FINNED TUBES

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PRODUCT DESCRIPTION

Custom made at our factory in the Scottish Borders, our helically tension wound, spiral Finned Tube (aka Gilled Tube) is typically used by heating specialists creating bespoke heating systems in large projects where long tube runs are required.

Finned Tube is highly versatile and its simplicity projects a minimalist style making them ideal for heating systems in contemporary buildings as well as in historical and refurbishment projects.

Finned Tube, typically carbon steel, has a relatively narrow tube at its core and a spiral metal 'fin' wound around it providing an enlarged surface area for the circulating air to pick up the heat energy and carry it around the room/space by means of natural convection.

We can design Finned Tube on a project by project basis to meet exact specifications. Single tubes of up to 6 meters can be supplied with flanged ends to join together with a gasket, or with threaded ends for joining with coupling joints or unions.

Our Finned Tubes are widely used in Church heating throughout the UK, Read about some of our recent Church projects on our website.

For full technical specifications and data sheets, please view below.

KEY FEATURES

- Available in a variety of bore sizes (25, 32, 40, 50, 65 and 80 mm)
- 16mm or 25mm fin height options
- Wide range of heat output options
- Natural metal finish as standard
- Hot dipped galvanised finish on request
- Powder coating available to any RAL colour
- Plain or screwed tube ends
- Robust carbon steel design

TECHNICAL SPECIFICATIONS

Available in up to 6m lengths and tube or fin diameters of 25mm/65mm - 100mm/165mm.

Finned Tube Details						Outputs - Watts per metre using Still Air 20°C Ambient												
Tube Nominal Bore mm	Fin Width mm	Diameter over fins mm	Fin Pitch mm	Weight per metre (kg)	Heating Surface m²/m	Mean Temperature of Water °C												
						40	45	50	55	60	65	70	75	80	85	90	95	100
25	16	65	10	3.81	0.789	71	95	120	146	165	197	229	259	292	326	357	392	426
			13	3.46	0.618	66	88	111	135	149	175	203	231	259	288	320	351	380
32	16	73	10	5.06	0.908	81	108	137	167	212	257	298	341	384	429	473	517	561
			13	4.58	0.713	76	101	127	155	202	236	274	310	350	387	428	466	509
32	25.4	92	10	6.41	1.691	114	153	194	136	283	328	373	416	461	505	551	600	648
			14	5.37	1.17	100	134	169	207	223	265	306	347	390	433	479	523	570
40	25.4	98	10	7.18	1.785	126	168	213	260	312	358	405	452	501	548	599	650	702
			14	6.04	1.24	109	146	185	226	246	289	336	381	425	472	519	567	618
50	25.4	108	10	9.18	2.05	146	195	248	303	360	413	468	522	577	631	691	748	808
			14	7.87	1.426	126	168	213	260	288	337	388	442	496	549	605	662	721
			19	7.22	1.118	112	149	189	231	247	289	336	380	426	473	519	569	620
65	25.4	124	10	11.48	2.361	161	215	273	333	429	484	548	610	676	740	808	877	948
			14	9.88	1.654	143	191	242	295	336	394	454	513	577	637	702	769	834
			19	9.08	1.301	131	175	221	269	288	336	388	440	492	547	602	658	719
80	25.4	137	10	14.13	2.617	177	235	298	363	466	531	601	671	740	813	884	960	1032
			14	12.29	1.837	158	210	266	324	377	440	505	570	636	704	774	846	920
			19	11.35	1.447	146	193	244	298	324	378	433	490	548	606	668	730	793

Finned Tube Details - Low Temperature						Mean Temperature of Water °C													Input any mean temperature below	Input different ambient temp. (W)	Double bank	Triple bank	4-Tube bank
Tube Nominal Bore mm	Fin Width mm	Diameter over fins mm	Fin Pitch mm	Weight per metre (kg)	Heating Surface m²/m	40	45	50	55	60	65	70	75	80	85	90	95	100	70	15			
25	16	65	10	3.81	0.789	38	70	101	134	165	197	229	259	292	326	357	392	426	230	253	368	505	643
32	16	73	10	5.06	0.908	40	82	128	170	212	257	298	341	384	429	473	517	561	299	329	479	659	838
32	25.4	92	10	6.41	1.691	106	150	196	240	283	328	373	416	461	505	551	600	648	374	411	598	822	1046
40	25.4	98	10	7.18	1.785	120	169	216	266	312	358	405	452	501	548	599	650	702	408	448	652	897	1141
50	25.4	108	10	9.18	2.05	141	197	250	308	360	413	468	522	577	631	691	748	808	470	517	752	1034	1317
65	25.4	124	10	11.48	2.361	186	246	306	370	429	484	548	610	676	740	808	877	948	556	612	890	1223	1557
80	25.4	137	10	14.13	2.617	198	264	328	406	466	531	601	671	740	813	884	960	1032	607	668	971	1336	1700

please note all banks are based on one above the other
please note outputs based on 20 degrees ambient temperature
please note for changing output based on different ambient temp working range
please note that all bank arrangements based on 20 degrees ambient

AMBIENT TEMPERATURE CORRECTION

The emission figures are based on an ambient temperature of 18°C and May be corrected
for other ambient temperatures in the range 0°C to 40°C by multiplying by the factor R.

Where R = T—Ta — T = Mean temperature of heating medium °C.

T—20 — Ta = Ambient Temperature °C.

BANKED TUBE ARRANGEMENTS

When tubes are arranged in banks, the output is obtained by multiplying the output from a single tube by the following factors –

2 TUBE BANK – 1.6 | 3 TUBE BANK – 2.2 | 4 TUBE BANK – 2.8

WATER VELOCITY CORRECTION

The emission figures for hot water are based on a velocity of 0.30 metres/sec. For other velocities the following factors should be applied.

Velocity Metres/Sec	0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.80	1.00
Correction Factor	0.870	0.912	0.965	1.00	1.007	1.017	1.025	1.035	1.040

FINNED TUBE IN CONVECTOR CASINGS

Outputs can vary according to the style of casing employed but in general the outputs given below will apply provided that:-

1. The clearance between casing and fin is not greater than about 12mm.
2. The air inlet gap below the casings around 0.75 D, when D is the diameter over the fins.
3. The free area of outlet is around 0.025m^2 per 300watts/Hr.

Casing Height	Increase In Output Over Still Air Figures
300mm	22%
400mm	28%
500mm	32%
600mm	36%
700mm	40%

DESIGN & INSTALLATION

Gilled/Finned tube should be installed by suitably qualified engineers.

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