

Merriott

Radiavector Radiators



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www.merriottuk.com
www.merriott.ie

What does Merriott stand for?

Merriott offers bespoke heating and cooling solutions that are the better choice for commercial applications across the UK and Ireland.

This means investing in world-class production facilities, and manufacturing products of the very highest standard – backed by revolutionary technology, rigorous testing and stringent quality control.

As a company, we have an unwavering commitment to innovation and sustainability, pioneering products that lead the way in design, performance and energy efficiency.

Underpinning all of this is our relationship with our customers: ensuring they can rely on best-in-class service and support, from specification right through to delivery.



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Range Overview

Product Description

Merriott Radiavector radiators are panel radiators all closed as one unit. They offer outputs ranging from 336W to 2530W per metre at $\Delta T 50^{\circ}\text{C}$.

The height of the radiavector increases in increments of 70mm, from a minimum of 70mm (2 panels) through to 280mm (5 panels).

The Radiavector's length increases in increments of 100mm, from a minimum of 400 mm through to 3000mm in increments of 100mm. For any additional lengths required, contact the Merriott Sales Office.

Outputs

All Radiavectors have been manufactured and tested in accordance with **EN442**.

Finish

Every Merriott Radiavector radiator undergoes an intensive pre-treatment process to protect against rust. In pre-treatment, the radiators are degreased, coated with iron phosphate and rinsed prior to painting. A cathodic electrodeposition primer coating is then applied to give total coverage of the bare steel and maximum corrosion protection. The durable topcoat (epoxy polyester powder) is electrostatically applied and stove enamel baked at 180°C . The process is monitored to ensure continuous achievement of optimum adhesion, opacity and gloss levels.

Colour

Our standard finish is semi-gloss RAL 9016 (White) in epoxy polyester powder. An extensive range of other RAL and BS colours are available, at a surcharge, on request.

Packaging

The entire surface of the radiator, including all 4 corners, is protected by cardboard box ends and packed in shrink wrapped polythene.

Connections

Standard connections are 4 x 1/2" (15mm) BSP connections. BDAC configurations is offered as standard. Other configurations are also available at a cost. See page 10 for details.

Flow and return positions must be specified at time of ordering.

Testing

The standard test pressure is 7.8 bar giving a maximum operating pressure of 6 bar. Higher testing and operation pressures are available at an additional cost.

Brackets and Feet

Radiavectors are supplied as standard without wall brackets or feet. Wall mounted cantilever brackets and boxsection feet are available on request. For a box foot to cover pipework as seen on page 12, this must be specified at the time of order and cannot be retrofitted.

Grilles

All models come as standard with a top grille which is removable for cleaning.

Dimensional Tolerances

Dimensional tolerances are in accordance with **EN442**.

Materials

Merriott Radiavectors are manufactured from flat steel tube, 70mm x 11mm, with a standard thickness of 1.5mm shell steel.

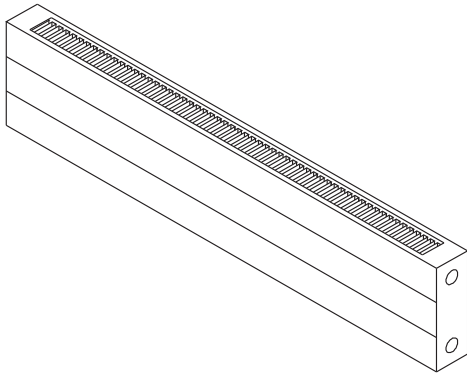
Warranty

Merriott radiators are guaranteed for a period of 5 years from date of purchase in respect of defective materials and workmanship. The system should be designed in accordance with the British Standard Code of Practice for Water Based Heating Systems in Buildings **BS EN 12828:2012+A1:2014** and **BS EN 12831: 2003**. The installation and commissioning of the system should comply with **BS EN 14336:2004**. On completion of the installation, the system should be properly flushed and filled in accordance with the British Code of Practice for the Treatment of Water in Domestic Hot Water Central Heating Systems **BS 7593:2006**, Part L of Building Regulations and Good Practice Guidance for Scotland. Merriott strongly recommends the use of corrosion inhibitor for all applications. Failure to observe these standards may invalidate the manufacturer's warranty.

