

hurlcon hydronic heating

Installation and Operating Instructions

Solazar Natural Convectors



Hurlcon Heating
48-90 Hanna Street
Noble Park Victoria, Australia, 3174

www.hurlconheating.com.au

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1 - INTRODUCTION

This brochure has been compiled to give our customers technical information on selecting, installing and operating **Solazar Natural Convectors**. **Solazar Natural Convectors** are designed as Low Surface Temperature (LST) and low water content ideal for aged care facilities, kindergartens etc. Produced in Melbourne at Hurlcon Heating's manufacturing plant using state of the art manufacturing equipment, the **Solazar Natural Convectors** are fully cleaned and electro statically powder coated in house on our modern powder coating line. All heat exchangers are copper tube with aluminium fins mechanically bonded and tested to 13 bar pressure, all exchangers are also powdercoated black before leaving the factory. **Solazar Natural Convectors** come in a wide range of sizes, providing flexibility in each project.

2 - GENERAL ADVICE

1. The convector outputs in this catalogue are quoted with the standard conditions of water temperatures of 90° C flow and 70° C return with an ambient air temperature of 20° C. The convectors can be used at different temperatures but their heat output will vary accordingly. Please refer to page 4 for further details.
2. **Solazar Natural Convectors** are designed to be installed in a hydronic heating system only. Only drain the water in the heating system if absolutely necessary, add water only if needed.
3. **Solazar Natural Convectors** can be used indefinitely without changing the water in the system.
4. The pipe work should be pressure tested to eliminate any leaks but DO NOT use MAINS PRESSURE if the convectors are connected.
5. Use only **OVENTROP** or approved valves both on the flow and return side of each convector. The manual or thermostatic valves should be placed on the inlet side with the lockshield valve for flow control on the outlet side. The use of thermostatic valves will provide more comfort and economy.
6. Use the air vent fitted on the heat exchanger to eliminate all the air from the convector.
7. The normal system pressure for a closed vented sealed system is between 1 - 2 Bars when cold.
8. Maximum water temperature 95° C

3 - TECHNICAL SPECIFICATIONS

All Hurlcon **Solazar Natural Convectors** are manufactured to the following specifications.

✓ Steel casing	1.15mm Galfan
✓ Wall Brackets	0.75mm Galfan
✓ Heat Exchanger	16mm Copper with 0.2mm aluminium fins
✓ Test pressure	13 BAR minimum
✓ Working pressure	10 BAR maximum
✓ Connections	1/2" BSP
✓ Finish	Powdercoat Horizon White Scylla
✓ Air bleed	1/8" BSP

4 - SIZES & TYPES AVAILABLE

Solazar convectors range of widths 600, 800, 1000, 1200, 1400, 1600, 1800, 2000 and 2400mm.
Heights of 300, 450, 600, 750 and 900mm are available.
Depth 4 Tube 124mm and 6 Tube 184mm.

NOTE. All Hurlcon Solazars are built to order, please check the lead times with your nearest Hurlcon sales office prior to scheduling installation, usually 3-4 weeks depending on quantities.

5 – HEAT OUTPUTS AND CORRECTION FACTORS

For selection of the convector size.

The **Solazar** convector heat outputs vary according to the difference between the room air temperature and the average of the flow and return water temperatures (called mean water temperature). The data supplied is based on 90/70 °C water temperature and 20 °C ambient air temperatures.

