



DONOHUE HEATING SERVICES
PREMIUM DATA SHEETS

MERRIOTT PRECISION RADIATORS

Range Overview

Product Description

Merriott Precision radiators offer outputs ranging from 147 watts to 3194 watts per metre at $\Delta T 50^{\circ}\text{C}$. Comprehensive sizing and emission charts are included in this brochure. Higher heat outputs can be achieved using non-standard radiators. Details are available from the Merriott Sales Office.

The height of the radiator increases in increments of 72.5mm, from a minimum of 143mm through to 868mm, for both double and single panel radiators.

The radiator length always relates to the overall front panel length, and increases in increments of 100mm, from a minimum of 400mm through to 3000mm. For any other lengths, please contact the Merriott Sales Office.

Outputs

All Merriott radiators are manufactured and tested in accordance with BS EN 442 and the NF quality mark requirements in its state of the art BS EN ISO 9001:2008 accredited manufacturing facility in Newport, Wales.

Paint

Every Merriott Precision radiator undergoes an intensive pre-treatment process to protect against rust. In pre-treatment, the radiators go through a series of washes which degrease the steel and an iron phosphate rinse passivates the surface prior to painting. The primer coat is applied by immersion in an electrophoretic bath 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 200°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 $\frac{1}{2}$ " (15mm) ABCD With $\frac{1}{2}$ " (15mm) blank plug and Vent (BOE or TBOE) Other connections available include:
- BBOE, TBSE & TTOE
- Combinations must be stated at time of ordering

For alternative connection sizes please contact the Merriott Sales Office.

Testing

The standard test pressure is 7 Bar giving a maximum operating pressure of 5.38 Bar. Higher pressures available on request.

Dimensional Tolerances

Dimensional tolerances are in accordance with EN442.

Materials

Merriott radiators are manufactured from flat steel tubes, 70mm x 11mm, with a standard thickness of 1.5mm. Other thicknesses are available on request.

Mounting

Mounting supports at the rear of the radiator fix securely to wall-mounted brackets. Floor-mounted supports (feet) are available on request.

Warranty

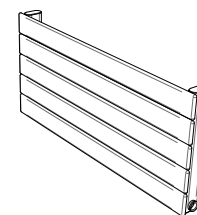
Merriott radiators are guaranteed for a period of 10 years from date of purchase in respect of defective materials and workmanship. The system should be designed in accordance with British Standard Code of Practice for Water Based Heating Systems in Buildings **BS EN 12828:2012+A1:2014** and **BS EN 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 recommend the use of corrosion inhibitor for all applications. Failure to observe these standards may invalidate the manufacturer's warranty.

02 / 03

Range Options

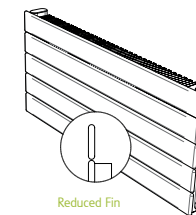
- Reduced fin is an option on all styles and heights. For radiators lower than 288mm high, a full fin product is recommended to maximise output
- Reduced fin is always reduced from the top - never the bottom
- Please note that models E12 and E24 can only be sold in conjunction with an LST cover

Standard Range



H10

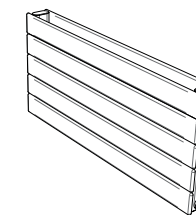
Single panel radiator. No convector fin



H11

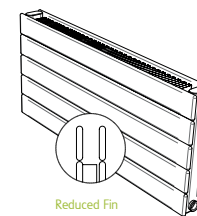
full fin shown

Single panel radiator with one convector fin



H20

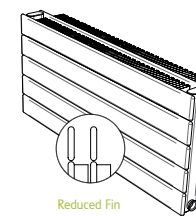
Double panel radiator. No convector fin



H21

full fin shown

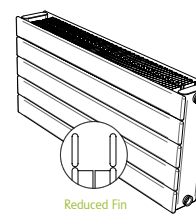
Double panel radiator with one convector fin



H22

full fin shown

Double panel radiator with two convector fins

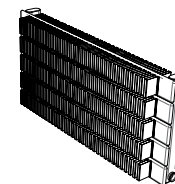


H22S

full fin shown

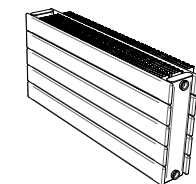
Double panel radiator with two convector fins face to face in centre of the panels

Extended Range



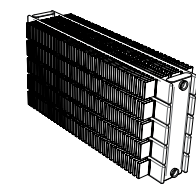
E12

Single panel radiator with two convector fins



H23

Double panel radiator with three convector fins

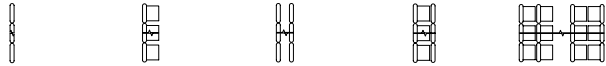


E24

Double panel radiator with four convector fins

Precision Horizontal - 143mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & 22S (Full Fin)
--------	-----	----------------	-----	----------------	----------------------

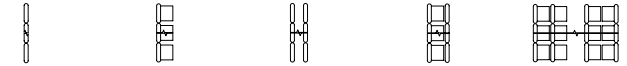
Length (mm)	Output (Watts)				
	$\Delta T50$	$\Delta T50$	$\Delta T50$	$\Delta T50$	$\Delta T50$
400	59	107	112	174	264
500	74	134	141	218	330
600	88	161	169	262	395
700	103	188	197	305	461
800	118	214	225	349	527
900	132	241	253	392	593
1000	147	268	281	436	659
1100	162	295	309	480	725
1200	176	322	337	523	791
1300	191	348	365	567	857
1400	206	375	393	610	923
1500	221	402	422	654	989
1600	235	429	450	698	1054
1700	250	456	478	741	1120
1800	265	482	506	785	1186
1900	279	509	534	828	1252
2000	294	536	562	872	1318
2100	309	563	590	916	1384
2200	323	590	618	959	1450
2300	338	616	646	1003	1516
2400	353	643	674	1046	1582
2500	368	670	703	1090	1648
2600	382	697	731	1134	1713
2700	397	724	759	1177	1779
2800	412	750	787	1221	1845
2900	426	777	815	1264	1911

Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	441	804	843	1308	1977
3100	456	831	871	1352	2043
3200	470	858	899	1395	2109
3300	485	884	927	1439	2175
3400	500	911	955	1482	2241

Precision Horizontal - 215mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & 22S (Full Fin)
--------	-----	----------------	-----	----------------	----------------------

Length (mm)	Output (Watts)				
	$\Delta T50$	$\Delta T50$	$\Delta T50$	$\Delta T50$	$\Delta T50$
400	86	157	165	249	362
500	108	196	206	312	453
600	130	235	247	374	544
700	151	274	288	436	634
800	173	314	330	498	725
900	194	353	371	561	815
1000	216	392	412	623	906
1100	238	431	453	685	997
1200	259	470	494	748	1087
1300	281	510	536	810	1178
1400	302	549	577	872	1268
1500	324	588	618	935	1359
1600	346	627	659	997	1450
1700	367	666	700	1059	1540
1800	389	706	742	1121	1631
1900	410	745	783	1184	1721
2000	432	784	824	1246	1812
2100	454	823	865	1308	1903
2200	475	862	906	1371	1993
2300	497	902	948	1433	2084
2400	518	941	989	1495	2174
2500	540	980	1030	1558	2265
2600	562	1019	1071	1620	2356
2700	583	1058	1112	1682	2446
2800	605	1098	1154	1744	2537
2900	626	1137	1195	1807	2627

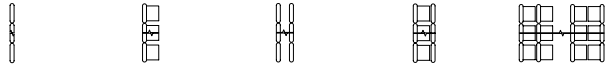
Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	648	1176	1236	1869	2718
3100	670	1215	1277	1931	2809
3200	691	1254	1318	1994	2899
3300	713	1294	1360	2056	2990
3400	734	1333	1401	2118	3080

04 / 05

Precision Horizontal - 288mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & 22S (Full Fin)
--------	-----	----------------	-----	----------------	----------------------

