

versatile



nZEB
RADIATOR FAMILY



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Enrich Your Space

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Enrich Your Space

Heating, Cooling & Ventilation, bathroom,
and tiling solutions that add value to your
project or home



OUR VALUES

PEOPLE

We are a family-run business built on long lasting relationships. To create great experiences and be a positive influence, we ensure our customers, staff and partners are at the heart of every decision we make.

SPECIALIST

We care about the work that we do and are proud to be the trusted provider of innovative solutions. To adapt to our customers bespoke design requirements, our specialist team only work with world class manufacturers and small ranges of exclusive products.

INSPIRING

We give our time and knowledge to be at the forefront of innovation in design and technology. We understand that our products impact our customers daily, so we seek solutions to delight.

SUSTAINABLE

We care about the environment and continually pursue solutions for a better future. We invest in sustainable, energy saving products that lower CO2 emissions and contribute to green building certifications. We ensure that everyone in the whole chain of our product's life cycle is accountable.

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WHAT MAKES nZEB SUSTAINABLE?

Sustainability does not just start when the product is in use, but from the sourcing of the materials and throughout the product life cycle. Being sustainable and reducing our impact on the environment is what we do.

HIGHEST EFFICIENCY RATINGS

Versatile's Low Water Content uses less energy than any other radiator and contains 90% less water than that of an equivalent steel panel, meaning faster response times and no wasteful overheating.

BUILT TO LAST

The heat exchanger consists of aluminium heating fins, copper and brass irrigation tubes and brass collectors. Totally rust-free, resistant to very high working pressures and with a 30-year guarantee. A long life means lower environmental impact.

EFFICIENT USE OF MATERIALS

Since copper and aluminium are such efficient heat conductors, only a relatively small quantity of these materials are required, this includes the casing. A Low Water Content radiator weighs much less and uses a lot less materials than a steel panel radiator.

FULLY RECYCLABLE

Copper and aluminium are highly efficient, long-life materials, and crucially, they are always fully recyclable. The use of these materials contributes to an improved LCA score.

DID YOU KNOW?

" Low Water Content radiators reduce the CO₂ emissions of an average house by about 1000 kg."



“Low water content radiators reduce the CO₂ emissions of an average house by about 1000 kg.”



**RESPECT
NATURE**

**BEST LCA
SCORE**

Importance of LIFE CYCLE ANALYSIS SCORE

VERSATILE LOW WATER CONTENT RADIATORS REDUCE WASTE

Life cycle analysis (LCA) according to the Ovam Ecolizer database and weight.

Example for a 10 kW heating system, 45/35/20 temperature profile.

	underfloor heating	cast iron radiator	steel panel radiator	Versatile Low-H ₂ O radiator
LCA Score	248700	248744	185853	66517
Total weight incl. water (kg)	6252	360	216.7	48.8

What is an LCA score?

LCA or 'Life Cycle Assessment' is a system designed to compare products and their overall impact on the environment. This looks at all processes from design, materials sourced, manufacturing, energy usage until the product is ultimately 'retired'. Governments are trying to standardise LCA systems and to integrate them into the legislation. Versatile uses Ovam's Ecolizer 2.0 based on the Eco-Indicator EI-99 database. The lower the LCA score, the less adverse impact on the environment. Low water content radiators score significantly better than other radiators or heating systems.



LOW WATER CONTENT: LIGHTER, FASTER AND EFFICIENT

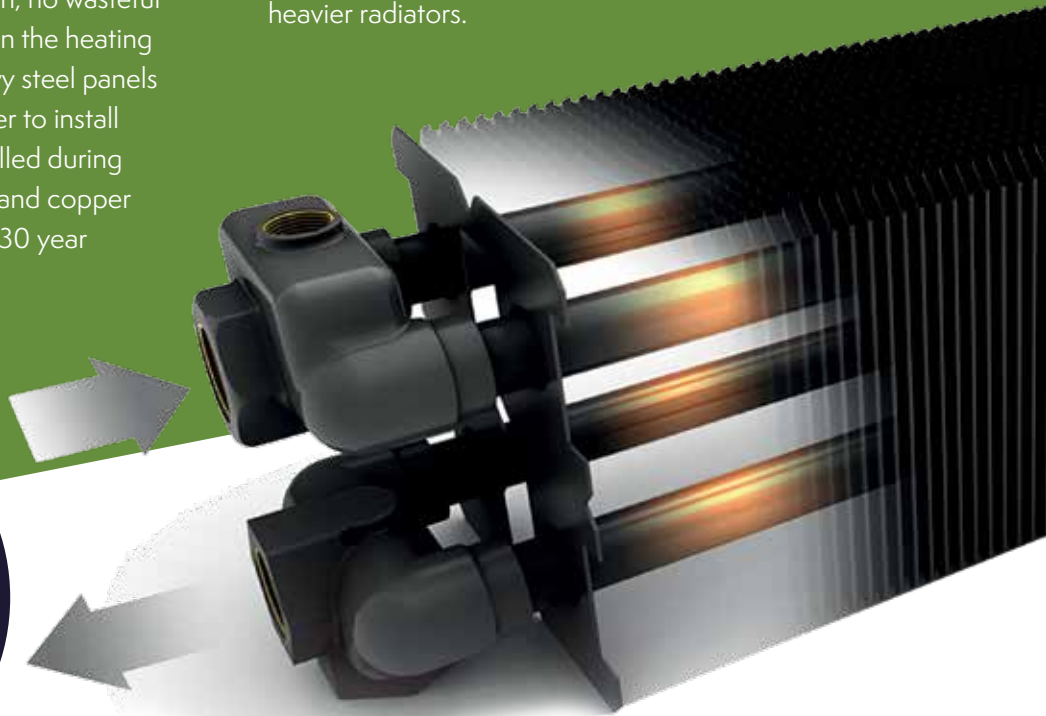
THE LOW WATER CONTENT RADIATOR

Versatile's Low Water Content radiators contain 90% less water than that of a steel panel radiator, meaning they are faster to heat up and cool down. This means Low Water Content radiators react faster to the occupants' needs as well as changes to ambient temperature. This ensures better comfort with less energy consumption, no wasteful over-heating and reduced demand on the heating system itself. They also have no heavy steel panels that require pre-heating, are far lighter to install and remain much lighter when fully filled during usage. The ultra-modern aluminium and copper heat exchanger, which comes with a 30 year guarantee provides

rapid energy efficient heat to any space.

Research by KIWA show that Low Water Content radiators consume between 9 and 16%* less energy than a system with steel panel radiators. They achieve the desired temperature faster with less heat wasted through unnecessary over-heating, common in heavier radiators.

THERE IS A CLEAR
CONNECTION
BETWEEN THE WEIGHT
OF THE RADIATOR, ITS
REACTION TIME AND
THE ENERGY SAVINGS
IT OFFERS.



COMPARISON LOW WATER CONTENT /PANEL RADIATORS

	Water temp. > 50°C Saving	Water temp. ≤ 50°C Saving
Renovation	13%	16%
New Builds	9%	10%

FASTEST
RESPONSE TIME
FOR MAXIMUM
COMFORT



Scientific and Technical Centre for
the Construction Company
Brussels, 1981



Technical University
Eindhoven, 2001



Partner for progress
Kiwa Certification
Apeldoorn, 2014



Thermic Regulation
France, 2012



Building Research
Establishment - UK
Watford, 2003

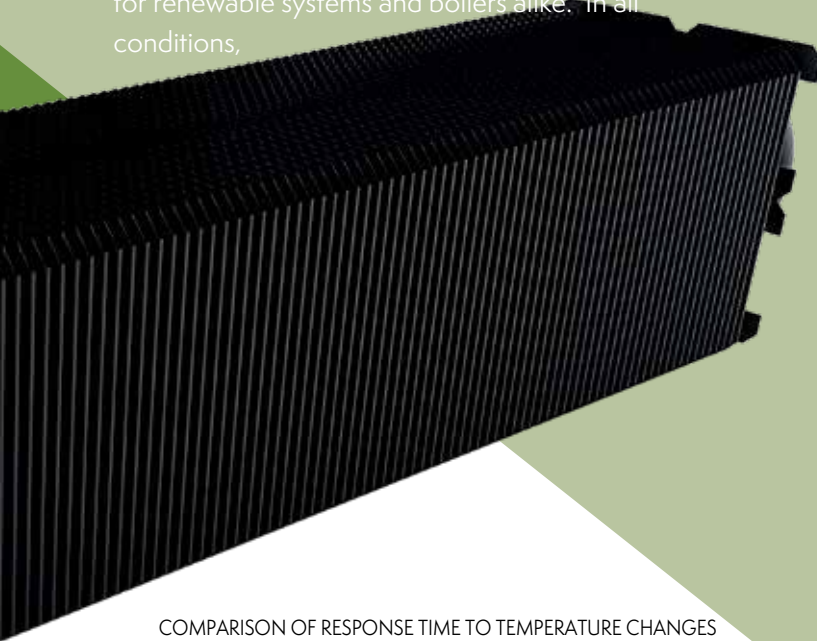
PROVEN TO BE THE WORLD'S MOST ECONOMICAL RADIATOR

Versatile's Low Water Content technology has been thoroughly tested over the years by a variety of independent bodies, receiving the title of Most Economical Radiator following tests carried out by the Dutch testing body KIWA. Versatile's Low Water Content radiator achieves consistently high efficiency performance standards every time.

