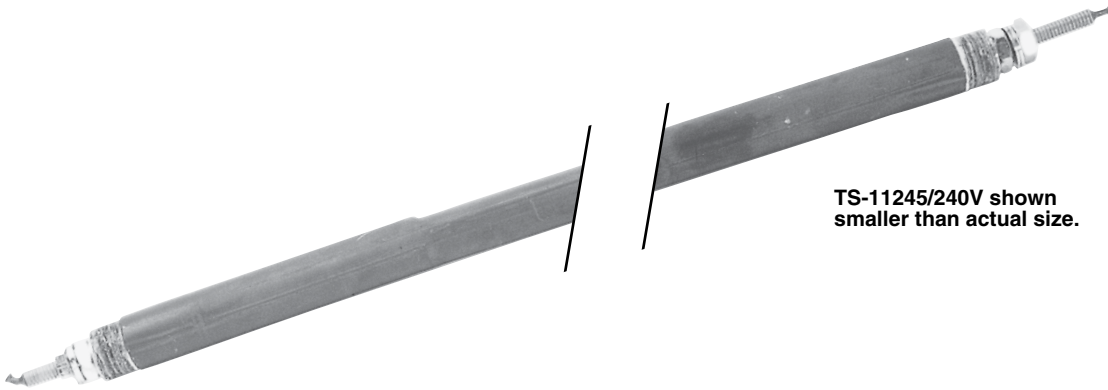
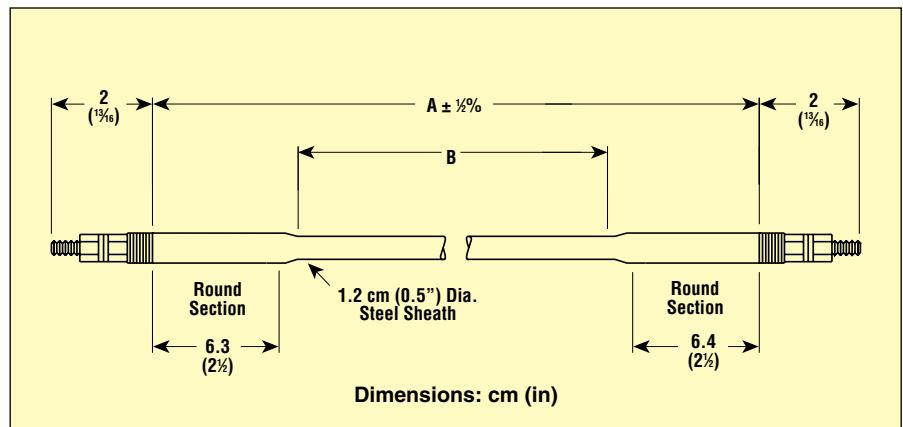


1.2 cm (0.5") DIAMETER HEART CROSS-SECTION



TS-11245/240V shown smaller than actual size.

- ✓ Steel Sheath
- ✓ 3700 to 5300 Watts
- ✓ 240 and 480V
- ✓ 20 W/in²
- ✓ 400°C (750°F) Maximum Sheath Temperature



APPLICATIONS

High element surface temperature clamp-on or air heating applications or where extreme rigidity is required.

ADVANTAGES

More uniform surface temperatures and resistance to deformation.

FEATURES

Type 4 Terminals: Integral parts of the element are of high strength to resist bending during tightening of the wiring connections. Type 4 is threaded extension of the cold pin. See terminal detail drawing in the Tubular Heater Overview section online.

Work Temperatures:

