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Find the *OMEGA CSH-202150/120V* at our website: ***Click HERE***

STAINLESS STEEL SHEATH CARTRIDGE HEATERS

Standard and High Watt Density Construction

CSS Series Starts at **$16**

MADE IN USA · 1 YEAR WARRANTY



CSS-102100/120, $20, shown larger than actual size

CSH-201100/120, $23, shown larger than actual size

Diameters as small as 3.2 mm (⅛")

- Stainless Steel Sheath
- CSH Series: Sheath Temperatures to 760°C (1400°F)
- CSS Series: Sheath Temperature to 677°C (1250°F)
- 3.2 to 19 mm (⅛ to ¾") Diameters
- 120V and 240V
- UL Recognized (E56973)
- CSA Certified (LR-16386)

APPLICATIONS

- Dies
- Molds
- Platens
- Heat Sealing
- Labeling
- Packaging
- Hot Melt Adhesive Machinery

OMEGALUX® CS Series cartridge heaters provide high wattage in limited spaces. They are manufactured with 300 Series stainless steel sheaths to precise dimensions and tolerances to ensure maximum heat transfer for minimum core temperature and faster heating. The CSS Series cartridge heaters feature an economical design of coiled resistance elements and ceramic cores and can be used whenever a high watt density is not required. The CSH Series consists of high watt density cartridge heaters that feature a swaged construction, which allows for longer life at higher temperatures. See next page for the maximum recommended watt density when selecting the high watt density CSH Series cartridge heaters.

CSS and CSH Series cartridge heaters are designed to fit holes drilled and reamed to the nominal diameter of the heater. The hole should be reamed to the fractional size with a +0.025 mm (0.001") tolerance.

SPECIFICATIONS

Lead Length: 150 mm L (6")

Lead Insulation:
CSH Series:
Fiberglass, rated to 250°C (482°F)
CSS Series:
Heater dia. of 6.4 mm (¼") and smaller: PFA, rated to 200°C (392°F)
Heater Dia. of 7.9 mm (5⁄16") and larger: Fiberglass, rated to 250°C (482°F)

Wattage Tolerance:
5 to -10% at rated voltage

Diameter Tolerance:
From 0.025 to 0.229 mm (0.001 to 0.009") less the nominal diameter in inches

Length Tolerance: ±2% or ±1.6 mm (1⁄16"), whichever is greater

Camber Tolerance:
1.7 mm/m (0.020"/ft) of length for units up to 305 mm (12") L

Sheath Material:
300 Series stainless steel

To Order, Call 1-800-872-4328® 1-800-USA-HEAT or Shop Online at omega.com℠

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3.18 mm (⅛") Diameter CSS Series Cartridge Heaters (Actual Dia: 0.124 to 0.120")

To Order *(Specify Model Number)*

Length mm (in)	Watts	W/in²	Model Number	Weight g (lb)	Price
25 (1.00)	10	35	CSS-01110/120	5 (0.01)	$36
25 (1.00)	15	50	CSS-01115/120	5 (0.01)	36
38 (1.50)	20	40	CSS-01120/120	14 (0.03)	40
38 (1.50)	25	50	CSS-01125/120	14 (0.03)	40
51 (2.00)	35	50	CSS-01235/120	27 (0.06)	42

4 mm (5⁄32") Diameter CSS Series Cartridge Heaters (Actual Dia: 0.155 to 0.152")

To Order *(Specify Model Number)*

Length mm (in)	Watts	W/in²	Model Number	Weight g (lb)	Price
25 (1.00)	10	25	CSS-02110/120	23 (0.05)	$27
38 (1.50)	20	35	CSS-02120/120	32 (0.07)	28
51 (2.00)	35	40	CSS-02235/120	41 (0.09)	29

4.76 mm (3⁄16") Diameter CSS Series Cartridge Heater (Actual Dia: 0.186 to 0.183")

To Order *(Specify Model Number)*

Length mm (in)	Watts	W/in²	Model Number	Weight g (lb)	Price
38 (1.50)	30	40	CSS-03130/120	32 (0.07)	$20
51 (2.00)	35	35	CSS-03235/120	41 (0.09)	22
76 (3.00)	65	40	CSS-03365/120	50 (0.11)	25
102 (4.00)	90	40	CSS-03490/120	59 (0.13)	27
102 (4.00)	60	25	CSS-03460/120	59 (0.13)	27
102 (4.00)	100	45	CSS-034100/120	59 (0.13)	27

