



Fine-Fin[®]

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HIGH PERFORMANCE TUBES FOR HEAT EXCHANGERS



Fine-Fin® High Performance Tubes

Material	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	Type 8
	30 FPI FIN HEIGHT: .032 inch .813 mm	28 FPI FIN HEIGHT: .035 inch .889 mm	26 FPI FIN HEIGHT: .049 inch 1.245 mm	36 FPI FIN HEIGHT: .026 inch .660 mm	43 FPI FIN HEIGHT: .022 inch .559 mm	36 FPI WITH INTERNAL RIB	28 FPI WITH INTERNAL RIB	26 FPI WITH INTERNAL RIB
Titanium Grades 1,2,16								
Zirconium								
High Nickel Alloys C-276, G-30, B-2, C22, 20Cb-3								
Austenitic Stainless Steel Type 304, 316, 317, 321, 904L								
High Nickel Alloys 600, 625, 800, 825								
Duplex Stainless Steel Alloy 2205, 7-MoPlus, 2101								
6-Mo Stainless Steel Alloy AL6XN								
Monel Alloy 400								
Ferritic Stainless Steel Type 405, 410, 430, 439								
Carbon Steels SA-214, 179, 334 Gr 1, 3, 6								
Copper - Nickel 90/10, 70/30								

Note: Other materials may be available upon request.

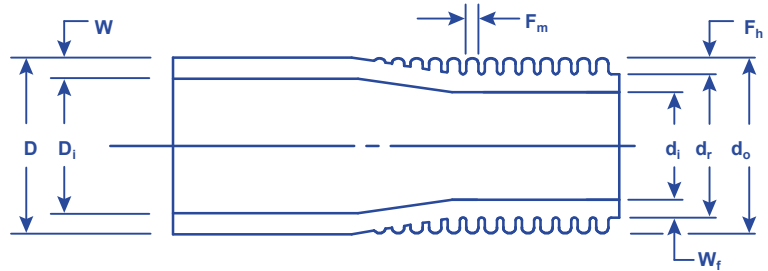


Fine-Fin® High Performance Tubes Nomenclature

SECTIONED DRAWING: Smooth Bore

(Applies to Type 1 - 5)

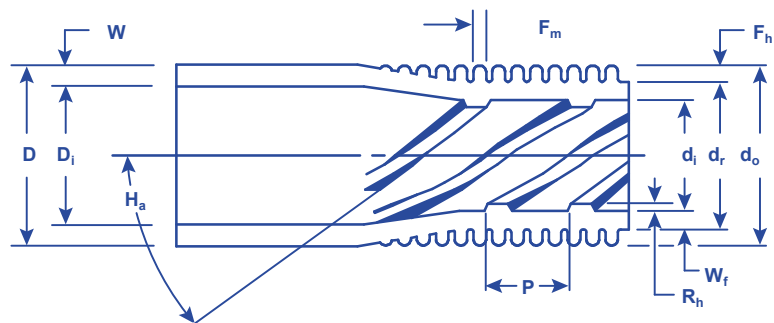
D = Outside Diameter of Plain End
 D_i = Inside Diameter of Plain End
 d_r = Root Diameter
 d_o = Diameter Over Fins
 d_i = Inside Diameter of Fin Section
 W = Wall Thickness of Plain End
 W_f = Wall Thickness Under Fin
 F_h = Height of Fin
 F_m = Mean Fin Thickness



SECTIONED DRAWING: with Internal Rib

(Applies to Type 6 - 8)

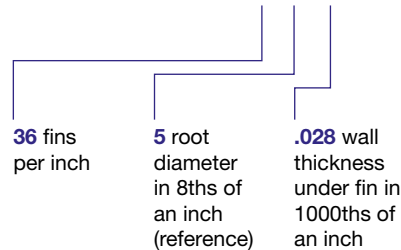
D = Outside Diameter of Plain End
 D_i = Inside Diameter of Plain End
 d_r = Root Diameter
 d_o = Diameter Over Fins
 d_i = Inside Diameter of Fin Section
 W = Wall Thickness of Plain End
 W_f = Wall Thickness Under Fin
 F_h = Height of Fin
 F_m = Mean Fin Thickness
 P = Mean Rib Pitch
 R_h = Height of Rib
 H_a = Helix Angle