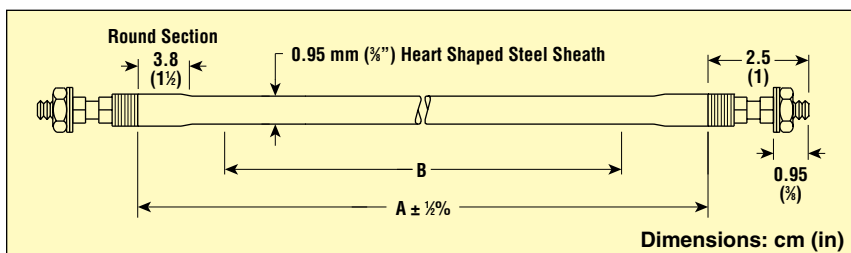
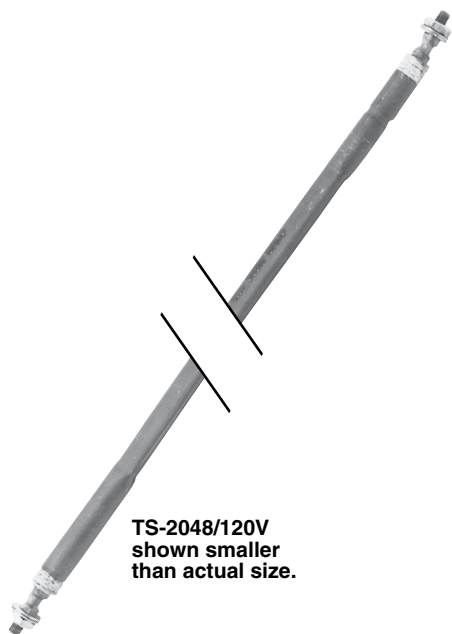
See Tubular Heater Overview section online.

Bending: Customer's minimum inside bending radius is 6.4 cm (2½"). See bending requirements in the Tubular Heater Overview section online.

To Order						
Watts	Volts	W/In ²	Dimensions cm (in)		Steel Sheath	Weight kg (lb)
			Sheath A	Heated B	Model No.	
3700	240	20	284 (112)	268 (105½)	TS-11245/240V	1.5 (3.3)
3700	480	20	284 (112)	268 (105½)	TS-11245/480V	1.5 (3.3)
3800	240	20	315 (124)	298 (117½)	TS-12445/240V	1.5 (3.3)
3800	480	20	315 (124)	298 (117½)	TS-12445/480V	1.5 (3.3)
3920	240	20	330 (130)	314 (123½)	TS-13045/240V	1.5 (3.3)
3920	480	20	330 (130)	314 (123½)	TS-13045/480V	1.5 (3.3)
4075	240	20	345 (136)	329 (129½)	TS-13645/240V	2.0 (4.3)
4075	480	20	345 (136)	329 (129½)	TS-13645/480V	2.0 (4.3)
4250	240	20	360 (142)	344 (135½)	TS-14245/240V	2.0 (4.3)
4250	480	20	360 (142)	344 (135½)	TS-14245/480V	2.0 (4.3)
4450	240	20	376 (148)	359 (141½)	TS-14845/240V	2.0 (4.3)
4450	480	20	376 (148)	359 (141½)	TS-14845/480V	2.0 (4.3)
4700	240	20	396 (156)	380 (149½)	TS-15645/240V	2.0 (4.3)
4700	480	20	396 (156)	380 (149½)	TS-15645/480V	2.0 (4.3)
5000	240	20	417 (164)	400 (157½)	TS-16445/240V	2.0 (4.3)
5000	480	20	417 (164)	400 (157½)	TS-16445/480V	2.0 (4.3)
5300	240	20	437 (172)	420 (165½)	TS-17245/240V	2.0 (4.3)
5300	480	20	437 (172)	420 (165½)	TS-17245/480V	2.0 (4.3)

Note: If element is to be bent, specify "must be annealed."
Ordering Examples: TS-13045/240V, 3920 W, 240V heater.
 TS-11245/480V, 3700 W, 480V heater.

0.95 cm (0.375") DIAMETER HEART CROSS-SECTION



- ✓ Steel Sheath
- ✓ 225 to 1500 Watts
- ✓ 120, 240 and 480V
- ✓ 20 W/in²
- ✓ 400°C (750°F) Maximum Sheath Temperature

APPLICATIONS

High element surface temperature clamp-on or air heating applications or where extreme rigidity is required.

ADVANTAGES

More uniform surface temperatures and resistance to deformation.

FEATURES

Type 3 Terminals:

Heliarc-welded to the cold pin. See terminal detail drawing in the Tubular Heater Overview section online.

Work Temperatures: See Tubular Heater Overview section online.

Bending: Customer's minimum inside bending radius is 4.8 cm (1 7/8"). See bending requirements in the Tubular Heater Overview section online.

