



Wings Radiant Heating & Cooling Ecoline

Healthcare · Education · Commercial · Prisons · Defence



Wings Radiant Heating and Cooling

Ecoline

Wings Radiant Ceiling Panel “Ecoline”



Wings Ecoline are lightweight radiant heating panels consisting of an arrangement of 15 mm copper waterway tubes with 28mm headers. The tubes are pressed into aluminium profiles, streamline butt welded and soldered to ensure maximum contact between the aluminium profiles to create efficient heat transference to the faceplate.

The Ecoline product comes in two types of faceplates plain, flat or perforated. The perforated units are ideally suited for projects that require sound absorption. All panels can be designed to be either suspended in false ceilings or free-hung from high level positions. Within the rear of the panel, is attached 40mm of insulation. The Ecoline panel is cross stabilised by profiles made from galvanised sheet used to enable variable suspension.

All visible surfaces are flat without corrugations ideally suited to false ceilings of all types. All panels will come in RAL 9016 as standard or any standard RAL colour as a powder coating. It is also possible to have your radiant panels in an anti-microbial finish for areas which require the highest levels of hygiene.

The Ecoline can come in any single size up to 3m in length, or multiple lengths to achieve longer continuous runs. The final connections are plain end or screw end left for final connection by others.

All panels are provided with insulation attached to the rear depending on its requirements. All units are delivered with a peel off protective coating to ensure protection from scratches during installation. All panels circuits are tested to 10 bar during manufacture in the factory.

All panels outputs are tested to BS EN 14037.



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Wings Radiant Ceiling Panel "Ecoline"

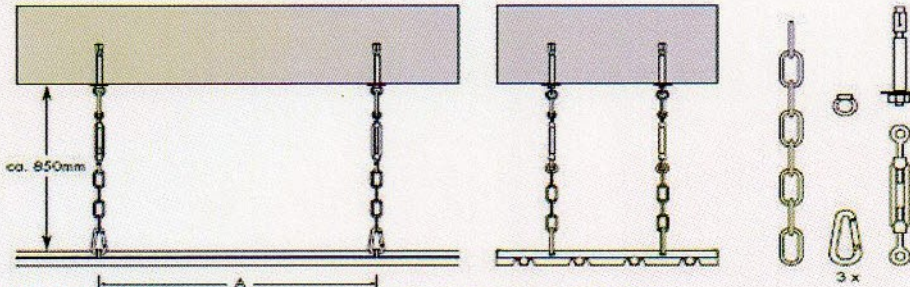


- **Offices**
- **Administrations**
- **Cinemas**
- **Theatre**
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- **Exhibition halls**
- **Factories**
- **Warehouses**
- **Logistics centres**
- **Nursing homes**
- **Surgeries**
- **Patient rooms**
- **Etc**

- **Postal distribution centres**
- **High-bay warehouse**
- **Maintenance hangars**
- **Market halls**
- **Homes**
- **Clinics**
- **Hospitals**
- **Schools**
- **Prisons**