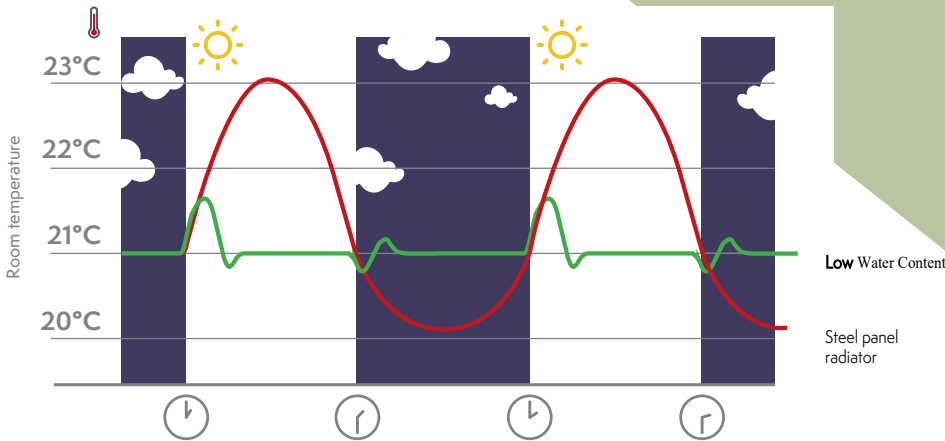
Low water content radiators are more efficient at all water temperatures, making them the perfect partner for renewable systems and boilers alike. In all conditions,

Low water content radiators achieve the maximum scores set by ISSO. Without a maximum score*, the Low water content exchanger would achieve even higher. KIWA found Low water content to be at least 5% more economical than underfloor heating.

*The minimum required score is 1.00 (100%) for Low water content as per the quality declaration, and average score of 0.05 (95%) for underfloor heating, according to NEN7120, Table 14.1, delivery efficiency up to 8m.



COMPARISON OF RESPONSE TIME TO TEMPERATURE CHANGES



WATER CONTENT SAVINGS

Dimensions (in mm)

	Output	Length	Height	Depth	Water	Operating	Pressure Drop
Target 1.0kW at 45/35/200C							
Steel Double Panel + Fin	1010	1700	780	92	16.55	123	81
Maxi 2020 WT	1027	1830	740	230	3.5	76	35
Maxi 2020 WT DBH	1100	1030	740	1800	1.9	43	18

DBH: DOUBLE OUTPUTS + COOLING WITH HEAT PUMPS

ONE ECO FRIENDLY SOLUTION

Heat pumps and solar thermal energy generally require much larger radiators as they operate with very low water temperatures that often don't exceed 35°C. Low Water Content radiators do not need to increase in size when working with lower water temperatures.

With Dynamic Boost Hybrid (DBH) technology, the same heat output can be achieved from a similar size radiator compared to a radiator working with a gas or oil-fired heating system, allowing the installation of renewable heating systems without compromising on comfort and aesthetics.

- Efficient and effortless heating with heat pumps and low temperature boilers.
- Suitable for environmentally friendly light cooling (non-condensing) in combination with any heat pump that can supply cooling water.
- Easy installation on almost all new and existing Versatile Low water content heating units.



THE SAME
OUTPUT AT
ALMOST HALF
THE SIZE OF A
STEEL PANEL
RADIATOR

nZEB Hybrid T11
Size: 50 cm x 100 cm
Output: 1173 Watts*
Weight: 16.7 kg
Water content: 1.3 litres

* maximum heat capacity

Steel Panel Heater
Size: 70 cm x 180 cm
Output: 1210 Watts
Weight: 73 kg
Water content: 13.7 litres

Based on conditions of
45/40/20



INTELLIGENT OPERATION

DBH has a simple control panel to adjust settings and modes, with automatically dimming coloured LED lights to indicate the selected setting.

There are three alternative configurations set at time of order: TPT (Temperature control) (default), ACO (Auto-changeover), BMS (Building Management System control).

TPT configuration (default): mode button can be used to switch between Heating and Cooling modes.

- Thermal activators run once the water temperature is above set-point (28°C default) and the measured room temperature is below the set-point, speeding up and slowing to achieve the desired room temperature.
- Boost mode can be activated where thermal activators run at max. speed for 15 minutes.

ACO configuration: mode button can be used to switch between Heating, Cooling and Breeze modes.

- Thermal activators run based on water temperature and chosen fixed speed.
- Breeze mode can be selected whereby the thermal activators operate independently of water temperature.

BMS configuration:

- DBH can be connected to an external controller, such as BMS or room thermostat to control thermal activator speed and changeover remotely. Please contact Versatile's technical team for more information.

FAQs

WHAT IS Versatile LIGHT COOLING ?

Light cooling (also referred to as 'non-condensing cooling') is a form of gentle cooling whereby the water temperature is always higher than the condensing temperature (or dew point), usually around 15°C depending on weather conditions, and therefore no condensation water is formed. This is an energy-efficient way of cooling that's ideal in combination with low temperature heating.

HOW MUCH ENERGY DOES LIGHT COOLING USE ?

The energy consumption is lower than with low temperature cooling systems such as air conditioning systems, especially in combination with a ground source heat pump.

GUARDIAN RADIATOR



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GUARDIAN NATURAL

Designed for quick installation
with strength and durability

- A strong and safe **Low Water Content**, widely specified for care homes, educational establishments, sheltered housing, public buildings, hotels and leisure centres, hospitals and healthcare environments.
- Hard-wearing single-piece casing enables rapid installation.
- Safety features include rounded corners and safe to touch surface, even at high flow temperatures.
- Low **water content** technology with super conductive and ultra fast heat exchanger for low energy consumption and maximum heat emission.
- 30-year guarantee on the heat exchanger.
- Can offer cooling via Versatile's Dynamic Boost Hybrid (DBH) technology and ventilation via Versatile's oXygen system.



GUARDIAN



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GUARDIAN HYBRID

A **Low Water Content** radiator for heating, cooling and ventilation in one.

Always leading the way in sustainable HVAC innovation, Versatile has developed pioneering technology with Dynamic Boost Hybrid (DBH).

DBH provides high outputs with all water temperatures, hot and cold, making it perfectly suited to heat pumps and other renewable energy systems.

DBH is an enhanced version of Versatile's former Dynamic Boost Effect (DBE) technology, utilising small electric activators inside the unit to significantly boost output. But with the added benefit of providing light cooling.

- All the benefits of Guardian, but even more compact and more powerful with DBH.
- The ultimate radiator solution for low flow temperatures associated with renewable energy technology.
- Low-cost light cooling when used with reverse cycle heat pumps providing cooled water.
- Breeze functionality offering ambient air circulation.

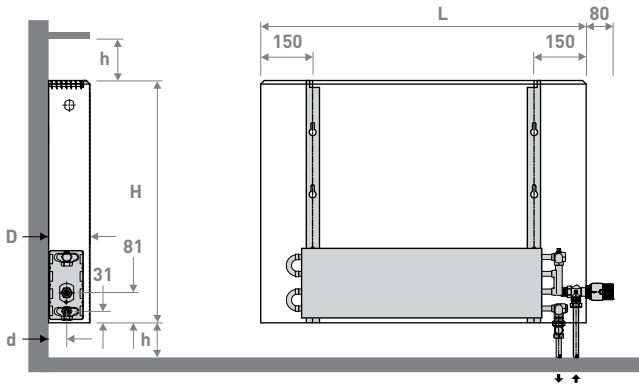


GUARDIAN HYBRID

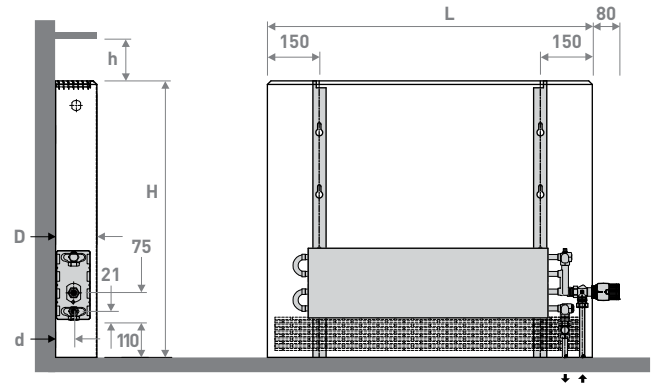
GUARDIAN NATURAL - DIMENSIONS

in mm

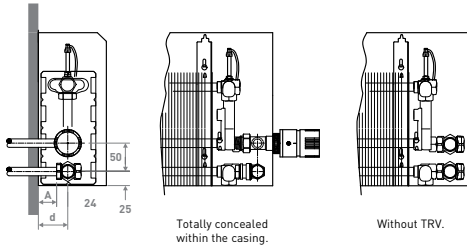
Guardian Wall Model (WT)



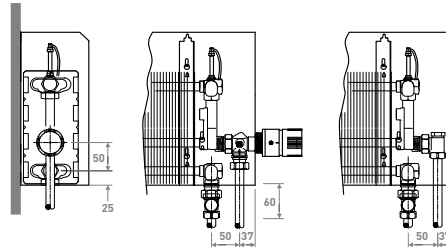
Guardian Floor Model (FT)



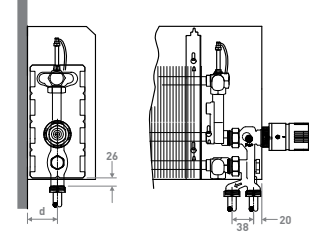
Example with Jaga valve: to the wall.