All dimensions are in mm

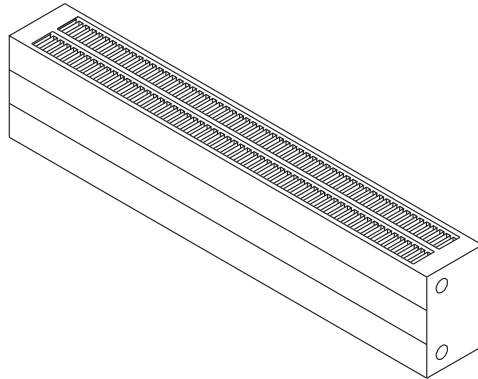
Model Options

K22



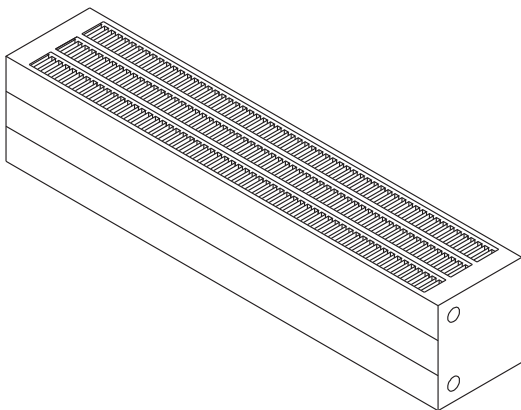
2 panel - single fin convector

K34



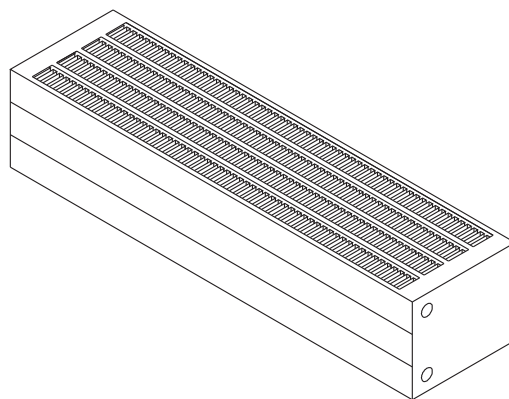
3 panel - double fin convector

K46



4 panel - triple fin convector

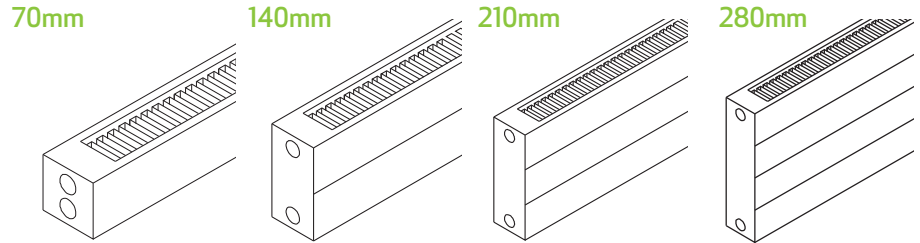
K58



5 panel - quadruple fin convector

Heat Outputs

K22 Radiavector 2 panel



Height	70mm	140mm	210mm	280mm
Depth (mm)	72	72	72	72
Dry Weight (kg/m)	6	12.3	18.5	24.7
Water Content (l/m)	1.2	2.3	3.5	4.7

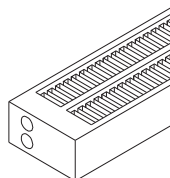
Length	Output (Watts)			
	$\Delta T50$	$\Delta T50$	$\Delta T50$	$\Delta T50$
mm				
400	134	210	273	330
500	168	262	342	413
600	202	314	410	496
700	235	367	478	578
800	269	419	546	661
900	302	472	615	743
1000	336	524	683	826
1100	370	576	751	909
1200	403	629	820	991
1300	437	681	888	1074
1400	470	734	956	1156
1500	504	786	1025	1239
1600	538	838	1093	1322
1700	571	891	1161	1404
1800	605	943	1229	1487
1900	638	996	1298	1569
2000	672	1048	1366	1652
2100	706	1100	1434	1735
2200	739	1153	1503	1817
2300	773	1205	1571	1900
2400	806	1258	1639	1982
2500	840	1310	1708	2065
2600	874	1362	1776	2148
2700	907	1415	1844	2230
2800	941	1467	1912	2313
2900	974	1520	1981	2395
3000	1008	1572	2049	2478

All outputs are in accordance with BS EN442 certification

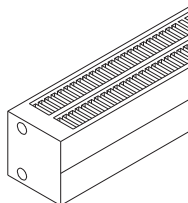
Heat Outputs

K34 Radiavector 3 panel

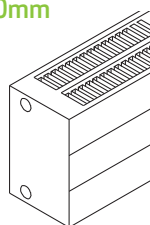
70mm



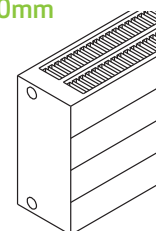
140mm



210mm



280mm



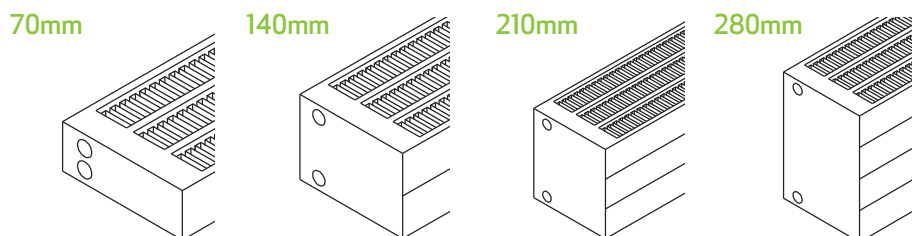
Height	70mm	140mm	210mm	280mm
Depth (mm)	133	133	133	133
Dry Weight (kg/m)	9.7	19.6	29.6	39.6
Water Content (l/m)	1.7	3.7	5.5	7.4