Wall mounted outputs kW's

HEIGHT (H mm)	TUBES (T)	LENGTH (L mm)								
		600	800	1000	1200	1400	1600	1800	2000	2400
300	4T	0.73	1.04	1.35	1.67	1.98	2.30	2.61	2.93	3.56
	6T	1.04	1.50	1.98	2.40	2.90	3.36	3.82	4.28	5.20
450	4T	0.81	1.17	1.52	1.88	2.23	2.59	2.94	3.30	4.00
	6T	1.17	1.68	2.19	2.70	3.20	3.72	4.23	4.74	5.75
600	4T	0.94	1.35	1.75	2.16	2.56	2.97	3.38	3.79	4.60
	6T	1.34	1.93	2.51	3.10	3.68	4.27	4.85	5.44	6.60
750	4T	0.98	1.40	1.83	2.26	2.68	3.11	3.54	3.96	4.82
	6T	1.40	2.01	2.63	3.24	3.85	4.46	5.07	5.68	6.91
900	4T	1.05	1.50	1.95	2.41	2.86	3.32	3.77	4.23	5.14
	6T	1.50	2.15	2.80	3.46	4.11	4.76	5.42	6.07	7.38

Correction Factors

M.E.D.	30°C	40°C	50°C	55°C	65°C	70°C
Factor	0.38	0.50	0.77	0.90	1.11	1.22

For temperatures other than 60°C, use the table above for correct emissions. To calculate the obtain Mean Effective Temperature Difference (M.E.D.) use the following equation: $M.E.D. = \frac{\text{Flow} + \text{Return water temp.}}{2} - \text{Room Temp.}$

6 - PACKING

1. In order to protect the **Solazar** convector and avoid external damage, all Solazars convectors are packed with bubble wrap packaging.
2. The Solazars are labelled with job and part number.

7 - MAINTENANCE

1. Any dust build up in the heat exchanger can be easily removed using a vacuum cleaner, front cover can be removed to provide access.
2. Casing should only be cleaned using a soft cloth and warm soapy water, please do not use corrosive or abrasive agents to clean your convector.

8 - INSTALLATION DETAILS

1. The Solazar heat exchanger can be installed as either a left or right hand installation. Simply turn the heat exchanger around to allow pipe connections to be made on either side of the casing.
2. The Solazar must be installed between 100 and 200mm from floor level to bottom of the convector.
3. Ensure clear air flow through the Solazar, no obstructions such as shelves immediately above.
4. Note there is a height and length for the casing shown on drawing number 1 (Page 6), the more important dimensions for your set-up is the measurements from the wall mounting bracket fixing holes, to the side of the casing, drawing number 2 (Page 6).
5. Pipe work can exit the wall behind the casing if you bring pipe work down through the wall from above.
6. Slide the heat exchanger into the brackets
7. Fix the wall mounting brackets vertically to the wall, ensure that the top of the brackets are level.
8. When fixing brackets please take into consideration the limited adjustment as per slots in the base of the front cover.
9. Fit the outer casings on the wall brackets and remove the very front panel by sliding it up and off.
10. This will leave the outer surround sitting on the wall. For convenience, mark the wall on the inside of the casing, where outer surround sits against the wall with a pencil mark before removing the front panel.
11. The outer casing can then be fixed in position ready to refit the front panel after the pipe work connections have been completed.

9 - PROBLEM SOLVING

1. A Solazar convector needs a continuous flow of hot water to work effectively.
2. If the Solazar convector flow pipe is hot and the return cold, increase the flow of water by re-balancing the system.
3. If the convector or the pipe work is noisy, check for air in the system. Switch the circulator off and allow the air to settle to the top of the convectors. Then bleed the convectors, top up water if necessary.
4. A convector will be hot only at maximum heat output. A warm convector indicates that the boiler has switched off or the thermostatic valve, if fitted, has adjusted the output to suit the required room conditions.
5. It is wise to provide an external drain at the lowest point of the pipe work in the event that the system has to be drained for maintenance or modification.

10 - WARRANTY

Solazar Natural Convectors are guaranteed for 10 years against defects in material or workmanship.

Warranty includes rework or replacement of the convector (parts only).

This warranty does DOES NOT COVER any labour charges, travel time expenses, or any consequential losses or damage.

The products must be installed and used according to accepted plumbing practices, like BS5449.

