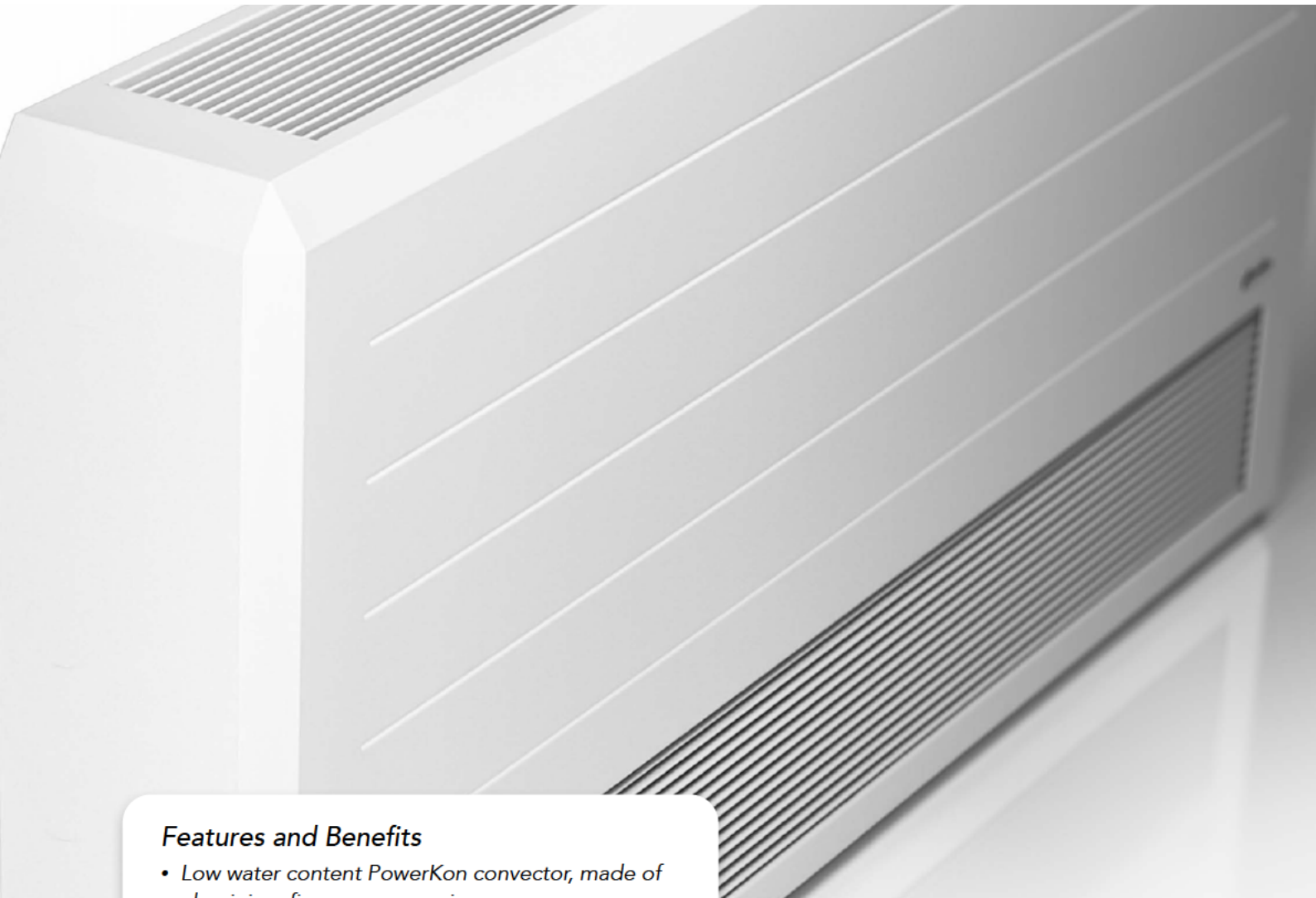




PowerKon + ST

"Safe Touch" low surface temperature convector



Features and Benefits

- Low water content PowerKon convector, made of aluminium fins on copper pipes
- Designed as single waterway convector to maximise water turbulence and therefore thermal performance
- Working pressure 10 bar, test pressure 16 bar
- Casing powder coated in anti-bacterial RAL 9016 Traffic White (Convector coated to RAL 7024 Graphite Grey).
- All performance data tested in accordance with BS EN442



PowerKon + ST

Ideal for the education, healthcare and the care sector

The PowerKon + ST is ideal for the education, healthcare and the care sector. The casing and bracketry are coated with an anti-bacterial and scratch resistant epoxy powder, coloured in RAL 9016, Traffic White. There are no joints in the casing to gather dirt, dust and potential bacteria.

The Powerkon + ST 'Safe Touch' low surface temperature convector delivers versatility, safety, high thermal performance and a high-quality casing which can be installed extremely quickly. All performance data is tested in accordance with BS EN 442.

Easy to install, strong single piece profiled casing, made of 1.6mm steel with 3mm rib details for extra strength and durability.