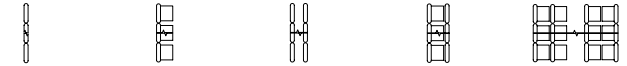
Length (mm)	Output (Watts)				
	ΔT50	ΔT50	ΔT50	ΔT50	ΔT50
400	115	207	218	328	454
500	144	259	273	410	568
600	172	311	327	492	682
700	201	363	382	574	795
800	230	414	436	656	909
900	258	466	491	738	1022
1000	287	518	545	820	1136
1100	316	570	600	902	1250
1200	344	622	654	984	1363
1300	373	673	709	1066	1477
1400	402	725	763	1148	1590
1500	431	777	818	1230	1704
1600	459	829	872	1312	1818
1700	488	881	927	1394	1931
1800	517	932	981	1476	2045
1900	545	984	1036	1558	2158
2000	574	1036	1090	1640	2272
2100	603	1088	1145	1722	2386
2200	631	1140	1199	1804	2499
2300	660	1191	1254	1886	2613
2400	689	1243	1308	1968	2726
2500	718	1295	1363	2050	2840
2600	746	1347	1417	2132	2954
2700	775	1399	1472	2214	3067
2800	804	1450	1526	2296	3181
2900	832	1502	1581	2378	3294

Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	861	1554	1635	2460	3408
3100	890	1606	1690	2542	3522
3200	918	1658	1744	2624	3635
3300	947	1709	1799	2706	3749
3400	976	1761	1853	2788	3862

Precision Horizontal - 360mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & 22S (Full Fin)
--------	-----	----------------	-----	----------------	----------------------

Length (mm)	Output (Watts)				
	ΔT50	ΔT50	ΔT50	ΔT50	ΔT50
400	143	272	270	392	540
500	179	341	338	490	675
600	214	409	406	587	809
700	250	477	473	685	944
800	286	545	541	783	1079
900	321	613	608	881	1214
1000	357	681	676	979	1349
1100	393	749	744	1077	1484
1200	428	817	811	1175	1619
1300	464	885	879	1273	1754
1400	500	953	946	1371	1889
1500	536	1022	1014	1469	2024
1600	571	1090	1082	1566	2158
1700	607	1158	1149	1664	2293
1800	643	1226	1217	1762	2428
1900	678	1294	1284	1860	2563
2000	714	1362	1352	1958	2698
2100	750	1430	1420	2056	2833
2200	785	1498	1487	2154	2968
2300	821	1566	1555	2252	3103
2400	857	1634	1622	2350	3238
2500	893	1703	1690	2448	3373
2600	928	1771	1758	2545	3507
2700	964	1839	1825	2643	3642
2800	1000	1907	1893	2741	3777
2900	1035	1975	1960	2839	3912

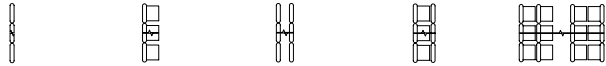
Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	1071	2043	2028	2937	4047
3100	1107	2111	2096	3035	4182
3200	1142	2179	2163	3133	4317
3300	1178	2247	2231	3231	4452
3400	1214	2315	2298	3329	4587

06 / 07

Precision Horizontal - 433mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & 22S (Full Fin)
--------	-----	----------------	-----	----------------	----------------------

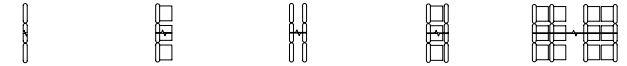
Length	Output (Watts)				
(mm)	ΔT50	ΔT50	ΔT50	ΔT50	ΔT50
400	178	318	324	453	622
500	223	397	405	567	778
600	267	476	485	680	933
700	312	556	566	793	1089
800	356	635	647	906	1244
900	401	715	728	1020	1400
1000	445	794	809	1133	1555
1100	490	873	890	1246	1711
1200	534	953	971	1360	1866
1300	579	1032	1052	1473	2022
1400	623	1112	1133	1586	2177
1500	668	1191	1214	1700	2333
1600	712	1270	1294	1813	2488
1700	757	1350	1375	1926	2644
1800	801	1429	1456	2039	2799
1900	846	1509	1537	2153	2955
2000	890	1588	1618	2266	3110
2100	935	1667	1699	2379	3266
2200	979	1747	1780	2493	3421
2300	1024	1826	1861	2606	3577
2400	1068	1906	1942	2719	3732
2500	1113	1985	2023	2833	3888
2600	1157	2064	2103	2946	4043
2700	1202	2144	2184	3059	4199
2800	1246	2223	2265	3172	4354
2900	1291	2303	2346	3286	4510

Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	1335	2382	2427	3399	4665
3100	1380	2461	2508	3512	4821
3200	1424	2541	2589	3626	4976
3300	1469	2620	2670	3739	5132
3400	1513	2700	2751	3852	5287

Precision Horizontal - 505mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & 22S (Full Fin)
--------	-----	----------------	-----	----------------	----------------------

Length	Output (Watts)				
(mm)	ΔT50	ΔT50	ΔT50	ΔT50	ΔT50
400	211	360	377	512	700
500	264	451	472	640	875
600	316	541	566	768	1049
700	369	631	660	896	1224
800	422	721	754	1024	1399
900	474	811	849	1152	1574
1000	527	901	943	1280	1749
1100	580	991	1037	1408	1924
1200	632	1081	1132	1536	2099
1300	685	1171	1226	1664	2274
1400	738	1261	1320	1792	2449
1500	791	1352	1415	1920	2624
1600	843	1442	1509	2048	2798
1700	896	1532	1603	2176	2973
1800	949	1622	1697	2304	3148
1900	1001	1712	1792	2432	3323
2000	1054	1802	1886	2560	3498
2100	1107	1892	1980	2688	3673
2200	1159	1982	2075	2816	3848
2300	1212	2072	2169	2944	4023
2400	1265	2162	2263	3072	4198
2500	1318	2253	2358	3200	4373
2600	1370	2343	2452	3328	4547
2700	1423	2433	2546	3456	4722
2800	1476	2523	2640	3584	4897
2900	1528	2613	2735	3712	5072

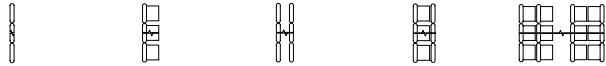
Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	1581	2703	2829	3840	5247
3100	1634	2793	2923	3968	5422
3200	1686	2883	3018	4096	5597
3300	1739	2973	3112	4224	5772
3400	1792	3063	3206	4352	5947

08 / 09

Precision Horizontal - 578mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & 22S (Full Fin)
--------	-----	----------------	-----	----------------	----------------------

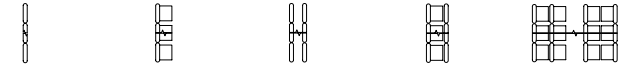
Length (mm)	Output (Watts)				
	ΔT50	ΔT50	ΔT50	ΔT50	ΔT50
400	244	402	432	569	775
500	305	503	540	712	969
600	365	604	648	854	1163
700	426	704	756	996	1357
800	487	805	864	1138	1550
900	548	905	972	1281	1744
1000	609	1006	1080	1423	1938
1100	670	1107	1188	1565	2132
1200	731	1207	1296	1708	2326
1300	792	1308	1404	1850	2519
1400	853	1408	1512	1992	2713
1500	914	1509	1620	2135	2907
1600	974	1610	1728	2277	3101
1700	1035	1710	1836	2419	3295
1800	1096	1811	1944	2561	3488
1900	1157	1911	2052	2704	3682
2000	1218	2012	2160	2846	3876
2100	1279	2113	2268	2988	4070
2200	1340	2213	2376	3131	4264
2300	1401	2314	2484	3273	4457
2400	1462	2414	2592	3415	4651
2500	1523	2515	2700	3558	4845
2600	1583	2616	2808	3700	5039
2700	1644	2716	2916	3842	5233
2800	1705	2817	3024	3984	5426
2900	1766	2917	3132	4127	5620

Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	1827	3018	3240	4269	5814
3100	1888	3119	3348	4411	6008
3200	1949	3219	3456	4554	6202
3300	2010	3320	3564	4696	6395
3400	2071	3420	3672	4838	6589

Precision Horizontal - 650mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & 22S (Full Fin)
--------	-----	----------------	-----	----------------	----------------------