Example with Jaga valve: to the floor.



Example with Jaga Pro valve: to the floor - WT only.



Depth mm	Connection to floor d (mm)	Connection to wall A (mm)	Clearance h (mm)
119	52	29	100
169	77	53	120
219	77	53	150

COLOURS

Environmentally friendly, scratch-resistant, high UV resistant powder coating.

Standard colour:

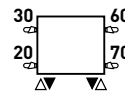
- White RAL 9016 (233), satin gloss finish.

CONNECTION

Standard connection:

Casing features multiple knockouts to suit high and low level valves, on either left or right. On FT models there are additional knockouts to allow for pipework or skirting at a low level.

High level valve details: see "Valves and TRVs".



Please note: when using the low level valve configuration in conjunction with FT and FF casings models, clearance will be required between the casing side panel and the skirting (assuming skirting is to be fitted tight to casing) to allow for casing removal.

ORDERING CODE

code height length depth colour model
GUAR . 040 064 119 . 233 /WT

For example using ordering code GUAR 040 064 119 233 / WT will result in a Guardian wall model with white casing, 400mm high, 640mm long and 119mm deep.

STOCK ITEMS

All items are stocked except casing heights 700mm and lengths 1640mm and 2040mm which are made to order.

All elements and brackets are in stock.

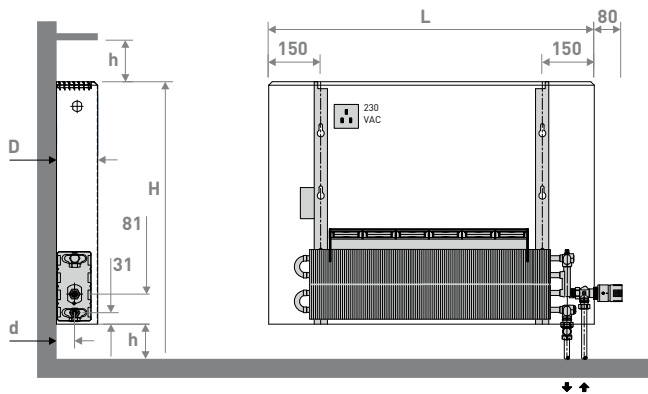
Contact the office for availability on larger quantities



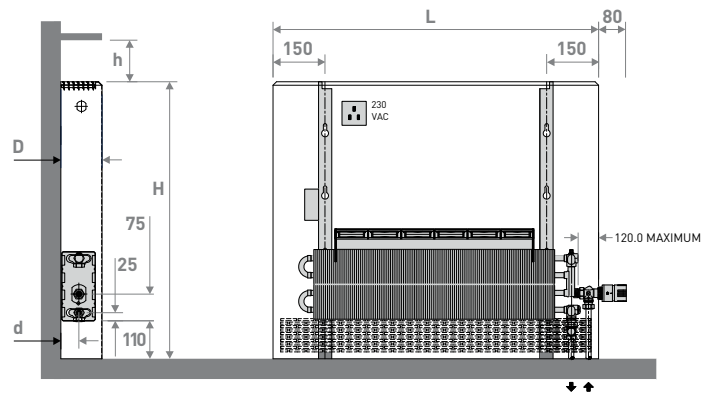
GUARDIAN HYBRID ■ DIMENSIONS

in mm

Guardian Wall Model (WT) with DBH



Guardian Floor Model (FT) with DBH



DELIVERY

All Guardian Hybrids are made to order. Split deliveries option available.

Please contact our customer service team to discuss your requirements.

Package includes:

- Low water content heat exchanger with wall brackets and fixing kit, air vent 1/8" and drain plug 1/2".
- Casing for connection left or right at low level.
- Cover plate in stainless steel effect for the side panel at the opposite end from the valve.
- Easy to install DBH unit with operation, control and 24VDC power supply.
- Clear installation instructions.

This heater is not equipped with a condensation monitor. It has to be integrated into the installation (only for cooling).

COLOUR

The DBH unit sits inside the Guardian Hybrid. Therefore outer casing colour information remains the same as for standard Guardians.

ELECTRICAL CONNECTION

The DBH system requires an electrical outlet near the heating unit. If it has a height of 500mm, 650mm and 950mm an electrical outlet or power cable can be installed in the casing. If the height is 300mm, only the power cable can be installed inside the casing. Connection to an external electrical outlet is always possible.

Do not connect the electrical and hydraulic connection to the same side of the coil.

HYDRAULIC CONNECTION

Heating

Supply/return on the bottom left or right, to the wall or floor. Wall connection via bottom or completely invisible within the cladding with valve set 225/265.

Heating and cooling

The same connections and valve sets can be used for heating and cooling as for heating only. For the valve sets, use the version with the Heimeier thermostatic head HC for heating and cooling or the version with a manual valve.

OPERATION OF DBH SYSTEM

- Suitable for heating or heating + cooling.
- Noise level monitoring, officially measured according to ISO 3741:2010.
- Coloured LEDs indicate setting.
- The DBH system will not control the heat pump or the boiler and therefore cannot replace a room thermostat.

In the UK, Guardian Hybrid is equipped with the DBH control in TPT mode (temperature control) by default. If you require ACO mode or BMS mode, this must be configured at time of ordering so must be included in the ordering code.

In TPT, the thermal activators run once the water temperature is above set-point (28°C default) and the measured room temperature is below the setpoint.

The room temperature set-point is selectable using the push button controller between 16°C and 26°C.

The thermal activators run at a maximum speed to achieve the equivalent noise level of 30dB(A), therefore the speed varies depending on radiator length.

The thermal activators will speed up and slow down to achieve the desired room temperature, switching off if the room temperature is achieved. The water temperature set-points and the maximum fan speed can be adjusted using the control panel. Boost mode: can be activated by the user by pressing and holding the + button, providing the water temperature is above the set-point. The thermal activators will run at maximum speed for 15 minutes, then revert to temperature control as detailed above. If water temperature drops below set-point,

the thermal activators will switch off.

Cooling mode: the aforementioned operation is reversed, the default water temperature is set to 24°C and the room temperature range is between 31°C and 21°C. For the thermal activators to operate, the water temperature must be below set-point and the room temperature must be above set-point.

ORDERING CODE

code	height	type	colour
DBHS .	060	10 /	TPT

The order code for the DBH set is made up of:

1. Order code to indicate it is a complete set – DBHS,
2. Nominal element length to which it is being fitted – 060, 070, 080, ...280,
3. Activator type – 10 or 15,
4. Control strategy – TPT, ACO or BMS.

Example – DBHS.12010/TPT = DBH set to suit 120cm long heat exchanger type 10 or 11, with temperature control strategy.

DBH to be ordered in addition to Guardian to make Guardian Hybrid.

IMPORTANT:

When ordering DBH to be fitted to Guardian, **the length of the DBH MUST be 1 length shorter than the Guardian.**

i.e. the DBHS12010/TPT would be fitted to the Guardian with length of 1440mm.

Refer to Versatile UK technical department for further guidance



DBH UNIT 10



DBH UNIT 15

HEIGHT 400 ■ OUTPUT TABLES ■ TECHNICAL INFO

WALL MODEL (WT)

GUARDIAN NATURAL

GUAR.040 LLL Dep.233/WT

L mm	TWIN		WEIGHT kg	WATER CONTENT l
	Depth mm	Watts 75/65		
440	119	234	4.5	0.53
	169	351	5.9	0.79
	219	446	7.1	1.06
640	119	467	6.6	0.80
	169	703	8.6	1.19
	219	893	10.4	1.60
840	119	701	8.7	1.06
	169	1054	11.3	1.58
	219	1339	13.6	2.13
1040	119	934	10.7	1.33
	169	1406	13.9	1.98
	219	1786	16.9	2.66
1240	119	1168	12.8	1.60
	169	1757	16.6	2.38
	219	2232	20.1	3.19
1440	119	1402	14.8	1.86
	169	2108	19.3	2.77
	219	2678	23.3	3.72
1640	119	1635	16.9	2.13
	169	2460	22.0	3.17
	219	3125	26.6	4.26
1840	119	1869	19.0	2.39
	169	2811	24.7	3.56
	219	3571	29.8	4.79
2040	119	2102	21.0	2.66
	169	3163	27.3	3.96
	219	-	-	-

EN442 output at 20°C room temperature.

