" | SC37-1.5 | 30 | 240 | 20 | .07 |
| 1½" | SC37-1.5 | 50 | 120 | 40 | .07 |
| 1½" | SC37-1.5 | 50 | 240 | 40 | .07 |
| 2" | SC37-2 | 15 | 120 | 9 | .09 |
| 2" | SC37-2 | 70 | 120 | 35 | .09 |
| 2" | SC37-2 | 70 | 240 | 35 | .09 |
| 2" | SC37-2 | 100 | 120 | 50 | .09 |
| 2½" | SC37-2.5 | 25 | 120 | 10 | .12 |
| 2½" | SC37-2.5 | 100 | 120 | 40 | .12 |
| 2½" | SC37-2.5 | 100 | 240 | 40 | .12 |
| 3" | SC37-3 | 20 | 120 | 6 | .15 |
| 3" | SC37-3 | 75 | 120 | 25 | .15 |
| 3" | SC37-3 | 75 | 240 | 25 | .15 |
| 3½" | SC37-3.5 | 40 | 120 | 12 | .18 |
| 3½" | SC37-3.5 | 150 | 120 | 50 | .18 |
| 3½" | SC37-3.5 | 150 | 240 | 50 | .18 |
| 4" | SC37-4 | 20 | 120 | 5 | .20 |
| 4" | SC37-4 | 55 | 120 | 12 | .20 |
| 4" | SC37-4 | 75 | 240 | 20 | .20 |
| 4" | SC37-4 | 220 | 120 | 50 | .20 |
| 4" | SC37-4 | 220 | 240 | 50 | .20 |
| 4½" | SC37-4.5 | 60 | 120 | 12 | .23 |
| 4½" | SC37-4.5 | 250 | 120 | 50 | .23 |
| 4½" | SC37-4.5 | 250 | 240 | 50 | .23 |
| 5" | SC37-5 | 70 | 120 | 12 | .27 |
| 5" | SC37-5 | 280 | 120 | 50 | .27 |
| 5" | SC37-5 | 280 | 240 | 50 | .27 |
| 5½" | SC37-5.5 | 25 | 120 | 4 | .31 |
| 5½" | SC37-5.5 | 100 | 240 | 15 | .31 |
| 6" | SC37-6 | 90 | 120 | 12 | .36 |
| 6" | SC37-6 | 350 | 120 | 50 | .36 |
| 6" | SC37-6 | 350 | 240 | 50 | .36 |
| 8" | SC37-8 | 125 | 120 | 14 | .16 |
| 8" | SC37-8 | 500 | 120 | 58 | .16 |
| 8" | SC37-8 | 500 | 240 | 58 | .18 |
| 9" | SC37-9 | 140 | 120 | 14 | .18 |
| 9" | SC37-9 | 550 | 120 | 55 | .18 |
| 9" | SC37-9 | 550 | 240 | 55 | .18 |
| 10" | SC37-10 | 100 | 120 | 9 | .20 |
| 10" | SC37-10 | 400 | 120 | 36 | .20 |
| 10" | SC37-10 | 400 | 240 | 36 | .20 |
| 12" | SC37-12 | 150 | 120 | 11 | .22 |
| 12" | SC37-12 | 600 | 120 | 45 | .22 |
| 12" | SC37-12 | 600 | 240 | 45 | .22 |

CARTRIDGE



Cartridge Heaters

Low to Medium Watt Density

CARTRIDGE

| ▼ Manufactured Items ▼ | | | | | | | | | | |
|------------------------|-----------|----------------|------------|-----------|----------------|------------|-----------|----------------|------------|--|
| Diameter: | | ½" (.499/.494) | | | ⅝" (.624/.619) | | | ¾" (.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 | | | | |
| 1½" | 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 | |
| 2½" | 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 | |
| 3½" | 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 | |
| 4½" | 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 | |
| 5½" | 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 | |
| 6½" | 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 | |
| 7½" | 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 | |
| 8½" | 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 | |
| 9½" | 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 | |
| 10½" | 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 | |
| 11½" | 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 ½"**
• Lengths longer than those listed may be ordered.