Length (mm)	Output (Watts)				
	ΔT50	ΔT50	ΔT50	ΔT50	ΔT50
400	276	443	487	624	848
500	345	554	609	780	1060
600	413	664	730	936	1271
700	482	775	852	1092	1483
800	551	886	974	1248	1695
900	620	996	1095	1404	1907
1000	689	1107	1217	1560	2119
1100	758	1218	1339	1716	2331
1200	827	1328	1460	1872	2543
1300	896	1439	1582	2028	2755
1400	965	1550	1704	2184	2967
1500	1034	1661	1826	2340	3179
1600	1102	1771	1947	2496	3390
1700	1171	1882	2069	2652	3602
1800	1240	1993	2191	2808	3814
1900	1309	2103	2312	2964	4026
2000	1378	2214	2434	3120	4238
2100	1447	2325	2556	3276	4450
2200	1516	2435	2677	3432	4662
2300	1585	2546	2799	3588	4874
2400	1654	2657	2921	3744	5086
2500	1723	2768	3043	3900	5298
2600	1791	2878	3164	4056	5509
2700	1860	2989	3286	4212	5721
2800	1929	3100	3408	4368	5933
2900	1998	3210	3529	4524	6145

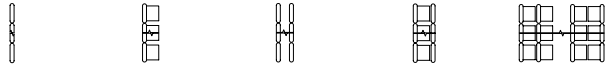
Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	2067	3321	3651	4680	6357
3100	2136	3432	3773	4836	6569
3200	2205	3542	3894	4992	6781
3300	2274	3653	4016	5148	6993
3400	2343	3764	4138	5304	7205

10 / 11

Precision Horizontal - 723mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & 22S (Full Fin)
--------	-----	----------------	-----	----------------	----------------------

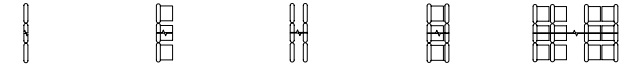
Length	Output (Watts)				
(mm)	ΔT50	ΔT50	ΔT50	ΔT50	ΔT50
400	307	482	543	678	918
500	384	603	679	848	1148
600	461	724	815	1018	1378
700	538	844	951	1187	1607
800	614	965	1086	1357	1837
900	691	1085	1222	1526	2066
1000	768	1206	1358	1696	2296
1100	845	1327	1494	1866	2526
1200	922	1447	1630	2035	2755
1300	998	1568	1765	2205	2985
1400	1075	1688	1901	2374	3214
1500	1152	1809	2037	2544	3444
1600	1229	1930	2173	2714	3674
1700	1306	2050	2309	2883	3903
1800	1382	2171	2444	3053	4133
1900	1459	2291	2580	3222	4362
2000	1536	2412	2716	3392	4592
2100	1613	2533	2852	3562	4822
2200	1690	2653	2988	3731	5051
2300	1766	2774	3123	3901	5281
2400	1843	2894	3259	4070	5510
2500	1920	3015	3395	4240	5740
2600	1997	3136	3531	4410	5970
2700	2074	3256	3667	4579	6199
2800	2150	3377	3802	4749	6429
2900	2227	3497	3938	4918	6658

Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	2304	3618	4074	5088	6888
3100	2381	3739	4210	5258	7118
3200	2458	3859	4346	5427	7347
3300	2534	3980	4481	5597	7577
3400	2611	4100	4617	5766	7806

Precision Horizontal - 795mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & 22S (Full Fin)
--------	-----	----------------	-----	----------------	----------------------

Length	Output (Watts)				
(mm)	ΔT50	ΔT50	ΔT50	ΔT50	ΔT50
400	337	521	600	730	986
500	422	651	750	913	1233
600	506	781	900	1096	1480
700	590	911	1050	1278	1726
800	674	1042	1200	1461	1973
900	759	1172	1350	1643	2219
1000	843	1302	1500	1826	2466
1100	927	1432	1650	2009	2713
1200	1012	1562	1800	2191	2959
1300	1096	1693	1950	2374	3206
1400	1180	1823	2100	2556	3452
1500	1265	1953	2250	2739	3699
1600	1349	2083	2400	2922	3946
1700	1433	2213	2550	3104	4192
1800	1517	2344	2700	3287	4439
1900	1602	2474	2850	3469	4685
2000	1686	2604	3000	3652	4932
2100	1770	2734	3150	3835	5179
2200	1855	2864	3300	4017	5425
2300	1939	2995	3450	4200	5672
2400	2023	3125	3600	4382	5918
2500	2108	3255	3750	4565	6165
2600	2192	3385	3900	4748	6412
2700	2276	3515	4050	4930	6658
2800	2360	3646	4200	5113	6905
2900	2445	3776	4350	5295	7151

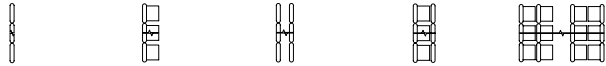
Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	2529	3906	4500	5478	7398
3100	2613	4036	4650	5661	7645
3200	2698	4166	4800	5843	7891
3300	2782	4297	4950	6026	8138
3400	2866	4427	5100	6208	8384

12 / 13

Precision Horizontal - 868mm High

Heat Outputs to BS EN442 Certification



Style:	H10	H11 (Full Fin)	H20	H21 (Full Fin)	H22 & H22S (Full Fin)
--------	-----	----------------	-----	----------------	-----------------------

Length (mm)	Output (Watts)				
	$\Delta T50$	$\Delta T50$	$\Delta T50$	$\Delta T50$	$\Delta T50$
400	367	558	658	782	1054
500	459	698	823	978	1317
600	550	838	988	1173	1580
700	642	977	1152	1369	1844
800	734	1117	1317	1564	2107
900	825	1256	1481	1760	2371
1000	917	1396	1646	1955	2634
1100	1009	1536	1811	2151	2897
1200	1100	1675	1975	2346	3161
1300	1192	1815	2140	2542	3424
1400	1284	1954	2304	2737	3688
1500	1376	2094	2469	2933	3951
1600	1467	2234	2634	3128	4214
1700	1559	2373	2798	3324	4478
1800	1651	2513	2963	3519	4741
1900	1742	2652	3127	3715	5005
2000	1834	2792	3292	3910	5268
2100	1926	2932	3457	4106	5531
2200	2017	3071	3621	4301	5795
2300	2109	3211	3786	4497	6058
2400	2201	3350	3950	4692	6322
2500	2293	3490	4115	4888	6585
2600	2384	3630	4280	5083	6848
2700	2476	3769	4444	5279	7112
2800	2568	3909	4609	5474	7375
2900	2659	4048	4773	5670	7639

Any requirement for lengths over 3000mm will be reviewed on a case by case basis. Please contact the Merriott Sales Office.

3000	2751	4188	4938	5865	7902
3100	2843	4328	5103	6061	8165
3200	2934	4467	5267	6256	8429
3300	3026	4607	5432	6452	8692
3400	3118	4746	5596	6647	8956

14 / 15

Heat Outputs Per Metre - Reduced Fin

Heat Outputs to BS EN442 Certification

A heavy duty grille is available for reduced fin Precisions radiators only. There is a small reduction in output when a heavy duty grille is used.

H11



Panel Height	143	215	288	360	433	505	578	650	723	795	868
Fin Height	70	143	215	288	360	433	505	578	650	723	795
Heat Emission $\Delta T50$	208	330	455	632	723	817	918	1024	1138	1258	1389

H21



Panel Height	143	215	288	360	433	505	578	650	723	795	868
Fin Height	70	143	215	288	360	433	505	578	650	723	795
Heat Emission $\Delta T50$	359	530	722	960	1110	1253	1392	1525	1655	1780	1903

H22 & H22S



Panel Height	143	215	288	360	433	505	578	650	723	795	868
Fin Height	70	143	215	288	360	433	505	578	650	723	795
Heat Emission $\Delta T50$	470	783	1021	1264	1455	1634	1807	1969	2126	2274	2418

Outputs Per Metre - Extended Range

Available in Full fin only.

