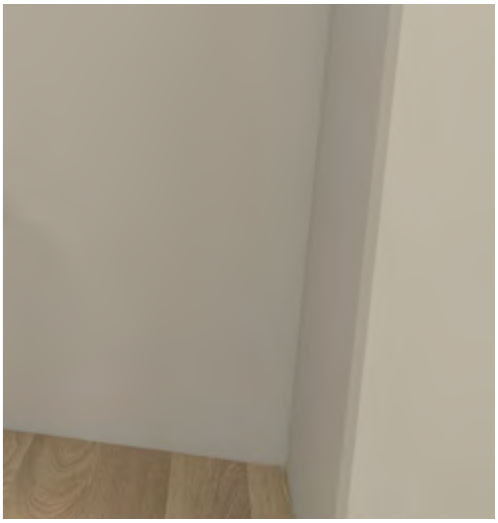
the future of space conditioning

Armis™

LST Radiator Covers



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FRENGER® systems

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Introduction

One of the most common ways of heating an area is via radiators at low wall level. Radiators can have surface temperatures of up to 80°C. At 60°C surface temperature, radiators can cause 3rd degree burns from only five seconds of skin contact and this poses a greater risk to the young, ill, or elderly. With the worst case scenario being that a person can get trapped next to the radiator and not have the strength to get up from the floor which could cause serious burns and injury.

The solution to the above potential situation would be to use ceiling mounted radiant panels (see other Frenger brochures) also freeing up wall spaces. Alternatively fit one of Frenger's Armis Low Surface Temperature (LST) Radiator covers over an existing radiator to create a gap between the radiator and LST whilst having negligible effect on the heat output of the radiator.

Frenger's Armis LST Covers can be manufactured any length to suit your project up to 3m long in one piece which covers most radiators. The cover can fit over the whole radiator or have apertures for the fitment of TRV or pipework. The casing is easily removable to allow access to the radiator for cleaning and maintenance.

Key Features

- Guarantee safe surface temperatures in your work environment, minimising risk of injury.
- Easy to install with the supplied wall and floor mounting bracketry.
- Manufactured from 1.5mm thick Zintec.
- Available with either a square top or sloping top.
- Simple cover removal to allow cleaning & maintenance.
- Minimal amount of external fixings.
- Made to measure to suit site requirements (site dimensions by others).
- Finished in RAL 9016 white powder coat as standard. Other RAL colours are available.
- Can be supplied with Anti-Bacterial finish on request.
- Multiple perforation patterns available.
- Can be supplied with aperture to allow for Thermostatic Radiator Valves (TRV), which can also be supplied with or without the internal radiator - all available in the Controls & Ancillaries section (page 13).

Wall Mounted Armis LST Radiator Cover Detail

Wall Mounted Armis LST Radiator Cover

Product Description (Armis LST)

Sloped Top Armis LST Radiator Cover With no TRV Aperture

LST Radiator Cover - Healthcare Option

In areas where the reduction in spread of infection is required, Frenger's Armis LST covers can be supplied with an Anti-Bacterial power coat finish in any Standard RAL colour.

The unit is manufactured from 1.5mm thick Zintec steel as standard with an option to manufacture from 2mm thick Zintec steel for greater robustness. Also available in 2mm thick Aluminium on request.

All of Frenger's Armis LST covers can be manufactured to any overall length (maximum single section length) is 3m with multiple sections used to make up longer continuous lengths. Frenger can also supply colour match Pipe Boxing to cover exposed pipework connecting to the internal radiator for a continuous appearance.

Material

As standard, manufactured from 1.5mm thick Zintec steel. 2mm Thick Zintec Steel or Aluminium available on request.

Construction

Two component system, the outer casing and the inner casing. Each component is manufactured from a single sheet of steel with minimal exposed fixings.

Shape

Available as either horizontal or vertical. The horizontal model is available with either square top or sloped top and can be designed as a bespoke continuous variant.

Finish

As standard, RAL 9016 powder coat. Other RAL colours and/or anti-bacterial finishes available on request.

Apertures

Apertures or cutouts can be allowed for in the design of the casing to allow for valves, pipework etc.

Perforation

Multiple perforation patterns available, 7mm Dot, Double Dot, Slot or Diamond.