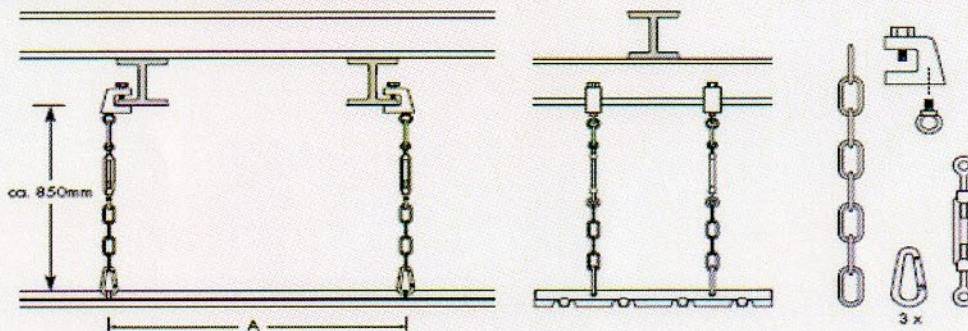
Suspension

Suspension components for concrete ceiling



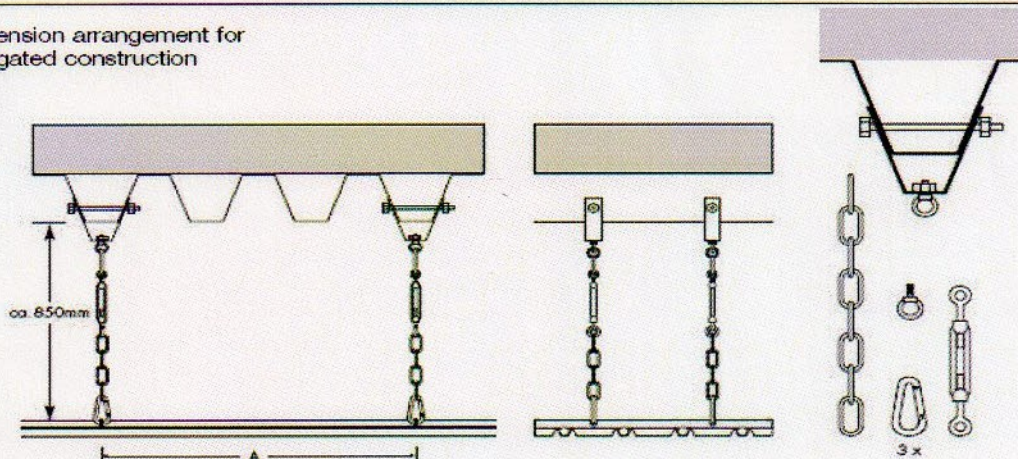
With express-anchor, M8 eye nut, welded link chain, adjustment piece and karabiner

Suspension components for girder mounting



With girder clamp, M8 eye bolt, welded link chain, adjustment piece and karabiner

Suspension arrangement for corrugated construction

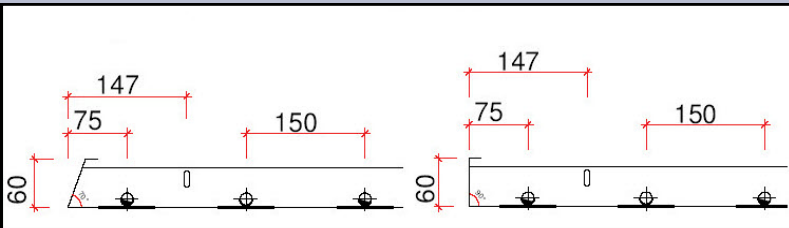
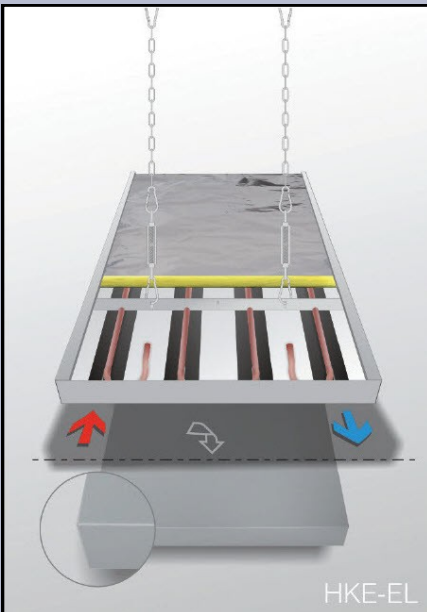


With trapeze hanger, M8 eye bolt and nut, welded link chain, adjustment piece and karabiner

Wings Radiant Ceiling Panel "Ecoline"

Product Data

Supports Details



Panel width, mm	Number of Waterway tubes (15mm)	Typical Output at ΔT 55°C in W/m	Operating Weight kg/m	weight kg/manifold	Weight of additional things made from aluminium	Blind tile kg/m	Backside cover plate kg/m	Double sided beam edge kg/m	Water content qdm/m	Suspension point distance in mm	Connection on one side	Connection on both side	Special version	Connection on one side Standard version	Special version
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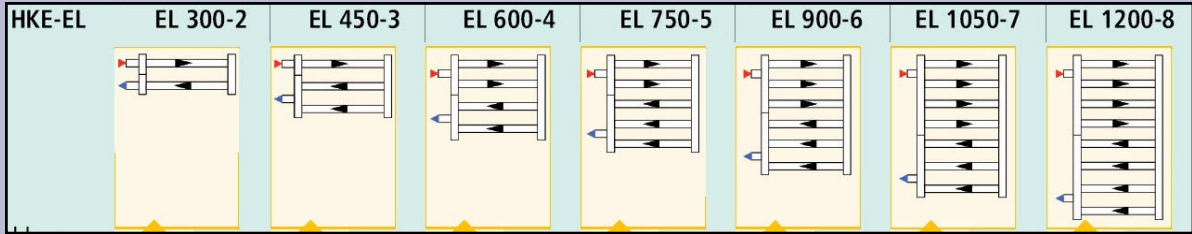
	300	2	196	3,9	0,40	0,95	1,30	0,81	1,3	0,27	2	150	60	-	120	-
	450	3	279	5,6	0,55	1,39	1,75	1,22	1,3	0,40	2	150	120	-	180	60
	600	4	363	7,3	0,70	1,82	2,15	1,62	1,3	0,53	2	300	120	60	240	120
	750	5	432	9,0	0,85	2,26	2,60	2,03	1,3	0,66	2	450	180	120	300	60
	900	6	501	10,7	1,00	2,69	3,00	2,43	1,3	0,80	2	600	180	60	360	120
	1050	7	570	12,4	1,15	3,13	3,45	2,84	1,3	0,93	2	750	240	120	180	60
	1200	8	639	14,1	1,30	3,56	3,85	3,24	1,3	1,06	2	900	240	120	180	60

