

# HYDRONIC HEATING

Luxury home heating & cooling  
solutions



[www.arcticmelbourne.com.au](http://www.arcticmelbourne.com.au)



# Notes:

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# WHAT IS HYDRONIC HEATING?

Hydronic heating is an efficient, environmentally conscious, cheap to run, low allergen heating option. Heating water with either a boiler or a heat pump, a hydronic system circulates the hot water through sealed pipes that run through either your radiators, towel rails or floors. The radiant heat emitted is a highly efficient form of heating and won't create the same dry and particle-laden air that can result from other forms of heating.

The water used in a hydronic heating system remains in continuous circulation, returning used water to the heating unit without wasting a drop. To add to the efficiency, you can individually adjust each radiator panel, towel rail and slab heating zone. You can also control your hydronic heating system via a central thermostat or wirelessly from your phone.

## Customise your system to suit any home

Choose from our standard range of Italian made radiator panels in a traditional or modern finish, curved or straight towel rails, and various under floor heating options.



# Why Choose Arctic Melbourne?

Arctic Melbourne is a small family run business lead by Zak and Raelene. We have a team of Hydronic Heating specialists who are passionate about quality workmanship. Using only the most trusted brands, Arctic Melbourne can design, install and maintain a powerful, clean and dependable hydronic heating system perfect for your home. We work closely with builders and architects to create luxury climate solutions all over Melbourne and our team are experienced with high-end installations of hydronic radiator panels, towel rails and under floor heating.

# UNDER FLOOR HEATING

The ultimate in home luxury - heat your entire home with hydronic under floor heating from Arctic Melbourne.



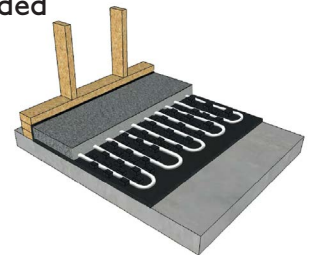
## In-Slab Heating

In-Slab floor heating is the standard method for hydronic underfloor heating. Pipes are secured to metal reinforcement, then concrete is poured, encompassing the underfloor pipe. When connected, heated water will flow through the underfloor pipework, transferring heat into the concrete. In turn this radiates heat to the floor of the entire property.



## In-Screed Heating

In-screed heating is the most efficient and responsive method of underfloor heating. The underfloor heating pipe is secured into Pipe Positioning Boards that are laid directly on top of a partially poured slab. Then the pipes and boards are screeded over with a 50mm concrete screed. This method means that the radiant heat travels only through the screed and no heat is lost to the bottom of the slab or the earth below.



## Heat Emission Plates

This method of underfloor heating uses aluminium heat plates laid between floor joists, with the hydronic pipe work secured into its grooves. When the pipes heat up, the aluminium plates assist in evenly distributing the heat across the entire surface of the floor.



## Minitec System

The Minitec System is designed for renovations and for retrofitting underfloor heating in an existing home. A thin, rigid plastic sheet is placed over the existing floor, and the special Minitec pipework is laid within. A self-levelling compound is then poured on top. The Minitec system raises the floor by only 15mm.





# CHOOSING YOUR FLOOR COVERINGS

Understanding the thermal conductivity of your flooring is important when choosing the most appropriate covering for your hydronic under floor heating system.

## Timber

Different types of wood flooring will have different thermal properties. The more dense and thinner the floor boards are, the better suited they will be. Engineered Timber board is the most ideal for slab heating. Similar to laminate, the manufacturing process gives engineered board a stable and strong base that won't react to the temperature changes commonly associated with under floor heating.



## Polished Concrete

Polished concrete is an ideal finish for hydronic under floor heating. Concrete has high thermal mass and can directly conduct the heat and transfer it to the room. If opting for a polished concrete finish, we would recommend the thickness on top of the pipe be around 70mm to prevent any hairline cracking, which is slightly higher than what we would recommend for other finishes.

## Carpet

Most carpets are suitable for use over hydronic under floor heating, however wool, high pile and some underlays are thermal insulators that can block the heat transfer from the floor into the room. Carpet does not conduct heat energy so the floors will not feel warm to the touch, however you can expect the radiant heat that travels through the carpet & underlay to provide warmth to the entire room.



## Tiles & Stone

Similar to polished concrete, tiled and stone flooring is one of the most suitable finishes. They both have high thermal mass and good conductivity so that heat can transfer quickly into the room, and they hold the heat well for longer periods of time. Because tiles and stone are great conductors of heat, the thickness of the floor covering will not directly affect the warmth of the room.

Always consult with your flooring supplier to check if your chosen floor type will remain under warranty when installed over hydronic under floor heating. We do not recommend using Vinyl, Hardwood or Floating Floorboards in conjunction with a slab heating project.



## TRADITIONAL HYDRONIC RADIATORS

Quality, elegance and performance. Expect only the best from a DeLonghi traditional hydronic radiator panel installed by Arctic Melbourne, and enjoy the peace of mind that comes with a 30 YEAR manufacture warranty.



Traditional DeLonghi hydronic wall panels are the go-to for home heating. Hydronic panels are filled with water, and the heat output of your panel is dependent on the volume. This means we can cater to any space or aesthetic requirement by varying the height, width and depth of the panel.

DeLonghi radiators come in a white finish as standard, or can be custom powder coated to suit your decor. You can also choose to upgrade the look and colour of your valves.

Hydronic radiator panels emit radiant heat that does not circulate dust or other airborne irritants. Perfect for anyone with sensitivities, allergies or asthma. Hydronic radiator heating is the perfect home heating solution.