H23



Panel Height	143	215	288	360	433	505	578	650	723	795	868
Fin Height	143	215	288	360	433	505	578	650	723	795	868
Heat Emission $\Delta T50$	737	1015	1275	1530	1752	1957	2154	2335	2505	2661	2806

E12 (Caution: radiator should not be used without a cover such as a LST panel)



Panel Height	143	215	288	360	433	505	578	650	723	795	868
Fin Height	143	215	288	360	433	505	578	650	723	795	868
Heat Emission $\Delta T50$	388	552	714	898	1020	1140	1265	1390	1517	1645	1777

E24 (Caution: radiator should not be used without a cover such as a LST panel or underneath a bench)

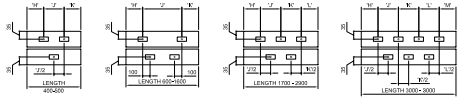


Panel Height	143	215	288	360	433	505	578	650	723	795	868
Fin Height	143	215	288	360	433	505	578	650	723	795	868
Heat Emission $\Delta T50$	864	1186	1487	1796	2049	2280	2501	2701	2884	3048	3194

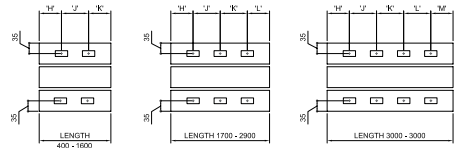
Bracket Locations

Support positions for Precisions 400mm - 3000mm long

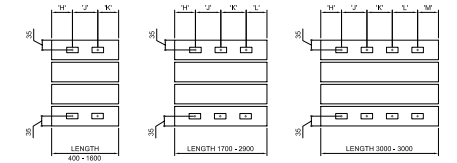
143mm High



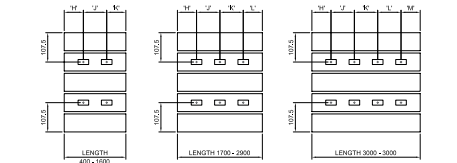
215mm High



288mm High



360mm - 868mm High



Length	H'	J'	K'	L'	M'
400	130	140	130	-	-
500	140	220	140	-	-
600	150	300	150	-	-
700	150	400	150	-	-
800	140	520	140	-	-
900	150	600	150	-	-
1000	140	720	140	-	-
1100	150	800	150	-	-
1200	150	900	150	-	-
1300	140	1020	140	-	-
1400	150	1100	150	-	-
1500	150	1200	150	-	-
1600	140	1320	140	-	-
1700	150	700	700	150	-
1800	150	720	780	150	-
1900	150	800	800	150	-
2000	150	820	880	150	-
2100	140	900	920	140	-
2200	150	920	980	150	-
2300	150	1000	1000	150	-
2400	140	1060	1060	140	-
2500	150	1100	1100	150	-
2600	150	1120	1180	150	-
2700	140	1200	1220	140	-
2800	150	1220	1280	150	-
2900	140	1300	1320	140	-
3000	150	900	900	900	150

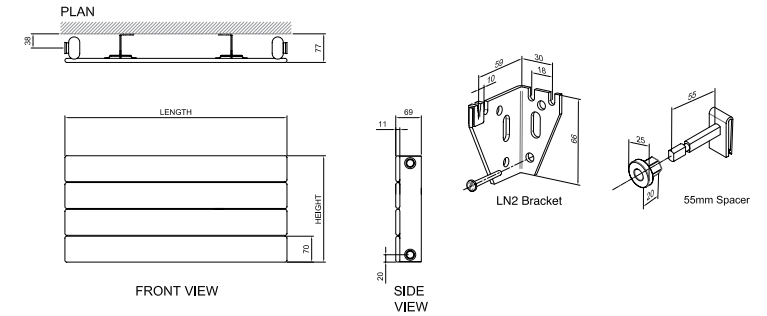
16 / 17

All dimensions are in millimetres

Bracket Detail

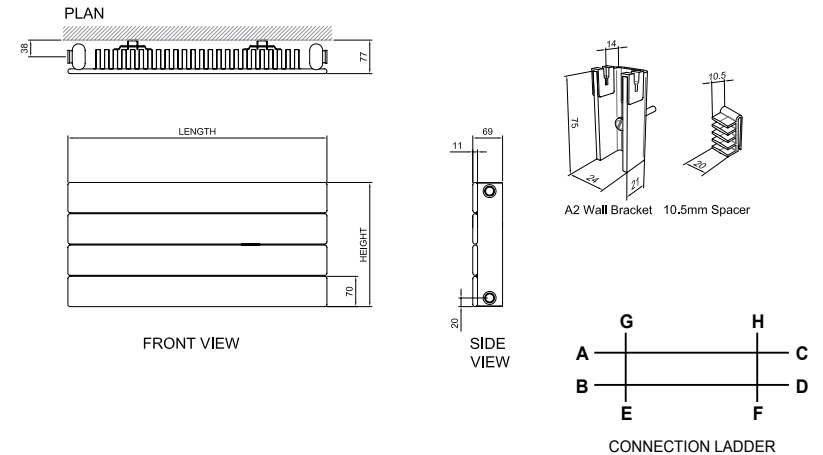
Type H10 - Standard model shown with 1/2" (15mm) ABCD connections

Length: available from 400mm to 3000mm in increments of 100mm.
Height: available from 143mm to 868mm in increments of 72.5mm.



Type H11 - Standard model shown with 1/2" (15mm) ABCD connections

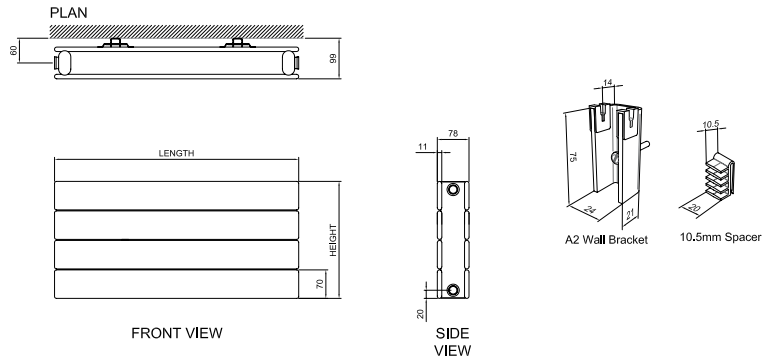
Length: available from 400mm to 3000mm in increments of 100mm.
Height: available from 143mm to 868mm in increments of 72.5mm.



Bracket Detail

Type H20 - Standard model shown with 1/2" (15mm) ABCD connections

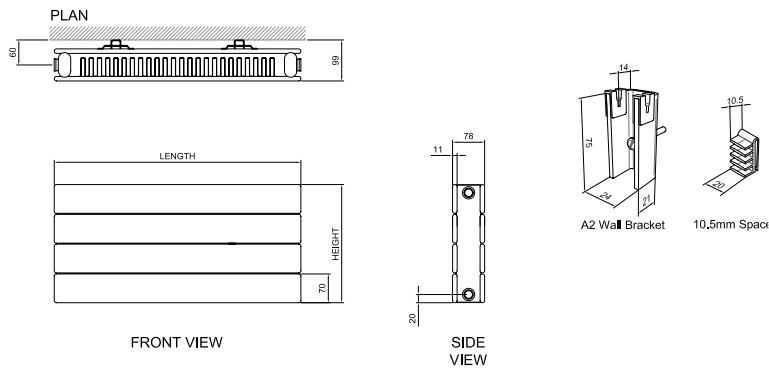
Length: available from 400mm to 3000mm in increments of 100mm.
 Height: available from 143mm to 868mm in increments of 72.5mm.



18 / 19

Type H21 - Standard model shown with 1/2" (15mm) ABCD connections

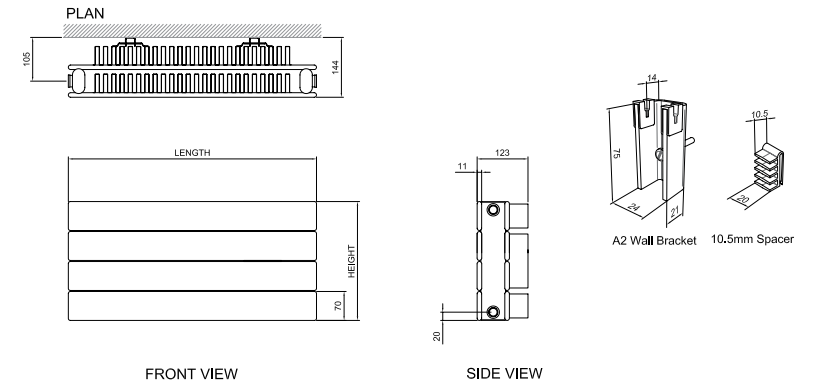
Length: available from 400mm to 3000mm in increments of 100mm.
 Height: available from 143mm to 868mm in increments of 72.5mm.