“Ecoline”

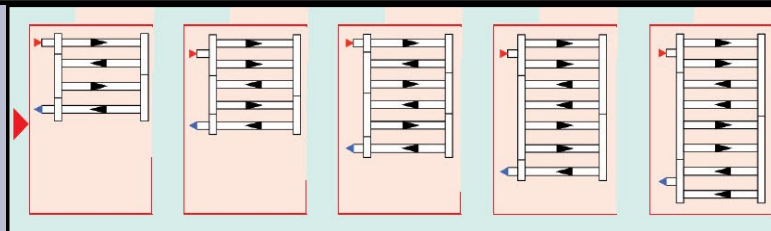
FKE-EL	Reading Thermal outputs in Watts per Linear Metre						
Delta ΔT	EL300	EL450	EL600	EL750	EL900	EL1050	E1200
Room Temp	300-2	450-3	600-4	750-5	900-6	1050-7	1200-8
2	4	5	7	8	9	11	12
4	9	12	16	19	22	25	28
6	15	20	25	30	35	40	45
8	21	28	36	43	50	57	64
10	27	37	47	56	65	74	83
12	33	46	58	69	81	92	104
14	39	55	70	84	97	111	124
16	46	64	82	98	114	130	157
18	53	74	95	113	131	160	168
20	60	84	107	128	149	170	191
22	67	94	120	144	167	190	214
24	74	104	134	160	185	211	237
26	81	115	147	176	204	233	261
27	85	120	154	184	214	244	273
28	89	125	161	192	223	254	285
30	96	136	175	209	242	276	310
32	104	147	189	226	262	298	334
34	112	157	203	243	281	321	359
36	119	169	218	260	301	343	385
38	127	180	232	277	321	366	411
40	135	191	247	295	342	390	437
42	143	202	262	313	362	413	463
44	151	214	277	331	383	437	489
46	159	225	293	349	404	460	516
47	163	231	301	358	415	473	530
48	167	237	308	367	425	485	543
50	175	249	323	385	447	509	570
52	183	261	339	404	468	533	597
54	192	273	355	423	490	558	625
55	196	279	363	433	501	571	639
56	200	285	371	442	512	583	653
58	208	297	387	461	534	608	681
60	217	309	403	480	556	633	709
62	225	321	419	499	578	658	737
64	234	334	435	518	600	684	766
66	242	346	452	538	623	709	794
68	251	358	468	558	646	735	823
70	260	371	485	577	669	761	852
72	268	384	501	597	692	787	881
74	277	396	518	617	715	813	911
76	286	409	535	637	738	840	940
78	295	422	552	657	761	866	970
80	304	435	569	678	785	893	1000
82	312	448	586	698	808	920	1029
84	321	461	604	719	832	947	1060
86	330	474	621	739	856	974	1090
88	339	487	638	760	880	1001	1120
90	348	500	656	781	904	1028	1151

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Flow Rates for Same end connections

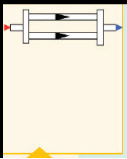
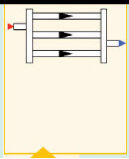
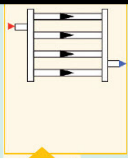
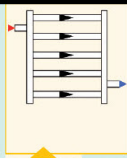
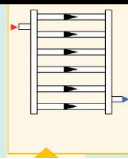
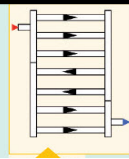
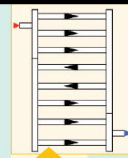