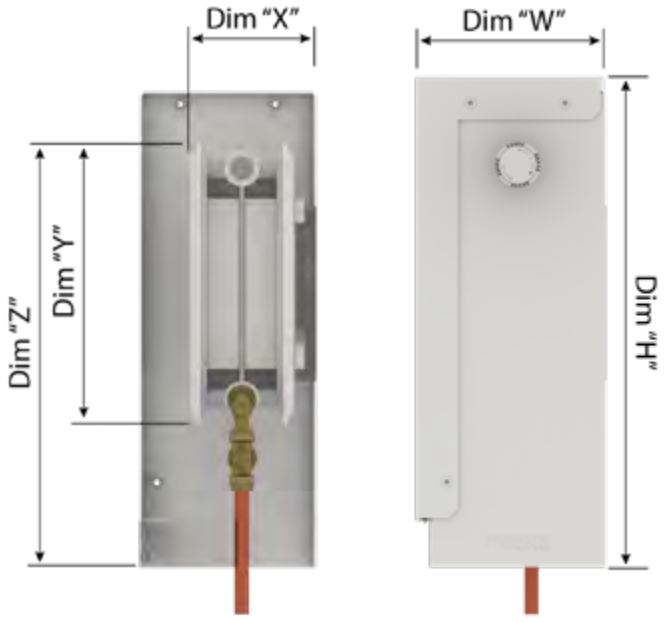
Continuous LST Radiator Cover

Vertical LST Radiator Cover

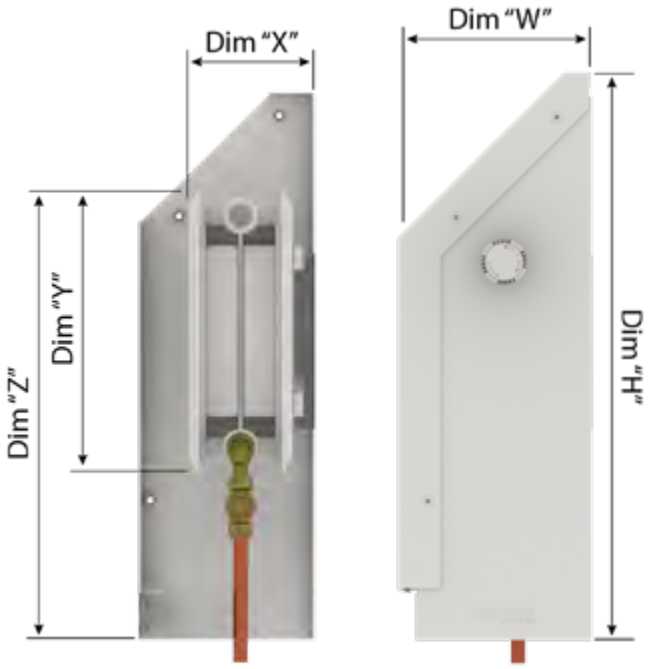
Product Dimensions (Armis LST)

Floor or Wall Mounted Horizontal Models

	LST Cover Size (mm)			Maximum Radiator Installed Dimensions (mm)		
Model Ref.	Width "W" (mm)	Height "H" (Flat Top) (mm)	Height "H" (Sloped Top) (mm)	Overall Distance from Wall "X" (mm)	Radiator Height "Y" (mm)	Overall Radiator Install Height "Z" (mm)
ARM 145-520	145	520	600	80	300	475
ARM 145-670	145	670	750	80	450	625
ARM 145-820	145	820	900	80	600	775
ARM 145-920	145	920	1000	80	700	875
ARM 165-520	165	520	600	100	300	475
ARM 165-670	165	670	750	100	450	625
ARM 165-820	165	820	900	100	600	775
ARM 165-920	165	920	1000	100	700	875
ARM 180-520	180	520	600	115	300	475
ARM 180-670	180	670	750	115	450	625
ARM 180-820	180	820	900	115	600	775
ARM 180-920	180	920	1000	115	700	875
ARM 200-520	200	520	600	135	300	475
ARM 200-670	200	670	750	135	450	625
ARM 200-820	200	820	900	135	600	775
ARM 200-920	200	920	1000	135	700	875