60 watts per linear ½"

70 watts per linear ½"

▼ IN STOCK ITEMS ▼

| Diameter: ½" | | | | | | Diameter: ½" (continued) | | | | | |
|--------------|----------|-------|-------|---------------------------------|----------------------|--------------------------|---------|-------|-------|---------------------------------|----------------------|
| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) | Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
| 1½" | SC50-1.5 | 18 | 120 | 12 | .07 | 4" | SC50-4 | 275 | 120 | 50 | .23 |
| 1½" | SC50-1.5 | 75 | 120 | 50 | .07 | 4" | SC50-4 | 275 | 240 | 50 | .23 |
| 1½" | SC50-1.5 | 75 | 240 | 50 | .07 | 5" | SC50-5 | 85 | 120 | 12 | .27 |
| 1½" | SC50-1.5 | 90 | 120 | 60 | .07 | 5" | SC50-5 | 350 | 120 | 50 | .27 |
| 2" | SC50-2 | 30 | 120 | 12 | .11 | 5" | SC50-5 | 350 | 240 | 50 | .27 |
| 2" | SC50-2 | 120 | 120 | 50 | .11 | 6" | SC50-6 | 110 | 120 | 12 | .33 |
| 2" | SC50-2 | 120 | 240 | 50 | .11 | 6" | SC50-6 | 425 | 120 | 50 | .33 |
| 2½" | SC50-2.5 | 40 | 120 | 12 | .14 | 6" | SC50-6 | 425 | 240 | 50 | .33 |
| 2½" | SC50-2.5 | 80 | 120 | 25 | .14 | 7" | SC50-7 | 135 | 120 | 14 | .48 |
| 2½" | SC50-2.5 | 150 | 120 | 50 | .14 | 7" | SC50-7 | 550 | 120 | 55 | .48 |
| 2½" | SC50-2.5 | 150 | 240 | 50 | .14 | 7" | SC50-7 | 550 | 240 | 55 | .48 |
| 3" | SC50-3 | 50 | 120 | 12 | .17 | 8" | SC50-8 | 160 | 120 | 14 | .53 |
| 3" | SC50-3 | 200 | 120 | 50 | .17 | 8" | SC50-8 | 650 | 120 | 55 | .53 |
| 3" | SC50-3 | 200 | 240 | 50 | .17 | 8" | SC50-8 | 650 | 240 | 55 | .53 |
| 4" | SC50-4 | 70 | 120 | 12 | .23 | 10" | SC50-10 | 210 | 120 | 14 | .62 |



Cartridge Heaters

Low to Medium Watt Density

▼ IN STOCK ITEMS (Continued) ▼

Diameter: 1/2" (continued)

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|---------|-------|-------|---------------------------------|----------------------|
| 10" | SC50-10 | 850 | 120 | 55 | .62 |
| 10" | SC50-10 | 850 | 240 | 55 | .62 |
| 12" | SC50-12 | 250 | 120 | 14 | .69 |
| 12" | SC50-12 | 1000 | 120 | 55 | .69 |
| 12" | SC50-12 | 1000 | 240 | 55 | .69 |
| 14" | SC50-14 | 250 | 120 | 12 | .48 |
| 14" | SC50-14 | 1000 | 240 | 48 | .48 |
| 16" | SC50-16 | 250 | 120 | 10 | .52 |
| 16" | SC50-16 | 1000 | 240 | 41 | .52 |
| 18" | SC50-18 | 300 | 120 | 11 | .57 |
| 18" | SC50-18 | 1200 | 240 | 44 | .57 |
| 24" | SC50-24 | 450 | 120 | 12 | 1.34 |
| 24" | SC50-24 | 1800 | 240 | 49 | 1.34 |

Diameter: 5/8"