Casing

3 heights, 8 lengths, 3 depths; 4 models: WTG (Wall Top Grille), WFG (Wall Front Grille), FTG (Floor Top Grille), FFG (Floor Front Grille)

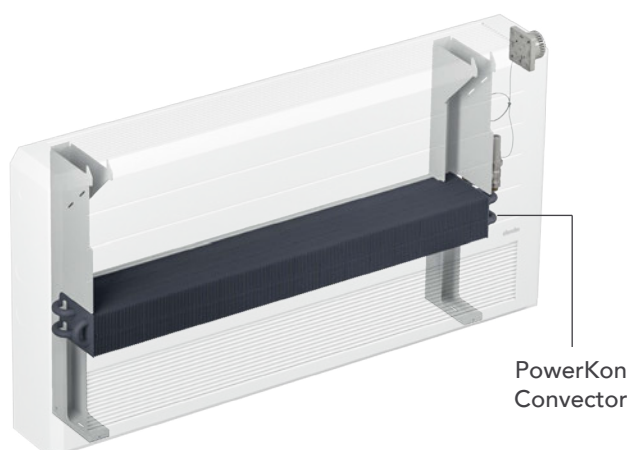
Complete with pencil-proof air inlet/outlet grilles (max. 7.1mm bar spacing), wall/floor brackets, wall spacer and a security screw locking system to fix casing onto bracketry to prevent unauthorised access.

Low water content PowerKon convector, made of aluminium fins on copper pipes, designed as a single waterway convector to maximise water turbulence and therefore thermal performance. Convector supplied with 1/2" female bidirectional connections, and a maximum working pressure of 10 bar (16 bar test). Convector coated to RAL 7024 Graphite Grey.

- 30 year warranty on Powerkon Convector
- 10 year warranty on casing

Convector

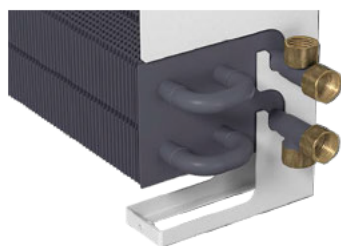
2 heights, 8 lengths, 3 depths;
Convector type: Single or Twin



Product Details



PowerKon Convactor
with bidirectional connections

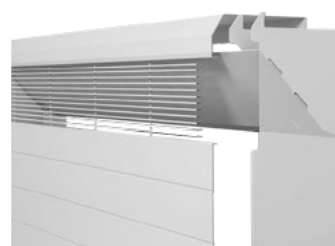


Protection Air Inlet Grille

for WTG and WFG
models as standard

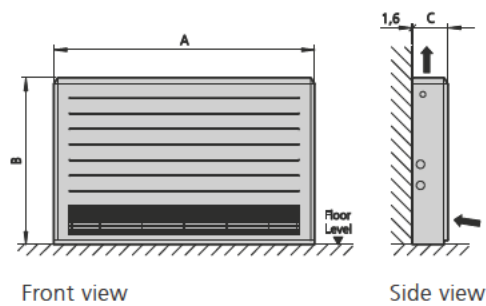


Air Guidance
for all front grille models

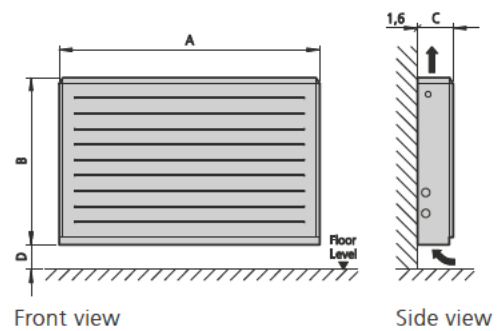


Casing Types

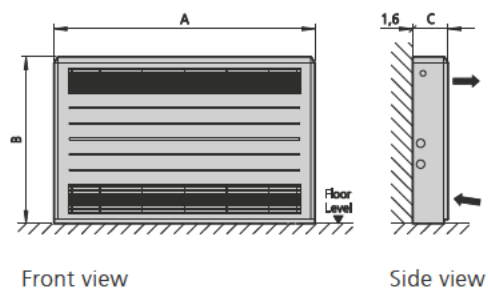
Floor mounted,
top grille (FTG)



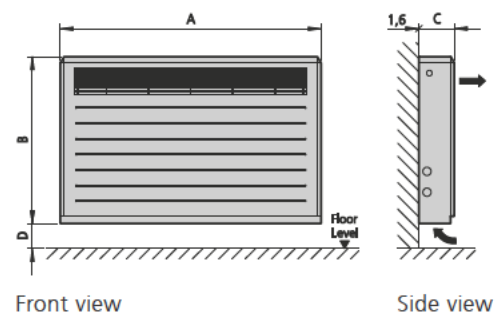
Wall mounted,
top grille (WTG)



Floor mounted,
front grille (FFG)



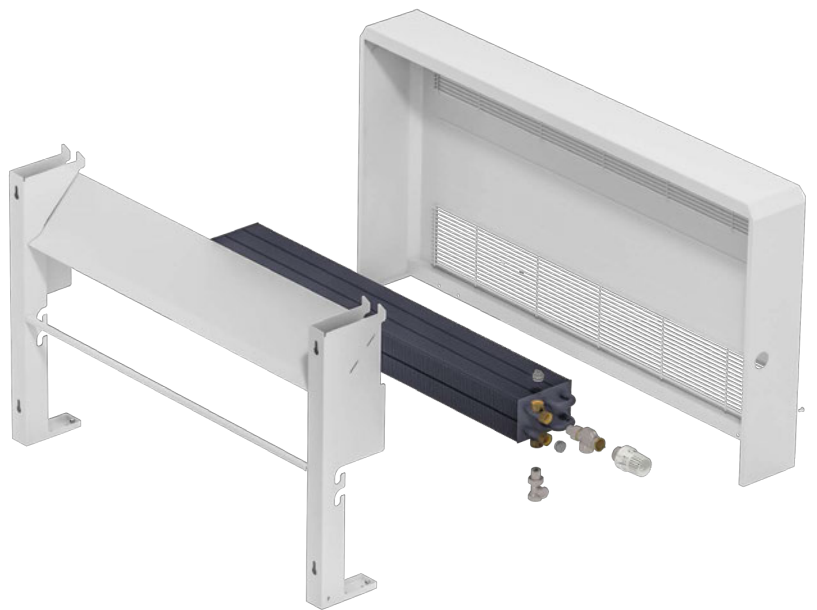
Wall mounted,
front grille (WFG)