GUARDIAN (WT) HYBRID

GUAR.040 LLL Dep.233/WT + DBHS.LLL TT/TPT

L mm	Depth mm	HEATING Comfort			HEATING Boost			COOLING		SOUND PRESSURE		POWER Watts Max
		Watts 75/65	Watts 45/35	Watts 35/30	Watts 75/65	Watts 45/35	Watts 35/30	Watts 16/18 Comfort	Watts 16/18 Boost	dB(A) Comfort	dB(A) Boost	
440	119	-	-	-	-	-	-	-	-	-	-	-
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
640	119	1130	404	243	1300	465	280	156	185	30.0	40.0	5.1
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
840	119	1663	595	358	1970	705	424	249	300	30.0	41.8	7.9
	169	2080	744	448	2707	969	583	281	377	30.0	42.4	7.2
	219	2697	1011	622	3504	1314	809	307	411	30.0	42.4	7.2
1040	119	2190	784	471	2649	948	570	338	415	30.0	43.0	10.3
	169	2705	968	582	3641	1303	784	379	522	30.0	44.1	10.7
	219	3500	1312	808	4705	1764	1086	413	570	30.0	44.1	10.7
1240	119	2709	969	583	3332	1192	717	426	531	30.0	44.0	14.0
	169	3238	1159	697	4329	1549	932	479	667	30.0	44.8	12.5
	219	4336	1626	1001	5914	2217	1365	523	728	30.0	44.8	12.5
1440	119	3104	1111	668	3832	1371	825	467	589	30.0	44.8	14.8
	169	3878	1388	835	5265	1884	1133	527	740	30.0	45.4	14.3
	219	5026	1884	1160	6813	2554	1572	575	807	30.0	45.4	14.3
1640	119	3608	1291	776	4515	1615	972	552	704	30.0	45.5	17.5
	169	4280	1531	921	6204	2220	1335	621	885	30.0	46.4	16.1
	219	5801	2175	1339	8021	3007	1851	677	965	30.0	46.4	16.1
1840	119	4143	1482	892	5200	1861	1119	642	819	30.0	46.0	19.2
	169	4644	1662	999	6620	2369	1425	621	885	30.0	46.4	19.6
	219	6367	2387	1469	8587	3219	1982	677	965	30.0	46.4	19.6
2040	119	4596	1644	989	5886	2106	1267	719	935	30.0	46.5	22.0
	169	5732	2051	1234	8088	2894	1741	814	1175	30.0	47.1	19.6
	219	-	-	-	-	-	-	-	-	-	-	-

EN16430 output at 20°C room temperature for heating and 27°C for cooling.
Sound pressure calculated based on sound power measurements in accordance with ISO 3741:2010 and an assumed room dampening of 8dB(A).

HEIGHT 500 ■ OUTPUT TABLES ■ TECHNICAL INFO

WALL MODEL (WT)

GUARDIAN NATURAL

GUAR.050 LLL Dep.233/WT

L mm	TWIN		WEIGHT kg	WATER CONTENT l
	Depth mm	Watts 75/65		
440	119	259	5.2	0.53
	169	394	6.6	0.79
	219	522	7.2	1.06
640	119	519	7.6	0.80
	169	788	9.6	1.19
	219	1044	10.5	1.60
840	119	778	9.9	1.06
	169	1181	12.6	1.58
	219	1566	13.8	2.13
1040	119	1038	12.3	1.33
	169	1575	15.6	1.98
	219	2088	17.1	2.66
1240	119	1297	14.6	1.60
	169	1969	18.6	2.38
	219	2610	20.4	3.19
1440	119	1556	17.0	1.86
	169	2363	21.6	2.77
	219	3132	23.7	3.72
1640	119	1816	19.4	2.13
	169	2757	24.6	3.17
	219	3654	27.0	4.26
1840	119	2075	21.7	2.39
	169	3150	27.6	3.56
	219	4176	30.3	4.79
2040	119	2335	24.1	2.66
	169	3544	30.6	3.96
	219	-	-	-

EN442 output at 20°C room temperature.

GUARDIAN (WT) HYBRID

GUAR.050 LLL Dep.233/WT + DBHS.LLL TT/TPT

L mm	Depth mm	HEATING Comfort			HEATING Boost			COOLING		SOUND PRESSURE		POWER Watts Max
		Watts 75/65	Watts 45/35	Watts 35/30	Watts 75/65	Watts 45/35	Watts 35/30	Comfort 16/18	Boost 16/18	Comfort dB(A)	Boost dB(A)	
440	119	-	-	-	-	-	-	-	-	-	-	-
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
640	119	1130	404	243	1300	465	280	156	185	30.0	40.0	5.1
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
840	119	1663	595	358	1970	705	424	249	300	30.0	41.8	7.9
	169	2080	744	448	2707	969	583	281	377	30.0	42.4	7.2
	219	2697	1011	622	3504	1314	809	307	411	30.0	42.4	7.2
1040	119	2190	784	471	2649	948	570	338	415	30.0	43.0	10.3
	169	2705	968	582	3641	1303	784	379	522	30.0	44.1	10.7
	219	3500	1312	808	4705	1764	1086	413	570	30.0	44.1	10.7
1240	119	2709	969	583	3332	1192	717	426	531	30.0	44.0	14.0
	169	3238	1159	697	4329	1549	932	479	667	30.0	44.8	12.5
	219	4336	1626	1001	5914	2217	1365	523	728	30.0	44.8	12.5
1440	119	3104	1111	668	3832	1371	825	467	589	30.0	44.8	14.8
	169	3878	1388	835	5265	1884	1133	527	740	30.0	45.4	14.3
	219	5026	1884	1160	6813	2554	1572	575	807	30.0	45.4	14.3
1640	119	3608	1291	776	4515	1615	972	552	704	30.0	45.5	17.5
	169	4280	1531	921	6204	2220	1335	621	885	30.0	46.4	16.1
	219	5801	2175	1339	8021	3007	1851	677	965	30.0	46.4	16.1
1840	119	4143	1482	892	5200	1861	1119	642	819	30.0	46.0	19.2
	169	4644	1662	999	6620	2369	1425	621	885	30.0	46.4	19.6
	219	6367	2387	1469	8587	3219	1982	677	965	30.0	46.4	19.6
2040	119	4596	1644	989	5886	2106	1267	719	935	30.0	46.5	22.0
	169	5732	2051	1234	8088	2894	1741	814	1175	30.0	47.1	19.6
	219	-	-	-	-	-	-	-	-	-	-	-

EN16430 output at 20°C room temperature for heating and 27°C for cooling.
Sound pressure calculated based on sound power measurements in accordance with ISO 3741:2010 and an assumed room dampening of 8dB(A).

HEIGHT 600 - OUTPUT TABLES - TECHNICAL INFO

WALL MODEL (WT)

GUARDIAN NATURAL

GUAR.060 LLL Dep.233/WT

L mm	TWIN		WEIGHT kg	WATER CONTENT l
	Depth mm	Watts 75/65		
440	119	277	5.8	0.53
	169	425	7.2	0.79
	219	593	8.8	1.06
640	119	554	8.4	0.80
	169	850	10.5	1.19
	219	1187	12.9	1.60
840	119	831	11.0	1.06
	169	1275	13.8	1.58
	219	1780	16.9	2.13
1040	119	1108	13.6	1.33
	169	1700	17.1	1.98
	219	2374	20.9	2.66
1240	119	1385	16.2	1.60
	169	2125	20.3	2.38
	219	2967	24.9	3.19
1440	119	1662	18.9	1.86
	169	2550	23.6	2.77
	219	3560	28.9	3.72
1640	119	1939	21.5	2.13
	169	2975	26.9	3.17
	219	4154	33.0	4.26
1840	119	2216	24.1	2.39
	169	3400	30.2	3.56
	219	4747	37.0	4.79
2040	119	2493	26.7	2.66
	169	3825	33.5	3.96
	219	-	-	-

EN442 output at 20°C room temperature.