6.35 mm (¼") Diameter CSS and CSH Series Cartridge Heaters (Actual Dia: 0.249 to 0.245")

To Order *(Specify Model Number)*

Length mm (in)	Watts	W/in²	Model Number	Weight g (lb)	Price
25 (1.00)	20	35	CSS-10120/120	5 (0.01)	$16
25 (1.00)	100	250	CSH-101100/120	9 (0.02)	22
32 (1.25)	20	25	CSS-101201/120	5 (0.01)	17
32 (1.25)	100	165	CSH-1011001/120	9 (0.02)	22
38 (1.50)	30	30	CSS-10130/*	9 (0.02)	17
38 (1.50)	50	50	CSS-10150/*	9 (0.02)	17
38 (1.50)	70	85	CSH-10170/120	9 (0.02)	22
38 (1.50)	120	150	CSH-101120/120	9 (0.02)	22
51 (2.00)	50	35	CSS-10250/120	14 (0.03)	17
51 (2.00)	100	85	CSH-102100/120	14 (0.03)	24
51 (2.00)	150	125	CSH-102150/120	14 (0.03)	24
64 (2.50)	65	35	CSS-10265/*	18 (0.04)	19
64 (2.50)	135	85	CSH-102135/120	14 (0.03)	25
64 (2.50)	185	115	CSH-102185/120	14 (0.03)	25
76 (3.00)	100	45	CSS-103100/240	23 (0.05)	20
76 (3.00)	170	90	CSH-103170/120	18 (0.04)	27
76 (3.00)	220	115	CSH-103220/120	18 (0.04)	27

More 6.35 mm (¼") diameter CSS and CSH Series cartridge heaters at top right, this page.
** Insert "**120**" or "**240**" to indicate desired operating voltage.*

6.35 mm (¼") Diameter CSS and CSH Series Cartridge Heaters *(cont.)*

MOST POPULAR MODELS HIGHLIGHTED!

To Order *(Specify Model Number)*

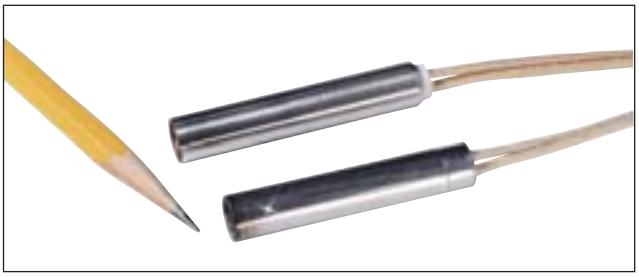
Length mm (in)	Watts	W/in²	Model Number	Weight g (lb)	Price
89 (3.50)	90	35	CSS-10390/*	27 (0.06)	$20
89 (3.50)	200	85	CSH-103200/*	18 (0.04)	27
89 (3.50)	260	110	CSH-103260/*	18 (0.04)	27
102 (4.00)	110	40	CSS-104110/*	32 (0.07)	21
102 (4.00)	235	85	CSH-104235/*	18 (0.04)	29
102 (4.00)	300	110	CSH-104300/*	18 (0.04)	29
102 (4.00)	400	150	CSH-104400/*	18 (0.04)	29
114 (4.50)	70	21	CSH-10470/120	23 (0.05)	30
114 (4.50)	110	30	CSS-1041101/*	36 (0.08)	23
114 (4.50)	270	85	CSH-104270/*	23 (0.05)	30
114 (4.50)	350	110	CSH-104350/*	23 (0.05)	30
127 (5.00)	305	85	CSH-105305/*	27 (0.06)	36
127 (5.00)	400	115	CSH-105400/*	27 (0.06)	36
178 (7.00)	150	30	CSS-107150/120	54 (0.12)	28

9.53 mm (⅜") Diameter CSS and CSH Series Cartridge Heaters (Actual Dia: 0.374 to 0.370")

