

# SALEM TUBE LOWFIN TUBING

Product information guide

# LOWFIN TUBING

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Steel Lowfin tube is an integral finned tube produced from welded and /or seamless purchased tubes made to requirements of ASTM Specifications in Carbon, Carbon Alloy, Stainless Steel and Copper Alloys.

All Lowfin which meets the requirements of ASME Boiler and Pressure Vessel Code, Section VIII, is made to an average wall in the fin area. When a minimum wall is required the next heavier wall size should be ordered.

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## RANGES OF SIZES

See Table 2

The standard maximum length for shipment by truck is 24 mtrs. For shipments of longer lengths contact Salem Tube directly.

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## TEMPERS

Steel is normally supplied in the 'as finned' temper. Plain ends and lands are supplied in the condition as described by the governing plain tube ASTM or ASME standard.

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## PLAIN SECTION REQUIREMENTS

Plain end lengths 25.4mm and over are supplied as standard. If plain end less than 25.4mm are required contact Salem Tube directly.

Distances of 457.2mm and over between lands are supplied as standard. If distances down to 203.2mm minimum are required contact Salem Tube directly.

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## TOLERANCES

Applicable tolerances for diameter and wall thickness are shown in Table 2. Other tolerances are per the governing ASTM or ASME standard.

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## TESTING

All Lowfin is Eddy Current and Air tested at 250psi, after finning per ASME specifications.

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## ALLOYS

Applicable plain tube specifications and mechanical properties.

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## ENGINEERING DATA

See Table 1

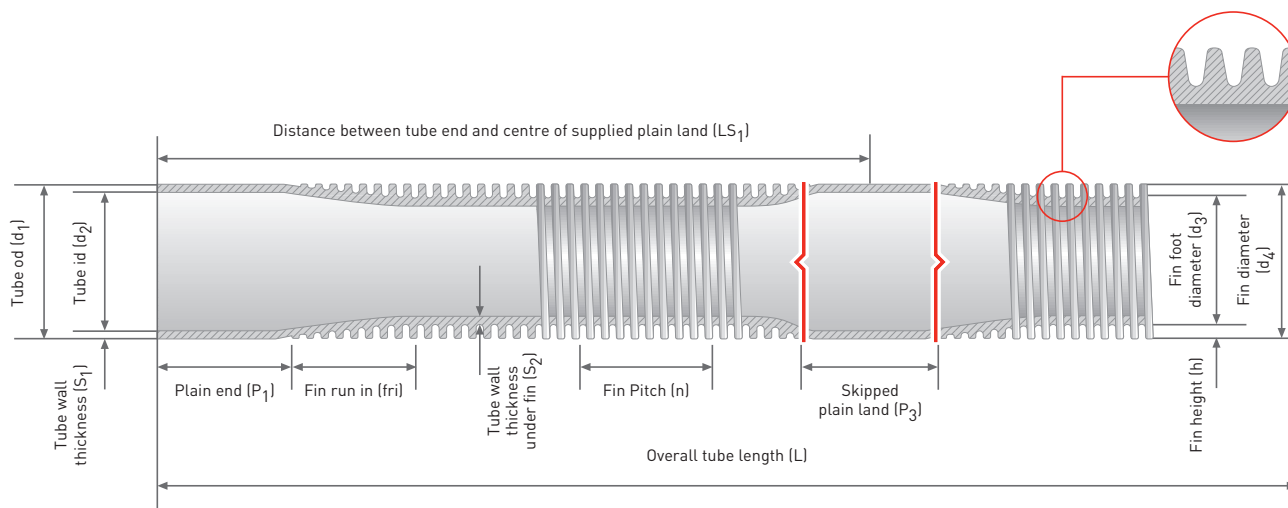
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## PACKING

Unless otherwise stated all Lowfin tubes are packed in wooden cases.