Length	Output (Watts)			
	70mm	140mm	210mm	280mm
mm	$\Delta T50$	$\Delta T50$	$\Delta T50$	$\Delta T50$
400	231	361	470	569
500	289	452	588	711
600	347	542	706	853
700	405	632	823	995
800	462	722	941	1138
900	520	813	1058	1280
1000	578	903	1176	1422
1100	636	993	1294	1564
1200	694	1084	1411	1706
1300	751	1174	1529	1849
1400	809	1264	1646	1991
1500	867	1355	1764	2133
1600	925	1445	1882	2275
1700	983	1535	1999	2417
1800	1040	1625	2117	2560
1900	1098	1716	2234	2702
2000	1156	1806	2352	2844
2100	1214	1896	2470	2986
2200	1272	1987	2587	3128
2300	1329	2077	2705	3271
2400	1387	2167	2822	3413
2500	1445	2258	2940	3555
2600	1503	2348	3058	3697
2700	1561	2438	3175	3839
2800	1618	2528	3293	3982
2900	1676	2619	3410	4124
3000	1734	2709	3528	4266

All outputs are in accordance with BS EN442 certification

Heat Outputs

K46 Radiavector 4 panel



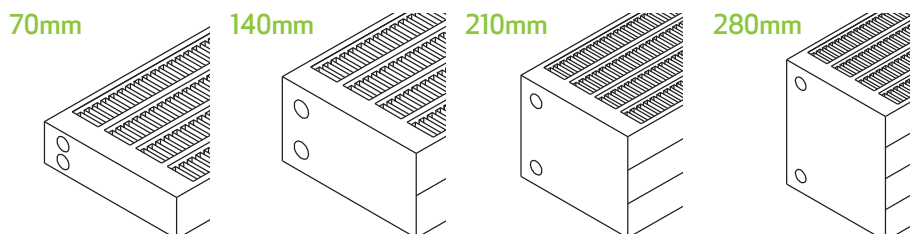
Height	70mm	140mm	210mm	280mm
Depth (mm)	194	194	194	194
Dry Weight (kg/m)	13.3	27.1	40.9	54.6
Water Content (l/m)	2.5	7.6	7.6	10.1

Length mm	Output (Watts)			
	$\Delta T50$	$\Delta T50$	$\Delta T50$	$\Delta T50$
400	324	505	658	796
500	405	632	823	995
600	485	758	987	1194
700	566	884	1152	1393
800	647	1010	1316	1592
900	728	1137	1481	1791
1000	809	1263	1645	1990
1100	890	1389	1810	2189
1200	971	1516	1974	2388
1300	1052	1642	2139	2587
1400	1133	1768	2303	2786
1500	1214	1895	2468	2985
1600	1294	2021	2632	3184
1700	1375	2147	2797	3383
1800	1456	2273	2961	3582
1900	1537	2400	3126	3781
2000	1618	2526	3290	3980
2100	1699	2652	3455	4179
2200	1780	2779	3619	4378
2300	1861	2905	3784	4577
2400	1942	3031	3948	4776
2500	2023	3158	4113	4975
2600	2103	3284	4277	5174
2700	2184	3410	4442	5373
2800	2265	3536	4606	5572
2900	2346	3663	4771	5771
3000	2427	3789	4935	5970

All outputs are in accordance with BS EN442 certification

Heat Outputs

K58 Radiavector 5 panel



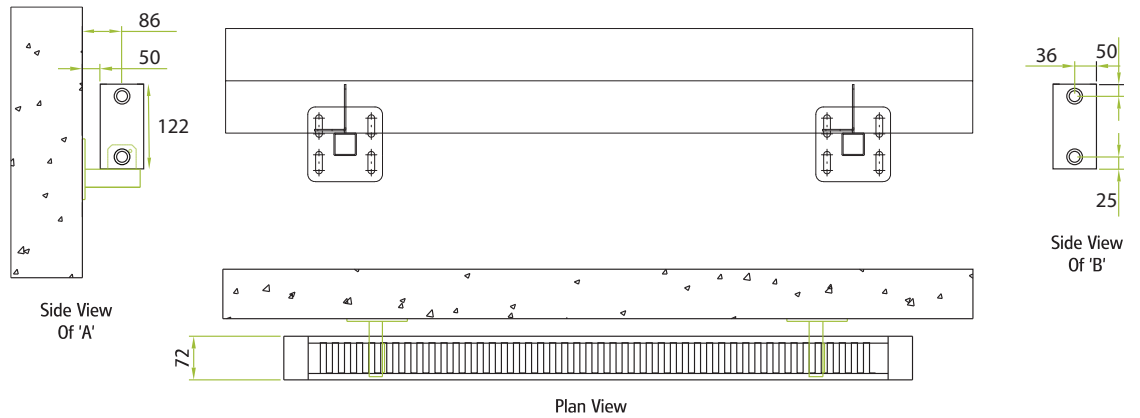
Height	70mm	140mm	210mm	280mm
Depth (mm)	255	255	255	255
Dry Weight (kg/m)	18	36.6	55.2	73.9
Water Content (l/m)	3.2	6.4	9.6	12.8