## Traditional DeLonghi Radiator Heat Output & Dimensions

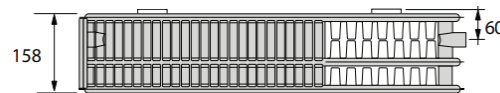
Type 11 Single							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.286	0.365	0.440	0.513	0.584	0.720
500	kW	0.357	0.456	0.551	0.642	0.730	0.900
600	kW	0.429	0.547	0.661	0.770	0.876	1.080
700	kW	0.500	0.638	0.771	0.898	1.022	1.260
800	kW	0.572	0.730	0.881	1.027	1.168	1.440
900	kW	0.643	0.821	0.991	1.155	1.314	1.620
1000	kW	0.715	0.912	1.101	1.283	1.460	1.800
1100	kW	0.786	1.003	1.211	1.412	1.606	1.980
1200	kW	0.857	1.094	1.321	1.540	1.752	2.160
1400	kW	1.000	1.277	1.541	1.798	2.044	2.520
1600	kW	1.143	1.459	1.762	2.053	2.336	2.880
1800	kW	1.286	1.642	1.982	2.310	2.628	3.240
2000	kW	1.429	1.824	2.202	2.566	2.920	3.600
2300	kW	1.644	2.098	2.532	2.951	3.358	4.139
2600	kW	1.858	2.371	2.863	3.336	3.796	4.679
3000	kW	2.144	2.736	3.303	3.850	4.380	2.881

Type 21 Compact							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.419	0.525	0.629	0.731	0.832	1.035
500	kW	0.523	0.657	0.786	0.918	1.040	1.294
600	kW	0.628	0.788	0.913	1.096	1.248	1.553
700	kW	0.733	0.919	1.100	1.278	1.456	1.812
800	kW	0.837	1.050	1.257	1.461	1.664	2.071
900	kW	0.943	1.182	1.415	1.644	1.872	2.330
1000	kW	1.046	1.313	1.572	1.828	2.080	2.589
1100	kW	1.151	1.444	1.729	2.009	2.288	2.847
1200	kW	1.256	1.576	1.886	2.192	2.496	3.106
1400	kW	1.465	1.838	2.200	2.557	2.912	3.624
1600	kW	1.674	2.101	2.515	2.922	3.328	4.142
1800	kW	1.884	2.364	2.829	3.287	3.744	4.659
2000	kW	2.093	2.626	3.144	3.653	4.160	5.177
2300	kW	2.407	3.020	3.615	4.200	4.784	5.954
2600	kW	2.721	3.414	4.087	4.748	5.408	6.730
3000	kW	3.139	3.939	4.715	5.479	6.240	7.766

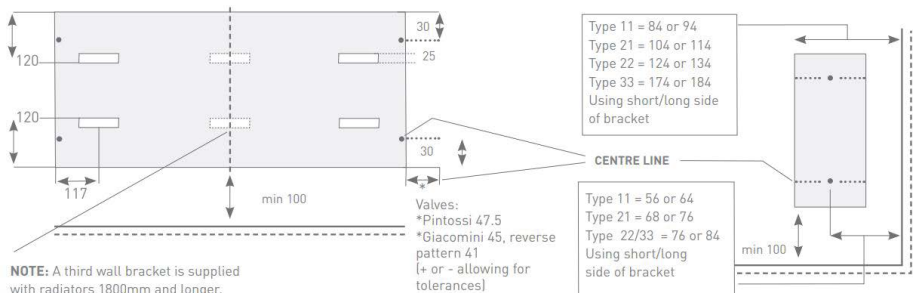


Type 22 Double							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.505	0.646	0.778	0.901	1.016	1.226
500	kW	0.631	0.807	0.972	1.128	1.271	1.533
600	kW	0.757	0.969	1.166	1.351	1.525	1.839
700	kW	0.883	1.130	1.361	1.576	1.779	2.146
800	kW	1.009	1.292	1.555	1.802	2.033	2.453
900	kW	1.136	1.453	1.750	2.027	2.287	2.759
1000	kW	1.262	1.615	1.944	2.252	2.541	3.066
1100	kW	1.388	1.776	2.139	2.477	2.795	3.372
1200	kW	1.514	1.938	2.333	2.702	3.049	3.679
1400	kW	1.766	2.261	2.722	3.153	3.558	4.292
1600	kW	2.019	2.584	3.111	3.603	4.066	4.905
1800	kW	2.271	2.906	3.499	4.054	4.574	5.518
2000	kW	2.523	3.229	3.888	4.504	5.082	6.131
2300	kW	2.902	3.714	4.472	5.180	5.845	7.051
2600	kW	3.280	4.198	5.055	5.855	6.607	7.971
3000	kW	3.785	4.844	5.832	6.758	7.623	9.197

Type 33 Triple							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.712	0.907	1.091	1.264	1.425	1.723
500	kW	0.889	1.134	1.363	1.580	1.782	2.153
600	kW	1.067	1.361	1.636	1.895	2.138	2.584
700	kW	1.245	1.587	1.909	2.211	2.495	3.015
800	kW	1.423	1.814	2.181	2.527	2.851	3.445
900	kW	1.601	2.041	2.454	2.843	3.207	3.876
1000	kW	1.779	2.268	2.727	3.159	3.564	4.307
1100	kW	1.957	2.495	2.999	3.475	3.920	4.738
1200	kW	2.135	2.721	3.272	3.791	4.276	5.168
1400	kW	2.491	3.175	3.817	4.423	4.989	6.030
1600	kW	2.846	3.628	4.363	5.055	5.702	6.891
1800	kW	3.202	4.082	4.908	5.686	6.415	7.752
2000	kW	3.558	4.536	5.453	6.318	7.127	8.614
2300	kW	4.092	5.216	6.271	7.266	8.197	9.906
2600	kW	4.625	5.896	7.089	8.214	9.266	11.198
3000	kW	5.337	6.803	8.180	9.477	10.691	12.921



Standard bracket supplied with DeLonghi radiators



Please note the heat output chart reflects a system running off a Natural Gas boiler. Panels installed in high humidity areas such as bathrooms, drying room etc are limited to a 12 month warranty only.