IDENTIFYING THE Fine-Fin® High Performance Tubes PART NUMBER

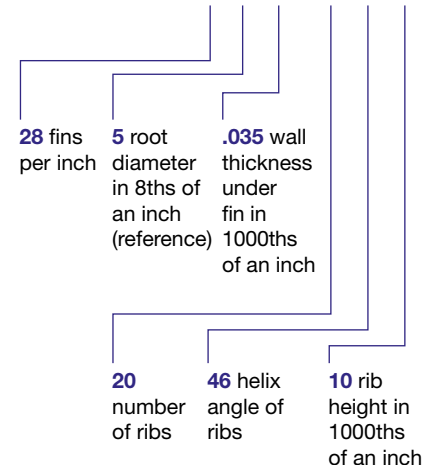
Example 1:
Smooth Bore (Type 1-5)

Part Number **36 5 028**



Example 2:
with Internal Rib (Type 6-8)

Part Number **28 5 035-20 46 10**



Fine-Fin® High Performance Tubes Type 1 30 FPI

30 fins per inch (1181 fins per meter)
.032 inches (.813 mm) average fin height
.011 inches (.279 mm) average fin thickness

Materials: Titanium Gd-1,2,16; Zirconium; C-276; G30; B-2; C-22; 20Cb-3; AL6XN.
Not all materials/grades listed are available in all sizes. Please inquire.

Part Number	Plain Section Average Diameter	Plain Section Average Wall	Wall Under Fin Average	Wall Under Fin Minimum	Nominal Root Diameter	Fin Section I.D.	Outside Area Ao	Inside Area Ai	Area Ratio Ao/Ai	I.D. Cross Section Area
	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(F ² /Ft) (m ² /m)	(F ² /Ft) (m ² /m)		(Inches ²) (cm ²)
304028	.625 15.875	.049 1.245	.028 .711	.025 .635	.561 14.249	.505 12.827	.411 .125	.132 .040	3.114 3.114	.200 1.292
304035	.625 15.875	.058 1.473	.035 .889	.031 .787	.561 14.249	.491 12.471	.411 .125	.129 .039	3.186 3.186	.189 1.222
304042	.625 15.875	.065 1.651	.042 1.067	.037 .940	.561 14.249	.477 12.116	.411 .125	.125 .038	3.288 3.288	.179 1.153
304049	.625 15.875	.072 1.829	.049 1.245	.044 1.118	.561 14.249	.463 11.760	.411 .125	.121 .037	3.397 3.397	.168 1.096
304065	.625 15.875	.083 2.108	.065 1.651	.058 1.473	.561 14.249	.431 10.947	.411 .125	.113 .034	3.637 3.637	.146 .941
305028	.750 19.050	.049 1.245	.028 .711	.025 .635	.686 17.424	.630 16.002	.500 .152	.165 .050	3.030 3.030	.312 2.011
305035	.750 19.050	.058 1.473	.035 .889	.031 .787	.686 17.424	.616 15.646	.500 .152	.161 .049	3.106 3.106	.298 1.923
305042	.750 19.050	.065 1.651	.042 1.067	.037 .940	.686 17.424	.602 15.291	.500 .152	.158 .048	3.165 3.165	.285 1.836
305049	.750 19.050	.072 1.829	.049 1.245	.044 1.118	.686 17.424	.588 14.935	.500 .152	.154 .047	3.247 3.247	.272 1.752
305065	.750 19.050	.083 2.108	.065 1.651	.058 1.473	.686 17.424	.556 14.122	.500 .152	.146 .045	3.425 3.425	.243 1.566
305083	.750 19.050	.109 2.769	.083 2.108	.074 1.880	.686 17.424	.520 13.208	.500 .152	.136 .041	3.676 3.676	.212 1.370
306028	.875 22.225	.049 1.245	.028 .711	.025 .635	.811 20.599	.755 19.177	.587 .179	.198 .060	2.965 2.965	.448 2.888
306035	.875 22.225	.058 1.473	.035 .889	.031 .787	.811 20.599	.741 18.821	.587 .179	.194 .059	3.026 3.026	.431 2.782
306042	.875 22.225	.065 1.651	.042 1.067	.037 .940	.811 20.599	.727 18.466	.587 .179	.190 .058	3.089 3.089	.415 2.978
306049	.875 22.225	.072 1.829	.049 1.245	.044 1.118	.811 20.599	.713 18.110	.587 .179	.187 .057	3.139 3.139	.399 2.576
306065	.875 22.225	.083 2.108	.065 1.651	.058 1.473	.811 20.599	.681 17.297	.587 .179	.178 .054	3.298 3.298	.364 2.350
306083	.875 22.225	.109 2.769	.083 2.108	.074 1.880	.811 20.599	.645 16.383	.587 .179	.168 .052	3.473 3.473	.327 2.108
307035	1.000 25.400	.058 1.473	.035 .889	.031 .787	.936 23.774	.866 21.996	.671 .205	.227 .069	2.956 2.956	.589 3.800
307042	1.000 25.400	.065 1.651	.042 1.067	.037 .940	.936 23.774	.852 21.641	.671 .205	.223 .068	3.009 3.009	.570 3.678
307049	1.000 25.400	.072 1.829	.049 1.245	.044 1.118	.936 23.774	.838 21.285	.671 .205	.219 .067	3.064 3.064	.552 3.558
307065	1.000 25.400	.083 2.108	.065 1.651	.058 1.473	.936 23.774	.806 20.472	.671 .205	.211 .064	3.180 3.180	.510 3.292
307083	1.000 25.400	.109 2.769	.083 2.108	.074 1.880	.936 23.774	.770 19.558	.671 .205	.202 .062	3.322 3.322	.466 3.004