Length	Output (Watts)			
	70mm	140mm	210mm	280mm
mm	$\Delta T50$	$\Delta T50$	$\Delta T50$	$\Delta T50$
400	411	642	837	1012
500	514	803	1046	1265
600	617	964	1255	1518
700	720	1124	1464	1771
800	822	1285	1674	2024
900	925	1445	1883	2277
1000	1028	1606	2092	2530
1100	1131	1767	2301	2783
1200	1234	1927	2510	3036
1300	1336	2088	2720	3289
1400	1439	2248	2929	3542
1500	1542	2409	3138	3795
1600	1645	2570	3347	4048
1700	1748	2730	3556	4301
1800	1850	2891	3766	4554
1900	1953	3051	3975	4807
2000	2056	3212	4184	5060
2100	2159	3373	4393	5313
2200	2262	3533	4602	5566
2300	2364	3694	4812	5819
2400	2467	3854	5021	6072
2500	2570	4015	5230	6325
2600	2673	4176	5439	6578
2700	2776	4336	5648	6831
2800	2878	4497	5858	7084
2900	2981	4657	6067	7337
3000	3084	4818	6276	7590

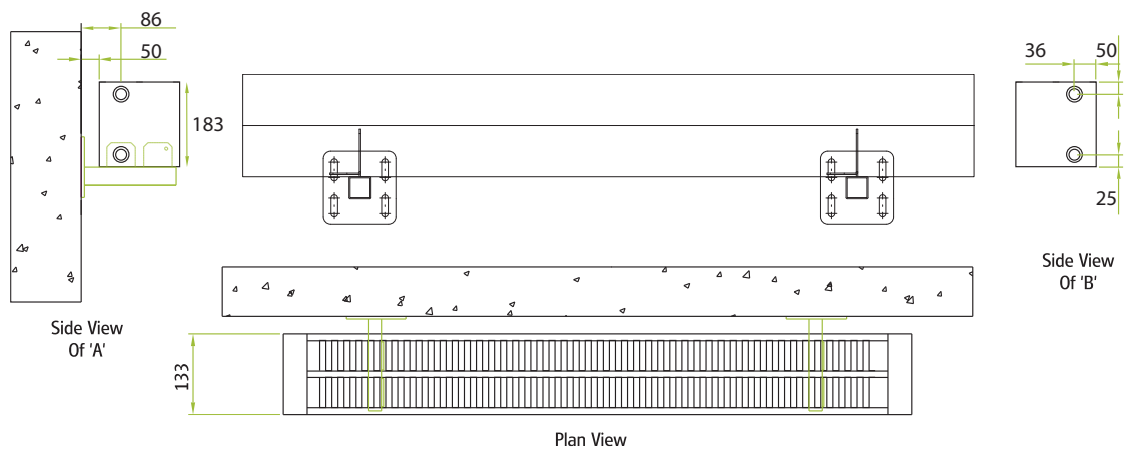
All outputs are in accordance with BS EN442 certification