# FLAT PANEL HYDRONIC RADIATORS

Sleek, minimalistic and high performance. Expect only the best from a DeLonghi Linear Flat Panel hydronic radiator installed by Arctic Melbourne, and enjoy the peace of mind that comes with a generous 30 YEAR manufacture warranty.

DeLonghi Linear Radiators are the perfect fit for any modern home. The hydronic wall panels are filled with water, and the heat output of the panel is dependent on the volume. This means we can cater to any space or aesthetic requirement by varying the height, width and depth of the panels.

Flat Panel radiators come in a gloss white finish as standard, or can be custom powder coated to suit your decor. You can also choose to upgrade the look and colour of your valves.

Hydronic radiator panels emit radiant heat that doesn't circulate dust or other airborne irritants. Perfect for anyone with sensitivities, allergies or asthma. Hydronic radiator heating is the perfect home heating solution.



## Linear Flat Panel DeLonghi Radiator Heat Output & Dimensions

Type 10 Single (no side panels, grilles or convection fins)							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.142	0.175	0.210	0.250	0.290	0.384
500	kW	0.177	0.218	0.263	0.312	0.363	0.480
600	kW	0.212	0.262	0.316	0.374	0.435	0.576
700	kW	0.248	0.306	0.368	0.437	0.508	0.672
800	kW	0.283	0.349	0.421	0.499	0.580	0.768
900	kW	0.319	0.393	0.471	0.562	0.653	0.864
1000	kW	0.354	0.437	0.526	0.624	0.726	0.960
1100	kW	0.389	0.481	0.579	0.686	0.798	1.056
1200	kW	0.425	0.524	0.631	0.749	0.871	1.152
1400	kW	0.496	0.612	0.736	0.873	1.016	1.344
1600	kW	0.566	0.699	0.842	0.998	1.161	1.536
1800	kW	0.637	0.786	0.947	1.123	1.306	1.728
2000	kW	0.708	0.874	1.052	1.248	1.451	1.920
2300	kW	0.814	1.005	1.210	1.435	1.669	2.208
2600	kW	0.920	1.136	1.368	1.622	1.886	2.496
3000	kW	1.062	1.310	1.578	1.872	2.177	2.881

Type 20 Single (side panels, grilles no convection fins)							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.253	0.322	0.387	0.448	0.509	0.623
500	kW	0.316	0.403	0.484	0.560	0.636	0.779
600	kW	0.379	0.483	0.581	0.672	0.763	0.935
700	kW	0.442	0.564	0.677	0.784	0.890	1.091
800	kW	0.505	0.645	0.774	0.896	1.018	1.246
900	kW	0.569	0.725	0.871	1.008	1.145	1.402
1000	kW	0.632	0.806	0.968	1.120	1.272	1.558
1100	kW	0.695	0.886	1.065	1.232	1.399	1.714
1200	kW	0.758	0.967	1.161	1.344	1.526	1.869
1400	kW	0.884	1.128	1.355	1.567	1.781	2.181
1600	kW	1.011	1.289	1.548	1.791	2.035	2.493
1800	kW	1.137	1.450	1.742	2.015	2.290	2.804
2000	kW	1.264	1.611	1.936	2.239	2.544	3.116
2300	kW	1.453	1.853	2.226	2.575	2.926	3.583
2600	kW	1.643	2.095	2.516	2.911	3.307	4.051
3000	kW	1.895	2.417	2.903	3.359	3.816	4.674

Type 21 Compact							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.396	0.501	0.601	0.697	0.787	0.959
500	kW	0.495	0.626	0.751	0.871	0.984	1.199
600	kW	0.594	0.751	0.901	1.045	1.181	1.439
700	kW	0.693	0.877	1.051	1.219	1.378	1.678
800	kW	0.792	1.002	1.202	1.393	1.575	1.918
900	kW	0.891	1.127	1.352	1.567	1.711	2.158
1000	kW	0.989	1.252	1.502	1.741	1.968	2.398
1100	kW	1.088	1.377	1.652	1.916	2.165	2.637
1200	kW	1.187	1.503	1.803	2.090	2.362	2.877
1400	kW	1.385	1.753	2.103	2.438	2.755	3.357
1600	kW	1.583	2.004	2.403	2.786	3.149	3.836
1800	kW	1.781	2.254	2.704	3.135	3.543	4.316
2000	kW	1.979	2.504	3.004	3.483	3.936	4.795
2300	kW	2.276	2.880	3.455	4.005	4.527	5.515
2600	kW	2.573	3.256	3.905	4.528	5.117	6.234
3000	kW	2.968	3.757	4.506	5.224	5.905	7.193

Type 22 Double							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.491	0.609	0.724	0.837	0.949	1.173
500	kW	0.613	0.762	0.905	1.046	1.186	1.466
600	kW	0.736	0.914	1.086	1.256	1.423	1.759
700	kW	0.858	1.066	1.267	1.465	1.660	2.052
800	kW	0.981	1.218	1.448	1.674	1.898	2.345
900	kW	1.104	1.371	1.629	1.883	2.135	2.638
1000	kW	1.226	1.523	1.811	2.093	2.372	2.931
1100	kW	1.349	1.675	1.992	2.302	2.609	3.224
1200	kW	1.472	1.828	2.173	2.511	2.846	3.518
1400	kW	1.717	2.132	2.535	2.930	3.321	4.104
1600	kW	1.962	2.437	2.897	3.348	3.795	4.690
1800	kW	2.207	2.742	3.259	3.767	4.270	5.276
2000	kW	2.453	3.046	3.621	4.185	4.744	5.863
2300	kW	2.821	3.503	4.164	4.813	5.456	6.742
2600	kW	3.188	3.960	4.707	5.441	6.167	7.621
3000	kW	3.679	4.569	5.432	6.278	7.116	8.794