To Order *(Specify Model Number)*

Length mm (in)	Watts	W/in²	Model Number	Weight g (lb)	Price
25 (1.00)	30	40	CSS-20130/120	18 (0.04)	$17
25 (1.00)	100	165	CSH-201100/120	18 (0.04)	23
32 (1.25)	100	110	CSH-2011001/120	18 (0.04)	23
32 (1.25)	150	165	CSH-201150/120	18 (0.04)	23
38 (1.50)	50	40	CSS-20150/*	32 (0.07)	17
38 (1.50)	150	125	CSH-2015150/120	23 (0.05)	23
38 (1.50)	200	105	CSH-201200/*	23 (0.05)	23
51 (2.00)	70	35	CSS-20270/*	41 (0.09)	18
51 (2.00)	100	50	CSS-202100/120	41 (0.09)	18
51 (2.00)	150	85	CSH-202150/*	27 (0.06)	25
51 (2.00)	200	110	CSH-202200/*	27 (0.06)	25
51 (2.00)	250	135	CSH-202250/*	27 (0.06)	25
64 (2.50)	100	40	CSS-2021001/*	54 (0.12)	19
64 (2.50)	200	85	CSH-202200/120	32 (0.07)	25

More 9.53 mm (⅜") diameter CSS and CSH Series cartridge heaters on following page.
Ordering Example: CSS-01120/120**, 3.18 mm (⅛") diameter cartridge heater, 120 Vac, **$40.
Ordering Example: CSH-103220/120**, 6.35 mm (¼") diameter cartridge heater, 120 Vac, **$27.



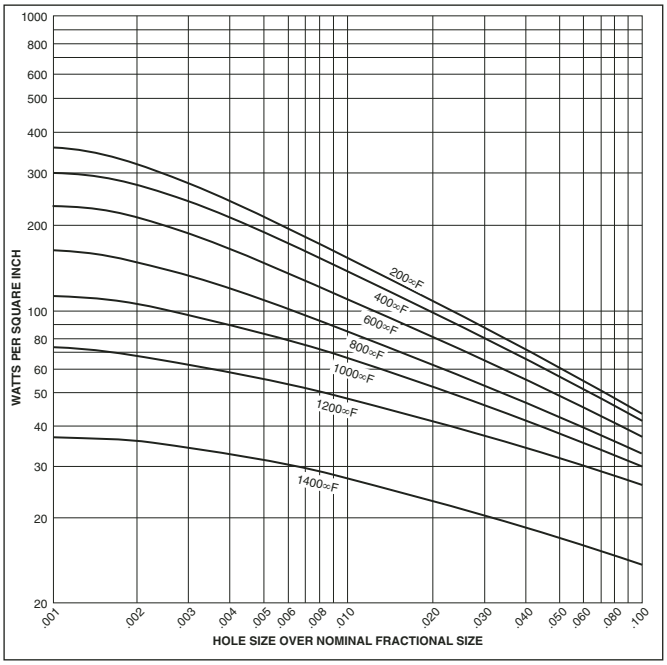
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9.53 mm (⅜") Diameter CSS and CSH Series Cartridge Heaters (*continued from page 71*)

To Order *(Specify Model Number)*

Length mm (in)	Watts	W/in²	Model Number	Weight g (lb)	Price
64 (2.50)	300	125	CSH-202300/*	32 (0.07)	$26
76 (3.00)	75	25	CSS-20375/*	68 (0.15)	20
76 (3.00)	250	85	CSH-203250/*	36 (0.08)	27
76 (3.00)	400	135	CSH-203400/*	36 (0.08)	27
89 (3.50)	150	50	CSS-203150/*	82 (0.18)	20
89 (3.50)	300	85	CSH-203300/*	41 (0.09)	28
89 (3.50)	450	130	CSH-203450/120	82 (0.18)	28
102 (4.00)	75	20	CSS-20475/120	91 (0.20)	23
102 (4.00)	220	50	CSS-204220/*	91 (0.20)	23
102 (4.00)	350	85	CSH-204350/*	45 (0.10)	29
102 (4.00)	500	120	CSH-204500/*	45 (0.10)	29
114 (4.50)	250	50	CSS-204250/*	104 (0.23)	23
127 (5.00)	280	50	CSS-205280/*	122 (0.27)	24
127 (5.00)	500	95	CSH-205500/*	50 (0.11)	33
140 (5.50)	100	15	CSS-205100/240	141 (0.31)	26
152 (6.00)	350	50	CSS-206350/*	163 (0.36)	27
152 (6.00)	600	90	CSH-206600/*	59 (0.13)	37

** Insert **"120"** or **"240"** to indicate desired operating voltage.*



Maximum watts per square inch with various increasing temperatures and hole tolerances

12.7 mm (½") Diameter CSS and CSH Series Cartridge Heaters (Actual Dia: 0.499 to 0.494")

MOST POPULAR MODELS HIGHLIGHTED!