Fine-Fin®

High Performance Tubes

Type 2

28 FPI

28 fins per inch (1102 fins per meter)
 .035 inches (.889 mm) average fin height
 .012 inches (.305 mm) average fin thickness

Materials: Austenitic Stainless Steel: 304, 316, 321; Nickel Alloys: 600, 625, 800, 825; Duplex Alloy 2205.
 Not all materials/grades listed are available in all sizes. Please inquire.

Part Number	Plain Section Average Diameter	Plain Section Average Wall	Wall Under Fin Average	Wall Under Fin Minimum	Nominal Root Diameter	Fin Section I.D.	Outside Area Ao	Inside Area Ai	Area Ratio Ao/Ai	I.D. Cross Section Area
	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(F ² /Ft) (m ² /m)	(F ² /Ft) (m ² /m)		(Inches ²) (cm ²)
284028	.625 15.875	.049 1.245	.028 .711	.025 .635	.555 14.097	.499 12.675	.413 .126	.131 .040	3.153 3.153	.196 1.262
284035	.625 15.875	.058 1.473	.035 .889	.031 .787	.555 14.097	.485 12.319	.413 .126	.127 .039	3.252 3.252	.185 1.192
284042	.625 15.875	.065 1.651	.042 1.067	.037 .940	.555 14.097	.471 11.963	.413 .126	.123 .037	3.358 3.358	.174 1.124
284049	.625 15.875	.072 1.829	.049 1.245	.044 1.118	.555 14.097	.457 11.608	.413 .126	.120 .037	3.442 3.442	.164 1.058
284065	.625 15.875	.083 2.108	.065 1.651	.058 1.473	.555 14.097	.425 10.795	.413 .126	.111 .034	3.721 3.721	.142 .915
285028	.750 19.050	.049 1.245	.028 .711	.025 .635	.680 17.272	.624 15.850	.501 .153	.163 .050	3.074 3.074	.306 1.973
285035	.750 19.050	.058 1.473	.035 .889	.031 .787	.680 17.272	.610 15.494	.501 .153	.160 .049	3.131 3.131	.292 1.885
285042	.750 19.050	.065 1.651	.042 1.067	.037 .940	.680 17.272	.596 15.138	.501 .153	.156 .048	3.212 3.212	.279 1.800
285049	.750 19.050	.072 1.829	.049 1.245	.044 1.118	.680 17.272	.582 14.783	.501 .153	.152 .046	3.296 3.296	.266 1.716
285065	.750 19.050	.083 2.108	.065 1.651	.058 1.473	.680 17.272	.550 13.970	.501 .153	.144 .044	3.479 3.479	.238 1.533
285083	.750 19.050	.109 2.769	.083 2.108	.074 1.880	.680 17.272	.514 13.056	.501 .153	.135 .041	3.711 3.711	.207 1.339
286028	.875 22.225	.049 1.245	.028 .711	.025 .635	.805 20.447	.749 19.025	.588 .179	.196 .060	3.000 3.000	.441 2.843
286035	.875 22.225	.058 1.473	.035 .889	.031 .787	.805 20.447	.735 18.669	.588 .179	.192 .059	3.063 3.063	.424 2.737
286042	.875 22.225	.065 1.651	.042 1.067	.037 .940	.805 20.447	.721 18.313	.588 .179	.189 .058	3.111 3.111	.408 2.634
286049	.875 22.225	.072 1.829	.049 1.245	.044 1.118	.805 20.447	.707 17.958	.588 .179	.185 .056	3.178 3.178	.393 2.533
286065	.875 22.225	.083 2.108	.065 1.651	.058 1.473	.805 20.447	.675 17.145	.588 .179	.177 .054	3.322 3.322	.358 2.309
286083	.875 22.225	.109 2.769	.083 2.108	.074 1.880	.805 20.447	.639 16.231	.588 .179	.167 .051	3.521 3.521	.321 2.069
287035	1.000 25.400	.058 1.473	.035 .889	.031 .787	.930 23.622	.860 21.844	.676 .206	.225 .069	3.004 3.004	.581 3.748
287042	1.000 25.400	.065 1.651	.042 1.067	.037 .940	.930 23.622	.846 21.488	.676 .206	.221 .067	3.059 3.059	.562 3.627
287049	1.000 25.400	.072 1.829	.049 1.245	.044 1.118	.930 23.622	.832 21.133	.676 .206	.218 .066	3.101 3.101	.544 3.508
287065	1.000 25.400	.083 2.108	.065 1.651	.058 1.473	.930 23.622	.800 20.320	.676 .206	.209 .064	3.234 3.234	.503 3.243
287083	1.000 25.400	.109 2.769	.083 2.108	.074 1.880	.930 23.622	.764 19.406	.676 .206	.200 .061	3.380 3.380	.458 2.958