Type 33 Triple							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.706	0.882	1.051	1.216	1.376	1.692
500	kW	0.882	1.103	1.314	1.519	1.720	2.115
600	kW	1.059	1.323	1.576	1.823	2.064	2.538
700	kW	1.235	1.544	1.839	2.127	2.408	2.961
800	kW	1.412	1.764	2.102	2.431	2.752	3.384
900	kW	1.588	1.985	2.365	2.735	3.096	3.807
1000	kW	1.765	2.205	2.627	3.039	3.440	4.231
1100	kW	1.941	2.426	2.890	3.343	3.784	4.654
1200	kW	2.118	2.646	3.153	3.647	4.128	5.077
1400	kW	2.471	3.087	3.678	4.254	4.817	5.923
1600	kW	2.824	3.528	4.204	4.862	5.505	6.769
1800	kW	3.177	3.969	4.729	5.470	6.193	7.615
2000	kW	3.530	4.410	5.255	6.078	6.881	8.461
2300	kW	4.059	5.072	6.043	6.990	7.913	9.730
2600	kW	4.589	5.733	6.831	7.901	8.945	10.999
3000	kW	5.295	6.616	7.882	9.117	10.321	12.692



Please note the heat output chart reflects a system running off a Natural Gas boiler. Panels installed in high humidity areas such as bathrooms, drying room etc are limited to a 12 month warranty only.

# VERTICAL HYDRONIC RADIATORS

DeLonghi vertical hydronic radiators come in both the traditional and linear flat panel designs. With their sleek look, they offer the perfect elegant solution for areas where space is a problem. Enjoy the peace of mind that comes with a 30 YEAR manufacturer warranty when you install a DeLonghi vertical radiator with Arctic Melbourne.

Vertical panels operate using the same method as the standard traditional and linear flat panels, providing luxurious and warm radiant heating throughout your home. Vertical panels come in white as standard but can be powder coated with a custom colour, making them suitable for every space.



## Vertical Traditional DeLonghi Radiator Heat Output & Dimensions

Type 10 Single (no side panels, grilles or convection fins)							
L-mm	H-mm	1400	1600	1800	2000	2200	2400
300	kW	0.542	0.605	0.623	0.751	0.835	0.895
400	kW	0.723	0.806	0.897	1.001	1.113	1.193
500	kW	0.904	1.008	1.121	1.251	1.392	1.492
600	kW	1.085	1.209	1.346	1.501	1.670	1.790
700	kW	1.265	1.411	1.570	1.752	1.949	2.088
900	kW	1.627	1.814	2.019	2.252	2.505	2.685

Type 21 Compact (side panels, grilles & convection fins)							
L-mm	H-mm	1400	1600	1800	2000	2200	2400
300	kW	1.016	1.122	1.229	1.326	1.422	1.509
400	kW	1.354	1.497	1.638	1.769	1.896	2.011
500	kW	1.693	1.871	2.048	2.211	2.370	2.514
600	kW	2.031	2.245	2.457	2.653	2.845	3.017
700	kW	2.370	2.619	2.867	3.095	3.319	3.520
900	kW	3.047	3.367	3.686	3.979	4.267	4.526

Type 20 Compact (side panels, grilles, no convection fins)							
L-mm	H-mm	1400	1600	1800	2000	2200	2400
300	kW	0.824	0.927	1.028	1.128	1.227	1.331
400	kW	1.099	1.236	1.371	1.504	1.636	1.774
500	kW	1.373	1.545	1.714	1.880	2.045	2.218
600	kW	1.648	1.854	2.056	2.256	2.454	2.662
700	kW	1.923	2.163	2.399	2.632	2.863	3.105
900	kW	2.472	2.782	3.084	3.385	3.681	3.992

Type 22 Double (side panels, grilles & convection fins)							
L-mm	H-mm	1400	1600	1800	2000	2200	2400
300	kW	1.262	1.373	1.492	1.629	1.777	1.937
400	kW	1.683	1.831	1.989	2.172	2.370	2.583
500	kW	2.105	2.288	2.487	2.715	2.962	3.229
600	kW	2.525	2.746	2.984	3.258	3.554	3.875
700	kW	2.945	3.204	3.481	3.801	4.147	4.521
900	kW	3.787	4.119	4.476	4.887	5.332	5.812

## Vertical Flat Panel Linear DeLonghi Radiator Heat Output & Dimensions

Type 10 Single (no side panels, grilles or convection fins)							
L-mm	H-mm	1400	1600	1800	2000	2200	2400
300	kW	0.477	0.525	0.584	0.645	0.720	0.797
400	kW	0.636	0.700	0.779	0.859	0.961	1.063
500	kW	0.795	0.825	0.973	1.074	1.201	1.328
600	kW	0.954	1.050	1.168	1.289	1.441	1.594
700	kW	1.113	1.225	1.363	1.504	1.681	1.860
900	kW	1.431	1.576	1.752	1.934	2.161	2.391

Type 21 Compact (side panels, grilles & convection fins)							
L-mm	H-mm	1400	1600	1800	2000	2200	2400
300	kW	0.936	1.029	1.120	1.205	1.286	1.426
400	kW	1.248	1.372	1.493	1.607	1.714	1.901
500	kW	1.560	1.715	1.867	2.009	2.143	2.376
600	kW	1.872	2.059	2.240	2.410	2.572	2.851
700	kW	2.184	2.402	2.614	2.812	3.000	3.357
900	kW	2.807	3.088	3.360	3.616	3.857	4.277