To Order *(Specify Model Number)*

Length mm (in)	Watts	W/in²	Model Number	Weight g (lb)	Price
38 (1.50)	75	50	CSS-30175/*	32 (0.07)	$18
38 (1.50)	90	60	CSS-30190/120	32 (0.07)	18
38 (1.50)	135	85	CSH-301135/*	32 (0.07)	24
38 (1.50)	335	210	CSH-301335/120	32 (0.07)	24
51 (2.00)	120	50	CSS-302120/*	50 (0.11)	21
51 (2.00)	200	85	CSH-302200/*	36 (0.08)	28
51 (2.00)	400	165	CSH-302400/120	36 (0.08)	28
64 (2.50)	80	25	CSS-30280/120	64 (0.14)	22
64 (2.50)	150	50	CSS-302150/*	64 (0.14)	22
64 (2.50)	270	85	CSH-302270/*	41 (0.09)	30
64 (2.50)	470	150	CSH-302470/*	41 (0.09)	30
76 (3.00)	200	50	CSS-303200/*	77 (0.17)	23
76 (3.00)	335	85	CSH-303335/*	45 (0.10)	32
76 (3.00)	535	135	CSH-303535/*	45 (0.10)	32
102 (4.00)	275	50	CSS-304275/*	104 (0.23)	25
102 (4.00)	470	85	CSH-304470/*	50 (0.11)	33
127 (5.00)	350	50	CSS-305350/*	122 (0.27)	26
127 (5.00)	500	70	CSH-305500/*	59 (0.13)	36
152 (6.00)	425	50	CSS-306425/*	150 (0.33)	30
152 (6.00)	735	85	CSH-306735/*	68 (0.15)	40
178 (7.00)	550	55	CSS-307550/*	218 (0.48)	32
203 (8.00)	650	55	CSS-308650/*	240 (0.53)	34
203 (8.00)	1000	85	CSH-3081000/*	77 (0.17)	54
254 (10.00)	850	55	CSS-310850/*	281 (0.62)	40
254 (10.00)	1200	80	CSH-3101200/240	100 (0.22)	62
305 (12.00)	1000	55	CSS-3121000/*	313 (0.69)	45

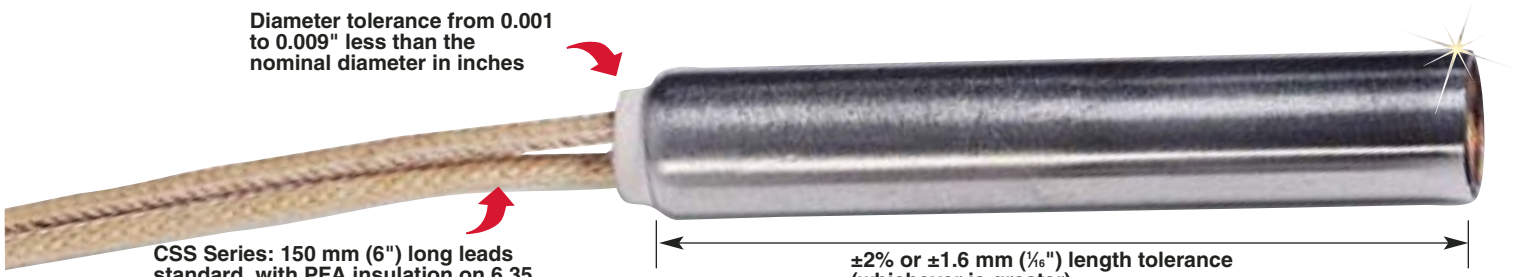
** Insert "**120**" or "**240**" to indicate desired operating voltage.*

Note for CSS and CSH Series heaters: the watt densities are based on a unit installed in mild steel. Different materials affect the above values, i.e., the lower the thermal conductivity of the material, the lower the maximum allowable watts per square inch.