Fine-Fin® High Performance Tubes Type 3 26 FPI

26 fins per inch (1023 fins per meter)
.049 inches (1.245 mm) average fin height
.013 inches (.330 mm) average fin thickness

Materials: Ferritic Stainless Steel, Carbon Steel, Copper-Nickel Alloys, Monel.
Not all materials/grades listed are available in all sizes. Please inquire.

Part Number	Plain Section Average Diameter	Plain Section Average Wall	Wall Under Fin Average	Wall Under Fin Minimum	Nominal Root Diameter	Fin Section I.D.	Outside Area Ao	Inside Area Ai	Area Ratio Ao/Ai	I.D. Cross Section Area
	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(F ² /Ft) (m ² /m)	(F ² /Ft) (m ² /m)		(Inches ²) (cm ²)
264028	.625 15.875	.049 1.245	.028 .711	.025 .635	.527 13.386	.471 11.963	.492 .150	.123 .037	4.000 4.000	.174 1.124
264035	.625 15.875	.058 1.473	.035 .889	.031 .787	.527 13.386	.457 11.608	.492 .150	.120 .037	4.100 4.100	.164 1.058
264042	.625 15.875	.065 1.651	.042 1.067	.037 .940	.527 13.386	.443 11.252	.492 .150	.116 .035	4.241 4.241	.154 .994
264049	.625 15.875	.072 1.829	.049 1.245	.044 1.118	.527 13.386	.429 10.897	.492 .150	.112 .034	4.393 4.393	.145 .933
264065	.625 15.875	.083 2.108	.065 1.651	.058 1.473	.527 13.386	.397 10.084	.492 .150	.104 .032	4.731 4.731	.124 .799
265028	.750 19.050	.049 1.245	.028 .711	.025 .635	.652 16.561	.596 15.138	.596 .182	.156 .048	3.821 3.821	.279 1.800
265035	.750 19.050	.058 1.473	.035 .889	.031 .787	.652 16.561	.582 14.783	.596 .182	.152 .046	3.921 3.921	.266 1.716
265042	.750 19.050	.065 1.651	.042 1.067	.037 .940	.652 16.561	.568 14.427	.596 .182	.149 .045	4.000 4.000	.253 1.635
265049	.750 19.050	.072 1.829	.049 1.245	.044 1.118	.652 16.561	.554 14.072	.596 .182	.145 .044	4.110 4.110	.241 1.555
265065	.750 19.050	.083 2.108	.065 1.651	.058 1.473	.652 16.561	.522 13.259	.596 .182	.137 .042	4.350 4.350	.214 1.381
265083	.750 19.050	.109 2.769	.083 2.108	.074 1.880	.652 16.561	.486 12.344	.596 .182	.127 .039	4.693 4.693	.186 1.197
266028	.875 22.225	.049 1.245	.028 .711	.025 .635	.777 19.736	.721 18.313	.704 .215	.189 .058	3.725 3.725	.408 2.634
266035	.875 22.225	.058 1.473	.035 .889	.031 .787	.777 19.736	.707 17.958	.704 .215	.185 .056	3.805 3.805	.393 2.533
266042	.875 22.225	.065 1.651	.042 1.067	.037 .940	.777 19.736	.693 17.602	.704 .215	.181 .055	3.890 3.890	.377 2.433
266049	.875 22.225	.072 1.829	.049 1.245	.044 1.118	.777 19.736	.679 17.247	.704 .215	.178 .054	3.955 3.955	.362 2.336
266065	.875 22.225	.083 2.108	.065 1.651	.058 1.473	.777 19.736	.647 16.434	.704 .215	.169 .052	4.166 4.166	.329 2.121
266083	.875 22.225	.109 2.769	.083 2.108	.074 1.880	.777 19.736	.611 15.519	.704 .215	.160 .049	4.400 4.400	.293 1.892
267035	1.000 25.400	.058 1.473	.035 .889	.031 .787	.902 22.911	.832 21.133	.811 .247	.218 .066	3.720 3.720	.544 3.508
267042	1.000 25.400	.065 1.651	.042 1.067	.037 .940	.902 22.911	.818 20.777	.811 .247	.214 .065	3.790 3.790	.526 3.391
267049	1.000 25.400	.072 1.829	.049 1.245	.044 1.118	.902 22.911	.804 20.422	.811 .247	.210 .064	3.862 3.862	.508 3.275
267065	1.000 25.400	.083 2.108	.065 1.651	.058 1.473	.902 22.911	.772 19.609	.811 .247	.202 .062	4.015 4.015	.468 3.020
267083	1.000 25.400	.109 2.769	.083 2.108	.074 1.880	.902 22.911	.736 18.694	.811 .247	.193 .059	4.202 4.202	.425 2.745