Type 20 Compact (side panels, grilles, no convection fins)							
L-mm	H-mm	1400	1600	1800	2000	2200	2400
300	kW	0.725	0.819	0.919	1.023	1.135	1.208
400	kW	0.967	1.091	1.226	1.365	1.514	1.611
500	kW	1.208	1.364	1.532	1.706	1.892	2.014
600	kW	1.450	1.637	1.838	2.047	2.271	2.417
700	kW	1.692	1.910	2.145	2.388	2.649	2.819
900	kW	2.175	2.456	2.758	3.070	3.406	3.625

Type 22 Double (side panels, grilles & convection fins)							
L-mm	H-mm	1400	1600	1800	2000	2200	2400
300	kW	1.194	1.317	1.441	1.553	1.712	1.868
400	kW	1.591	1.756	1.978	2.072	2.293	2.491
500	kW	1.990	2.196	2.402	2.590	2.867	3.113
600	kW	2.387	2.635	2.882	3.107	3.441	3.622
700	kW	2.786	3.073	3.363	3.626	4.015	4.358
900	kW	3.581	3.952	4.323	4.662	5.162	5.605

Please note the heat output chart reflects a system running off a Natural Gas boiler. Panels installed in high humidity areas such as bathrooms, drying room etc are limited to a 12 month warranty only.





# SAFE TOUCH HYDRONIC PANELS

Safe Touch steel panel radiators are designed to be cooler to touch than standard radiators. Suitable for use in Aged Care and Child Care Facilities, Schools and Hospitals. They are the number one choice for when safety is of high concern and are popular for use in children's bedrooms.

Hydronic radiator panels work by heating water inside the panel and then emitting warm radiant heat that does not circulate dust or other airborne irritants. Hydronic heating is the perfect solution for any household with sensitivities, allergies or asthma concerns.

Safe Touch radiators come in a gloss white scratch and corrosion resistant finish as standard.





## Safe Touch DeLonghi Radiator Panel Heat Output & Dimensions

Type 11 Single							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.281	0.349	0.416	0.484	0.552	0.692
500	kW	0.351	0.436	0.520	0.604	0.689	0.865
600	kW	0.421	0.524	0.624	0.725	0.827	1.038
700	kW	0.492	0.611	0.728	0.846	0.965	1.210
800	kW	0.562	0.698	0.833	0.967	1.103	1.383
900	kW	0.632	0.785	0.937	1.088	1.241	1.556
1000	kW	0.702	0.873	1.041	1.209	1.379	1.729
1100	kW	0.773	0.960	1.145	1.330	1.517	1.902
1200	kW	0.843	1.047	1.249	1.451	1.655	2.075
1400	kW	0.983	1.222	1.457	1.692	1.930	2.421
1600	kW	1.124	1.396	1.665	1.934	2.206	2.767
1800	kW	1.264	1.571	1.873	2.176	2.482	3.113
2000	kW	1.405	1.745	2.081	2.418	2.758	3.458
2300	kW	1.615	2.007	2.393	2.780	3.171	3.977
2600	kW	1.826	2.269	2.706	3.143	3.585	4.496
3000	kW	2.107	2.618	3.122	3.627	4.136	5.188

Type 21 Compact							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.389	0.495	0.596	0.696	0.793	0.983
500	kW	0.487	0.618	0.746	0.870	0.991	1.229
600	kW	0.584	0.742	0.895	1.043	1.189	1.475
700	kW	0.682	0.866	1.044	1.217	1.387	1.721
800	kW	0.779	0.989	1.193	1.391	1.586	1.967
900	kW	0.876	1.113	1.342	1.565	1.784	2.213
1000	kW	0.974	1.237	1.491	1.739	1.982	2.459
1100	kW	1.071	1.360	1.640	1.913	2.180	2.705
1200	kW	1.168	1.484	1.789	2.087	2.378	2.950
1400	kW	1.363	1.731	2.087	2.435	2.775	3.442
1600	kW	1.558	1.979	2.386	2.783	3.171	3.934
1800	kW	1.753	2.226	2.684	3.130	3.568	4.426
2000	kW	1.947	2.473	2.982	3.478	3.964	4.917
2300	kW	2.239	2.844	3.429	4.000	4.559	5.655
2600	kW	2.532	3.216	3.877	4.522	5.153	6.393
3000	kW	2.921	3.710	4.473	5.217	5.946	7.376

Type 22 Double							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.495	0.619	0.739	0.856	0.974	1.210
500	kW	0.619	0.774	0.923	1.071	1.217	1.512
600	kW	0.743	0.928	1.108	1.285	1.461	1.814
700	kW	0.867	1.083	1.292	1.499	1.704	2.117
800	kW	0.991	1.238	1.477	1.713	1.948	2.419
900	kW	1.115	1.392	1.662	1.927	2.191	2.722
1000	kW	1.238	1.547	1.846	2.141	2.435	3.024
1100	kW	1.362	1.702	2.031	2.355	2.678	3.327
1200	kW	1.486	1.856	2.216	2.569	2.922	3.629
1400	kW	1.734	2.166	2.585	2.997	3.409	4.234
1600	kW	1.981	2.475	2.954	3.426	3.896	4.839
1800	kW	2.229	2.785	3.324	3.854	4.382	5.443
2000	kW	2.477	3.094	3.693	4.282	4.869	6.048
2300	kW	2.848	3.558	4.924	2.924	5.600	6.956
2600	kW	3.220	4.022	5.567	5.567	6.330	7.863
3000	kW	3.715	4.641	6.423	6.423	7.304	9.072