High watt density construction CSH Series



Standard Construction CSS Series



Compact design provides high wattage in small spaces

15.9 mm (⅝") Diameter CSS and CSH Series Cartridge Heaters (Actual Dia: 0.624 to 0.619")

To Order *(Specify Model Number)*

Length mm (in)	Watts	W/in²	Model Number	Weight g (lb)	Price
51 (2.00)	250	85	CSH-402250/*	59 (0.13)	$27
64 (2.50)	75	20	CSS-40275/240	68 (0.15)	23
64 (2.50)	200	50	CSS-402200/*	68 (0.15)	23
64 (2.50)	335	85	CSH-402335/*	68 (0.15)	30
76 (3.00)	250	50	CSS-403250/*	95 (0.21)	25
76 (3.00)	415	85	CSH-403415/*	77 (0.17)	32
89 (3.50)	300	50	CSS-403300/*	113 (0.25)	26
89 (3.50)	350	60	CSS-403350/120	113 (0.25)	26
102 (4.00)	350	50	CSS-404350/*	132 (0.29)	27
102 (4.00)	585	85	CSH-404585/*	91 (0.20)	35
127 (5.00)	450	50	CSS-405450/*	159 (0.35)	28
152 (6.00)	350	30	CSS-406350/120	200 (0.44)	31
152 (6.00)	400	30	CSS-406400/120	200 (0.44)	31
152 (6.00)	540	50	CSS-406540/*	200 (0.44)	31
152 (6.00)	920	85	CSH-406920/*	136 (0.30)	41
178 (7.00)	635	50	CSS-407635/*	259 (0.57)	34
203 (8.00)	750	57	CSS-408750/*	249 (0.55)	37
203 (8.00)	1000	70	CSH-4081000/240	181 (0.40)	48
203 (8.00)	1500	100	CSH-4081500/240	181 (0.40)	55
229 (9.00)	950	55	CSS-409950/*	286 (0.63)	40
254 (10.00)	1000	53	CSS-4101000/*	308 (0.68)	41
254 (10.00)	1600	85	CSH-4101600/240	318 (0.70)	66
305 (12.00)	1200	53	CSS-4121200/240	340 (0.75)	47
305 (12.00)	1750	80	CSH-4121750/240	363 (0.80)	75

** Insert "**120**" or "**240**" to indicate desired operating voltage.*

All cartridge heaters are rated by wattage and watt density (watts per square inch) for either 120 or 240 volt operation. In some applications it may be useful to derate the wattage by operating the cartridge heater at a lower voltage. When operating at lower voltages, the wattage is derated using the following formula:

(Operating Voltage/Rated Voltage)²
x Wattage at Rated Voltage = Derated Wattage

19 mm (¾") Diameter CSS and CSH Series Cartridge Heaters (Actual Dia: 0.749 to 0.741")

MOST POPULAR MODELS HIGHLIGHTED!

To Order *(Specify Model Number)*

Length mm (in)	Watts	W/in²	Model Number	Weight g (lb)	Price
64 (2.50)	230	50	CSS-502230/*	95 (0.21)	$26
89 (3.50)	350	50	CSS-503350/*	132 (0.29)	27
127 (5.00)	500	50	CSS-505500/*	195 (0.43)	32
152 (6.00)	650	50	CSS-506650/*	222 (0.49)	36
152 (6.00)	1000	80	CSH-5061000/240	200 (0.44)	51
152 (6.00)	1500	115	CSH-5061500/240	200 (0.44)	51
178 (7.00)	760	50	CSS-507760/*	259 (0.57)	38
203 (8.00)	750	40	CSS-508750/120	318 (0.70)	42
203 (8.00)	885	50	CSS-508885/*	318 (0.70)	42
203 (8.00)	1500	85	CSH-5081500/240	263 (0.58)	70
203 (8.00)	2000	110	CSH-5082000/240	263 (0.58)	70
254 (10.00)	1100	45	CSS-5101100/240	363 (0.80)	47
254 (10.00)	2000	90	CSH-5102000/240	204 (0.45)	82
305 (12.00)	1300	45	CSS-5121300/240	417 (0.92)	53
305 (12.00)	2200	80	CSH-512220/240	454 (1.00)	108

Ordering Example: CSS-403250/240**, 15.9 mm (⅝") diameter, 76 mm (3") long cartridge heater, 240 Vac, **$25.
Ordering Example: CSH-4081500/240**, 15.9 mm (⅝") diameter, 203 mm (8") long cartridge heater, 240 Vac, **$55.
Ordering Example: CSS-502230/120**, 19 mm (¾") diameter, 64 mm (2.50") long cartridge heater, 120 Vac, **$26.

Example: The **CSH-5102000/240** cartridge heater is rated at 2000 watts and 90 watts per square inch at 240 volts. To determine the derated wattage when operating on 120 volts:

(120 Volts/240 Volts)² x 2000 Watts = 500 Watts

When operating on 120 volts, the watt density of this heater would also be reduced by a factor of 4 from 90 watts per square inch to approximately 22 watts per square inch.

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