Casing Length A mm	Casing Height B mm	Casing Depth C mm	Floor Distance D mm
650	500	120	100
850	650	170	120
1050	800	220	150
1250			
1450			
1650			
1850			
2050			

Design Information

Information on planning and design



- Low surface temperature convector, compliant with NHS DN4 at ΔT 50K and a maximum flow temperature of 80°C
- Can be installed extremely quickly, thanks to its strong one-piece profiled casing (1/2" female bidirectional connections, wall/floor brackets and wall spacer are included)
- Strong single piece profiled casing, made of 1.6 mm steel with 3 mm rib details for extra strength and durability
- Compliant with NHS estates
- WFG - Wall mounted casing complete with air outlet grille at the front and integral bottom grille to prevent convector access
- WTG - Wall mounted casing complete with air outlet grille at the top and integral bottom grille to prevent convector access
- FFG - Floor standing casing complete with air inlet and outlet grille at the front
- FTG - Floor standing casing complete with air inlet at the front and air outlet at the top
- Pencil-proof air inlet/outlet grilles (max. 7.1mm bar spacing)
- Air outlet grille as pencil proof linear bar grille with max. 7.1 mm bar spacing
- Security screw locking system to fix casing onto bracketry to prevent unauthorized access
- Casing and bracketry with scratch resistant and anti bacterial epoxy powder coating, finished in RAL 9016 Traffic White
- Reversible emitter for left or right handed pipework, with knockouts for external or inbuilt TRV heads

Performance

500mm High										
Casing Length	Convector Length	Depth	Single Convector				Twin Convector			
			WTG ¹	WFG ²	FTG ³	FFG ⁴	WTG ¹	WFG ²	FTG ³	FFG ⁴
mm			Output (Watts) Δ50°C				Output (Watts) Δ50°C			
650	525	120	425	362	413	341	524	425	509	-
		170	673	539	653	508	793	604	769	-
		220	928	686	900	647	1051	737	1020	-
850	725	120	626	532	607	501	771	624	748	-
		170	990	793	960	748	1166	888	1131	-
		220	1364	1009	1323	951	1546	1084	1499	-
1050	925	120	826	702	801	662	1018	824	988	-
		170	1307	1047	1267	987	1539	1172	1492	-
		220	1801	1332	1747	1256	2040	1431	1979	-
1250	1125	120	1026	872	995	822	1265	1024	1227	-
		170	1624	1301	1574	1226	1912	1456	1854	-
		220	2238	1654	2170	1560	2535	1778	2459	-
1450	1325	120	1226	1042	1189	982	1512	1224	1466	-
		170	1940	1555	1882	1465	2285	1740	2216	-
		220	2674	1977	2593	1864	3029	2125	2939	-
1650	1525	120	1426	1213	1384	1143	1758	1424	1706	-
		170	2257	1808	2189	1704	2658	2024	2578	-
		220	3111	2301	3017	2169	3524	2472	3419	-
1850	1725	120	1627	1383	1578	1303	2005	1623	1945	-
		170	2574	2062	2496	1944	3031	2308	2940	-
		220	3547	2624	3440	2473	4019	2819	3898	-
2050	1925	120	1827	1553	1772	1464	2252	1823	2185	-
		170	2891	2316	2803	2183	3404	2592	3301	-
		220	3984	2947	3864	2778	4513	3166	4378	-

¹ Model WTG = Wall Top Grille | ² Model WFG = Wall Front Grille | ³ Model FTG = Floor Top Grille | ⁴ Model FFG = Floor Front Grille

Correction Factor Table

The outputs shown within this brochure are based on BS EN442. 75-65-20° operating conditions giving a ΔT of 50°C . For other ΔT 's, a correction factor must be applied.

ΔT	CORRECTION FACTOR	ΔT	CORRECTION FACTOR	ΔT	CORRECTION FACTOR
60	1.267	47	0.923	35	0.629
59	1.240	46	0.897	34	0.606
58	1.213	47	0.923	33	0.583
57	1.186	46	0.897	32	0.560
56	1.159	45	0.872	31	0.537
55.5	1.145	44	0.847	30	0.515
55	1.132	43	0.822	29	0.493
54	1.105	42	0.797	28	0.471
53	1.079	41	0.773	27	0.449
52	1.052	40	0.748	26	0.427
51	1.026	39	0.724	25	0.406
50	1.000	38	0.700	24	0.385
49	0.974	37	0.676	23	0.364
48	0.948	36	0.652	22.5	0.354