Technical Specification

K22



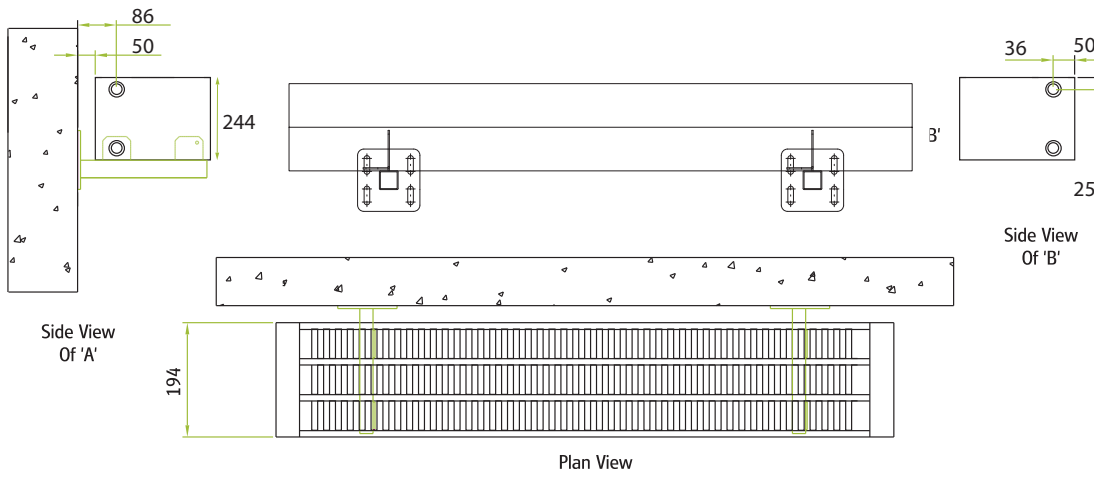
K34



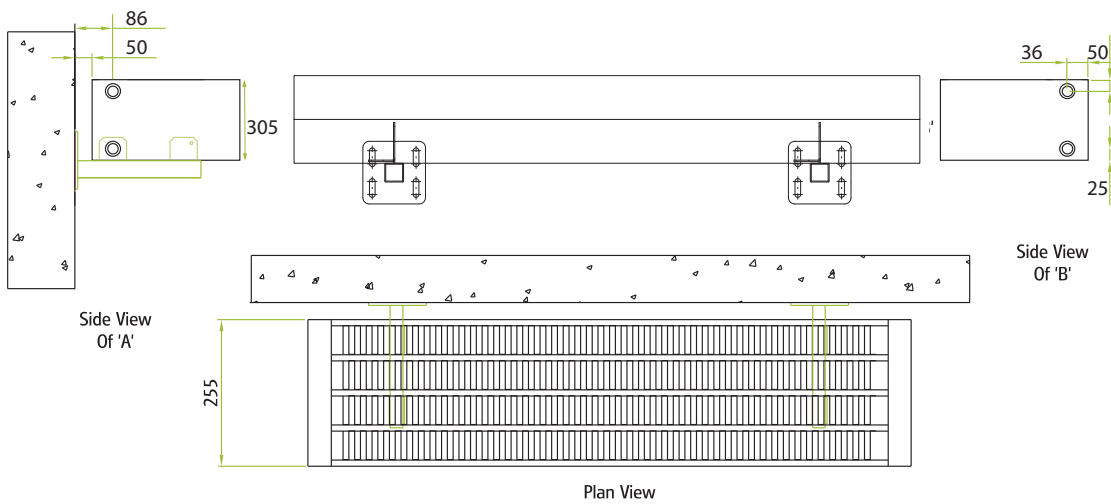
Note: All dimensions shown are the same when using cantilever brackets or Radiavector feet.

Technical Options

K46



K58



Note: All dimensions shown are the same when using cantilever brackets or Radiavector feet.

Connection Options

Flow and return position must be specified at time of quote.

Standard connections

BD, DB, AD and CB (Bottom opposite end and top bottom opposite end) connections are offered as standard using 4 x 1/2" (15mm) BSP connection.

Other connection configurations

Other connections are offered at an extra cost and must be specified at the time of quote.

Connection using 4 x 3/4" (20mm) BSP connections are available on request.

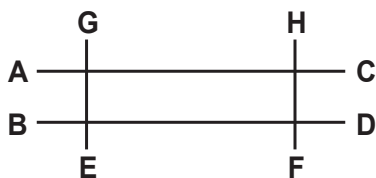
AB and CD (Top Bottom Same End) connections

Top & Bottom Same End connections must be specified at the time of order and cannot be used on a 4-connection Radiavector.

Vertical connections

EF connections are available on all models of Radiavector. Other vertical connections available on request. GH connections are not available on radiavector.

Connection Ladder



Connection Centre Details

Rad Type	Connection Arrangement	Stub to Stub Dim.	Distance from Wall (Connection)	Distance from Wall	
				Radiator Width	Front Face To Wall
K22	"A, B, C, D"	L	86	72	122
K22	"E, F"	L-34	86	72	122
K34	"A, B, C, D"	L	86	133	183
K34	"E, F"	L-34	86	133	183
K46	"A, B, C, D"	L	86	194	244
K46	"E, F"	L-34	86	194	244
K58	"A, B, C, D"	L	86	255	305
K58	"E, F"	L-34	86	255	305

L = The overall length of the radiavector

All values are in mm

For ABCD connections all connections are the same distance from the top or the bottom of the Radiavector. The dimension from the top/bottom edge of the Radiavector to the centre of the connection is 25mm. Both connections are the same distance from the wall.

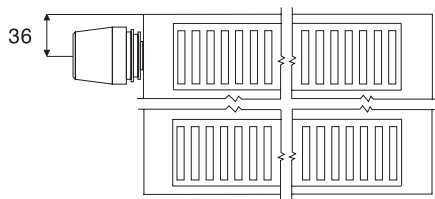
Connection Details

2-pipe connections with built-in valve

To facilitate the installation of radiavectors Merriott offers a built-in valve system.

Radiavector with built-in valve at the side

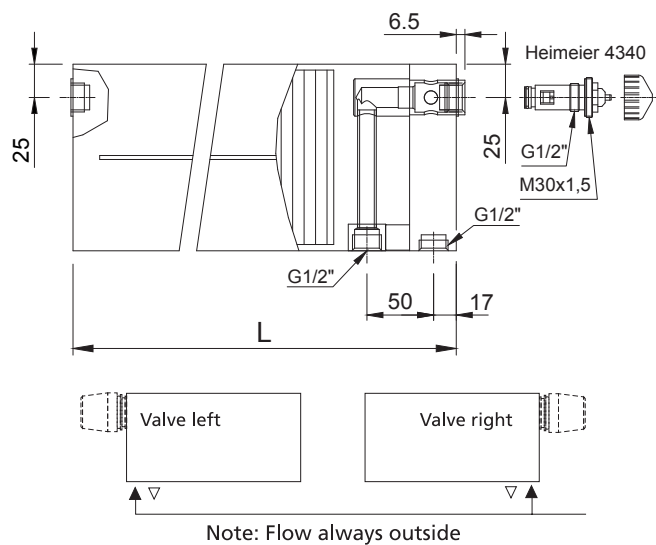
Dimensional drawing



ALL TYPES

- Available over all heights 70mm-280mm
- Equipped with preset built in valve
- Unit installed for valve to be on Right hand or Left hand side
- Thermostatic sensor head not included, must be ordered as an accessory
- Pipes on bottom side by side
- End connection is always the flow
- Connection size 1/2" BSP as standard

