

Physical & Electrical Specifications

Table I
Tubular Element Diameters

Description	Tubular Element Diameters											
	One-Pass Coil									Two-Pass Coil		
	0.200	0.250	0.260	0.315	0.375	0.430	0.475	0.490	0.625	.235 x 1.00 Oval	0.430	0.475
Available Sheath Materials(1) (Max Sheath Temp)												
Copper (350°F)	—	X	X	X	—	X	X	—	—	—	X	X
Steel (750°F)	—	—	—	X	—	X	X	X	—	—	X	X
304 SS (1400°F)	—	X	X	X	X	X	X	X	—	—	X	X
316 SS (1400°F)	—	—	—	X	—	X	X	X	—	—	X	X
Incoloy 800 (1700°F)	—	X	X	X	X	X	X	X	—	X	X	X
Inconel 600 (1800°F)	—	—	—	—	—	X	X	X	X	—	X	X
Monel (900°F)	—	X	X	X	—	X	X	X	—	—	X	X
Copper Plated Steel (750°F)	—	X	X	X	—	X	—	—	—	—	X	—
321 SS (1400°F)	—	X	X	X	X	X	X	X	X	—	X	X
Titanium (750°F)	—	—	—	X	—	X	—	—	—	—	X	—
Copper-Nickel (350°F)	—	X	X	—	—	—	X	—	—	—	—	X
Incoloy 840 (1700°F)	X	X	X	X	X	X	X	X	X	—	X	X
Sheath Diameters												
Minimum	0.195	0.245	0.255	0.308	0.370	0.425	0.470	0.485	0.620	.230 x 0.095	0.425	0.470
Maximum	0.205	0.255	0.265	0.320	0.380	0.435	0.482	0.495	0.630	.240 x 1.005	0.435	0.482
Standard Wall Thickness(2)	0.018	0.018 0.025 0.028	0.018 0.025 0.028	0.018 0.025 0.028	0.018 0.030	0.028 0.035	0.035	0.035	0.035 0.049	0.032	0.028	0.035
Sheath Lengths												
Minimum	6	6	6	6	6	6	6	6	6	13	6	6
Maximum (5)	88	359	338	333	321	319	333	317	319	145	79	170
Sheath length tolerances (4)	1 % of overall sheath length with a minimum of 1/8"											
Heated length tolerances (4)	1 % of overall sheath length with a minimum of 1/2"											
Cold Ends												
Minimum	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Maximum	10	32	32	32	32	45	45	45	45	10	10	16
Maximum Current Draw	15	30	30	40	40	40	55	55	60	15	15	30
Maximum Voltage	240	300	300	480	480	600	600	600	600	240	240	300
Wattage Tolerance	+5% / -10%											
Ohms/Inch												
Minimum	.096	.032	.035	.020	.020	.015	.015	.015	.014	.300	.200	.070
Maximum	21	28	30	35	35	33	35	37	35	30	35	35

(1) Table indicates sheath materials commonly used. Consult factory for availability of material required.

(2) When multiple wall thicknesses are listed, confirm with factory for standard wall thickness.

(3) Unless noted otherwise, all dimensions are in inches.

(4) Consult factory for special tolerances needed.

(5) Consult factory for length outside range, standards shown.

Physical & Electrical Specifications

Table II
Finned Tubular Element Diameters

Description	Finned Tubular Element Diameters									
	One-Pass Coil								Two-Pass Coil	
	0.250	0.260	0.315	0.375	0.430	0.475	0.490	0.625	0.430	0.475
Sheath/Fin Materials (1) (Max Sheath Temp)	Available (Fin Height)									
Copper Plated Steel/Steel (750°F)	X(.25)	X(.25)	X(.25)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
304 SS/304 SS (1400°F)	X(.25)	X(.25)	X(.25)	X(.32)	X(.32)	X(.32)	X(.32)	N/A	X(.32)	X(.32)
316 SS/304 SS (1400°F)	X(.25)	X(.25)	X(.25)	X(.32)	X(.32)	X(.32)	X(.32)	N/A	X(.32)	X(.32)
Monel/Monel (900°F)	X(.32)	X(.32)	X(.32)	X(.32)	X(.32)	X(.32)	X(.32)	N/A	X(.32)	X(.32)
Steel/Copper Plated Steel (750°F)	N/A	N/A	N/A	X(.32)	X(.32)	X(.32)	X(.32)	N/A	X(.32)	X(.32)
321 SS/304 SS (1400°F)	X(.25)	X(.25)	X(.25)	X(.32)	X(.32)	X(.32)	X(.32)	X(.32)	X(.32)	X(.32)
Sheath Diameters (4)										
Minimum	0.245	0.255	0.308	0.370	0.425	0.470	0.485	0.620	0.425	0.470
Maximum	0.255	0.265	0.320	0.380	0.435	0.482	0.495	0.630	0.435	0.482
Standard Wall Thickness (2)	0.018 0.025 0.028	0.018 0.025 0.028	0.018 0.025 0.028	0.018 0.030	0.028 0.035	0.035	0.035	0.035 0.049	0.028 0.035	0.035
Fin Thickness	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
Overall Fin Diameter										
Minimum	Sheath Diameter + 2* Fin Height - .032									
Maximum	Sheath Diameter + 2* Fin Height + .032									
Sheath Lengths										
Minimum	8	8	8	8	6	6	6	8	6	6
Maximum	133.5	133.5	133.5	133.5	133.5	249	249	133.5	79	170
Sheath length tolerances (4)	1% of overall sheath length with a minimum of 1/8"									
Heated length tolerances (4)	1% of overall sheath length with a minimum of 1/2"									
Cold Ends										
Minimum	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Maximum	32	32	32	32	45	45	45	45	10	16
Maximum Current Draw	30	30	40	40	40	55	55	60	15	30
Maximum Voltage	300	300	480	480	600	600	600	600	240	300
Wattage Tolerance (4)	+5%/-10%									
Ohms/Inch										
Minimum	.032	.035	.020	.020	.015	.015	.015	0.14	.200	.070
Maximum	28	30	35	33	35	35	37	35	35	35

- (1) Table indicates sheath materials commonly used. Consult factory for availability of material required.
- (2) When multiple wall thicknesses are listed, confirm with factory for standard wall thickness.
- (3) Unless noted otherwise, all dimensions are in inches.
- (4) Consult factory for special tolerances needed.
- (5) Consult factory for length outside range, standards shown.