Performance

650mm High										
Casing Length	Convector Length	Depth	Single Convector				Twin Convector			
			WTG ¹	WFG ²	FTG ³	FFG ⁴	WTG ¹	WFG ²	FTG ³	FFG ⁴
mm			Output (Watts) Δ50°C				Output (Watts) Δ50°C			
650	525	120	467	418	453	394	576	491	558	463
		170	739	624	716	588	870	698	844	657
		220	1018	794	987	748	1154	853	1119	804
850	725	120	687	615	666	580	848	723	821	681
		170	1087	918	1053	864	1280	1027	1241	967
		220	1498	1168	1452	1100	1697	1254	1645	1182
1050	925	120	907	812	879	766	1119	954	1084	899
		170	1435	1211	1390	1141	1690	1355	1638	1276
		220	1977	1541	1916	1452	2240	1656	2171	1560
1250	1125	120	1126	1009	1092	951	1390	1185	1347	1117
		170	1782	1505	1727	1418	2099	1684	2035	1586
		220	2456	1915	2381	1804	2783	2057	2698	1938
1450	1325	120	1346	1205	1305	1137	1661	1416	1610	1335
		170	2130	1798	2064	1694	2509	2013	2432	1895
		220	2935	2288	2846	2156	3326	2459	3224	2316
1650	1525	120	1566	1402	1518	1322	1932	1647	1872	1553
		170	2478	2092	2401	1971	2918	2341	2829	2204
		220	3414	2662	3310	2508	3869	2860	3751	2695
1850	1725	120	1786	1599	1731	1508	2204	1879	2135	1771
		170	2826	2386	2738	2247	3328	2670	3226	2514
		220	3894	3036	3775	2860	4412	3261	4277	3073
2050	1925	120	2006	1796	1944	1694	2475	2110	2398	1989
		170	3174	2679	3075	2524	3738	2998	3623	2823
		220	4373	3409	4239	3212	4955	3663	4803	3451

¹ Model WTG = Wall Top Grille | ² Model WFG = Wall Front Grille | ³ Model FTG = Floor Top Grille | ⁴ Model FFG = Floor Front Grille

Correction Factor Table

The outputs shown within this brochure are based on BS EN442. 75-65-20° operating conditions giving a ΔT of 50°C . For other ΔT 's, a correction factor must be applied.

ΔT	CORRECTION FACTOR	ΔT	CORRECTION FACTOR	ΔT	CORRECTION FACTOR
60	1.267	47	0.923	35	0.629
59	1.240	46	0.897	34	0.606
58	1.213	47	0.923	33	0.583
57	1.186	46	0.897	32	0.560
56	1.159	45	0.872	31	0.537
55.5	1.145	44	0.847	30	0.515
55	1.132	43	0.822	29	0.493
54	1.105	42	0.797	28	0.471
53	1.079	41	0.773	27	0.449
52	1.052	40	0.748	26	0.427
51	1.026	39	0.724	25	0.406
50	1.000	38	0.700	24	0.385
49	0.974	37	0.676	23	0.364
48	0.948	36	0.652	22.5	0.354

Performance

800mm High										
Casing Length	Convector Length	Depth	Single Convector				Twin Convector			
			WTG ¹	WFG ²	FTG ³	FFG ⁴	WTG ¹	WFG ²	FTG ³	FFG ⁴
mm			Output (Watts) Δ50°C				Output (Watts) Δ50°C			
650	525	120	496	452	482	426	612	531	594	501
		170	786	674	762	636	926	755	896	712
		220	1083	859	1050	809	1227	922	1190	869
850	725	120	730	665	708	627	901	781	873	736
		170	1156	992	1120	935	1362	1110	1318	1047
		220	1593	1263	1544	1189	1804	1356	1749	1278
1050	925	120	964	878	935	827	1189	1031	1153	972
		170	1525	1309	1478	1234	1798	1465	1740	1382
		220	2102	1667	2038	1570	2382	1790	2309	1686
1250	1125	120	1197	1091	1161	1028	1477	1281	1432	1207
		170	1895	1627	1837	1533	2233	1820	2165	1717
		220	2612	2071	2532	1951	2959	2224	2869	2095
1450	1325	120	1431	1303	1388	1229	1765	1531	1711	1443
		170	2265	1944	2195	1833	2669	2176	2584	2052
		220	3121	2475	3026	2331	3537	2658	3429	2504
1650	1525	120	1664	1516	1615	1429	2053	1781	1991	1679
		170	2635	2261	2554	2132	3105	2531	3005	2387
		220	3631	2879	3520	2712	4114	3092	3989	2913
1850	1725	120	1898	1729	1841	1630	2342	2031	2270	1914
		170	3005	2579	2912	2431	3541	2886	3427	2722
		220	4141	3283	4014	3092	4691	3526	4548	3322
2050	1925	120	2132	1942	2068	1830	2630	2281	2550	2150
		170	3374	2896	3270	2730	3977	3241	3849	3057
		220	4650	3687	4508	3473	5269	3960	5108	3730

¹ Model WTG = Wall Top Grille | ² Model WFG = Wall Front Grille | ³ Model FTG = Floor Top Grille | ⁴ Model FFG = Floor Front Grille

Correction Factor Table

The outputs shown within this brochure are based on BS EN442. 75-65-20° operating conditions giving a ΔT of 50°C . For other ΔT 's, a correction factor must be applied.