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|----------|-------|-------|---------------------------------|----------------------|
| 2 1/2" | SC62-2.5 | 20 | 120 | 5 | .15 |
| 2 1/2" | SC62-2.5 | 50 | 120 | 12 | .15 |
| 2 1/2" | SC62-2.5 | 75 | 240 | 20 | .15 |
| 2 1/2" | SC62-2.5 | 200 | 120 | 50 | .15 |
| 2 1/2" | SC62-2.5 | 200 | 240 | 50 | .15 |
| 3" | SC62-3 | 65 | 120 | 12 | .21 |
| 3" | SC62-3 | 250 | 120 | 50 | .21 |
| 3" | SC62-3 | 250 | 240 | 50 | .21 |
| 3 1/2" | SC62-3.5 | 75 | 120 | 12 | .25 |
| 3 1/2" | SC62-3.5 | 300 | 120 | 50 | .25 |
| 3 1/2" | SC62-3.5 | 300 | 240 | 50 | .25 |
| 3 1/2" | SC62-3.5 | 350 | 120 | 60 | .25 |
| 4" | SC62-4 | 90 | 120 | 12 | .29 |
| 4" | SC62-4 | 350 | 120 | 50 | .29 |
| 4" | SC62-4 | 350 | 240 | 50 | .29 |
| 5" | SC62-5 | 115 | 120 | 12 | .35 |
| 5" | SC62-5 | 450 | 120 | 50 | .35 |
| 5" | SC62-5 | 450 | 240 | 50 | .35 |
| 6" | SC62-6 | 100 | 120 | 7 | .44 |
| 6" | SC62-6 | 135 | 120 | 123 | .44 |
| 6" | SC62-6 | 350 | 120 | 30 | .44 |
| 6" | SC62-6 | 400 | 240 | 30 | .44 |
| 6" | SC62-6 | 540 | 120 | 50 | .44 |
| 6" | SC62-6 | 540 | 240 | 50 | .44 |
| 7" | SC62-7 | 160 | 120 | 12 | .57 |
| 7" | SC62-7 | 635 | 120 | 50 | .57 |
| 7" | SC62-7 | 635 | 240 | 50 | .57 |
| 8" | SC62-8 | 190 | 120 | 12 | .55 |
| 8" | SC62-8 | 750 | 120 | 57 | .55 |
| 8" | SC62-8 | 750 | 240 | 57 | .55 |
| 9" | SC62-9 | 235 | 120 | 14 | .63 |

Diameter: 5/8" (continued)

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|---------|-------|-------|---------------------------------|----------------------|
| 9" | SC62-9 | 950 | 120 | 55 | .63 |
| 9" | SC62-9 | 950 | 240 | 55 | .63 |
| 10" | SC62-10 | 250 | 120 | 53 | .68 |
| 10" | SC62-10 | 1000 | 120 | 53 | .68 |
| 10" | SC62-10 | 1000 | 240 | 53 | .68 |
| 12" | SC62-12 | 300 | 120 | 12 | .75 |
| 12" | SC62-12 | 1200 | 240 | 53 | .75 |
| 18" | SC62-18 | 375 | 120 | 11 | 1.03 |
| 18" | SC62-18 | 1500 | 240 | 44 | 1.03 |
| 20" | SC62-20 | 375 | 120 | 10 | 1.25 |
| 20" | SC62-20 | 1500 | 240 | 40 | 1.25 |
| 24" | SC62-24 | 500 | 120 | 11 | 1.47 |
| 24" | SC62-24 | 625 | 120 | 14 | 1.47 |
| 24" | SC62-24 | 2000 | 240 | 44 | 1.47 |
| 24" | SC62-24 | 2500 | 240 | 65 | 1.47 |

Diameter: 3/4"