Side view

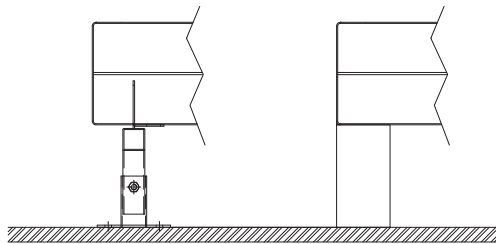


Mounting Options

Floor mounting (feet)

Merriott offers two types of floor-mounting feet at an extra cost.

- Box section foot standard height is 100mm high. Other heights are available as a special request. Box foot standard height is 140mm only
- The feet are white (RAL9016) as standard, however they are available painted at whichever RAL colour is specified.



Box Section

Part Number:
K22: SUPP-F056
K34,46,58: SUPP-F057

Box Foot

Available upon request

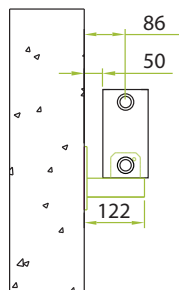
The box foot is designed to conceal pipework. This foot must be specified at the time of order and cannot be retrofitted. It can also be ordered with a cutout to allow for TRV access.

Wall-bracket

The brackets used to wall mount the radiavector are a cantilever brackets.

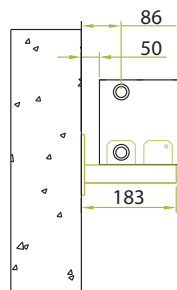
They bear their weight on prongs, from underneath the radiavector, and not using a backclip.

Part Number: SUWBRVR



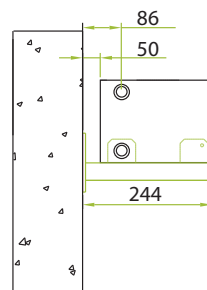
Side View
Of 'A'

K22



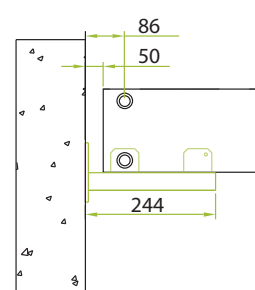
Side View
Of 'A'

K34



Side View
Of 'A'

K46



Side View
Of 'A'

K58

Correction Factors

The outputs quoted in this brochure are based on a Delta T (ΔT) of 50.

Listed below are the correction factors needed to calculate the output at other Delta Ts (ΔT s) between 10° and 80° C. This is done by multiplying your heat output with the appropriate correction factor selected from the table below.

Required Room Temperature = 21° C, Flow Temperature = 86° C, Return Temperature = 72° C

Mean Water Temperature = $(T_{\text{Flow}} + T_{\text{Return}}) / 2 = (86 + 72) / 2 = 79° C$

$\Delta T = \text{Mean Water Temperature} - \text{Required Room Temperature} = 79 - 21 = 58° C$

From the tables below, the output for a K22 at $\Delta T 58° C$ is 1.2348 times the output stated at $\Delta T 50° C$.