ΔT	CORRECTION FACTOR	ΔT	CORRECTION FACTOR	ΔT	CORRECTION FACTOR
60	1.267	47	0.923	35	0.629
59	1.240	46	0.897	34	0.606
58	1.213	47	0.923	33	0.583
57	1.186	46	0.897	32	0.560
56	1.159	45	0.872	31	0.537
55.5	1.145	44	0.847	30	0.515
55	1.132	43	0.822	29	0.493
54	1.105	42	0.797	28	0.471
53	1.079	41	0.773	27	0.449
52	1.052	40	0.748	26	0.427
51	1.026	39	0.724	25	0.406
50	1.000	38	0.700	24	0.385
49	0.974	37	0.676	23	0.364
48	0.948	36	0.652	22.5	0.354

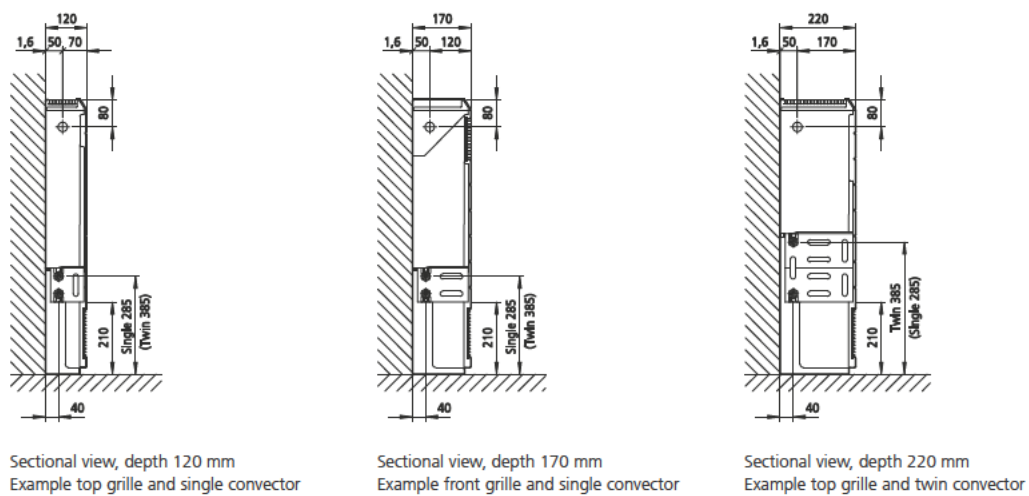
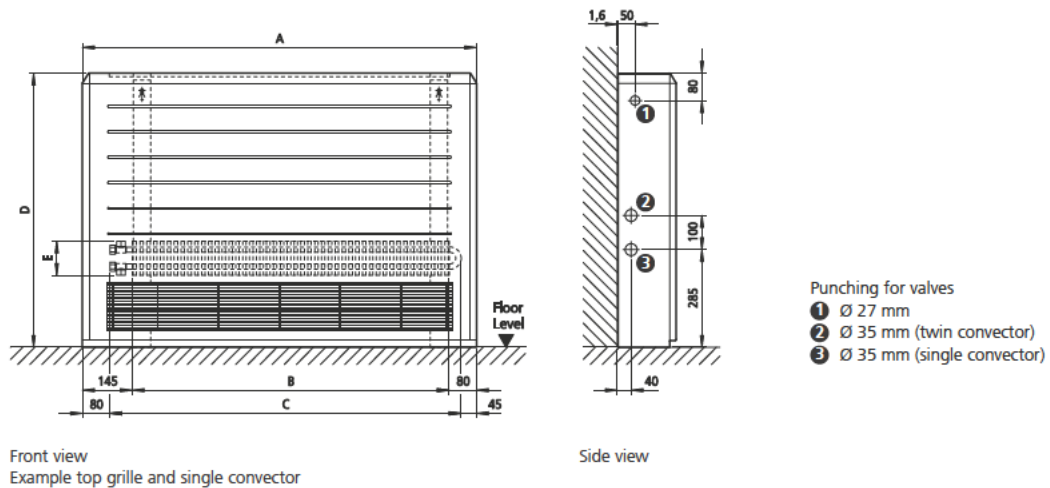
Performance

	Dry weights and water contents per metre of casing													
	Depth	WTG ¹			WFG ²			FTG ³			FFG ⁴			Water Content
		Casing Height												
		500	650	800	500	650	800	500	650	800	500	650	800	
		mm												
Single	120	14.41	17.15	19.90	15.47	18.22	20.95	11.71	14.50	17.30	13.98	16.78	19.58	0.65
	170	17.79	20.89	23.99	19.81	22.90	26.01	14.41	17.59	20.77	17.64	20.82	24.00	0.97
	220	21.18	24.63	28.10	23.73	27.18	30.64	17.12	20.68	24.24	20.88	24.44	28.01	1.31
Twin	120	16.45	19.19	21.94	17.51	20.26	22.99	13.75	16.54	19.34	-	18.82	21.62	1.31
	170	20.85	23.94	27.05	22.86	25.96	29.06	17.46	20.65	23.82	-	23.88	27.06	1.95
	220	25.24	28.70	32.16	27.79	31.25	34.70	21.18	24.74	28.30	-	28.50	32.07	2.60