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|----------|-------|-------|---------------------------------|----------------------|
| 2 1/2" | SC75-2.5 | 60 | 120 | 12 | .21 |
| 2 1/2" | SC75-2.5 | 230 | 120 | 50 | .21 |
| 2 1/2" | SC75-2.5 | 230 | 240 | 50 | .21 |
| 3 1/2" | SC75-3.5 | 90 | 120 | 12 | .29 |
| 3 1/2" | SC75-3.5 | 350 | 120 | 50 | .29 |
| 3 1/2" | SC75-3.5 | 350 | 240 | 50 | .29 |
| 3 1/2" | SC75-3.5 | 350 | 120 | 60 | .25 |
| 5" | SC75-5 | 125 | 120 | 12 | .43 |
| 5" | SC75-5 | 500 | 120 | 50 | .43 |
| 5" | SC75-5 | 500 | 240 | 50 | .43 |
| 6" | SC75-6 | 160 | 120 | 12 | .49 |
| 6" | SC75-6 | 650 | 120 | 50 | .49 |
| 6" | SC75-6 | 650 | 240 | 50 | .49 |
| 7" | SC75-7 | 190 | 120 | 12 | .57 |
| 7" | SC75-7 | 760 | 120 | 50 | .57 |
| 7" | SC75-7 | 760 | 240 | 50 | .57 |
| 8" | SC75-8 | 220 | 120 | 12 | .70 |
| 8" | SC75-8 | 750 | 120 | 40 | .70 |
| 8" | SC75-8 | 885 | 120 | 50 | .70 |
| 8" | SC75-8 | 885 | 240 | 50 | .70 |
| 10" | SC75-10 | 275 | 120 | 11 | .80 |
| 10" | SC75-10 | 1100 | 240 | 45 | .80 |
| 12" | SC75-12 | 325 | 120 | 11 | .92 |
| 12" | SC75-12 | 1300 | 240 | 45 | .92 |
| 14" | SC75-14 | 315 | 120 | 10 | 1.03 |
| 14" | SC75-14 | 625 | 120 | 20 | 1.03 |
| 14" | SC75-14 | 1250 | 120 | 40 | 1.03 |
| 16" | SC75-16 | 450 | 120 | 12 | 1.14 |
| 16" | SC75-16 | 1800 | 240 | 49 | 1.14 |

CARTRIDGE



Cartridge Heaters

Low to Medium Watt Density

CARTRIDGE

▼ IN STOCK ITEMS (Continued) ▼

Diameter: 3/4" (continued)

| Length | Cat.No. | Watts | Volts | Watt Density w/in. ² | Approx. Wght. (lbs.) |
|--------|---------|-------|-------|------------------------------------|----------------------------|
| 18" | SC75-18 | 500 | 120 | 12 | 1.25 |
| 18" | SC75-18 | 2000 | 240 | 49 | 1.25 |
| 20" | SC75-20 | 565 | 120 | 12 | 1.40 |
| 20" | SC75-20 | 2250 | 240 | 49 | 1.40 |
| 24" | SC75-24 | 595 | 120 | 11 | 1.50 |
| 24" | SC75-24 | 690 | 120 | 13 | 1.50 |
| 24" | SC75-24 | 2375 | 240 | 43 | 1.50 |
| 24" | SC75-24 | 2750 | 240 | 50 | 1.50 |
| 36" | SC75-36 | 625 | 120 | 8 | 2.05 |
| 36" | SC75-36 | 2500 | 240 | 36 | 2.05 |

▼ Manufactured Items ▼

| 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 | SC1.0-10.5 | 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"



Cartridge Heaters

Low to Medium Watt Density

CARTRIDGE

▼ Manufactured Items ▼

| 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"**
 • Lengths longer than those listed may be ordered.

Wattage

The maximum wattages listed are computed at 60 watts per square inch of heated surface. With proper fit in a heat sink, long life can 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 1 5/8" 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 3/8" in diameter and larger. All units 1 5/8" and larger are manufactured with post terminals (type SF-3). Optional Type SF1 leads are available. Stock units supplied with 12" leads.

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 ±2% with a 1/16" minimum. Consult factory for closer tolerances.

How to Order

After determining the wattage required and the line voltage available, determine the physical space available for heaters and the number of heaters required. Review Stock lists for In-Stock Items. Review Special Features, see page 22-27. **Specify:** catalog number, wattage, voltage, lead type, and special features, if required. **Example:** SC62-8.5/600W240V/SF1-16/SF14-10