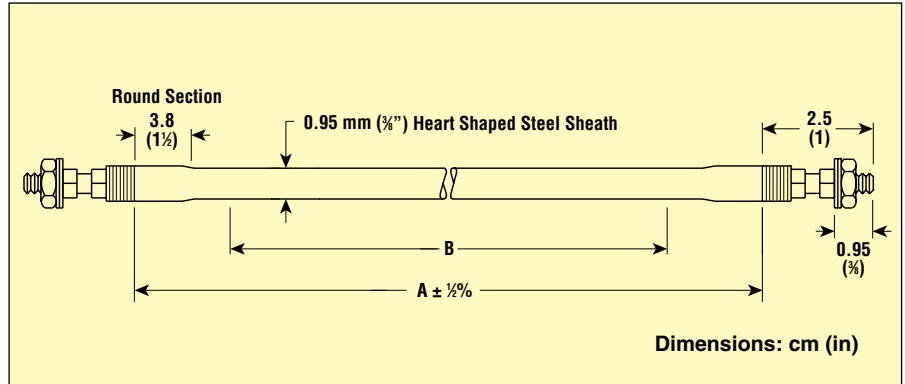
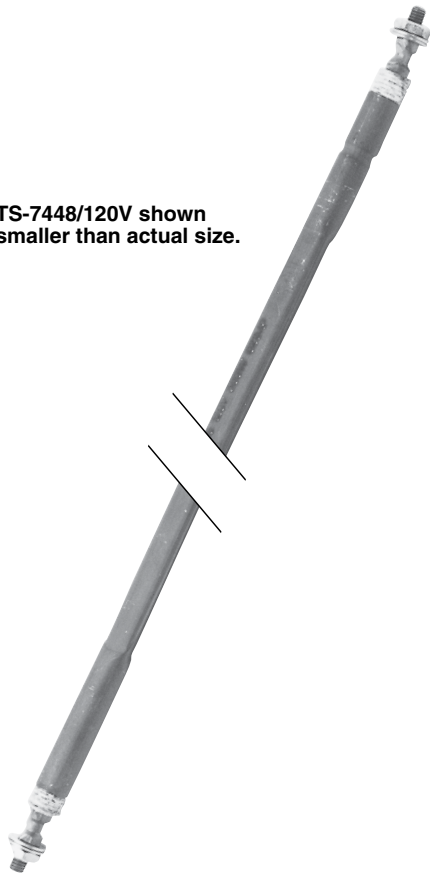
To Order						
Watts	Volts	W/In ²	Dimensions In. (cm)		Steel Sheath	Weight kg (lb)
			Sheath A	Heated B	Model No.	
225	120	20	39 (16)	24 (9½)	TS-1648/120V	0.2 (0.4)
250	120	20	44 (18)	28 (11½)	TS-1848/120V	0.2 (0.4)
300	120	20	49 (20)	33 (13½)	TS-2048/120V	0.2 (0.4)
350	120	20	54 (22)	45 (15½)	TS-2248/120V	0.2 (0.4)
450	120	20	61 (25)	45 (18½)	TS-2548/120V	0.2 (0.4)
500	120	20	66 (27)	50 (20½)	TS-2748/120V	0.2 (0.4)
500	240	20	66 (27)	50 (20½)	TS-2748/240V	0.2 (0.4)
500	120	20	69 (28)	53 (21½)	TS-2848/120V	0.4 (0.8)
500	240	20	69 (28)	53 (21½)	TS-2848/240V	0.4 (0.8)
550	120	20	74 (30)	57 (23½)	TS-3048/120V	0.4 (0.8)
550	240	20	74 (30)	57 (23½)	TS-3048/240V	0.4 (0.8)
600	120	20	78 (32)	62 (25½)	TS-3248/120V	0.4 (0.8)
600	240	20	78 (32)	62 (25½)	TS-3248/240V	0.4 (0.8)
650	120	20	83 (34)	67 (27½)	TS-3448/120V	0.4 (0.8)
650	240	20	83 (34)	67 (27½)	TS-3448/240V	0.4 (0.8)
700	120	20	88 (36)	72 (29½)	TS-3648/120V	0.4 (0.8)
700	240	20	88 (36)	72 (29½)	TS-3648/240V	0.4 (0.8)
750	120	20	93 (38)	77 (31½)	TS-3848/120V	0.4 (0.8)
750	240	20	93 (38)	77 (31½)	TS-3848/240V	0.4 (0.8)
800	120	20	98 (40)	82 (33½)	TS-4048/120V	0.5 (1)
800	240	20	98 (40)	82 (33½)	TS-4048/240V	0.5 (1)
850	120	20	103 (42)	87 (35½)	TS-4248/120V	0.5 (1)
850	240	20	103 (42)	87 (35½)	TS-4248/240V	0.5 (1)