Fine-Fin®
High Performance Tubes
Type 4
36 FPI

36 fins per inch (1417 fins per meter)
.026 inches (.660 mm) average fin height
.012 inches (.305 mm) average fin thickness

Materials: Titanium; Zirconium.

Not all materials/grades listed are available in all sizes. Please inquire.

Part Number	Plain Section Average Diameter	Plain Section Average Wall	Wall Under Fin Average	Wall Under Fin Minimum	Nominal Root Diameter	Fin Section I.D.	Outside Area Ao	Inside Area Ai	Area Ratio Ao/Ai	I.D. Cross Section Area
	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(F ² /Ft) (m ² /m)	(F ² /Ft) (m ² /m)		(Inches ²) (cm ²)
364028	.625 15.875	.049 1.245	.028 .711	.025 .635	.573 14.554	.517 13.132	.411 .125	.135 .041	3.044 3.044	.210 1.354
364035	.625 15.875	.058 1.473	.035 .889	.031 .787	.573 14.554	.503 12.776	.411 .125	.132 .040	3.114 3.114	.199 1.282
364042	.625 15.875	.065 1.651	.042 1.067	.037 .940	.573 14.554	.489 12.421	.411 .125	.128 .039	3.211 3.211	.188 1.212
364049	.625 15.875	.072 1.829	.049 1.245	.044 1.118	.573 14.554	.475 12.065	.411 .1225	.124 .038	3.315 3.315	.177 1.143
364065	.625 15.875	.083 2.108	.065 1.651	.058 1.473	.573 14.554	.443 11.252	.411 .125	.116 .035	3.543 3.543	.154 .994
365028	.750 19.050	.049 1.245	.028 .711	.025 .635	.698 17.729	.642 16.307	.500 .152	.168 .051	2.976 2.976	.324 2.088
365035	.750 19.050	.058 1.473	.035 .889	.031 .787	.698 17.729	.628 15.951	.500 .152	.164 .050	3.049 3.049	.310 1.998
365042	.750 19.050	.065 1.651	.042 1.067	.037 .940	.698 17.729	.614 15.596	.500 .152	.161 .049	3.106 3.106	.296 1.910
365049	.750 19.050	.072 1.829	.049 1.245	.044 1.118	.698 17.729	.600 15.240	.500 .152	.157 .048	3.185 3.185	.283 1.824
365065	.750 19.050	.083 2.108	.065 1.651	.058 1.473	.698 17.729	.568 14.427	.500 .152	.149 .045	3.356 3.356	.253 1.635
365083	.750 19.050	.109 2.769	.083 2.108	.074 1.880	.698 17.729	.532 .152	.500 .152	.139 .042	3.597 3.597	.222 1.434
366028	.875 22.225	.049 1.245	.028 .711	.025 .635	.823 20.904	.767 19.482	.587 .179	.201 .061	2.920 2.920	.462 2.981
366035	.875 22.225	.058 1.473	.035 .889	.031 .787	.823 20.904	.753 19.126	.587 .179	.197 .060	2.980 2.980	.445 2.873
366042	.875 22.225	.065 1.651	.042 1.067	.037 .940	.823 20.904	.739 18.771	.587 .179	.193 .059	3.041 3.041	.429 2.767
366042	.875 22.225	.072 1.829	.049 1.245	.044 1.118	.823 20.904	.725 18.415	.587 .179	.190 .058	3.089 3.089	.413 2.663
366065	.875 22.225	.083 2.108	.065 1.651	.058 1.473	.823 20.904	.693 17.602	.587 .179	.181 .055	3.243 3.243	.377 2.433
366083	.875 22.225	.109 2.769	.083 2.108	.074 1.880	.823 20.904	.657 16.688	.587 .179	.172 .052	3.413 3.413	.339 2.187
367035	1.000 25.400	.058 1.473	.035 .889	.031 .787	.948 24.079	.878 22.301	.671 .205	.230 .070	2.917 2.917	.605 3.906
367042	1.000 25.400	.065 1.651	.042 1.067	.037 .940	.948 24.079	.864 21.946	.671 .205	.226 .069	2.969 2.969	.586 3.783
367049	1.000 25.400	.072 1.829	.049 1.245	.044 1.118	.948 24.079	.850 21.590	.671 .205	.223 .068	3.009 3.009	.567 3.661
367065	1.000 25.400	.083 2.108	.065 1.651	.058 1.473	.948 24.079	.818 20.777	.671 .205	.214 .065	3.136 3.136	.526 3.391
367083	1.000 25.400	.109 2.769	.083 2.108	.074 1.880	.948 24.079	.782 19.863	.671 .205	.205 .062	3.273 3.273	.480 3.099