Type 33 Triple							
L-mm	H-mm	300	400	500	600	700	900
400	kW	0.717	0.892	1.060	1.223	1.382	1.696
500	kW	0.897	1.115	1.325	1.529	1.728	2.120
600	kW	1.076	1.338	1.590	1.834	2.073	2.544
700	kW	1.256	1.561	1.854	2.140	2.419	2.968
800	kW	1.435	1.784	2.119	2.446	2.765	3.392
900	kW	1.614	2.007	2.384	2.752	3.110	3.816
1000	kW	1.794	2.230	2.649	3.057	3.456	4.240
1100	kW	1.973	2.453	2.914	3.363	3.801	4.664
1200	kW	2.152	2.676	3.179	3.669	4.147	5.088
1400	kW	2.511	3.122	3.709	4.280	4.838	5.936
1600	kW	2.870	3.568	4.239	4.892	5.529	6.784
1800	kW	3.229	4.015	4.769	5.503	6.220	7.632
2000	kW	3.587	4.461	5.299	6.115	6.911	8.480
2300	kW	4.126	5.130	6.093	7.032	7.948	9.752
2600	kW	4.664	5.799	6.888	7.949	8.985	11.024
3000	kW	5.381	6.691	7.948	9.172	10.367	12.720



Increased radiant convection, reduced surface temperature.



Please note the heat output chart reflects a system running off a Natural Gas boiler. Panels installed in high humidity areas such as bathrooms, drying room etc are limited to a 12 month warranty only.

# RICHMOND HYDRONIC TOWEL RAILS

Quality, style and performance. Expect only the best from a DeLonghi Richmond Series heated Towel Rail installed by Arctic Melbourne, and enjoy the peace of mind that comes with a 10 YEAR manufacture warranty.

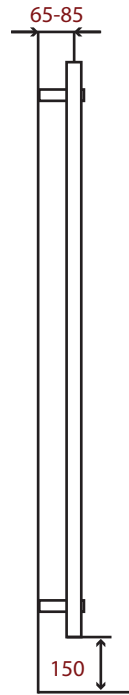
The DeLonghi Richmond range of Towel Rails offer a sophisticated, high quality enhancement for any home. Available in a standard range of Chrome or White, Straight or Curved, this stunning hydronic Towel Rail is ideal for any modern or traditional bathroom. Towel Rails can be custom powder coated to suit your decor and you can choose to upgrade the look and colour of your valves.

Hydronic towel rails work in the same way as hydronic radiators. They are filled with hot water that emits a steady radiant heat throughout your room, whilst simultaneously keeping your towels or clothes luxuriously warm.

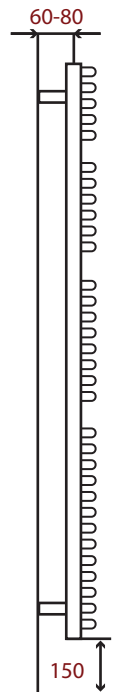


## DeLonghi Richmond Towel Rail Heat Output & Dimensions

Curved Model						
W-mm	H-mm	Connection Centres mm	Output kw Δt 60		Output kw Δt 50	
			WHITE	CHROME	WHITE	CHROME
450	691	400	0.366	0.245	0.286	0.192
450	961	400	0.492	0.335	0.385	0.262
450	1186	400	0.602	0.436	0.471	0.341
450	1591	400	0.816	0.573	0.638	0.448
450	1771	400	0.912	0.668	0.713	0.522
500	691	450	0.398	0.266	0.311	0.208
500	961	450	1.536	0.385	0.419	0.280
500	1186	450	0.656	0.462	0.513	0.361
500	1591	450	0.861	0.602	0.673	0.471
500	1771	450	0.970	0.645	0.758	0.504
550	691	500	0.431	0.287	0.337	0.224
550	1186	500	0.711	0.509	0.556	0.398
550	1591	500	0.934	0.654	0.730	0.509
550	1771	500	1.053	0.700	0.823	0.548
600	691	550	0.463	0.261	0.362	0.240
600	961	550	0.624	0.421	0.488	0.329
600	1186	550	0.765	0.551	0.598	0.431
600	1591	550	1.006	0.700	0.786	0.547
600	1771	550	1.135	0.756	0.887	0.591
750	1591	700	1.223	0.847	0.956	0.662
750	1771	700	1.383	0.924	1.081	0.722



Straight Model						
W-mm	H-mm	Connection Centres mm	Output kw Δt 60		Output kw Δt 50	
			WHITE	CHROME	WHITE	CHROME
400	691	350	0.334	0.225	0.261	0.176
400	1186	350	0.547	0.399	0.428	0.312
400	1591	350	0.766	0.536	0.579	0.419
400	1771	350	0.821	0.589	0.647	0.433
450	691	400	0.366	0.245	0.286	0.192
450	961	400	0.492	0.335	0.385	0.262
450	1186	400	0.602	0.436	0.471	0.341
450	1591	400	0.816	0.573	0.638	0.448
450	1771	400	0.912	0.668	0.713	0.522
500	691	450	0.398	0.266	0.311	0.208
500	961	450	0.536	0.358	0.419	0.280
500	1186	450	0.656	0.462	0.513	0.361
500	1591	450	0.861	0.602	0.673	0.471
500	1771	450	0.970	0.645	0.758	0.504
550	691	500	0.431	0.287	0.337	0.224
550	1186	500	0.711	0.509	0.556	0.398
550	1591	500	0.934	0.654	0.730	0.511
550	1771	500	1.053	0.700	0.823	0.547
600	691	550	0.463	0.307	0.362	0.240
600	961	550	0.624	0.421	0.488	0.329
600	1186	550	0.765	0.551	0.598	0.431
600	1591	550	1.006	0.700	0.786	0.547
600	1771	550	1.135	0.756	0.887	0.591
750	1591	700	1.223	0.847	0.956	0.662
750	1771	700	1.383	0.924	1.081	0.722



Tables based on ΔT 60 - mean water temperature in radiator of 80°C and a room temperature of 20°C - radiator outputs to EN442. ΔT 50 - mean water temperature in radiator of 70°C and a room temperature of 20°C.