900	120	20	108 (44)	92 (37½)	TS-4448/120V	0.5 (1)
900	240	20	108 (44)	92 (37½)	TS-4448/240V	0.5 (1)
950	120	20	113 (45)	97 (39½)	TS-4648/120V	0.5 (1)
950	240	20	113 (45)	97 (39½)	TS-4648/240V	0.5 (1)
1000	120	20	118 (48)	102 (41½)	TS-4848/120V	0.5 (1)
1000	240	20	118 (48)	102 (41½)	TS-4848/240V	0.5 (1)
1000	480	20	118 (48)	102 (41½)	TS-4848/480V	0.5 (1)
1050	120	20	123 (50)	106 (43½)	TS-5048/120V	0.5 (1)
1050	240	20	123 (50)	106 (43½)	TS-5048/240V	0.5 (1)
1050	480	20	123 (50)	106 (43½)	TS-5048/480V	0.5 (1)
1100	120	20	133 (54)	116 (47½)	TS-5448/120V	0.6 (1.3)
1100	240	20	133 (54)	116 (47½)	TS-5448/240V	0.6 (1.3)
1100	480	20	133 (54)	116 (47½)	TS-5448/480V	0.6 (1.3)
1200	120	20	142 (58)	126 (51½)	TS-5848/120V	0.6 (1.3)
1200	240	20	142 (58)	126 (51½)	TS-5848/240V	0.6 (1.3)
1200	480	20	142 (58)	126 (51½)	TS-5848/480V	0.6 (1.3)
1300	120	20	152 (62)	136 (55½)	TS-6248/120V	0.6 (1.3)
1300	240	20	152 (62)	136 (55½)	TS-6248/240V	0.6 (1.3)
1300	480	20	152 (62)	136 (55½)	TS-6248/480V	0.6 (1.3)
1400	120	20	162 (66)	146 (59½)	TS-6648/120V	0.6 (1.3)
1400	240	20	162 (66)	146 (59½)	TS-6648/240V	0.6 (1.3)
1400	480	20	162 (66)	146 (59½)	TS-6648/480V	0.6 (1.3)
1500	120	20	172 (70)	156 (63½)	TS-7048/120V	0.6 (1.3)
1500	240	20	172 (70)	156 (63½)	TS-7048/240V	0.6 (1.3)
1500	480	20	172 (70)	156 (63½)	TS-7048/480V	0.6 (1.3)