Fine-Fin® High Performance Tubes Type 5 43 FPI

43 fins per inch (1692 fins per meter)
.022 inches (.559 mm) average fin height
.010 inches (.254 mm) average fin thickness

Materials: Titanium Grades 1, 2, 16.
Not all materials/grades listed are available in all sizes. Please inquire.

Part Number	Plain Section Average Diameter	Plain Section Average Wall	Wall Under Fin Average	Wall Under Fin Minimum	Nominal Root Diameter	Fin Section I.D.	Outside Area Ao	Inside Area Ai	Area Ratio Ao/Ai	I.D. Cross Section Area
	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Ft²/Ft) (m²/m)	(Ft²/Ft) (m²/m)		(Inches²) (cm²)
435023	.750 19.050	0.035* 0.889*	.023 .584	.020 .508	.706 17.932	.660 16.764	.500 .152	.173 .053	2.890 2.890	.342 2.207

* Minimum Wall

Fine-Fin® High Performance Tubes Type 6 36 FPI with Internal rib

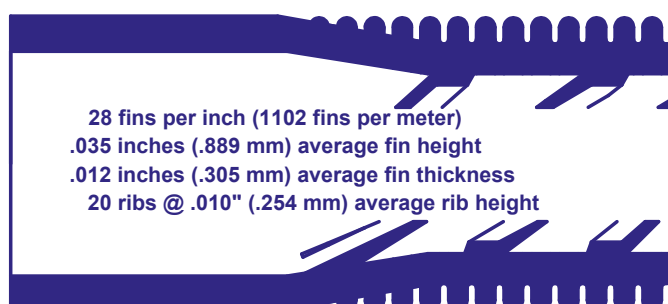
36 fins per inch (1417 fins per meter)
.026 inches (.660 mm) average fin height
.012 inches (.305 mm) average fin thickness
20 ribs @ .010" (.254 mm) average rib height

Materials: Titanium, Zirconium.
Not all materials/grades listed are available in all sizes. Please inquire.

Part Number	Plain Section Average Diameter	Plain Section Average Wall	Wall Under Fin Average	Wall Under Fin Minimum	Nominal Root Diameter	Fin Section I.D.	Outside Area Ao	Inside Area Ai	Area Ratio Ao/Ai	I.D. Cross Section Area
	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Ft²/Ft) (m²/m)	(Ft²/Ft) (m²/m)		(Inches²) (cm²)
365025-204610	.750 19.050	.049 1.245	.025 .635	.022 .559	.698 17.729	.648 16.459	.500 .152	.203 .062	2.463 2.463	.328 2.116
365028-204610	.750 19.050	.049* 1.245*	.028 .711	.025 .635	.698 17.729	.642 16.307	.500 .152	.201 .061	2.488 2.488	.322 2.077

* Minimum Wall

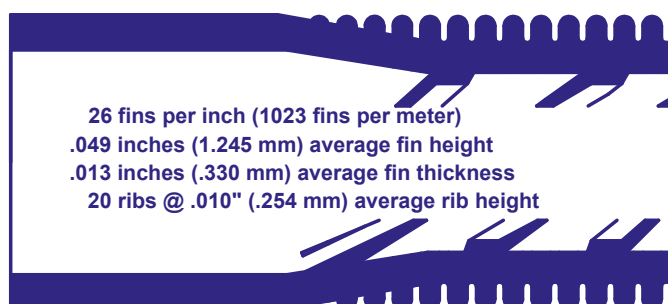
Fine-Fin®
High Performance Tubes
Type 7
28 FPI with Internal rib



Materials: Austenitic Stainless Steel: 304, 316, 321.
 Not all materials/grades listed are available in all sizes. Please inquire.