GUARDIAN (WT) HYBRID

GUAR.060 LLL Dep.233/WT + DBHS.LLL TT/TPT

L mm	Depth mm	HEATING Comfort				HEATING Boost			COOLING		SOUND PRESSURE		POWER Watts Max
		Watts 75/65	Watts 55/45	Watts 45/35	Watts 35/30	Watts 75/65	Watts 45/35	Watts 35/30	Comfort Watts 16/18	Boost Watts 16/18	Comfort dB(A)	Boost dB(A)	
440	119	-	-	-	-	-	-	-	-	-	-	-	-
	169	-	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-	-
640	119	1130	640	404	243	1300	465	280	148	176	30.0	40.0	5.1
	169	-	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-	-
840	119	1663	942	595	358	1970	705	424	237	285	30.0	41.8	7.9
	169	2080	1178	744	448	2707	969	583	267	358	30.0	42.4	7.2
	219	2697	1567	1011	622	3504	1314	809	292	390	30.0	42.4	7.2
1040	119	2190	1240	784	471	2649	948	570	321	394	30.0	43.0	10.3
	169	2705	1532	968	582	3641	1303	784	360	496	30.0	44.1	10.7
	219	3500	2034	1312	808	4705	1764	1086	392	542	30.0	44.1	10.7
1240	119	2709	1534	969	583	3332	1192	717	405	504	30.0	44.0	14.0
	169	3238	1834	1159	697	4329	1549	932	455	634	30.0	44.8	12.5
	219	4336	2520	1626	1001	5914	2217	1365	497	692	30.0	44.8	12.5
1440	119	3104	1758	1111	668	3832	1371	825	444	560	30.0	44.8	14.8
	169	3878	2196	1388	835	5265	1884	1133	501	703	30.0	45.4	14.3
	219	5026	2921	1884	1160	6813	2554	1572	546	767	30.0	45.4	14.3
1640	119	3608	2043	1291	776	4515	1615	972	524	669	30.0	45.5	17.5
	169	4280	2424	1531	921	6204	2220	1335	590	841	30.0	46.4	16.1
	219	5801	3371	2175	1339	8021	3007	1851	643	917	30.0	46.4	16.1
1840	119	4143	2346	1482	892	5200	1861	1119	610	778	30.0	46.0	19.2
	169	4644	2630	1662	999	6620	2369	1425	590	841	30.0	46.4	19.6
	219	6367	3700	2387	1469	8587	3219	1982	643	917	30.0	46.4	19.6
2040	119	4596	2603	1644	989	5886	2106	1267	683	888	30.0	46.5	22.0
	169	5732	3246	2051	1234	8088	2894	1741	773	1116	30.0	47.1	19.6
	219	-	-	-	-	-	-	-	-	-	-	-	-

EN16430 output at 20°C room temperature for heating and 27°C for cooling.
Sound pressure calculated based on sound power measurements in accordance with ISO 3741:2010 and an assumed room dampening of 8dB(A).

HEIGHT 400 ■ OUTPUT TABLES ■ TECHNICAL INFO

FLOOR MODEL (FT)

GUARDIAN NATURAL

GUAR.040 LLL Dep.233/FT

L mm	TWIN		WEIGHT		WATER CONTENT	
	Depth mm	Watts 75/65	kg	l		
440	119	193	3.4	0.53		
	169	277	4.5	0.79		
	219	339	6.9	1.06		
640	119	385	4.9	0.80		
	169	553	6.6	1.19		
	219	677	10.0	1.60		
840	119	578	6.5	1.06		
	169	830	8.7	1.58		
	219	1016	13.1	2.13		
1040	119	770	8.0	1.33		
	169	1106	10.7	1.98		
	219	1354	16.2	2.66		
1240	119	963	9.6	1.60		
	169	1383	12.8	2.38		
	219	1693	19.3	3.19		
1440	119	1156	11.1	1.86		
	169	1660	14.8	2.77		
	219	2032	22.5	3.72		
1640	119	1348	12.6	2.13		
	169	1936	16.9	3.17		
	219	2370	25.6	4.26		
1840	119	1541	14.2	2.39		
	169	2213	19.0	3.56		
	219	2709	28.7	4.79		
2040	119	1733	15.7	2.66		
	169	2489	21.0	3.96		
	219	-	-	-		

EN442 output at 20°C room temperature.

GUARDIAN (WT) HYBRID

GUAR.040 LLL Dep.233/FT + DBHS.LLL TT/TPT

L mm	Depth mm	HEATING Comfort			HEATING Boost			COOLING		SOUND PRESSURE		POWER Watts Max
		Watts 75/65	Watts 45/35	Watts 35/30	Watts 75/65	Watts 45/35	Watts 35/30	Comfort Watts 16/18	Boost Watts 16/18	Comfort dB(A)	Boost dB(A)	
440	119	-	-	-	-	-	-	-	-	-	-	-
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
640	119	1130	404	243	1300	465	280	156	185	30.0	40.0	5.1
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
840	119	1663	595	358	1970	705	424	249	300	30.0	41.8	7.9
	169	2080	744	448	2707	969	583	281	377	30.0	42.4	7.2
	219	2697	1011	622	3504	1314	809	307	411	30.0	42.4	7.2
	219	-	-	-	-	-	-	-	-	-	-	-
1040	119	2190	784	471	2649	948	570	338	415	30.0	43.0	10.3
	169	2705	968	582	3641	1303	784	379	522	30.0	44.1	10.7
	219	3500	1312	808	4705	1764	1086	413	570	30.0	44.1	10.7
	219	-	-	-	-	-	-	-	-	-	-	-
1240	119	2709	969	583	3332	1192	717	426	531	30.0	44.0	14.0
	169	3238	1159	697	4329	1549	932	479	667	30.0	44.8	12.5
	219	4336	1626	1001	5914	2217	1365	523	728	30.0	44.8	12.5
	219	-	-	-	-	-	-	-	-	-	-	-
1440	119	3104	1111	668	3832	1371	825	467	589	30.0	44.8	14.8
	169	3878	1388	835	5265	1884	1133	527	740	30.0	45.4	14.3
	219	5026	1884	1160	6813	2554	1572	575	807	30.0	45.4	14.3
	219	-	-	-	-	-	-	-	-	-	-	-
1640	119	3608	1291	776	4515	1615	972	552	704	30.0	45.5	17.5
	169	4280	1531	921	6204	2220	1335	621	885	30.0	46.4	16.1
	219	5801	2175	1339	8021	3007	1851	677	965	30.0	46.4	16.1
	219	-	-	-	-	-	-	-	-	-	-	-
1840	119	4143	1482	892	5200	1861	1119	642	819	30.0	46.0	19.2
	169	4644	1662	999	6620	2369	1425	621	885	30.0	46.4	19.6
	219	6367	2387	1469	8587	3219	1982	677	965	30.0	46.4	19.6
	219	-	-	-	-	-	-	-	-	-	-	-
2040	119	4596	1664	989	5886	2106	1267	719	935	30.0	46.5	22.0
	169	5732	2051	1234	8088	2894	1741	814	1175	30.0	47.1	19.6
	219	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-

EN16430 output at 20°C room temperature for heating and 27°C for cooling.
Sound pressure calculated based on sound power measurements in accordance with ISO 3741:2010 and an assumed room dampening of 8dB(A).

HEIGHT 500 - OUTPUT TABLES - TECHNICAL INFO

GUARDIAN NATURAL FLOOR MODEL (FT)

GUARDIAN NATURAL

GUAR.050 LLL Dep.233/FT

L mm	TWIN		WEIGHT kg	WATER CONTENT l
	Depth mm	Watts 75/65		
440	119	221	4.0	0.53
	169	320	5.2	0.79
	219	377	7.1	1.06
640	119	442	5.8	0.80
	169	639	7.6	1.19
	219	754	10.4	1.60
840	119	663	7.6	1.06
	169	959	10.0	1.58
	219	1132	13.6	2.13
1040	119	884	9.4	1.33
	169	1278	12.4	1.98
	219	1509	16.9	2.66
1240	119	1105	11.2	1.60
	169	1598	14.8	2.38
	219	1886	20.1	3.19
1440	119	1326	13.0	1.86
	169	1918	17.1	2.77
	219	2263	23.3	3.72
1640	119	1547	14.8	2.13
	169	2237	19.5	3.17
	219	2640	26.6	4.26
1840	119	1768	16.6	2.39
	169	2557	21.9	3.56
	219	3018	29.8	4.79
2040	119	1989	18.4	2.66
	169	2876	24.3	3.96
	219	-	-	-

EN442 output at 20°C room temperature.