K22

K34

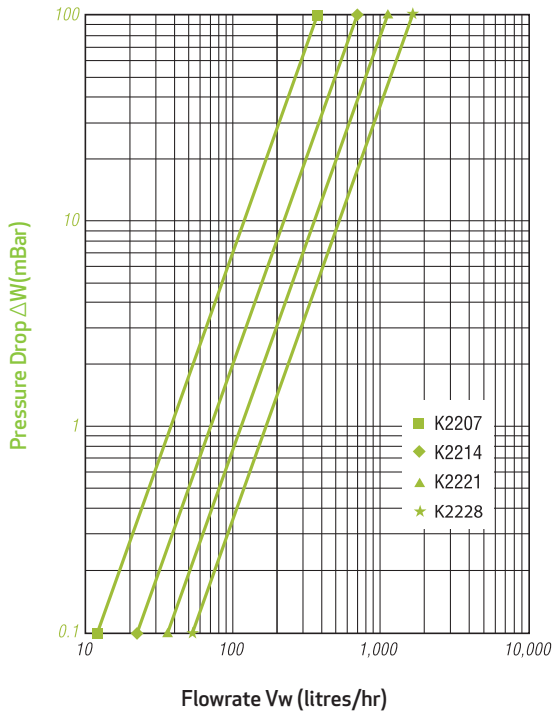
K46

K58

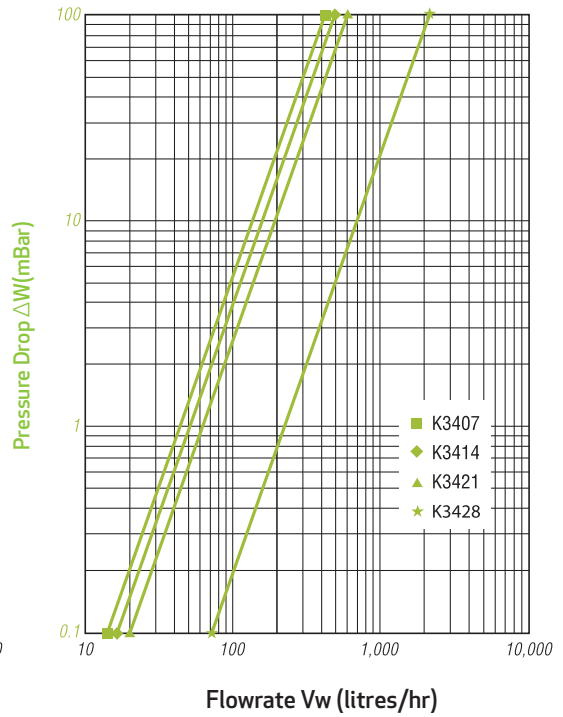
$\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	$\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	$\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	$\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	Based on $\Delta T(^{\circ}C)$	
	$\Delta T 50$		$\Delta T 50$		$\Delta T 50$		$\Delta T 50$		$\Delta T 50$		$\Delta T 50$		$\Delta T 50$		
10	0.1016	46	0.8883	10	0.1028	46	0.8888	10	0.1039	46	0.8893	10	0.1011	46	0.8881
11	0.1163	47	0.9158	11	0.1176	47	0.9162	11	0.1188	47	0.9166	11	0.1158	47	0.9157
12	0.1316	48	0.9436	12	0.133	48	0.9439	12	0.1343	48	0.9442	12	0.1311	48	0.9435
13	0.1475	49	0.9717	13	0.1489	49	0.9718	13	0.1503	49	0.972	13	0.1469	49	0.9716
14	0.1639	50	1	14	0.1653	50	1	14	0.1668	50	1	14	0.1632	50	1
15	0.1807	51	1.0285	15	0.1823	51	1.0284	15	0.1839	51	1.0282	15	0.1801	51	1.0286
16	0.1981	52	1.0573	16	0.1997	52	1.057	16	0.2013	52	1.0567	16	0.1974	52	1.0574
17	0.2159	53	1.0863	17	0.2176	53	1.0859	17	0.2192	53	1.0854	17	0.2152	53	1.0865
18	0.2342	54	1.1156	18	0.2359	54	1.1149	18	0.2376	54	1.1143	18	0.2335	54	1.1158
19	0.2529	55	1.145	19	0.2546	55	1.1443	19	0.2564	55	1.1435	19	0.2521	55	1.1454
20	0.272	56	1.1747	20	0.2738	56	1.1738	20	0.2756	56	1.1728	20	0.2713	56	1.1751
21	0.2915	57	1.2046	21	0.2933	57	1.2035	21	0.2951	57	1.2024	21	0.2908	57	1.2051
22	0.3014	58	1.2348	22	0.3032	58	1.2335	22	0.3151	58	1.2322	22	0.3007	58	1.2353
23	0.3114	59	1.2651	23	0.3133	59	1.2636	23	0.3354	59	1.2622	23	0.331	59	1.2658
24	0.3318	60	1.2957	24	0.3343	60	1.294	24	0.3561	60	1.2924	24	0.3517	60	1.2964
25	0.3524	61	1.3265	25	0.3753	61	1.3246	25	0.3772	61	1.3228	25	0.3727	61	1.3273
26	0.3735	62	1.3575	26	0.3967	62	1.3554	26	0.3986	62	1.3534	26	0.3941	62	1.3584
27	0.3949	63	1.3887	27	0.4185	63	1.3864	27	0.4203	63	1.3842	27	0.5149	63	1.3897
28	0.4387	64	1.4202	28	0.4405	64	1.4177	28	0.4424	64	1.4152	28	0.438	64	1.4212
29	0.4612	65	1.4518	29	0.463	65	1.4491	29	0.4647	65	1.4464	29	0.4604	65	1.4529
30	0.4839	66	1.4836	30	0.4857	66	1.4807	30	0.4874	66	1.4778	30	0.4832	66	1.4849
31	0.507	67	1.5157	31	0.5087	67	1.5125	31	0.5105	67	1.5094	31	0.5063	67	1.517
32	0.5304	68	1.5479	32	0.5321	68	1.5445	32	0.5338	68	1.5412	32	0.5297	68	1.5493
33	0.5541	69	1.5804	33	0.5557	69	1.5767	33	0.5574	69	1.5731	33	0.5534	69	1.5819
34	0.5781	70	1.613	34	0.5797	70	1.6091	34	0.5813	70	1.6053	34	0.5774	70	1.6146
35	0.6024	71	1.6458	35	0.6039	71	1.6417	35	0.6055	71	1.6377	35	0.6018	71	1.6476
36	0.627	72	1.6789	36	0.6285	72	1.6745	36	0.63	72	1.6702	36	0.6264	72	1.6807
37	0.6519	73	1.8121	37	0.6533	73	1.7075	37	0.6547	73	1.7029	37	0.6513	73	1.714
38	0.6771	74	1.7455	38	0.6784	74	1.7407	38	0.6797	74	1.7358	38	0.6765	74	1.7476
39	0.7025	75	1.7791	39	0.7038	75	1.774	39	0.705	75	1.7689	39	0.702	75	1.7813
40	0.7283	76	1.8129	40	0.7294	76	1.8076	40	0.7306	76	1.8022	40	0.7278	76	1.8152
41	0.7543	77	1.8469	41	0.7554	77	1.8413	41	0.7564	77	1.8356	41	0.7538	77	1.8493
42	0.7806	78	1.8811	42	0.7815	78	1.8752	42	0.7825	78	1.8693	42	0.7802	78	1.8836
43	0.8071	79	1.9155	43	0.808	79	1.9092	43	0.8088	79	1.9031	43	0.8067	79	1.9181
44	0.8339	80	1.95	44	0.8347	80	1.9435	44	0.8354	80	1.937	44	0.8336	80	1.9527
45	0.861	-	-	45	0.8616	-	-	45	0.8622	-	-	45	0.8607	-	-