	Exponent values												
	Depth	WTG ¹			WFG ²			FTG ³			FFG ⁴		
		Casing Height											
		500	650	800	500	650	800	500	650	800	500	650	800
	mm												
Single	120	1.3656	1.3380	1.3247	1.4333	1.3559	1.3334	1.3669	1.3392	1.3260	1.4453	1.3673	1.3445
	170	1.3386	1.3115	1.2985	1.4012	1.3255	1.3035	1.3398	1.3127	1.2997	1.4129	1.3366	1.3144
	220	1.3461	1.3188	1.3057	1.4046	1.3287	1.3066	1.3473	1.3200	1.3069	1.4163	1.3398	1.3176
Twin	120	1.5028	1.4725	1.4578	1.5716	1.4867	1.4621	1.5043	1.4738	1.4593	-	1.4992	1.4742
	170	1.4731	1.4433	1.4290	1.5364	1.4534	1.4293	1.4744	1.4446	1.4303	-	1.4656	1.4412
	220	1.4814	1.4513	1.4369	1.5401	1.4569	1.4327	1.4827	1.4527	1.4382	-	1.4691	1.4447

¹ Model WTG = Wall Top Grille | ² Model WFG = Wall Front Grille | ³ Model FTG = Floor Top Grille | ⁴ Model FFG = Floor Front Grille

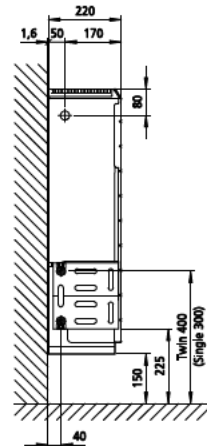
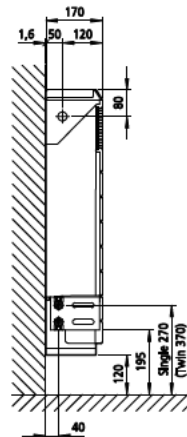
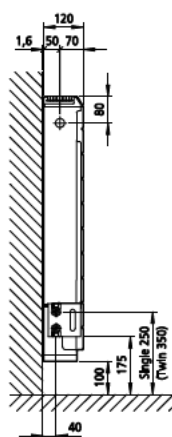
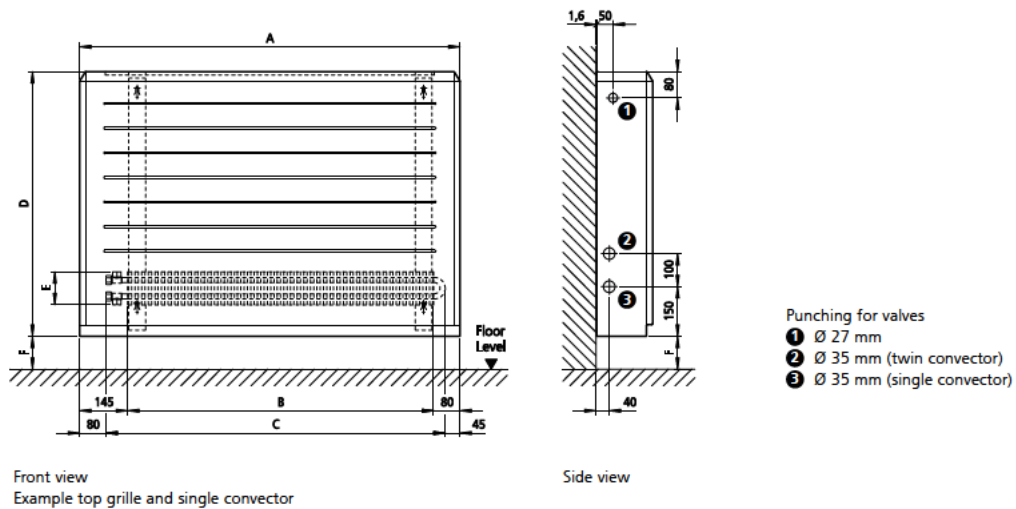
Technical Drawings FTG & FFG



Dimensions in mm

Casing Length A	Finned Length B	Convector Length C	Casing Heights D	Convector Heights E	Casing Depths	Distance to Floor level F
mm						
650	425	525	500	100 (single)	120	100
850	625	725	650	200 (twin)	170	150
1050	825	925	800		220	200
1250	1025	1125				
1450	1225	1325				
1650	1425	1525				
1850	1625	1725				
2050	1825	1925				