Bracket Detail

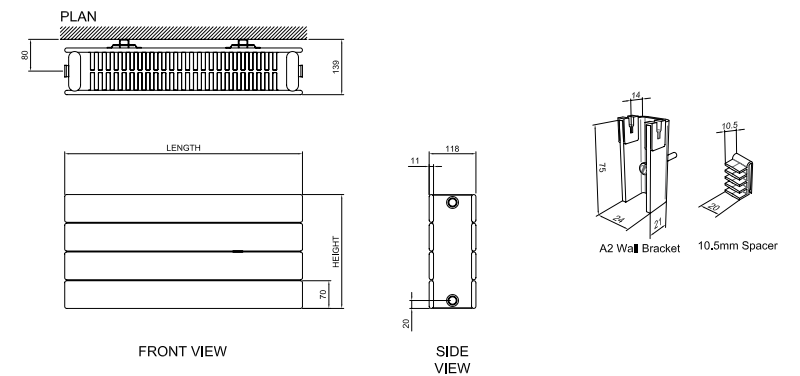
Type H22 - Standard model shown with 1/2" (15mm) ABCD connections

Length: available from 400mm to 3000mm in increments of 100mm.
 Height: available from 143mm to 868mm in increments of 72.5mm.



Type H22S - Standard model shown with 1/2" (15mm) ABCD connections

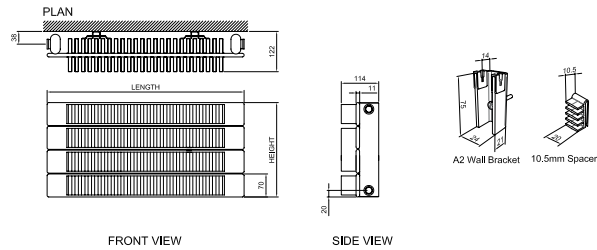
Length: available from 400mm to 3000mm in increments of 100mm.
 Height: available from 143mm to 868mm in increments of 72.5mm.



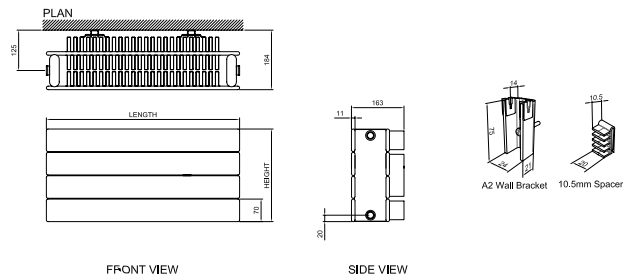
Bracket Detail - Extended Range

- Comprises of the E12, H23 and E24
- These high output radiators are available on request
- Lengths available from 400mm to 3000mm in increments of 100mm
- Heights available from 143mm to 868mm in increments of 72.5mm
- A2 type wall bracket supplied as standard
- Please note, E12 and E24 are to be used as emitters behind an LST casing

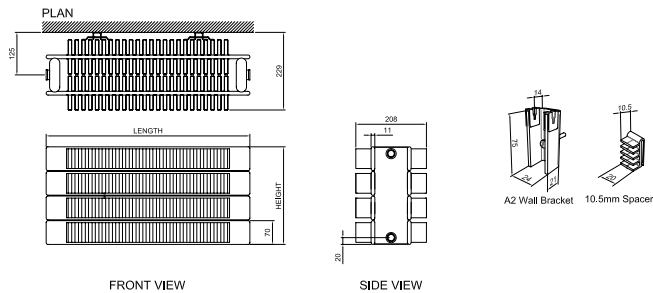
Type E12 - Standard model shown with 1/2" (15mm) ABCD connections



Type H23 - Standard model shown with 1/2" (15mm) ABCD connections



Type E24 - Standard model shown with 1/2" (15mm) ABCD connections

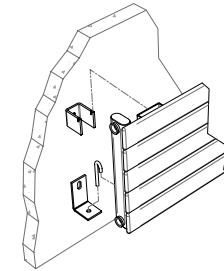


Security Bracket Details

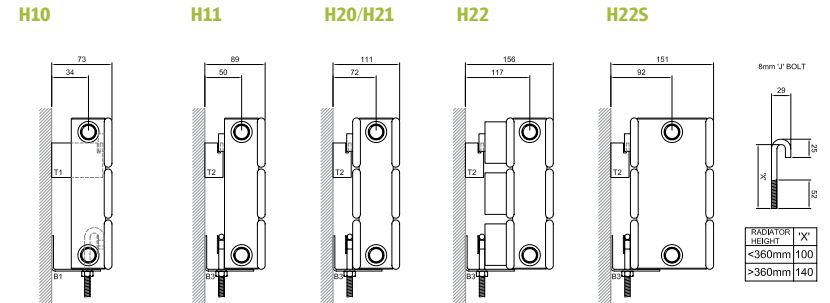
Security Mounting

Merriott offer a high security bracket for horizontal Precision radiators, designed for use in areas where robustness is required and safety is paramount.

This bracket comes in 3 parts. Below shows a side view of how it fits on to the radiator, and the resultant dimension from wall to front of radiator.



20 / 21

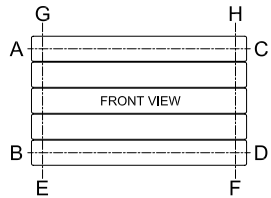


Additional Options

Merriott offers a wide range of additional features and options for our standard radiators. A selection of these are shown in this section. Please contact the Merriott Sales Office to discuss any non-standard applications you have in mind.

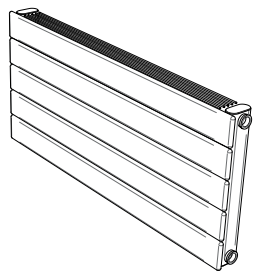
Connection Variations

A, B, C, D, E, F, G and H denote connection positions. The standard connection configuration is ABCD. Other connection configurations, which must be specified at order stage include: EFAC and GHBD.



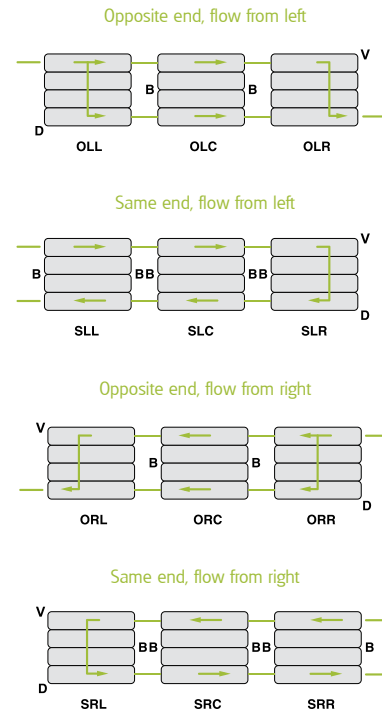
Top Grilles

Top grilles can be supplied at the customer's request and should be requested at order stage. Should a retro fit grille be required, the radiator must have a reduced fin. Grilles cannot be fitted on to Full Fin Radiators.



Series Radiators

For series connected radiators, there is a code for each radiator in the series. This code must be used when ordering your 'series' radiators. Maximum length of a series is up to 18m. Please contact the Merriott Sales Office for technical advice prior to ordering series radiators. There are four configurations recommended below:

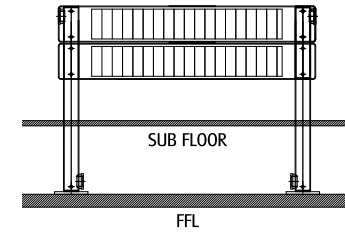


B = Baffle, D = Drain, V = Vent

22 / 23

Mounting Options

Extended Header Feet/ Live Header Feet

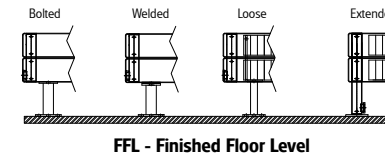


Extended headers with foot mount are available on all horizontal Precision radiators. They are generally adopted when pipework is to be concealed under a raised access floor. Foot height and connection orientation of the feet are client specified.

Note: The height of the extended header feet and live header feet are in increments of 72.5mm

The height of the centre of the connection off the ground will always be 25mm and this connection will always be a 1/2" (15mm) BSP.