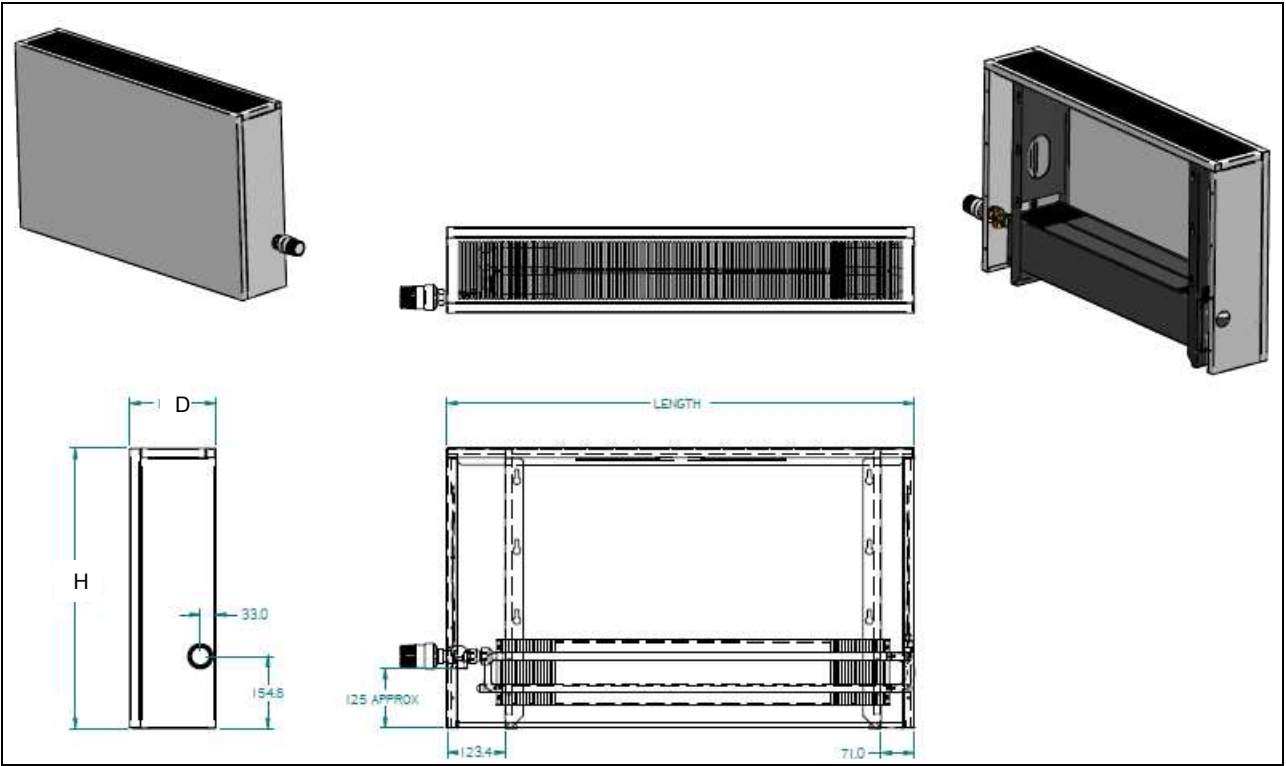
Failure to do so will void the guarantee.

The below items must also be followed or else the warranty may be voided:

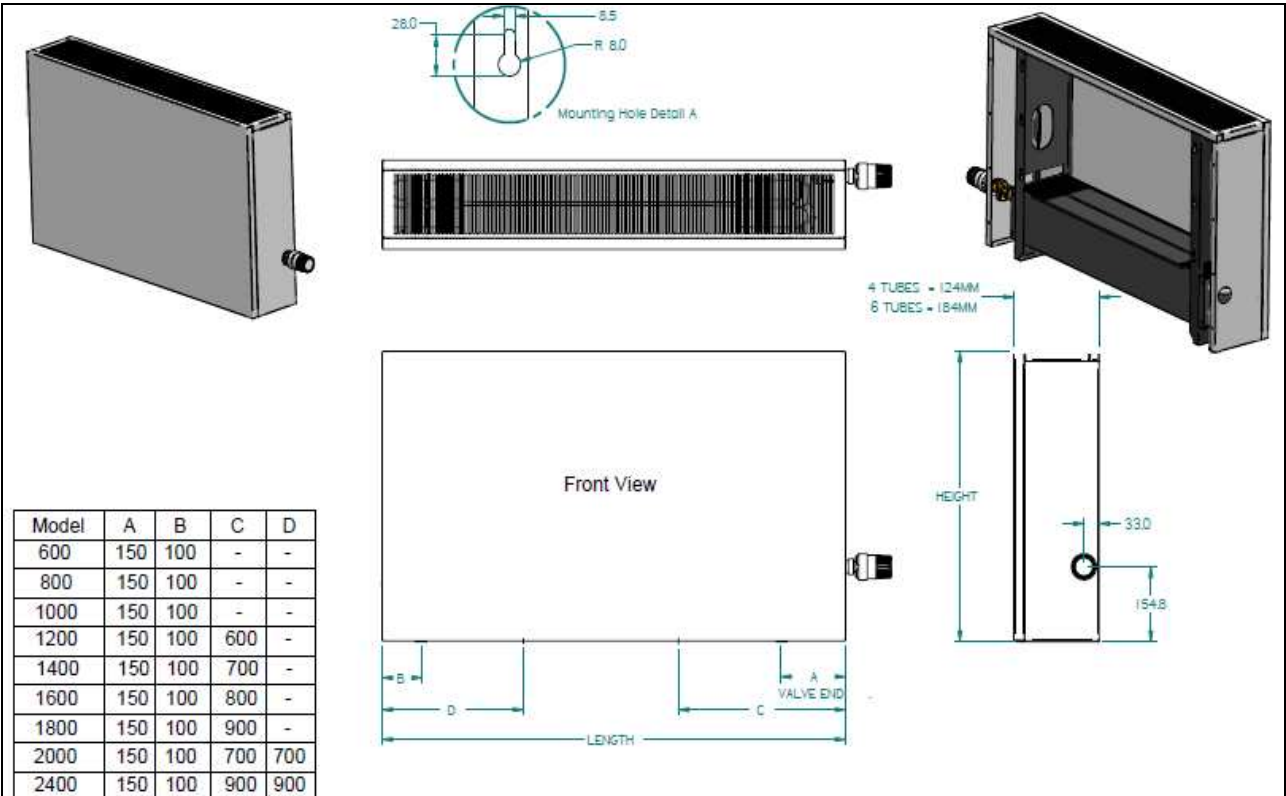
1. Solazar Natural Convectors must only be used for the purpose for which they are intended.
2. After the installation, the system should be tested by a qualified person. Otherwise, damage may occur in the place of installation.
3. Please ensure that the connection elements are free of any dirt and burr after the installation.
4. Do not use the convectors in humid environment (swimming pool, sauna bath, green house)
5. Do not overtighten the airvents or valves, otherwise the connection threads could be damaged.
6. When filling the convectors for the first time, heating system controls should be closed and the system should be set to right pressure.
7. Please take cautions against freezing risk.
8. After installation the system must be properly flushed
9. Avoid dropping or flexing (bending) the convectors when carrying or transporting it.
10. Please do not use corrosive or abrasive agents to clean your convector.
11. Do not place more than 10 kgs onto the convector so as to avoid the brackets coming out of the wall.
12. This warranty shall not apply to any convectors that have been subject to accident, negligence, alteration, abuse or misuse

11 - DIMENSIONS

Drawing 1 - Dimensions



Drawing 2 – Bracket locations





Hurlcon Heating
48-90 Hanna Street
Noble Park Victoria, Australia, 3174
Ph: +613 9554 2275 Fax: +613 9554 2272
email: sales@hurlconheating.com.au

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●●●● FLUIDRA GROUP