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# LOW FIN TUBE NOMENCLATURE



## TUBE

Tube diameter ( $d_1$ )

Tube wall thickness ( $S_1$ )

Tube inside diameter ( $d_2$ )

Plain ends ( $P_1$ ) + ( $P_2$ )

Skipped plain land ( $P_3$ )

Overall tube length ( $L$ )

## FIN SECTION

Fin Diameter ( $d_4$ )

Fin root diameter ( $d_3$ )

Fin height ( $h$ )

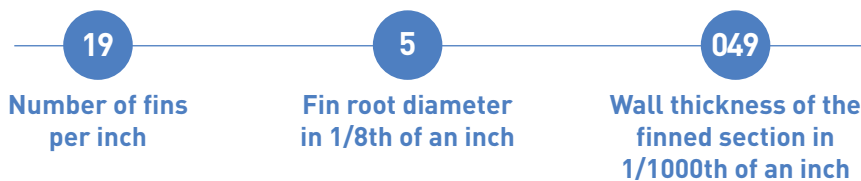
Fin pitch ( $n$ ) = fins per inch

Tube wall thickness under fin ( $S_2$ )

Fin run in/Fin run out ( $fri$ )

## DEFINITION OF CODING SYSTEM

**6 number system** Example: Code 195049



## Engineering Data Lowfin tube 19 fins per 1" (25.4mm)

Table 1

Fin Code	Ao		Ao A1	IXS		Approx Wt	
	Ft2/Ft	Cm2 / Cm		In2	Cm2	lbs /Ft	Kgs /M
193042	.318	9.69	4.13	.068	.049	.234	.348
193049	.318	9.69	4.33	.062	.040	.255	.379
193058	.318	9.69	4.63	.054	.035	.280	.417
194049	.410	12.49	3.87	.129	.83	.343	.510
194058	.410	12.49	4.05	.118	.76	.381	.567
194065	.410	12.49	4.20	.109	.70	.408	.608
194072	.410	12.49	4.36	.101	.65	.438	.652
195049	.503	15.33	3.62	.221	1.43	.432	.643
195058	.503	15.33	3.75	.206	1.33	.482	.717
195065	.503	15.33	3.86	.195	1.26	.520	.773
195072	.503	15.33	3.97	.184	1.19	.556	.828
195083	.503	15.33	4.16	.168	1.08	.611	.909
196058	.595	18.13	3.57	.319	2.06	.583	.867
196065	.595	18.13	3.65	.305	1.97	.632	.940
196072	.595	18.13	3.73	.291	1.88	.675	1.004
196083	.595	18.13	3.87	.271	1.75	.747	1.112
196095	.595	18.13	4.04	.249	1.61	.819	1.219
197058	.688	20.97	3.45	.456	2.94	.683	1.017
197065	.688	20.97	3.51	.439	2.83	.742	1.104
197072	.688	20.97	3.58	.423	2.72	.797	1.186
197083	.688	20.97	3.69	.398	2.57	.881	1.312
197095	.688	20.97	3.82	.372	2.40	.969	1.442
197109	.688	20.97	3.98	.342	2.21	1.065	1.584

**Ao** = Average outside area  
**Ao/Ai** = Outside to Inside surface area ratio  
**IXS** = I.D cross-sectional area, average  
**Approx wt** = Approximate weight per unit length (steel)

### Standard Size Range of Fin "INTEGRON" Tubes

#### DEFINITION OF CODING SYSTEM

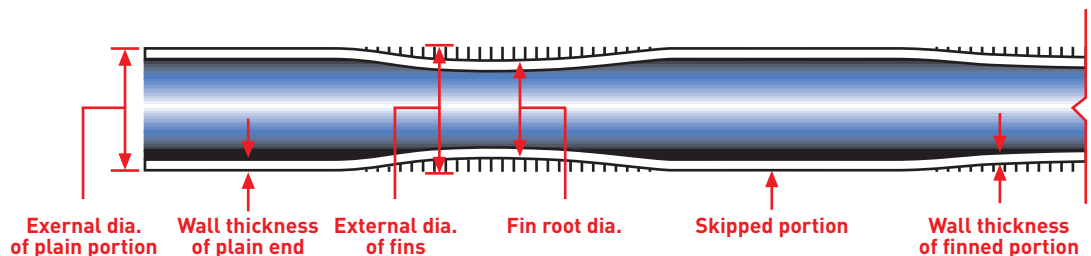
Example:

Code 195049

19 Fins per inch

5 Fin root dia. in 1/8th of an inch

049 Wall thickness of finned portion in 1/1000th of an inch



## Standard Sizes – Lowfin – Low Carbon, Stainless Steel and Copper Alloys 19 fins per 1” (25.4mm)

Table 2

Standard Sizes					Plain Section Dimensions and Tolerances								Fin Section Dimensions			
Outside Diameter		Wall Thickness		Fin Code	Outside Diameter				Wall Thickness				At-A-Point Root Dia		Minimum Wall Thickness	
					Nominal Size		Tolerances		Nominal Size		Tolerances					
In	mm	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
½	13.0	.042	1.07	193042	.500	13.0	.004	.10	.060	1.52	.005	.15	.375	9.5	0.37	.94
		.049	1.24	193049					.065	1.65	.006	.16			.044	1.12
		.058	1.47	193058					.075	1.90	.007	.19			.049	1.25
5/8	15.9	0.49	1.24	194049	.625	15.9	.004	.10	.065	1.65	.006	.16	.500	13.0	.044	1.12
		.058	1.47	194058					.075	1.90	.007	.19			.049	1.25
		.065	1.65	194065					.085	2.16	.008	.22			.058	1.47
		.072	1.83	194072					.085	2.16	.008	.22			.065	1.65
¾	19.1	.049	1.24	195049	.750	19.1	.004	.10	.065	1.65	.006	.16	.625	15.9	.044	1.12
		.058	1.47	195058					.075	1.90	.007	.19			.049	1.25
		.065	1.65	195065					.085	2.16	.008	.22			.058	1.47
		.072	1.83	195072					.085	2.16	.008	.22			.065	1.65
		.083	2.11	195083					.095	2.41	.009	.24			.074	1.88
7/8	22.2	.058	1.47	196058	.875	22.2	.004	.10	.075	1.90	.007	.19	.750	19.1	.049	1.25
		.065	1.65	196065					.085	2.16	.008	.22			.058	1.47
		.072	1.83	196072					.085	2.16	.008	.22			.065	1.65
		.083	2.11	196083					.095	2.41	.009	.24			.074	1.88
		.095	2.41	196095					.110	2.70	.010	.28			.084	2.13
1	25.4	.058	1.47	197058	1.000	25.4	.006	.15	.075	1.90	.007	.19	.875	22.2	.049	1.25
		.065	1.65	197065					.085	2.16	.008	.22			.058	1.47
		.072	1.83	197072					.085	2.16	.008	.22			.065	1.65
		.083	2.11	197083					.095	2.41	.009	.24			.074	1.88
		.095	2.41	197095					.110	2.79	.010	.28			.084	2.13
		.109	2.77	197109				.125	3.18	.011	.32			.097	2.46	

Tolerances are plus or minus

Fins per inch - 19 + 1 -0

Fin width - .011 inch Avg

Fin height - .050 inch Min

## Engineering Data Lowfin tube 26 fins per 1" (25.4mm)

Table 3

Fin Code	Ao		Ao A1	IXS		Approx Wt	
	Ft2/Ft	Cm2 / Cm		In2	Cm2	lbs /Ft	Kgs /M
265035	.63	19.2	4.38	.245	1.580	.360	.54
265042	.63	19.2	4.49	.232	1.496	.401	.60
265049	.63	19.2	4.61	.221	1.425	.441	.66
267035	.88	26.8	4.15	.533	3.439	.510	.76
267042	.88	26.8	4.22	.515	3.322	.568	.85

Tolerances are plus or minus

Fins per inch - 26 +1/-0

Fin width - .011" Avg

Fin height - .050" Min ,052" Avg

## Standard Sizes – Lowfin – Low Carbon, Stainless Steel and Copper Alloys 26 fins per 1" (25.4mm)

Table 4

Standard Sizes					Plain Section Dimensions and Tolerances								Fin Section Dimensions			
Outside Diameter		Wall Thickness		Fin Code	Outside Diameter				Wall Thickness				At-A-Point Root Dia		Minimum Wall Thickness	
Nominal Size		Tolerances			Nominal Size		Tolerances		Nominal Size		Tolerances					
In	mm	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
¾	19.1	.035	.89	265035	.750	19.1	.005	.13	.055	1.40	.0055	.14	.640	16.3	.031	.79
		.042	1.07	265042					.065	1.65	.0065	.17			.037	.94
		.049	1.24	265049					.075	1.91	.0075	.19			.044	1.12
1	25.4	.035	.89	267035	1.000	25.4	.005	.13	.055	1.40	.0055	.14	.890	22.6	.031	.79
		.042	1.07	267042					.065	1.65	.0065	.17			.037	.94