Part Number	Plain Section Average Diameter	Plain Section Average Wall	Wall Under Fin Average	Wall Under Fin Minimum	Nominal Root Diameter	Fin Section I.D.	Outside Area Ao	Inside Area Ai	Area Ratio Ao/Ai	I.D. Cross Section Area
	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Ft ² /Ft) (m ² /m)	(Ft ² /Ft) (m ² /m)		(Inches ²) (cm ²)
285028-204610	.750 19.050	.049 1.245	.028 .711	.025 .635	.680 17.272	.624 15.850	.501 .153	.195 .153	2.569 2.569	.304 1.961
285035-204610	.750 19.050	.058 1.473	.035 .889	.031 .787	.680 17.272	.610 15.494	.501 .153	.191 .153	2.623 2.623	.290 1.871

Fine-Fin®
High Performance Tubes
Type 8
26 FPI with Internal rib



Materials: Carbon Steel, Copper-Nickel, Ferritic SS.
 Not all materials/grades listed are available in all sizes. Please inquire.

Part Number	Plain Section Average Diameter	Plain Section Average Wall	Wall Under Fin Average	Wall Under Fin Minimum	Nominal Root Diameter	Fin Section I.D.	Outside Area Ao	Inside Area Ai	Area Ratio Ao/Ai	I.D. Cross Section Area
	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Inches) (mm)	(Ft ² /Ft) (m ² /m)	(Ft ² /Ft) (m ² /m)		(Inches ²) (cm ²)
265028-204610	.750 19.050	.049 1.245	.028 .711	.025 .635	.652 16.561	.596 15.138	.596 .182	.187 .057	3.187 3.187	.277 1.787
265035-204610	.750 19.050	.058 1.473	.035 .889	.031 .787	.652 16.561	.582 14.783	.596 .182	.182 .055	3.275 3.275	.264 1.703

Fine-Fin® High Performance Tubes Weights

Not all materials/grades listed are available in all sizes. Please inquire.

Fins/Inch	28	26	28	28	26	30	30/36	26	26	26
Part Number	Stainless 304, 316, 321, Alloy 800, 825	Stainless 430, 439, Seacure	Duplex Stainless 2205, 2101	Nickel Alloy 600, Alloy 625	Nickel Alloy 400	Nickel C-276 C-22	Titanium Grade 1,2,16	Copper Nickel 90/10	Copper Nickel 70/30	Carbon Steel
	(lb/ft) (kg/m)	(lb/ft) (kg/m)	(lb/ft) (kg/m)	(lb/ft) (kg/m)	(lb/ft) (kg/m)	(lb/ft) (kg/m)	(lb/ft) (kg/m)	(lb/ft) (kg/m)	(lb/ft) (kg/m)	(lb/ft) (kg/m)
XX4028	.250 .372	.242 .361	.247 .368	.259 .386	.274 .408	.269 .400	.141 .209	.276 .411	.276 .411	.242 .361
XX4035	.296 .440	.287 .427	.293 .436	.307 .457	.324 .483	.319 .474	.166 .248	.327 .487	.327 .487	.287 .427
XX4042	.336 .500	.326 .485	.332 .495	.349 .519	.368 .548	.362 .538	.189 .281	.372 .553	.372 .553	.326 .485
XX4049	.376 .560	.366 .544	.373 .555	.391 .582	.413 .615	.406 .604	.212 .315	.417 .620	.417 .620	.366 .544
XX4065	.434 .646	.422 .627	.430 .640	.451 .671	.476 .709	.468 .696	.244 .364	.481 .715	.481 .715	.422 .627
XX4083	.558 .830	.542 .806	.553 .822	.580 .863	.612 .911	.601 .895	.314 .468	.618 .919	.618 .919	.542 .806
XX5028	.302 .450	.294 .437	.299 .446	.314 .467	.332 .494	.326 .485	.170 .253	.335 .498	.335 .498	.294 .437
XX5035	.361 .538	.351 .522	.358 .533	.376 .559	.397 .590	.390 .580	.204 .303	.400 .595	.400 .595	.351 .522
XX5042	.412 .613	.400 .595	.408 .607	.428 .637	.452 .672	.444 .660	.232 .345	.456 .678	.456 .678	.400 .595
XX5049	.461 .685	.447 .665	.456 .679	.479 .712	.505 .752	.496 .739	.259 .386	.510 .759	.510 .759	.447 .665
XX5065	.537 .798	.521 .775	.531 .791	.557 .829	.589 .876	.578 .860	.302 .450	.594 .884	.594 .884	.521 .775
XX5083	.693 1.032	.673 1.002	.687 1.022	.720 1.072	.761 1.132	.747 1.112	.390 .581	.767 1.142	.767 1.142	.673 1.002
XX6028	.356 .530	.346 .514	.353 .525	.370 .550	.391 .581	.384 .571	.200 .298	.394 .586	.364 .566	.346 .514
XX6035	.427 .636	.415 .617	.423 .630	.444 .661	.469 .698	.461 .685	.241 .358	.473 .704	.473 .704	.415 .617
XX6042	.486 .724	.472 .702	.482 .717	.505 .752	.533 .794	.524 .780	.274 .407	.538 .801	.538 .801	.472 .702
XX6049	.547 .813	.531 .790	.541 .805	.568 .845	.600 .892	.589 .876	.308 .458	.605 .900	.605 .900	.531 .790
XX6065	.636 .947	.618 .919	.630 .938	.661 .984	.698 1.039	.686 1.020	.358 .533	.704 1.048	.704 1.048	.618 .919
XX6083	.827 1.230	.803 1.195	.819 1.218	.859 1.278	.907 1.350	.891 1.326	.466 .693	.915 1.362	.915 1.362	.803 1.195
XX7035	.493 .734	.479 .713	.488 .727	.512 .762	.541 .805	.532 .791	.278 .413	.546 .812	.546 .812	.479 .713
XX7042	.562 .836	.545 .811	.556 .827	.583 .868	.616 .917	.605 .900	.316 .470	.621 .925	.621 .925	.545 .811
XX7049	.632 .941	.614 .914	.626 .932	.657 .978	.694 1.032	.682 1.014	.356 .530	.700 1.042	.700 1.042	.614 .914
XX7065	.737 1.097	.715 1.065	.730 1.086	.766 1.139	.808 1.023	.794 1.182	.415 .617	.816 1.214	.816 1.214	.715 1.065
XX7083	.961 1.430	.933 1.389	.952 1.417	.999 1.486	1.055 1.569	1.036 1.542	.541 .805	1.064 1.583	1.064 1.583	.933 1.389