Technical Drawings WTG & WFG

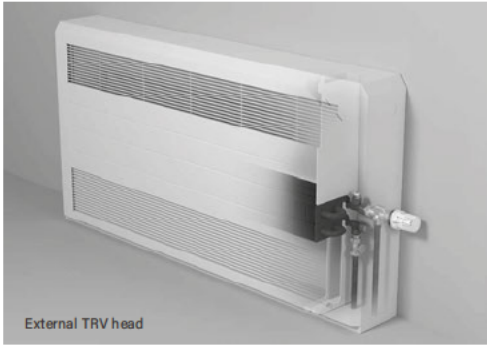
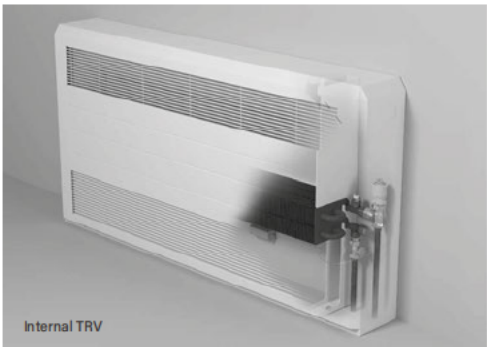
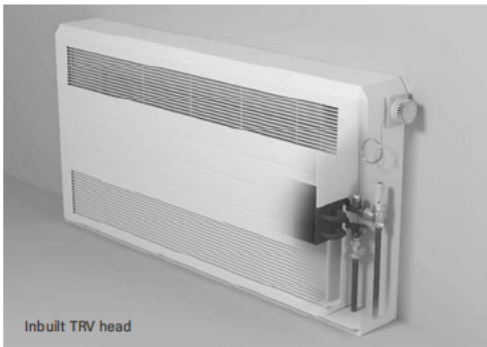
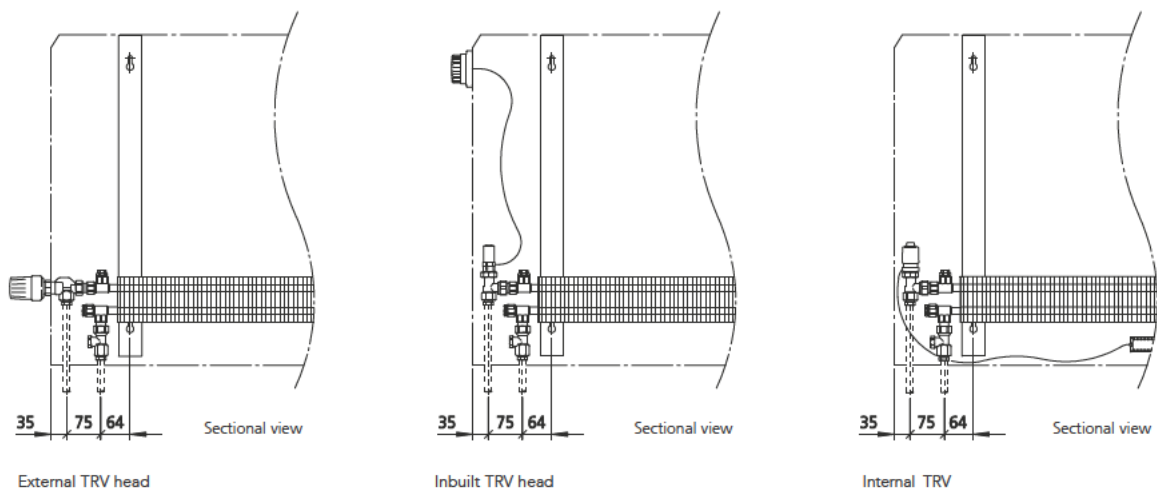


Dimensions in mm

Casing Length A	Finned Length B	Convactor Length C	Casing Heights D	Convactor Heights E	Casing Depths	Distance to Floor level F
mm						
650	425	525	500	100 (single)	120	100
850	625	725	650	200 (twin)	170	150
1050	825	925	800		220	200
1250	1025	1125				
1450	1225	1325				
1650	1425	1525				
1850	1625	1725				
2050	1825	1925				

Installation

Valve positions

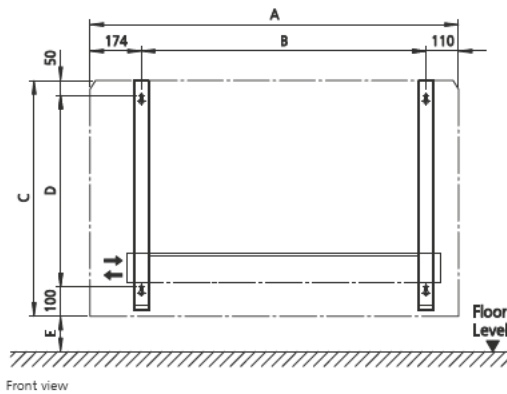


Code	Valve Type
PKVLV-EXT	Powerkon External TRV Valve Set
PKVLV-EXTPI	Powerkon External Pressure Independent TRV Valve Set
PKVLV-IB	Powerkon Inbuilt TRV Valve Set
PKVLV-IBPI	Powerkon Inbuilt Pressure Independent TRV Valve Set
PKVLV-INT	Powerkon Internal TRV Valve Set
PKVLV-INTPI	Powerkon Pressure Independent Internal TRV Valve Set

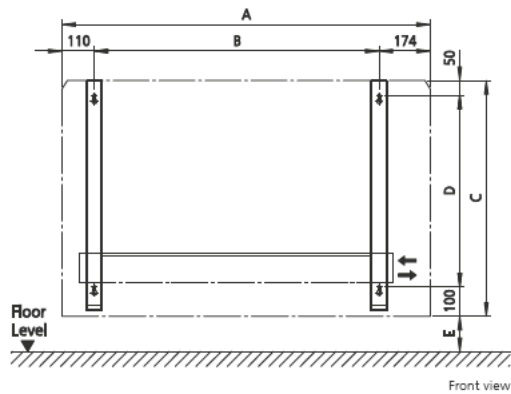
Dimensions in mm

Installation

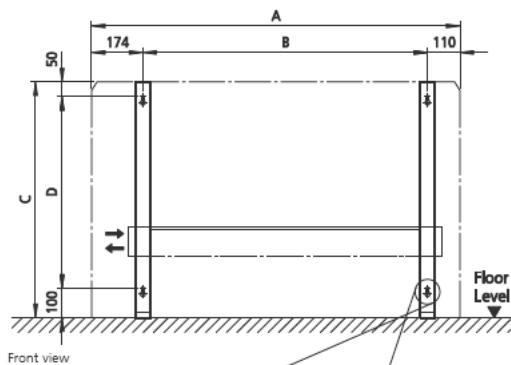
Wall mounted, LH valve position



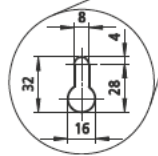
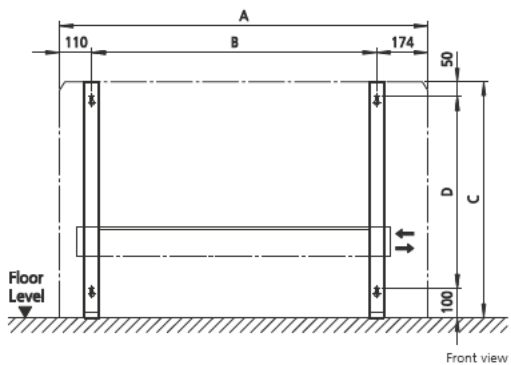
Wall mounted, RH valve position