Please note: when the overall radiator height (including the feet) exceeds 505mm, additional top stays or supports are recommended to ensure stability.



Loose Feet

All horizontal Precision radiators except the H10 & H20 can be mounted on loose feet. These are ideal where wall mounting is limited or impossible. The feet are secured to the floor and have prongs which fit between the fin flutes and hold the unit steady. Radiators can only be floor mounted when the foot height plus the radiator is 550mm or less

Welded Feet

These are factory fitted (welded to the radiator) which minimises installation time for the client. All horizontal Precision radiators can be mounted on welded feet.

Bolt-on Feet

All horizontal Precision radiators, except the H10, can be mounted on bolt-on feet. The feet are secured to the floor and attached to the radiator via M8 Bolts (2 per foot). This means the radiator can be removed easily with minimal fuss.

Merriott recommends that for all radiators with EF connection configuration, the minimum height of the foot be at least 150mm. This is to allow for the installation of accessories.

Please note the following must be stated at the time of order:

- Connection details
- Flow & return



Merriott
Vertical

Content

Range Overview	26
Range Options	27
Technical Specifications	28-29
Heat Outputs	30-32
Bracket Details	33-35
Additional Options	36
Correction Factors	37
Resistance Diagram	38-39
How to Order	40

Range Overview

Product Description

Merriott Vertical Precision radiators offer outputs ranging from 371 watts to 1791 watts per metre at $\Delta T50^{\circ}\text{C}$. Comprehensive sizing and outputs charts are included in this brochure.

Vertical Precision radiators are available in heights from 600mm to 3000mm, in 100mm increments.

The length of the radiator increases in increments of 72.5mm, from a minimum of 288mm through to 868mm, for both double and single panel radiators.

Outputs

All Merriott radiators are manufactured and tested in accordance with BS EN 442 and the NF quality mark requirements in its state of the art BS EN ISO 9001:2008 accredited manufacturing facility in Newport, Wales.

Finish

Every Merriott Precision radiator undergoes an intensive pre-treatment process to protect against rust. In pre-treatment, the radiators go through a series of washes which degrease the steel and an iron phosphate rinse passivates the surface prior to painting. The primer coat is applied by immersion in an electrophoretic bath 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 200°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 $1/2"$ (15mm) Bottom, Bottom Opposite Ends (BBOE) with blank and air vent $1/2"$ (15mm). Other connections available include: (TBSE, TBOE, BOE, TOE & TTOE)

Combinations must be stated at time of ordering. For alternative connection sizes, contact the Merriott Sales Office.

Testing

The standard test pressure is 7 bar giving a maximum operating pressure of 5.38 Bar.

Where required, radiators can be supplied with test pressures of up to 13 bar (operating 10 bar).

Dimensional Tolerances

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

Materials

Merriott radiators are manufactured from flat steel tube 70mm x 11mm with standard steel thickness of 1.5mm.

Mounting

Mounting supports at the rear of the radiator fix securely to surface mounted brackets. Floor-mounted supports (feet) are available on request at time of order.

Warranty

Merriott radiators are guaranteed for a period of 10 years from date of purchase in respect of defective materials and workmanship. The system should be designed in accordance with 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 recommend the use of corrosion inhibitor for all applications. Failure to observe these standards may invalidate the manufacturer's warranty.

26 27

Range Options

V10

Single Vertical Panel

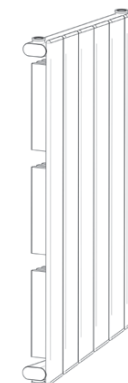
No Convectector Fin



V11

Single Vertical Panel

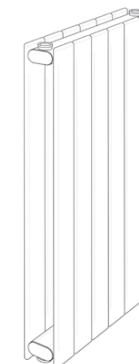
Single Convectector Fin



V20

Double Vertical Panel

No Convectector Fin



Height: Ranges from 600mm to 3000mm in increments of 100mm

Length: Ranges from 288mm to 868mm in increments of 72.5mm

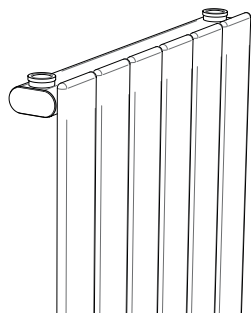
Vertical Precision radiators can be manufactured with side grilles. This must be specified at the point of order as there is no retro-fit side grille.

Technical Specifications

Technical data per element

V10

Height	Dry Weight	Water Content	Surface area
mm	Kg	Ltr	sqm
1200	2.56	0.71	0.21
1300	2.75	0.75	0.22
1400	2.94	0.78	0.24
1500	3.13	0.82	0.25
1600	3.32	0.85	0.27
1700	3.51	0.89	0.28
1800	3.70	0.93	0.30
1900	3.89	1.01	0.31
2000	4.08	1.09	0.33
2100	4.26	1.18	0.34
2200	4.45	1.26	0.36
2300	4.64	1.34	0.37
2400	4.83	1.43	0.39
2500	5.01	1.51	0.40
2600	5.20	1.59	0.42
2700	5.39	1.67	0.43
2800	5.58	1.76	0.45
2900	5.77	1.84	0.47
3000	5.95	1.93	0.48

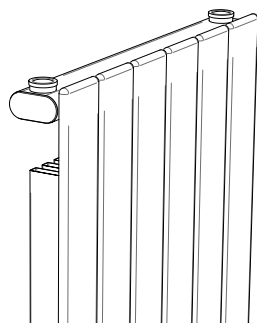


	kg	L/element	Surface area
600	1.24	0.33	0.09
700	1.43	0.38	0.12
800	1.63	0.44	0.13
900	1.84	0.49	0.15
1000	2.04	0.55	0.17
1100	2.25	0.59	0.18

28 / 29

V11

Height	Dry Weight	Water Content	Surface area
mm	Kg	Ltr	sqm
1200	3.98	0.71	0.81
1300	4.24	0.75	0.83
1400	4.50	0.78	0.85
1500	4.76	0.82	0.86
1600	4.76	0.85	1.00
1700	5.33	0.89	1.01
1800	5.64	0.93	1.03
1900	5.95	1.01	1.04
2000	6.26	1.09	1.24
2100	6.31	1.18	1.26
2200	6.93	1.26	1.27
2300	7.75	1.34	1.29
2400	7.79	1.43	1.48
2500	7.83	1.51	1.50
2600	7.86	1.59	1.51
2700	7.90	1.67	1.53
2800	7.94	1.76	1.54
2900	7.98	1.84	1.56
3000	8.02	1.93	1.57

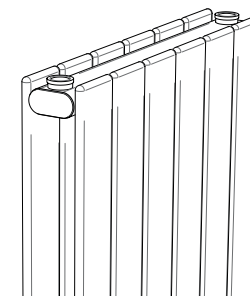


Technical Specifications

Technical data per element

V20

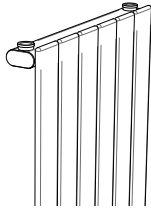
Height	Dry Weight	Water Content	Surface area
mm	Kg	Ltr	sqm
1200	4.83	1.46	0.39
1300	5.21	1.57	0.42
1400	5.55	1.72	0.45
1500	5.94	1.81	0.48
1600	6.29	1.96	0.51
1700	6.67	2.06	0.54
1800	7.03	2.20	0.57
1900	7.40	2.31	0.60
2000	7.78	2.44	0.63
2100	7.96	2.50	0.66
2200	8.14	2.55	0.69
2300	8.34	2.62	0.72
2400	8.54	2.68	0.75
2500	9.30	2.93	0.79
2600	10.06	3.17	0.82
2700	10.44	3.29	0.85
2800	10.82	3.41	0.88
2900	11.20	3.53	0.91
3000	11.58	3.65	0.94



	kg	L/element	Surface area
600	2.33	0.73	0.19
700	2.72	0.85	0.22
800	3.11	0.97	0.25
900	3.51	1.09	0.28
1000	3.89	1.22	0.32
1100	4.28	1.34	0.35