Resistance Diagrams

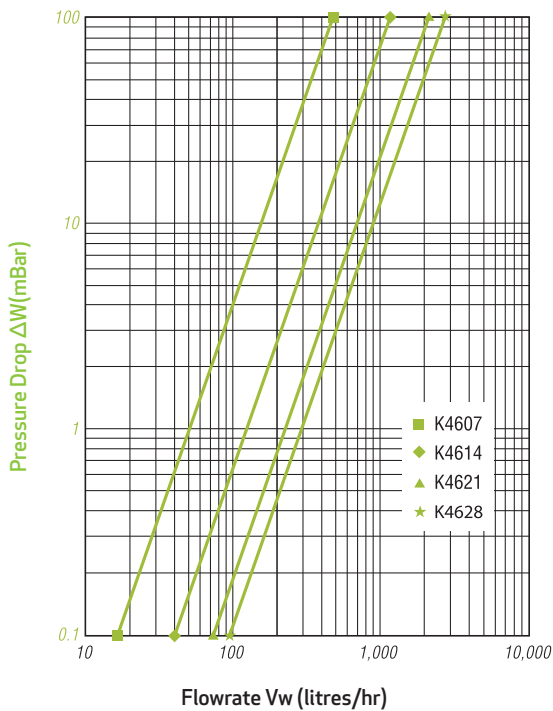
K22



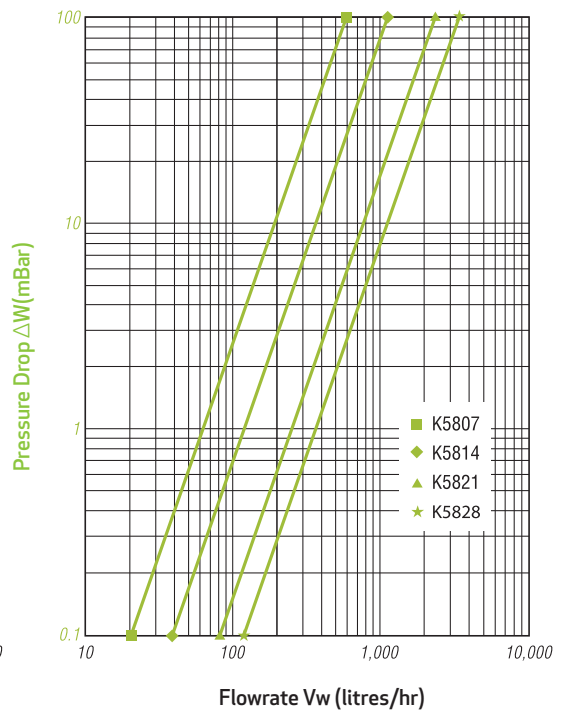
K34



K46



K58



Resistance Diagrams

How to calculate the resistance of a Radiavector $\Delta T 50^\circ C$

Radiator type: K46 210mm HIGH x 1000mm LONG

Output @ $\Delta T 50^\circ C$: 1645W (flow/return – 75/65 $^\circ C$ Room temp 20 $^\circ C$)

If the output is not at $\Delta T 50^\circ C$, please use the correction factor tables shown to get the correct output.

C –	Specific Heat Constant (always 4187 J/kg $^\circ C$)				
Q –	(m)	x	(C)	x	(ΔT)
Output –	(flow rate)	x	(Constant)	x	(difference between flow and return temp)
Watts –	(l/s)		(J/kg $^\circ C$)		($^\circ C$)
1603 –	(m)		(4187)		(10)

Therefore

$$m - 1645 / ((4187) \times (10))$$

$$m - 0.03928827 (L/S) \\ \times 3600 (L/H)$$

$$m - 141.4 (L/S)$$

Please refer to the resistance diagram which gives a value of 1.5mBar or 0.15Kpa.

Contact details

Merriott UK & Ireland

Purmo Group (UK) Ltd, Eastern Avenue, Team Valley,
Gateshead, Tyne & Wear, NE11 0PG
Tel: 0330 0415 472

sales@merriottuk.com
sales@merriott.ie

www.merriottuk.com / www.merriott.ie

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