Note: If element is to be bent, specify "must be annealed."

Ordering Examples: TS-4848/480V, 1000 W, 480V heater.

TS-6248/240V, 1000 W, 240V heater.

TS-7448/120V shown smaller than actual size.



- ✓ Steel Sheath
- ✓ 1600 to 3800 Watts
- ✓ 120, 240 and 480V
- ✓ 20 W/in²
- ✓ 400°C (750°F) Maximum Sheath Temperature

APPLICATIONS

High element surface temperature clamp-on or air heating applications or where extreme rigidity is required.

ADVANTAGES

More uniform surface temperatures and resistance to deformation.

FEATURES

Type 3 Terminals: Heliarc-welded to the cold pin. See terminal detail drawing in the Tubular Heater Overview section online.

Work Temperatures: See Tubular Heater Overview section online.

Bending: Customer's minimum inside bending radius is 4.8 cm (1 7/8"). See bending requirements in the Tubular Heater Overview section online.

To Order						
Watts	Volts	W/in ²	Dimensions cm (in)		Steel Sheath	Weight kg (lb)
			Sheath A	Heated B	Model No.	
1600	120	20	191 (74)	171 (67 1/2)	TS-7448/120V	0.6 (1.3)
1600	240	20	191 (74)	171 (67 1/2)	TS-7448/240V	0.6 (1.3)
1600	480	20	191 (74)	171 (67 1/2)	TS-7448/480V	0.6 (1.3)
1700	120	20	198 (78)	181 (71 1/2)	TS-7848/120V	0.8 (1.8)
1700	240	20	198 (78)	181 (71 1/2)	TS-7848/240V	0.8 (1.8)
1700	480	20	198 (78)	181 (71 1/2)	TS-7848/480V	0.8 (1.8)
1800	120	20	208 (82)	185 (75 1/2)	TS-8248/120V	0.8 (1.8)
1800	240	20	208 (82)	185 (75 1/2)	TS-8248/240V	0.8 (1.8)
1800	480	20	208 (82)	185 (75 1/2)	TS-8248/480V	0.8 (1.8)
1850	120	20	218 (86)	195 (79 1/2)	TS-8648/120V	0.8 (1.8)
1850	240	20	218 (86)	195 (79 1/2)	TS-8648/240V	0.8 (1.8)
1850	480	20	218 (86)	195 (79 1/2)	TS-8648/480V	0.8 (1.8)
1950	120	20	228 (90)	205 (83 1/2)	TS-9048/120V	0.8 (1.8)
1950	240	20	228 (90)	205 (83 1/2)	TS-9048/240V	0.8 (1.8)
1950	480	20	228 (90)	205 (83 1/2)	TS-9048/480V	0.8 (1.8)
2050	120	20	239 (94)	215 (87 1/2)	TS-9448/120V	0.8 (1.8)
2050	240	20	239 (94)	215 (87 1/2)	TS-9448/240V	0.8 (1.8)
2050	480	20	239 (94)	215 (87 1/2)	TS-9448/480V	0.8 (1.8)
2150	120	20	245 (98)	225 (91 1/2)	TS-9848/120V	0.8 (1.8)
2150	240	20	245 (98)	225 (91 1/2)	TS-9848/240V	0.8 (1.8)
2150	480	20	245 (98)	225 (91 1/2)	TS-9848/480V	0.8 (1.8)
2250	120	20	259 (102)	234 (95 1/2)	TS-10248/120V	1.1 (2.5)
2250	240	20	259 (102)	234 (95 1/2)	TS-10248/240V	1.1 (2.5)
2250	480	20	259 (102)	234 (95 1/2)	TS-10248/480V	1.1 (2.5)
2350	240	20	269 (106)	244 (99 1/2)	TS-10648/120V	1.1 (2.5)
2350	480	20	269 (106)	244 (99 1/2)	TS-10648/480V	1.1 (2.5)
2500	240	20	284 (112)	258 (105 1/2)	TS-11248/240V	1.1 (2.5)
2500	480	20	284 (112)	258 (105 1/2)	TS-11248/480V	1.1 (2.5)
2600	240	20	300 (118)	273 (111 1/2)	TS-11848/240V	1.1 (2.5)
2600	480	20	300 (118)	273 (111 1/2)	TS-11848/480V	1.1 (2.5)
2750	240	20	315 (124)	289 (117 1/2)	TS-12448/240V	1.1 (2.5)
2750	480	20	315 (124)	289 (117 1/2)	TS-12448/480V	1.1 (2.5)
2900	240	20	330 (130)	303 (123 1/2)	TS-13048/240V	1.1 (2.5)
2900	480	20	330 (130)	303 (123 1/2)	TS-13048/480V	1.1 (2.5)
3050	240	20	345 (136)	317 (129 1/2)	TS-13648/240V	1.5 (3.3)
3050	480	20	345 (136)	317 (129 1/2)	TS-13648/480V	1.5 (3.3)
3200	240	20	360 (142)	332 (135 1/2)	TS-14248/240V	1.5 (3.3)
3200	480	20	360 (142)	332 (135 1/2)	TS-14248/480V	1.5 (3.3)
3350	240	20	376 (148)	347 (141 1/2)	TS-14848/240V	1.5 (3.3)
3350	480	20	376 (148)	347 (141 1/2)	TS-14848/480V	1.5 (3.3)
3550	240	20	396 (156)	366 (149 1/2)	TS-15648/240V	1.5 (3.3)
3550	480	20	396 (156)	366 (149 1/2)	TS-15648/480V	1.5 (3.3)
3700	240	20	417 (164)	386 (157 1/2)	TS-16448/240V	1.5 (3.3)
3700	480	20	417 (164)	386 (157 1/2)	TS-16448/480V	1.5 (3.3)
3800	240	20	437 (172)	405 (165 1/2)	TS-17248/240V	1.5 (3.3)
3800	480	20	437 (172)	405 (165 1/2)	TS-17248/480V	1.5 (3.3)

Note: If element is to be bent, specify "must be annealed."

Ordering Examples: TS-12448/480V, 2750 W, 480 V heater.

TS-13648/240V, 3050 W, 240V heater.