## ICONIC HYDRONIC TOWEL RAILS

Quality, style and performance. Expect only the best from a DeLonghi Iconic Series heated Towel Rail installed by Arctic Melbourne, and enjoy the peace of mind that comes with a 10 YEAR manufacture warranty.

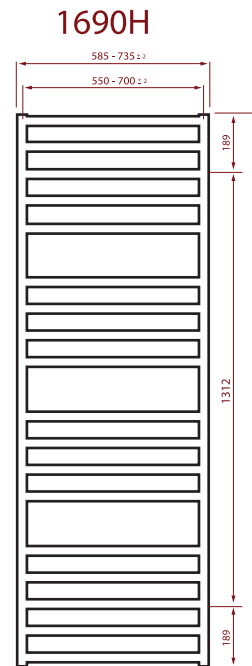
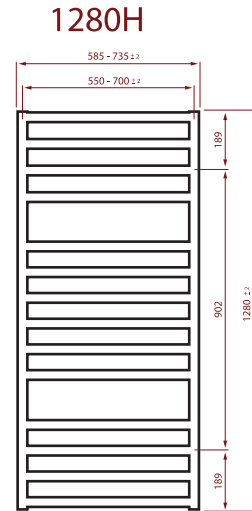
The DeLonghi Iconic range of Towel Rails offer a stylish high quality enhancement for any home. Available in a standard range of Chrome, White or Black, this sleek hydronic Towel Rail is ideal for any modern or traditional bathroom. Towel Rails can be custom powder coated to suit your decor and you can choose to upgrade the look and colour of your valves.

Hydronic towel rails work in the same way as hydronic radiators. They are filled with hot water that emits a steady radiant heat throughout your room, whilst simultaneously keeping your towel or clothes luxuriously warm.



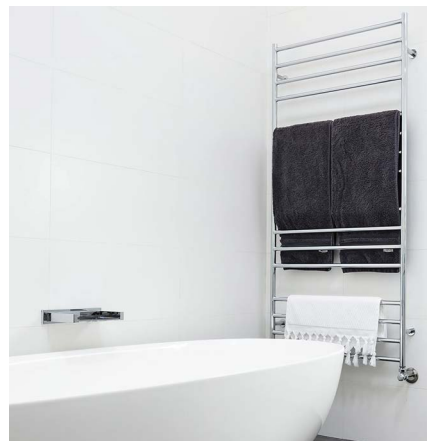
## DeLonghi Iconic Towel Rail Heat Output & Dimensions

Part Number	Height	Width	Pipe Centres	kW Output
<b>CHROME</b>				
ICONIC 1280X585C	1280	585	550	0.604
ICONIC 1280X735C	1280	735	700	0.890
ICONIC 1690X585C	1690	585	550	0.774
ICONIC 1690X735C	1690	735	700	0.934
<b>WHITE</b>				
ICONIC 1280X585W	1280	585	550	0.858
ICONIC 1280X735W	1280	735	700	1.264
ICONIC 1690X585W	1690	585	550	1.099
ICONIC 1690X735W	1690	735	700	1.327
<b>MATT BLACK</b>				
ICONIC 1280X585MB	1280	585	550	0.858
ICONIC 1280X735MB	1280	735	700	1.264
ICONIC 1690X585MB	1690	585	550	1.099
ICONIC 1690X735MB	1690	735	700	1.327



**ADDITIONAL MEASUREMENTS**  
 Pipe centres from wall -82mm  
 Total depth from wall -110mm

Please note the heat output chart reflects a system running off a Natural Gas boiler.



# THERMOSTATS

Arctic Melbourne offer a range of thermostat options for your hydronic heating system

## Immergas CAR V2

The Immergas CAR V2 modulating remote control has been designed to guarantee ideal temperature conditions at any time of the day and night for each individual day of the week. Users can modify the basic program according to their lifestyle to guarantee optimal tailored comfort. Programming of the CAR V2 remote control is extremely easy and a wide display allows constant control of all values set.



## Immergas Crono 7

The Immergas Crono 7 with backlight is a 7 day programmable thermostat designed to guarantee ideal temperature conditions at any time of the day and night for each individual day of the week. Programming the Crono 7 is extremely easy and a wide display allows constant control of all values set. The Crono 7 allows you to adjust the ambient room temperature of the room, where as the CAR V2 allows a more precise water temperature adjustment.

## Siemens REV24

Mains-independent, the REV24 is a 7-day room temperature controller that can provide the right temperature at the right time. All factory settings already provide optimal living comfort and you can easily adjust the controller to your needs with the user-assisted clear-text display and program selection slider.



## Siemens RDE100.I

The RDE 100.I is a super-slim room thermostat. 7 Day programmable, 24 periods per day with On/Off/Program functions.

## Siemens WIFI RDS110

The RDS110 Wifi Thermostat allows you to remotely monitor and manage your home's temperature and energy usage anytime, anywhere. Equipped with patented self-learning algorithm, the intuitive RDS110 allows for total home comfort.



## Nest Learning Thermostat

The Nest Learning Thermostat learns every time you adjust the temperature, that's how it builds a schedule for your home. So, in your first week with Nest, teach it well - turn it up when you want to be cosy, turn it down when you want to save energy. The Nest comes in Stainless, Black or White to suit any home interior.



## Honeywell Wi-Fi 9000

With the Wi-Fi 9000 and Honeywell's Total Connect Comfort services, you can remotely monitor and manage your home's comfort and energy usage anytime, anywhere. Choose the programmable mode to save on annual heating and cooling costs. Easily change the high-definition display to any colour you choose. See indoor and outdoor temperature and humidity information right on the home screen.

## Honeywell CM 907

The CM907 is a 7-day Programmable Room Thermostat. It is designed to provide automatic time and temperature control of domestic heating or cooling systems. The slim, ultra modern design complements the extra large LCD screen with the Line of Text display and function buttons ensure simplified programming and operation for all users.