GUARDIAN (WT) HYBRID

GUAR.050 LLL Dep.233/FT + DBHS.LLL TT/TPT

L mm	Depth mm	HEATING Comfort			HEATING Boost			COOLING		SOUND PRESSURE		POWER Watts Max
		Watts 75/65	Watts 45/35	Watts 35/30	Watts 75/65	Watts 45/35	Watts 35/30	Comfort 16/18	Boost 16/18	Comfort dB(A)	Boost dB(A)	
440	119	-	-	-	-	-	-	-	-	-	-	-
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
640	119	1130	404	243	1300	465	280	156	185	30.0	40.0	5.1
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
840	119	1663	595	358	1970	705	424	249	300	30.0	41.8	7.9
	169	2080	744	448	2707	969	583	281	377	30.0	42.4	7.2
	219	2697	1011	622	3504	1314	809	307	411	30.0	42.4	7.2
	219	-	-	-	-	-	-	-	-	-	-	-
1040	119	2190	784	471	2649	948	570	338	415	30.0	43.0	10.3
	169	2705	968	582	3641	1303	784	379	522	30.0	44.1	10.7
	219	3500	1312	808	4705	1764	1086	413	570	30.0	44.1	10.7
	219	-	-	-	-	-	-	-	-	-	-	-
1240	119	2709	969	583	3332	1192	717	426	531	30.0	44.0	14.0
	169	3238	1159	697	4329	1549	932	479	667	30.0	44.8	12.5
	219	4336	1626	1001	5914	2217	1365	523	728	30.0	44.8	12.5
	219	-	-	-	-	-	-	-	-	-	-	-
1440	119	3104	1111	668	3832	1371	825	467	589	30.0	44.8	14.8
	169	3878	1388	835	5265	1884	1133	527	740	30.0	45.4	14.3
	219	5026	1884	1160	6813	2554	1572	575	807	30.0	45.4	14.3
	219	-	-	-	-	-	-	-	-	-	-	-
1640	119	3608	1291	776	4515	1615	972	552	704	30.0	45.5	17.5
	169	4280	1531	921	6204	2220	1335	621	885	30.0	46.4	16.1
	219	5801	2175	1339	8021	3007	1851	677	965	30.0	46.4	16.1
	219	-	-	-	-	-	-	-	-	-	-	-
1840	119	4143	1482	892	5200	1861	1119	642	819	30.0	46.0	19.2
	169	4644	1662	999	6620	2369	1425	621	885	30.0	46.4	19.6
	219	6367	2387	1469	8587	3219	1982	677	965	30.0	46.4	19.6
	219	-	-	-	-	-	-	-	-	-	-	-
2040	119	4596	1664	989	5886	2106	1267	719	935	30.0	46.5	22.0
	169	5732	2051	1234	8088	2894	1741	814	1175	30.0	47.1	19.6
	219	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-

EN16430 output at 20°C room temperature for heating and 27°C for cooling.
Sound pressure calculated based on sound power measurements in accordance with ISO 3741:2010 and an assumed room dampening of 8dB(A).

HEIGHT 600 ■ OUTPUT TABLES ■ TECHNICAL INFO

FLOOR MODEL (FT)

GUARDIAN NATURAL

GUAR.060 LLL Dep.233/FT

L mm	TWIN		WEIGHT	WATER CONTENT
	Depth mm	Watts 75/65	kg	l
440	119	247	4.5	0.53
	169	358	5.9	0.79
	219	419	8.1	1.06
640	119	493	6.6	0.80
	169	716	8.6	1.19
	219	839	11.7	1.60
840	119	740	8.7	1.06
	169	1075	11.3	1.58
	219	1258	15.4	2.13
1040	119	986	10.7	1.33
	169	1433	13.9	1.98
	219	1678	19.0	2.66
1240	119	1233	12.8	1.60
	169	1791	16.6	2.38
	219	2097	22.7	3.19
1440	119	1480	14.8	1.86
	169	2149	19.3	2.77
	219	2516	26.4	3.72
1640	119	1726	16.9	2.13
	169	2507	22.0	3.17
	219	2936	30.0	4.26
1840	119	1973	19.0	2.39
	169	2866	24.7	3.56
	219	3355	33.7	4.79
2040	119	2219	21.0	2.66
	169	3224	27.3	3.96
	219	-	-	-

EN442 output at 20°C room temperature.

GUARDIAN (WT) HYBRID

GUAR.060 LLL Dep.233/FT + DBHS.LLL TT/TPT

L mm	Depth mm	HEATING Comfort			HEATING Boost			COOLING		SOUND PRESSURE		POWER
		Watts 75/65	Watts 45/35	Watts 35/30	Watts 75/65	Watts 45/35	Watts 35/30	Comfort 16/18	Boost 16/18	Comfort dB(A)	Boost dB(A)	Watts Max
440	119	-	-	-	-	-	-	-	-	-	-	-
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
640	119	1130	404	243	1300	465	280	156	185	30.0	40.0	5.1
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
840	119	1663	595	358	1970	705	424	249	300	30.0	41.8	7.9
	169	2080	744	448	2707	969	583	281	377	30.0	42.4	7.2
	219	2697	1011	622	3504	1314	809	307	411	30.0	42.4	7.2
1040	119	2190	784	471	2649	948	570	338	415	30.0	43.0	10.3
	169	2705	968	582	3641	1303	784	379	522	30.0	44.1	10.7
	219	3500	1312	808	4705	1764	1086	413	570	30.0	44.1	10.7
1240	119	2709	969	583	3332	1192	717	426	531	30.0	44.0	14.0
	169	3238	1159	697	4329	1549	932	479	667	30.0	44.8	12.5
	219	4336	1626	1001	5914	2217	1365	523	728	30.0	44.8	12.5
1440	119	3104	1111	668	3832	1371	825	467	589	30.0	44.8	14.8
	169	3878	1388	835	5265	1884	1133	527	740	30.0	45.4	14.3
	219	5026	1884	1160	6813	2554	1572	575	807	30.0	45.4	14.3
1640	119	3608	1291	776	4515	1615	972	552	704	30.0	45.5	17.5
	169	4280	1531	921	6204	2220	1335	621	885	30.0	46.4	16.1
	219	5801	2175	1339	8021	3007	1851	677	965	30.0	46.4	16.1
1840	119	4143	1482	892	5200	1861	1119	642	819	30.0	46.0	19.2
	169	4644	1662	999	6620	2369	1425	621	885	30.0	46.4	19.6
	219	6367	2387	1469	8587	3219	1982	677	965	30.0	46.4	19.6
2040	119	4596	1664	989	5886	2106	1267	719	935	30.0	46.5	22.0
	169	5732	2051	1234	8088	2894	1741	814	1175	30.0	47.1	19.6
	219	-	-	-	-	-	-	-	-	-	-	-

EN16430 output at 20°C room temperature for heating and 27°C for cooling.
Sound pressure calculated based on sound power measurements in accordance with ISO 3741:2010 and an assumed room damping of 8dB(A).

HEIGHT 700 - OUTPUT TABLES - TECHNICAL INFO

FLOOR MODEL (FT)

GUARDIAN NATURAL

GUAR.070 LLL Dep.233/FT

L mm	TWIN		WEIGHT kg	WATER CONTENT l
	Depth mm	Watts 75/65		
440	119	270	5.2	0.53
	169	393	6.6	0.79
	219	-	-	-
640	119	540	7.5	0.80
	169	786	9.5	1.19
	219	-	-	-
840	119	810	9.8	1.06
	169	1179	12.5	1.58
	219	-	-	-
1040	119	1080	12.2	1.33
	169	1572	15.5	1.98
	219	-	-	-
1240	119	1350	14.5	1.60
	169	1965	18.5	2.38
	219	-	-	-
1440	119	1620	16.9	1.86
	169	2358	21.5	2.77
	219	-	-	-
1640	119	1890	19.2	2.13
	169	2751	24.4	3.17
	219	-	-	-
1840	119	2160	21.5	2.39
	169	3144	27.4	3.56
	219	-	-	-
2040	119	2430	23.9	2.66
	169	3537	30.4	3.96
	219	-	-	-

EN442 output at 20°C room temperature.

GUARDIAN (WT) HYBRID

GUAR.070 LLL Dep.233/FT + DBHS.LLL TT/TPT

L mm	Depth mm	HEATING Comfort			HEATING Boost			COOLING		SOUND PRESSURE		POWER Watts Max
		Watts 75/65	Watts 45/35	Watts 35/30	Watts 75/65	Watts 45/35	Watts 35/30	Comfort Watts 16/18	Boost Watts 16/18	Comfort dB(A)	Boost dB(A)	
440	119	-	-	-	-	-	-	-	-	-	-	-
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
640	119	1130	404	243	1300	465	280	148	176	30.0	40.0	5.1
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
840	119	1663	595	358	1970	705	424	237	285	30.0	41.8	7.9
	169	2080	744	448	2707	969	583	267	358	30.0	42.4	7.2
	219	-	-	-	-	-	-	-	-	-	-	-
1040	119	2190	784	471	2649	948	570	321	394	30.0	43.0	10.3
	169	2705	968	582	3641	1303	784	360	496	30.0	44.1	10.7
	219	-	-	-	-	-	-	-	-	-	-	-
1240	119	2709	969	583	3332	1192	717	405	504	30.0	44.0	14.0
	169	3238	1159	697	4329	1549	932	455	634	30.0	44.8	12.5
	219	-	-	-	-	-	-	-	-	-	-	-
1440	119	3104	1111	668	3832	1371	825	444	560	30.0	44.8	14.8
	169	3878	1388	835	5265	1884	1133	501	703	30.0	45.4	14.3
	219	-	-	-	-	-	-	-	-	-	-	-
1640	119	3608	1291	776	4515	1615	972	524	669	30.0	45.5	17.5
	169	4280	1531	921	6204	2220	1335	590	841	30.0	46.4	16.1
	219	-	-	-	-	-	-	-	-	-	-	-
1840	119	4143	1482	892	5200	1861	1119	610	778	30.0	46.0	19.2
	169	4644	1662	999	6620	2369	1425	590	841	30.0	46.4	19.6
	219	-	-	-	-	-	-	-	-	-	-	-
2040	119	4596	1664	989	5886	2106	1267	683	888	30.0	46.5	22.0
	169	5732	2051	1234	8088	2894	1741	773	1116	30.0	47.1	19.6
	219	-	-	-	-	-	-	-	-	-	-	-

EN16430 output at 20°C room temperature for heating and 27°C for cooling. Sound pressure calculated based on sound power measurements in accordance with ISO 3741:2010 and an assumed room damping of 8dB(A).