Vertical Precision - V10

Heat Outputs to BS EN442 Certification



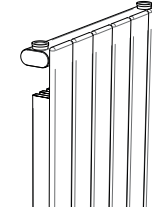
V10									
Height	Length								
	288	360	433	505	578	650	723	795	868
600	248	296	345	393	442	490	538	586	639
700	279	334	390	446	502	557	613	668	729
800	309	372	435	498	561	623	687	749	817
900	340	410	480	550	621	690	761	830	906
1000	371	447	525	602	680	757	835	911	994
1100	397	486	575	662	749	833	918	1001	1092
1200	429	526	623	716	810	902	993	1083	1176
1300	462	566	670	771	872	970	1069	1165	1266
1400	494	606	717	825	933	1038	1144	1247	1355
1500	527	646	764	879	998	1107	1219	1329	1444
1600	559	686	811	933	1056	1175	1294	1411	1533
1700	592	726	859	988	1117	1243	1370	1494	1623
1800	625	765	906	1042	1178	1311	1445	1576	1712
1900	658	805	953	1097	1240	1380	1521	1658	1801
2000	690	845	1000	1151	1302	1449	1596	1740	1890
2100	723	886	1048	1206	1364	1518	1672	1823	1980
2200	755	926	1096	1260	1426	1586	1748	1906	2070
2300	789	967	1144	1316	1488	1656	1825	1990	2161
2400	822	1007	1191	1371	1550	1725	1901	2073	2252
2500	855	1048	1240	1427	1613	1795	1978	2157	2358
2600	888	1088	1288	1482	1676	1865	2055	2241	2464
2700	922	1130	1337	1538	1739	1936	2133	2326	2541
2800	955	1171	1385	1594	1802	2006	2210	2410	2618
2900	989	1213	1434	1651	1866	2077	2289	2496	2711
3000	1023	1254	1483	1707	1930	2148	2367	2581	2804

For heights over 3000mm contact the Merriott Sales Office

30 / 31

Vertical Precision - V11

Heat Outputs to BS EN442 Certification

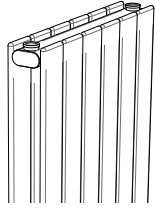


V11									
Height	Length								
	288	360	433	505	578	650	723	795	868
1200	551	678	807	932	1058	1180	1304	1425	1542
1300	585	721	857	990	1123	1253	1384	1512	1637
1400	619	763	907	1047	1188	1325	1464	1600	1731
1500	653	804	956	1103	1252	1397	1543	1686	1825
1600	686	845	1005	1160	1316	1469	1622	1773	1918
1700	720	887	1054	1216	1380	1540	1701	1859	2012
1800	753	928	1102	1273	1444	1611	1780	1945	2105
1900	786	969	1151	1329	1508	1683	1859	2031	2198
2000	820	1010	1200	1385	1572	1754	1938	2117	2291
2100	853	1051	1249	1442	1636	1826	2015	2204	2384
2200	887	1092	1298	1498	1700	1897	2096	2290	2478
2300	920	1133	1347	1555	1764	1969	2175	2377	2572
2400	954	1175	1396	1612	1829	2041	2255	2464	2666
2500	988	1217	1446	1669	1894	2114	2335	2551	2761
2600	1022	1259	1496	1727	1959	2186	2415	2639	2856
2700	1056	1301	1546	1785	2025	2260	2496	2728	2951
2800	1090	1343	1596	1843	2091	2333	2577	2816	3047
2900	1125	1386	1647	1901	2157	2407	2659	2906	3144
3000	1160	1429	1698	1960	2224	2482	2741	2996	3241

For heights over 3000mm contact the Merriott Sales Office

Vertical Precision - V20

Heat Outputs to BS EN442 Certification



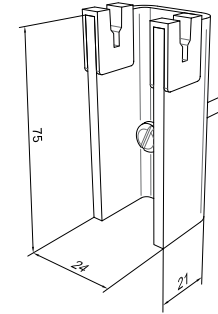
V20									
Height	Length								
	288	360	433	505	578	650	723	795	868
600	360	441	521	599	677	753	829	903	985
700	413	505	597	686	775	862	950	1035	1129
800	465	569	672	773	873	971	1070	1166	1272
900	516	632	746	858	970	1078	1188	1295	1412
1000	567	694	820	943	1066	1185	1305	1423	1552
1100	617	756	893	1027	1161	1291	1422	1549	1690
1200	667	817	966	1110	1255	1396	1537	1675	1819
1300	717	878	1038	1193	1349	1500	1652	1800	1955
1400	767	939	1110	1276	1442	1604	1766	1925	2090
1500	816	999	1181	1358	1535	1707	1880	2049	2225
1600	865	1059	1252	1440	1627	1810	1993	2172	2359
1700	914	1119	1323	1522	1811	1912	2106	2295	2493
1800	963	1179	1394	1603	1811	2014	2218	2418	2626
1900	1012	1248	1465	1784	1903	2116	2331	2540	2759
2000	1061	1299	1535	1965	1994	2218	2443	2662	2891
2100	1110	1358	1606	1946	2086	3230	2555	2784	3024
2200	1158	1417	1676	1926	2177	2421	2666	2906	3156
2300	1207	1477	1746	2007	2268	2523	2778	3028	3288
2400	1255	1536	1816	2087	2359	2624	2889	3149	3420
2500	1304	1596	1886	2168	2454	2725	3001	3271	3552
2600	1352	1655	1956	2248	2541	2826	3112	3392	3683
2700	1400	1714	2026	2329	2632	2927	3224	3514	3815
2800	1448	1773	2096	2409	2723	3028	3335	3635	3947
2900	1497	1832	2166	2490	2814	3130	3447	3757	4079
3000	1545	1891	2236	2570	2905	3231	3558	3878	4211

For heights over 3000mm contact the Merriott Sales Office

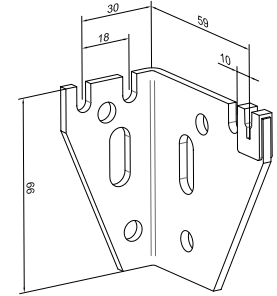
32 / 33

Bracket Details

Wall Brackets



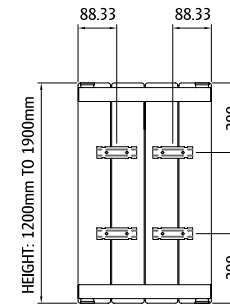
'A2' Type Bracket (V11 and V20)



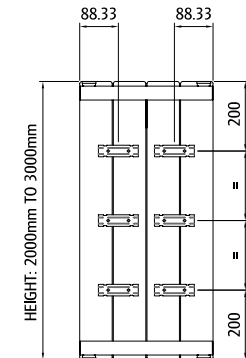
'LN1' Type Bracket (V10 only)

All Types

Bracket Locations



ALL RADIATOR LENGTHS

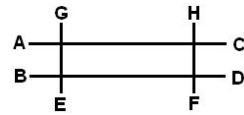


ALL RADIATOR LENGTHS

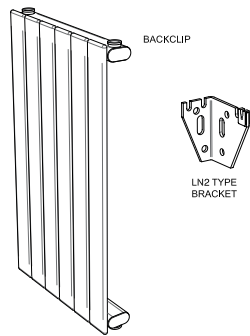
All dimensions are in millimetres

Bracket Details

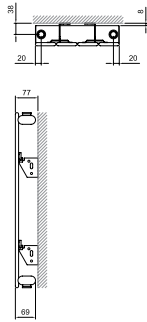
CONNECTION LADDER



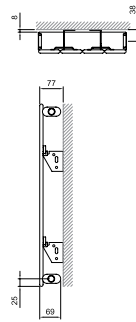
V10



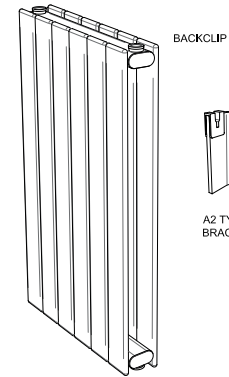
EF (GH) Connections



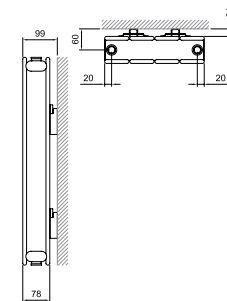
BD (AC) Connections



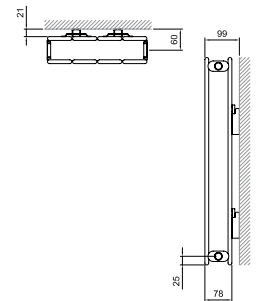
V20



EF (GH) Connections

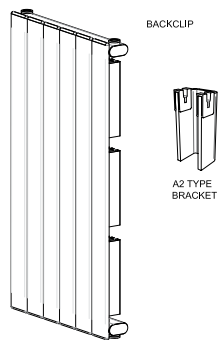


BD (AC) Connections

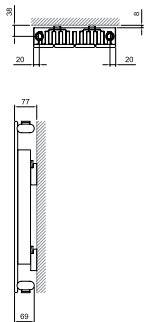


34 / 35

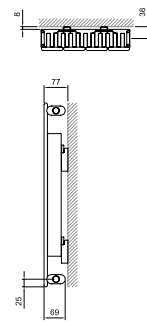
V11



EF (GH) Connections



BD (AC) Connections



All dimensions are in millimetres

Additional Options

Merriott offer a wide range of additional features and options for our standard radiators. A selection of these is shown in this section. Please contact the Merriott Sales Office to discuss any non-standard applications you have in mind.