Floor mounted, LH valve position



Floor mounted, RH valve position



Dimensions in mm

Casing Length A	Fixing Length B	Casing Heights C	Fixing Heights D	Floor Distance E
mm				
650	366	500	350	100
850	566	650	450	120
1050	766	800	650	150
1250	966			
1450	1166			
1650	1366			
1850	1566			
2050	1766			

Ordering Information

Model	Convactor Type	Casing Depth	Casing Height	Casing Length
		mm		
WTG (Wall Top Grille)	S = Single Convactor T = Twin Convactor	12 = 120 mm 17 = 170 mm 22 = 220 mm	50 = 500 mm 65 = 650 mm 80 = 800 mm	06 = 650 mm 08 = 850 mm 10 = 1050 mm 12 = 1250 mm 14 = 1450 mm 16 = 1650 mm 18 = 1850 mm 20 = 2050 mm
WFG (Wall Front Grille)	S = Single Convactor T = Twin Convactor	12 = 120 mm 17 = 170 mm 22 = 220 mm	50 = 500 mm 65 = 650 mm 80 = 800 mm	06 = 650 mm 08 = 850 mm 10 = 1050 mm 12 = 1250 mm 14 = 1450 mm 16 = 1650 mm 18 = 1850 mm 20 = 2050 mm
FTG (Floor Top Grille)	S = Single Convactor T = Twin Convactor	12 = 120 mm 17 = 170 mm 22 = 220 mm	50 = 500 mm 65 = 650 mm 80 = 800 mm	06 = 650 mm 08 = 850 mm 10 = 1050 mm 12 = 1250 mm 14 = 1450 mm 16 = 1650 mm 18 = 1850 mm 20 = 2050 mm
FFG (Floor Front Grille)	S = Single Convactor T = Twin Convactor	12 = 120 mm 17 = 170 mm 22 = 220 mm	50 = 500 mm 65 = 650 mm 80 = 800 mm	06 = 650 mm 08 = 850 mm 10 = 1050 mm 12 = 1250 mm 14 = 1450 mm 16 = 1650 mm 18 = 1850 mm 20 = 2050 mm

Example Code

PK - FTG - S - 17 - 6512

PK - FTG - S - 17 - 6512
 Floor Top Grille Single Convactor Depth Height Width

Technical Data

Advice on measuring conditions

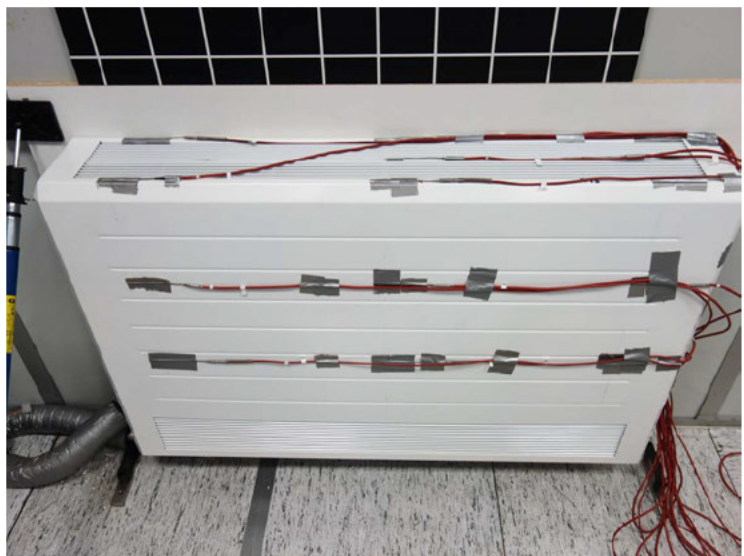
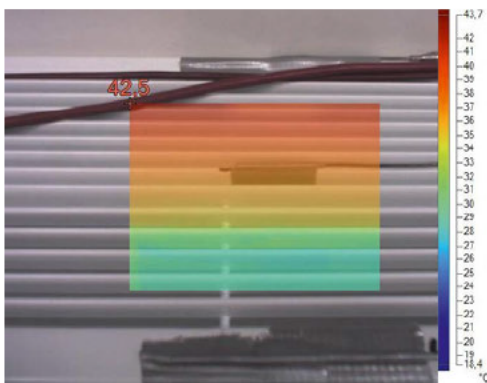
The heat outputs were measured in accordance with BS EN 442 'Radiators and Convectors'.

The standard regulates the performance measurements specifically of convectors.

Part 1 "Technical Specification and Requirements"

Part 2 "Test Procedure and Performance Data"

The reference/air temperature is measured in the centre of the test chamber (2 metres from the external wall) at a height of 0.75 metres). The surface temperature is measured in line with the NHS DN4 requirements to not exceed 43 °C.



Test setup



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