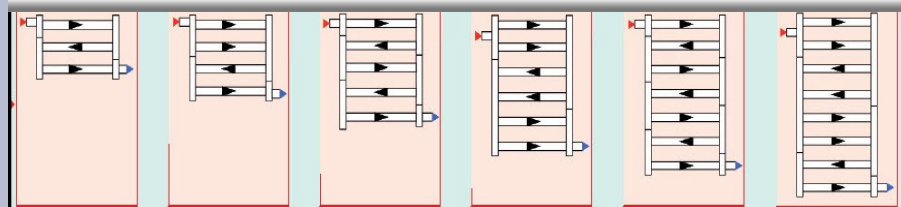
60	54			108				162				
	+ 15			+ 30				+ 45				
120	176	115	54	352		291		528	169		108	
	+ 40	+ 44	+ 45	+ 80		+ 75		+ 120	+ 50		+ 45	
180	354	232	110	708	82	586	54			335		192
	+ 90	+ 88	+ 105	+ 175	+ 120	+ 170	+ 110			+ 120		+ 110
240	590	383	176		132	973	88		71	559	54	352
	+ 220	+ 210	+ 180		+ 195	+ 280	+ 185		+ 195	+ 190	+ 190	+ 180
300		562	264		198		130		105	826	77	528
		+ 360	+ 250		+ 275		+ 260		+ 275	+ 260	+ 270	+ 250
450			480		372		264		212		160	
			+ 370		+ 405		+ 380		+ 400		+ 390	
600			860		650		429		342		264	
			+ 480		+ 540		+ 490		+ 515		+ 500	
750							638		512		385	
							+ 600		+ 630		+ 610	
900									694		528	
									+ 745		+ 720	
1050											704	
											+ 830	
1200												
1400												
1650												
1800												



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Pressure Drop

HKE-EL	EL 300-2	EL 450-3	EL 600-4	EL 750-5	EL 900-6	EL 1050-7	EL 1200-8
							
Δp per linear m + Δp of a Pair of manifolds in Pa							
60		81		135		189	
		+ 20		+ 40		+ 55	
120	27	264	203	440	81	616	257
	+ 15	+ 80	+ 70	+ 115	+ 30	+ 150	+ 120
180	55	27 531	409	885	162 133	107 512	
	+ 30	+ 30 + 160	+ 140	+ 225	+ 75 + 80	+ 85 + 230	
240	88	44 885	27 678	1475	264 220	220 854	
	+ 50	+ 55 + 320	+ 35 + 280	+ 450	+ 120 + 125	+ 130 + 460	
300	132	65	40	27	396 329	260	
	+ 75	+ 80	+ 75	+ 80	+ 170 + 180	+ 190	
450	264	132	77	55	40 792 660	528	
	+ 140	+ 150	+ 130	+ 150	+ 155 + 300 + 315	+ 330	
600	430	210	132	88	64 1075	859	
	+ 225	+ 240	+ 195	+ 245	+ 250 + 570	+ 600	
750		320	192	132	94		
		+ 330	+ 290	+ 340	+ 345		
900			264	177	132		
			+ 400	+ 490	+ 510		
1050			352	240	170		
			+ 510	+ 740	+ 760		
1200				295	215		
				+ 980	+ 1020		
1400				350	286		
				+ 1220	+ 1280		
1600					352		
					+ 1600		
1800							





Ecoline Cooling output watts

Temperature °C	Number of Tubes with insulation W/m	8	7	6	5	4	3	2
	Panel width, mm	1200	1050	900	750	600	450	300
	1	10	9	8	6	5	4	3
	2	21	19	16	13	10	8	5
	3	32	28	24	20	16	12	8
	4	43	38	32	27	21	16	11
	5	54	48	40	34	27	20	14
	6	65	57	49	41	32	25	17
	7	76	67	57	48	38	29	20
	8	87	77	66	55	44	33	23
	9	98	87	74	62	49	38	26
	10	110	97	83	69	55	42	29
	11	121	107	91	76	60	46	31
	12	132	117	100	83	66	50	34
	13	144	127	108	90	72	55	37
14	155	137	117	98	78	59	40	

Temperature °C	Number of Tubes without insulation W/m	8	7	6	5	4	3	2
	Panel width, mm	1200	1050	900	750	600	450	300
	1	11	9	8	7	5	4	3
	2	23	20	17	14	11	9	6
	3	36	32	27	23	18	14	10
	4	50	44	38	31	25	19	13
	5	65	57	49	40	32	25	17
	6	79	70	60	50	39	30	21
	7	94	83	71	59	47	36	25
	8	110	96	82	69	54	42	29
	9	125	110	94	78	62	48	33
	10	141	124	106	88	70	54	37
	11	157	138	118	98	78	60	41
	12	173	152	130	108	86	66	45
	13	189	166	142	118	94	72	50
14	205	180	154	128	102	78	54	



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