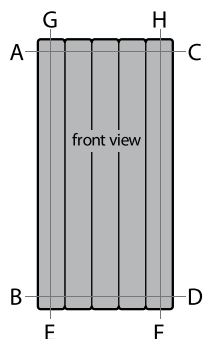
Please note the following must be stated at the time of order :

- Connection details
- Flow & return

Connection Variations

A, B, C, D, E, F, G and H denote connection positions. The standard connection configuration is EF. EF denotes flow at E or F.

Other connection configurations, which must be specified at order stage, include: AB, AD, CD, CB, GH.



36 / 37

Correction Factors

The outputs quoted in this brochure are based on a ΔT of 50°C.

Listed below are the multiplying factors needed to calculate the output at other Delta Ts (ΔT s) between 10°C and 80°C. This is done by multiplying your heat output with the appropriate correction factor selected from the table below. Please note more detailed correction factors for Precision products are available from your local Merriott contact.

EXAMPLE:

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

SOLUTION:

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

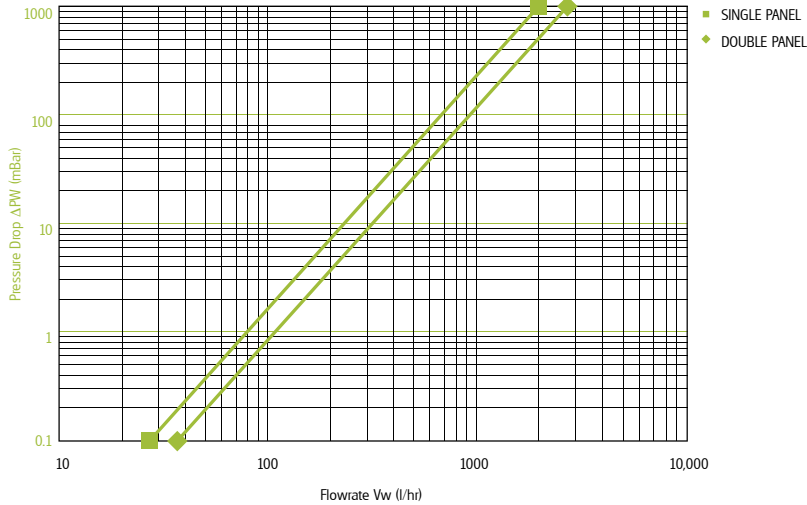
$\Delta T = \text{Mean Water Temperature} - \text{Required Room Temperature} = 79 - 21 = 58^\circ\text{C}$

From the tables below, the output for a Precision at $\Delta T 58^\circ\text{C}$ is 1.206 times the output stated at $\Delta T 50^\circ\text{C}$.

$\Delta T (^\circ\text{C})$	Based on $\Delta T 50$	$\Delta T (^\circ\text{C})$	Based on $\Delta T 50$
10	0.131	46	0.900
11	0.148	47	0.925
12	0.165	48	0.950
13	0.182	49	0.975
14	0.200	50	1
15	0.219	51	1.025
16	0.237	52	1.051
17	0.256	53	1.076
18	0.275	54	1.102
19	0.295	55	1.128
20	0.314	56	1.154
21	0.334	57	1.180
22	0.355	58	1.206
23	0.375	59	1.233
24	0.396	60	1.259
25	0.417	61	1.286
26	0.438	62	1.312
27	0.459	63	1.339
28	0.481	64	1.366
29	0.503	65	1.393
30	0.524	66	1.420
31	0.547	67	1.447
32	0.569	68	1.475
33	0.592	69	1.502
34	0.614	70	1.530
35	0.637	71	1.558
36	0.660	72	1.585
37	0.684	73	1.613
38	0.707	74	1.641
39	0.731	75	1.669
40	0.754	76	1.697
41	0.778	77	1.726
42	0.802	78	1.754
43	0.826	79	1.782
44	0.851	80	1.811
45	0.875		

Resistance Diagram

Horizontal Precision radiators



38 / 39

How to calculate the resistance of a Precision radiator at $\Delta T 50^{\circ}\text{C}$

Radiator type: H22s 1000mm LONG x 650mm HIGH full fin
Output @ $\Delta T 50^{\circ}\text{C}$: 2119W (flow/return - 75/65 $^{\circ}\text{C}$)

If the output is not at $\Delta T 50^{\circ}\text{C}$, please use the correction factor table on the previous page to get the correct output.

Calculate the flow rate as follows:

C = Specific Heat Constant (always 4187 J/kg $^{\circ}\text{C}$)
Q = (m) x (C) x (ΔT)
Output = (flow rate) x (Constant) x (difference between flow and return temp)
Watts = (l/s) (l/kg $^{\circ}\text{C}$) ($^{\circ}\text{C}$)
2703 = (m) (4187) (10)

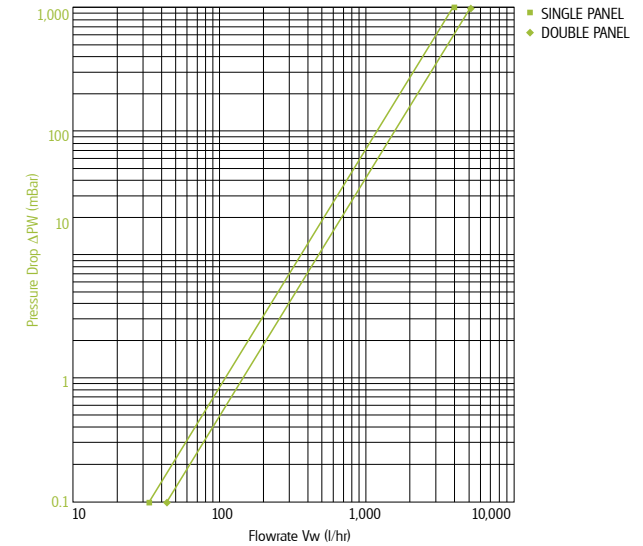
Therefore

m = 2119 / ((4187) X (10))
m = 0.050609 (L/S)
 X 3600 (L/H)
m = 182.2 L/H

Please refer to the resistance diagram which gives a value of approx 3.8mBar.

Resistance Diagram

Vertical Precision radiators



How to calculate the resistance of a Vertical Precision radiator at $\Delta T 50^{\circ}\text{C}$

Radiator type: V10 2000mm HIGH x 723mm LONG
Output @ $\Delta T 50^{\circ}\text{C}$: 1596W (flow/return - 75/65 $^{\circ}\text{C}$)

If the output is not at $\Delta T 50^{\circ}\text{C}$, please use the correction factor table on page 37 of this brochure to get the correct output.

Calculate the flow rate as follows:

Q = (m) x (C) x (ΔT)
Output = (Flow Rate) (Constant) (Difference between flow and return temperature)
Watts = (l/s) (l/Kg $^{\circ}\text{C}$) ($^{\circ}\text{C}$)
1596 = (m) (4187) (18)

Therefore

m = 1596 / ((4187) x (18))
m = 0.021176657 Litres per Second (l/s) multiply by 3600 to convert to litres per hour
m = 76.24 litres per hour (l/hr)

Please refer to the resistance diagram which gives a value of approx 0.3mBar .