HEIGHT 800 ■ OUTPUT TABLES ■ TECHNICAL INFO

GUARDIAN NATURAL FLOOR MODEL (FT)

GUARDIAN NATURAL

GUAR.080 LLL Dep.233/FT

L mm	Depth mm	TWIN		WEIGHT kg	WATER CONTENT l
		Watts 75/65			
440	119	291		5.8	0.53
	169	425		7.2	0.79
	219	517		9.6	1.06
640	119	582		8.4	0.80
	169	849		10.5	1.19
	219	1035		14.0	1.60
840	119	874		11.0	1.06
	169	1274		13.8	1.58
	219	1552		18.4	2.13
1040	119	1165		13.6	1.33
	169	1698		17.1	1.98
	219	2070		22.8	2.66
1240	119	1456		16.2	1.60
	169	2123		20.3	2.38
	219	2587		27.2	3.19
1440	119	1747		18.9	1.86
	169	2548		23.6	2.77
	219	3104		31.5	3.72
1640	119	2038		21.5	2.13
	169	2972		26.9	3.17
	219	3622		35.9	4.26
1840	119	2330		24.1	2.39
	169	3397		30.2	3.56
	219	4139		40.3	4.79
2040	119	2621		26.7	2.66
	169	3821		33.5	3.96
	219	-		-	-

EN442 output at 20°C room temperature.

GUARDIAN (WT) HYBRID

GUAR.080 LLL Dep.233/FT + DBHS.LLL TT/TPT

L mm	Depth mm	HEATING Comfort			HEATING Boost			COOLING		SOUND PRESSURE		POWER Watts Max
		Watts 75/65	Watts 45/35	Watts 35/30	Watts 75/65	Watts 45/35	Watts 35/30	Comfort 16/18	Boost 16/18	Comfort dB(A)	Boost dB(A)	
440	119	-	-	-	-	-	-	-	-	-	-	-
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
640	119	1130	404	243	1300	465	280	140	167	30.0	40.0	5.1
	169	-	-	-	-	-	-	-	-	-	-	-
	219	-	-	-	-	-	-	-	-	-	-	-
840	119	1663	595	358	1970	705	424	224	270	30.0	41.8	7.9
	169	2080	744	448	2707	969	583	253	339	30.0	42.4	7.2
	219	2697	1011	622	3504	1314	809	276	370	30.0	42.4	7.2
1040	119	2190	784	471	2649	948	570	304	374	30.0	43.0	10.3
	169	2705	968	582	3641	1303	784	341	470	30.0	44.1	10.7
	219	3500	1312	808	4705	1764	1086	372	513	30.0	44.1	10.7
1240	119	2709	969	583	3332	1192	717	383	478	30.0	44.0	14.0
	169	3238	1159	697	4329	1549	932	431	600	30.0	44.8	12.5
	219	4336	1626	1001	5914	2217	1365	471	655	30.0	44.8	12.5
1440	119	3104	1111	668	3832	1371	825	420	530	30.0	44.8	14.8
	169	3878	1388	835	5265	1884	1133	474	666	30.0	45.4	14.3
	219	5026	1884	1160	6813	2554	1572	518	726	30.0	45.4	14.3
1640	119	3608	1291	776	4515	1615	972	497	634	30.0	45.5	17.5
	169	4280	1531	921	6204	2220	1335	559	797	30.0	46.4	16.1
	219	5801	2175	1339	8021	3007	1851	609	869	30.0	46.4	16.1
1840	119	4143	1482	892	5200	1861	1119	578	737	30.0	46.0	19.2
	169	4644	1662	999	6620	2369	1425	559	797	30.0	46.4	19.6
	219	6367	2387	1469	8587	3219	1982	609	869	30.0	46.4	19.6
2040	119	4596	1664	989	5886	2106	1267	647	842	30.0	46.5	22.0
	169	5732	2051	1234	8088	2894	1741	733	1058	30.0	47.1	19.6
	219	-	-	-	-	-	-	-	-	-	-	-

EN16430 output at 20°C room temperature for heating and 27°C for cooling.
Sound pressure calculated based on sound power measurements in accordance with ISO 3741:2010 and an assumed room damping of 8dB(A).

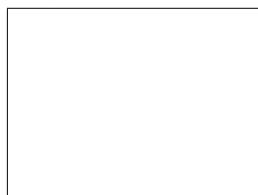
COLOUR CHART



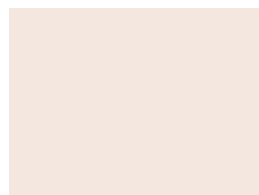
233 Traffic white RAL 9016

Maxi 2020 is available in a smooth glossy finish in the following colours.

Varsatile has two environmentally friendly electrostatic powder coating lines with recuperation and without the use of solvents. After a thorough pre-treatment, the radiators are painted and baked at a temperature of approximately 200°C. This ensures a highly UV and scratch resistant finish.



201 White RAL 9010



205 Pergamon



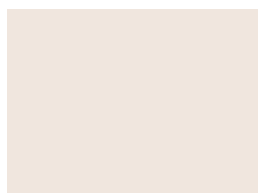
223 Natural



212 Bahama



234 Warm brown RAL 070 60 10



202 Off-white RAL 9001



235 Traffic yellow RAL 1023



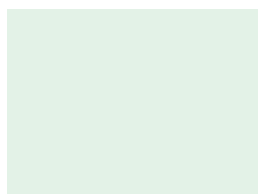
236 Orange



211 Flaming Red RAL 3000



226 Ruby red RAL 3003



220 Aegean



237 Yellow green RAL 110 80 60



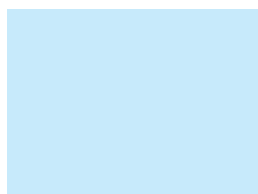
238 Green



221 Calypso



213 English green RAL 6009



239 Azure



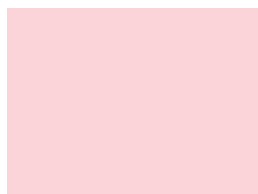
240 Ocean blue RAL 230 70 30



208 Sapphire blue RAL 5003



241 Night blue RAL 5011



242 Pink



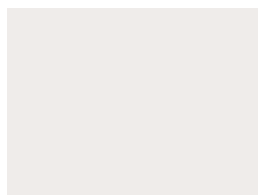
243 Magenta RAL 010 50 50



219 Violet RAL 4008



244 Purple



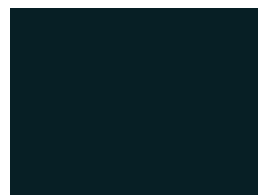
228 Classic white



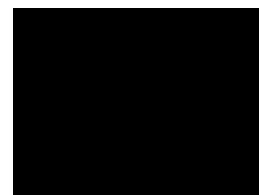
203 Light grey RAL 7035



209 Dark grey RAL 7011



231 Anthracite grey RAL 7016



204 Black RAL 9005

SPECIAL COLOURS

SMOOTH METALLICS



006 Aluminium RAL 9006



049 Anodic grey



005 Gunmetal grey



007 Anthracite



051 Yellow gold



050 Old gold

FINE TEXTURE METALLICS



035 Silver grey



036 Warm grey



045 Concrete grey



001 Sandblast grey



018 Pearl black



037 Cream



039 Grey brown



038 Cappuccino

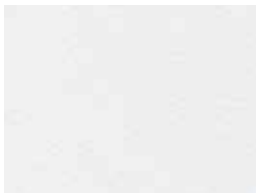


042 Chocolate



017 Pearl brown

FINE TEXTURE



053 Pure white



026 Platinum grey



028 Granite grey



046 Graphite black



040 Copper



041 Cinnamon



043 Khaki



044 Navy blue

This colour chart is only indicative. It's impossible to obtain a 100% exact colour reproduction in printing. A colour chart can be obtained on request.