Tolerances are plus or minus

## Engineering Data Lowfin tube 28 fins per 1" (25.4mm) Table 5

Fin Code	Ao		Ao A1	IXS		Approx Wt	
	Ft2/Ft	Cm2 / Cm		In2	Cm2	lbs /Ft	Kgs /M
285028	.52	15.8	3.187	.301	1.94	.284	.423
285035	.52	15.8	3.261	.287	1.85	.331	.493
285042	.52	15.8	3.338	.274	1.77	.377	.561
285049	.52	15.8	3.419	.261	1.68	.421	.626
285065	.52	15.8	3.619	.233	1.50	.520	.774
285083	.52	15.8	3.875	.203	1.31	.623	.927
286028	.61	18.6	3.119	.435	2.81	.338	.503
286035	.61	18.6	3.179	.419	2.70	.394	.586
286042	.61	18.6	3.241	.403	2.60	.449	.668
286049	.61	18.6	3.306	.387	2.50	.504	.750
286065	.61	18.6	3.464	.353	2.28	.624	.929
286083	.61	18.6	3.660	.316	2.04	.752	1.12
287028	.77	21.3	3.071	.593	3.83	.391	.582
287035	.77	21.3	3.121	.574	3.70	.457	.680
287042	.77	21.3	3.173	.555	3.58	.522	.777
287049	.77	21.3	3.227	.537	3.46	.586	.872
287055	.77	21.3	3.357	.496	3.20	.728	1.08
287083	.77	21.3	3.516	.452	2.92	.881	1.31

**Tolerances are plus or minus**

Fins per inch - 28 +1/-0

Fin width - .011" Avg

Fin height - .035" Min ,037" Avg

## Standard Sizes – Lowfin – Seamless and Welded Stainless Steel 28 fins per 1” (25.4mm)

Table 6

Standard Sizes					Plain Section Dimensions and Tolerances								Fin Section Dimensions			
Outside Diameter		Wall Thickness		Fin Code	Outside Diameter				Wall Thickness				At-A-Point Root Dia		Minimum Wall Thickness	
					Nominal Size		Tolerances		Nominal Size		Tolerances					
In	mm	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
¾	19.1	.028	.71	285028	.750	19.1	.004	.10	.049	1.24	.005	.127	.672	17.1	.025	.64
		.035	.89	285035					.058	1.47	.0055	.140			.031	.79
		.042	1.07	285042					.065	1.65	.0065	.165			.037	.94
		.049	1.24	285049					.072	1.83	.007	.178			.044	1.12
		.065	1.65	285065					.085	2.16	.0085	.216			.058	1.47
		.083	2.11	285083					.095	2.41	.0095	.241			.074	1.88
7/8	22.2	.028	.71	286028	.875	22.2	.004	.10	.049	1.24	.005	.127	.797	20.2	.025	.64
		.035	.89	286035					.058	1.47	.0055	.140			.031	.79
		.042	1.07	286042					.065	1.65	.0065	.165			.037	.94
		.049	1.24	286049					.072	1.83	.007	.178			.044	1.12
		.065	1.65	286065					.085	2.16	.0085	.216			.058	1.47
		.083	2.11	286083					.095	2.41	.0095	.241			.074	1.88
1	25.4	.028	.71	287028	1.000	25.4	.006	.15	.049	1.24	.005	.127	.922	23.4	.025	.64
		.035	.89	287035					.058	1.47	.0055	.140			.031	.79
		.042	1.07	287042					.065	1.65	.0065	.165			.037	.94
		.049	1.24	287049					.072	1.83	.007	.178			.044	1.12
		.065	1.65	287065					.085	2.16	.0085	.216			.058	1.47
		.083	2.11	287083					.095	2.41	.0095	.241			.074	1.88

Tolerances are plus or minus





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