# BOILERS & HEAT PUMPS

Arctic Melbourne offers a range of boiler & heat pump options for your hydronic heating system. We can help you choose the right boiler for your unique needs.

## Natural Gas & LPG Boilers

Our certified range of Immergas gas boilers are available in natural gas and LPG, with both internal & external installation options. We offer both the 32kW standard efficiency model, and the high efficiency condensing range that provides excellent efficiency ratings of more than 98%.

As well as heating only boilers, our Condensing Combination Boilers enable a single boiler to produce continuous flow domestic hot water, whilst also managing the delivery of hydronic heating. Combi boilers are a great choice for smaller homes, whilst a dedicated hydronic boiler is recommended for large family homes.



## Heat Pumps (Electric)

Heat pumps allow for more advanced solutions of heating and cooling, with a further option to combine domestic hot water production. Immergas air-water heat pumps use external air as a renewable energy source. Excellent for cooling and heating homes and offices alike, they provide one of the best solutions in terms of energy efficiency, low running costs and reduction of polluting emissions. With 3 x single-phase and 3 x three phase versions available, the Immergas Heat Pump is the ideal solution for stand-alone systems or as a combination with integrated equipment and hybrid solutions.

## Wood Pellet Boiler

MCZ's range of wood pellet boilers are available with power outputs of 22kW - 35kW, supplied with internal pumps and expansion vessels. The range comes complete with everything required to deliver hydronic heating and domestic hot water, effectively and sustainably. Wood Pellet Boilers are available in a range of both traditional and modern finishes to suit any style of home.

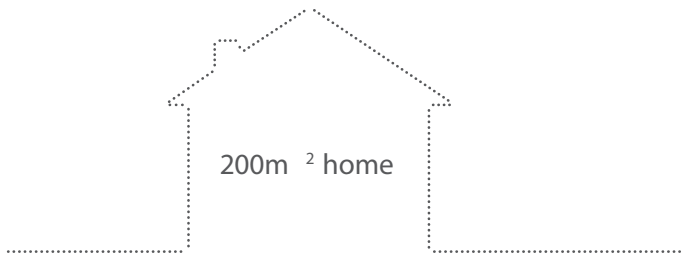


Also Available: Diesel Boiler, Electric, Woodfire & More



## Running Costs

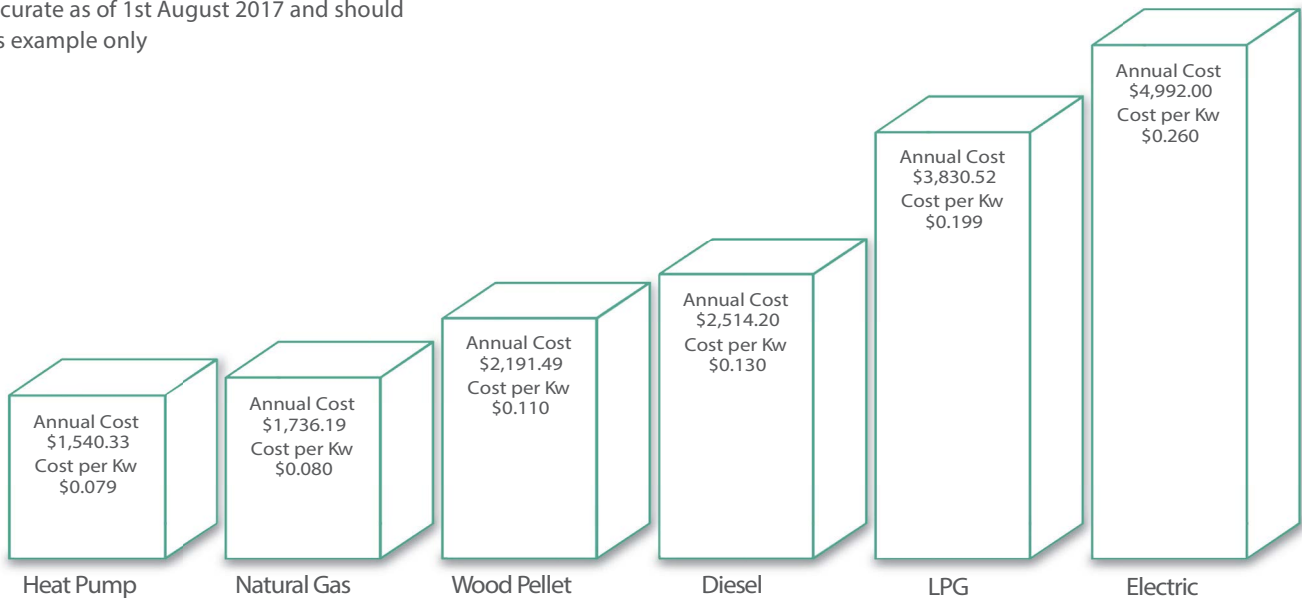
Running costs are a key consideration and one which can be challenging to answer due to the variability in types of fuels and prices. Actual cost of heating will depend on the area heated, running time, thermostat settings, house insulation, energy tariffs and the local climate. The costing graph below is based on the following typical heat load.



@ 20Kw heat load, operating for 8 hours a day for 120 days a year

Please Note:

Figures accurate as of 1st August 2017 and should be used as example only



## Premier Pack Upgrade (recommended)

The Premier Pack Upgrade is designed for Immergas Boilers, extending the warranty to 5 years. It includes a Google Nest controller, spare bottle of Fernox rust inhibitor and a Magna Clean filter. The Magna Clean filter offers immediate ongoing system protection, reduced heating bills of up to 6% per annum, reduced carbon emissions, reduced maintenance costs and it extends the life of your hydronic heating system.