Low Water Content [▪]

CORRECTION FACTORS

AVERAGE CORRECTION FACTORS ACCORDING TO EN442 - 75/65/20°C

Tv	Tl	Tr	25	30	35	40	45	50	55	60	65	70	75	80	85
90	18		0.45	0.58	0.69	0.79	0.89	0.98	1.07	1.16	1.24	1.34	1.41	1.49	1.56
	20		0.38	0.52	0.63	0.74	0.83	0.92	1.01	1.10	1.18	1.28	1.35	1.43	1.50
	22		0.30	0.46	0.57	0.68	0.78	0.87	0.96	1.04	1.13	1.22	1.30	1.37	1.44
	24		0.20	0.39	0.52	0.62	0.72	0.81	0.90	0.99	1.07	1.15	1.24	1.31	1.38
85	18		0.42	0.54	0.65	0.75	0.84	0.93	1.01	1.10	1.20	1.27	1.34	1.41	
	20		0.36	0.49	0.59	0.69	0.79	0.87	0.96	1.04	1.12	1.21	1.28	1.35	
	22		0.28	0.42	0.54	0.64	0.73	0.82	0.90	0.99	1.06	1.15	1.22	1.30	
	24		0.19	0.36	0.48	0.58	0.68	0.76	0.85	0.93	1.01	1.10	1.17	1.24	
80	18		0.39	0.51	0.61	0.70	0.79	0.88	0.96	1.04	1.12	1.20	1.27		
	20		0.33	0.45	0.56	0.65	0.74	0.82	0.90	0.98	1.07	1.14	1.21		
	22		0.26	0.39	0.50	0.60	0.68	0.77	0.85	0.93	1.01	1.08	1.15		
	24		0.17	0.34	0.45	0.54	0.63	0.72	0.80	0.87	0.96	1.03	1.10		
75	18		0.37	0.47	0.57	0.66	0.74	0.82	0.90	0.99	1.05	1.12			
	20		0.30	0.42	0.52	0.61	0.69	0.77	0.85	0.93	1.00	1.07			
	22		0.24	0.36	0.46	0.55	0.64	0.72	0.79	0.88	0.95	1.01			
	24		0.16	0.31	0.41	0.50	0.59	0.67	0.74	0.83	0.89	0.96			
70	18		0.34	0.44	0.53	0.61	0.69	0.77	0.85	0.92	0.99				
	20		0.28	0.39	0.48	0.56	0.64	0.72	0.80	0.87	0.93				
	22		0.22	0.33	0.43	0.51	0.59	0.67	0.74	0.81	0.88				
	24		0.14	0.28	0.38	0.46	0.54	0.62	0.69	0.76	0.83				
65	18		0.31	0.40	0.49	0.57	0.64	0.71	0.79	0.85					
	20		0.25	0.35	0.44	0.52	0.59	0.66	0.74	0.80					
	22		0.19	0.30	0.39	0.47	0.54	0.61	0.69	0.75					
	24		0.12	0.25	0.34	0.42	0.50	0.57	0.64	0.70					
60	18		0.28	0.37	0.45	0.52	0.59	0.66	0.73						
	20		0.23	0.32	0.40	0.47	0.54	0.62	0.68						
	22		0.17	0.27	0.35	0.43	0.50	0.57	0.63						
	24		0.11	0.23	0.31	0.38	0.45	0.52	0.58						
55	18		0.25	0.33	0.40	0.47	0.55	0.60							
	20		0.20	0.29	0.36	0.43	0.50	0.56							
	22		0.15	0.24	0.32	0.38	0.45	0.51							
	24		0.09	0.20	0.27	0.34	0.40	0.47							
50	18		0.22	0.30	0.36	0.43	0.49								
	20		0.18	0.25	0.32	0.38	0.44								
	22		0.13	0.21	0.28	0.34	0.40								
	24		0.08	0.17	0.24	0.30	0.36								
45	18		0.19	0.26	0.32	0.38									
	20		0.15	0.22	0.28	0.34									
	22		0.11	0.18	0.24	0.30									
	24		0.06	0.14	0.20	0.26									
40	18		0.16	0.22	0.28										
	20		0.12	0.18	0.24										
	22		0.09	0.15	0.20										
	24		0.05	0.12	0.17										
35	18		0.13	0.19											
	20		0.10	0.15											
	22		0.07	0.12											
	24		0.03	0.09											
30	18		0.10												
	20		0.07												
	22		0.04												
	24		0.02												

The indicated outputs with ΔT 50 are the exact outputs, measured in accordance with EN442. An average correction factor is given in this table for all other ΔT outputs, applicable for all dimensions. These correction factors are to be used for guidance only.

Low Water Content HYBRID - CORRECTION FACTORS

**AVERAGE CORRECTION FACTORS
ACCORDING TO EN442 - 75/65/20°C**

Tv	Tl	Tr	25	30	35	40	45	50	55	60	65	70	75	80	85
90	18		0.53	0.64	0.74	0.83	0.91	0.99	1.06	1.13	1.19	1.27	1.32	1.38	1.44
	20		0.46	0.59	0.69	0.78	0.86	0.94	1.01	1.08	1.15	1.22	1.28	1.33	1.39
	22		0.38	0.53	0.64	0.73	0.81	0.89	0.97	1.03	1.10	1.18	1.23	1.29	1.35
	24		0.28	0.47	0.58	0.68	0.77	0.85	0.92	0.99	1.06	1.12	1.19	1.24	1.30
85	18		0.50	0.61	0.71	0.79	0.87	0.94	1.01	1.08	1.16	1.21	1.27	1.32	
	20		0.43	0.56	0.66	0.74	0.82	0.90	0.97	1.03	1.10	1.17	1.22	1.28	
	22		0.36	0.50	0.61	0.70	0.78	0.85	0.92	0.99	1.05	1.12	1.18	1.23	
	24		0.26	0.44	0.55	0.65	0.73	0.80	0.88	0.94	1.01	1.08	1.13	1.19	
80	18		0.47	0.58	0.67	0.75	0.83	0.90	0.97	1.03	1.10	1.16	1.21		
	20		0.41	0.53	0.62	0.71	0.78	0.85	0.92	0.99	1.06	1.11	1.17		
	22		0.34	0.47	0.57	0.66	0.74	0.81	0.88	0.94	1.01	1.07	1.12		
	24		0.24	0.41	0.52	0.61	0.69	0.76	0.83	0.90	0.97	1.02	1.08		
75	18		0.44	0.55	0.63	0.71	0.79	0.85	0.92	0.99	1.04	1.10			
	20		0.38	0.50	0.59	0.67	0.74	0.81	0.87	0.95	1.00	1.06			
	22		0.31	0.44	0.54	0.62	0.70	0.76	0.83	0.90	0.96	1.01			
	24		0.22	0.39	0.49	0.57	0.65	0.72	0.79	0.86	0.91	0.97			
70	18		0.41	0.51	0.60	0.67	0.74	0.81	0.88	0.93	0.99				
	20		0.36	0.46	0.55	0.63	0.70	0.76	0.84	0.89	0.95				
	22		0.29	0.41	0.50	0.58	0.65	0.72	0.78	0.85	0.90				
	24		0.20	0.36	0.46	0.54	0.61	0.68	0.74	0.80	0.86				
65	18		0.39	0.48	0.56	0.63	0.70	0.76	0.83	0.88					
	20		0.33	0.43	0.51	0.59	0.65	0.72	0.78	0.84					
	22		0.27	0.38	0.47	0.54	0.61	0.67	0.74	0.79					
	24		0.18	0.33	0.42	0.50	0.57	0.63	0.70	0.75					
60	18		0.36	0.44	0.52	0.59	0.65	0.72	0.77						
	20		0.30	0.40	0.48	0.55	0.61	0.68	0.73						
	22		0.24	0.35	0.43	0.50	0.57	0.63	0.69						
	24		0.17	0.30	0.39	0.46	0.52	0.59	0.64						
55	18		0.33	0.41	0.48	0.55	0.61	0.66							
	20		0.27	0.36	0.44	0.50	0.57	0.62							
	22		0.22	0.32	0.39	0.46	0.52	0.58							
	24		0.15	0.27	0.35	0.42	0.48	0.54							
50	18		0.29	0.37	0.44	0.50	0.56								
	20		0.25	0.33	0.40	0.46	0.52								
	22		0.19	0.28	0.36	0.42	0.48								
	24		0.13	0.24	0.31	0.38	0.44								
45	18		0.26	0.33	0.40	0.46									
	20		0.22	0.29	0.36	0.42									
	22		0.17	0.25	0.32	0.38									
	24		0.11	0.21	0.28	0.33									
40	18		0.23	0.30	0.35										
	20		0.19	0.25	0.32										
	22		0.14	0.21											
	24		0.09	0.17											
35	18		0.19	0.26											
	20		0.15	0.21											
	22		0.11	0.18											
	24		0.07	0.14											
30	18		0.16												
	20		0.12												
	22		0.08												
	24		0.04												

The indicated outputs with ΔT 50 are the exact outputs, measured in accordance with EN 442. An average correction factor is given in this table for all other ΔT outputs, applicable for all dimensions. These correction factors are to be used for guidance only.

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Versatile's revolutionary solutions offer the best in energy-efficient heating, cooling & ventilation, supplying to healthcare, schools, commercial & domestic projects across Ireland and beyond.

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