Fine-Fin® High Performance Tubes Standards

ASME Sec. 8, Div 1, UG-8:	(and Appendix 23 for external pressure rating where necessary).
ASTM A-1012:	Seamless and Welded Ferritic, Austenitic and Duplex Alloy Steel Condenser and Heat Exchanger Tubes with Integral Fins
ASTM B-891:	Seamless and Welded Titanium and Titanium Alloy Condenser and Heat Exchanger Tubes With Integral Fins
ASTM B-924:	Seamless and Welded Nickel Alloy Condenser and Heat Exchanger Tubes with Integral Fins
ASTM B-359 / ASME SB-359:	Copper and Copper Alloy Seamless Condenser and Heat Exchanger Tubes with Integral Fins

Fine-Fin® High Performance Tubes Tolerances

Fins per inch:	+3 / -2
Fins height:	± .003" (.076 mm)
Overall length:	+ 1/8" (3.175 mm) up to 24' (7.3 m) incl; + 1/4" (6.35 mm) over 24' (7.3 m) up to 34' (10.4 m) incl; + 3/8" (9.525 mm) over 34' (10.4 m) up to 44' (13.4 m) incl; + 1/2" (12.7 mm) over 44' (13.4 m).
Plain end length: (Straight)	+ 1/4" (6.35 mm) / - 0" (0.0 mm)
Plain end length: (U-Bends)	+ 1/2" (12.7 mm) / - 0" (0.0 mm)
Land length:	+ 1/4" (6.35 mm) / - 0" (0.0 mm)
Land location:	+ 1/4" (6.35 mm) / - 0" (0.0 mm) from start end of tube
Land at tangent: (U-Bends)	± 1/4" (6.35 mm)
Wall thickness:	See data sheet
Finned section diameter:	Max. O.D. within material spec. No guarantee on min. O.D.
Finned section transition:	1/2" (12.7 mm) minimum total transition, 4" (101.6 mm) maximum total transition

Fine-Fin® High Performance Tubes Specifications

All straight length tubes:	Air test at 250 psi (1.72 Mpa) after finning, standard. Hydro-test, optional.
All u-bend tubes:	Hydro-test after bending, standard.
All tubes:	Eddy current test after finning, standard.
Standard packaging:	Hex bundles.
Wood boxes:	Available at nominal price extra.
Land length:	1.0" (25.4 mm) minimum (for shorter lengths, consult VHET).
Distance between lands:	18" (457.2 mm) minimum.



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