LST Radiator Cover with Flat Top



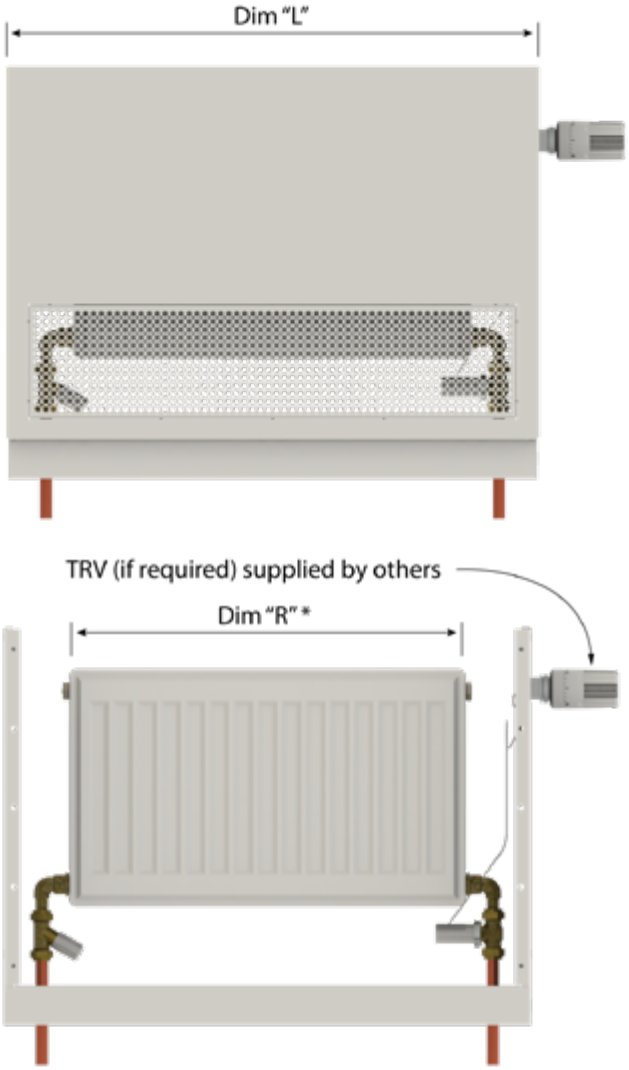
LST Radiator Cover with Sloped Top

Product Dimensions

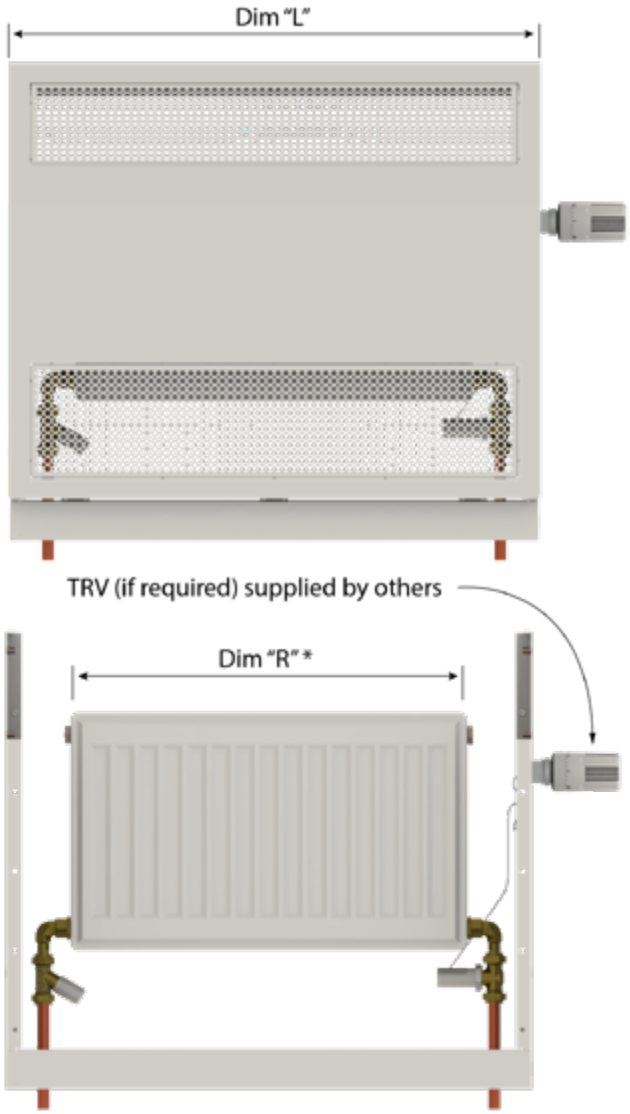
LST Cover Length "L" (mm)	*Max. Rad Length "R" (mm)
675	500
775	600
875	700
975	800
1075	900
1175	1000
1275	1100
1375	1200
1475	1300
1575	1400
1675	1500
1775	1600
1875	1700

LST Cover Length "L" (mm)	*Max. Rad Length "R" (mm)
1975	1800
2075	1900
2175	2000
2275	2100
2375	2200
2475	2300
2575	2400
2675	2500
2775	2600
2875	2700
2975	2800
3075	2900
3175	3000

*Maximum recommended length based on typical valving arrangements, purchaser to determine length needed based on site plumbing dimensions.



LST Radiator Cover with Flat Top



LST Radiator Cover with Sloped Top

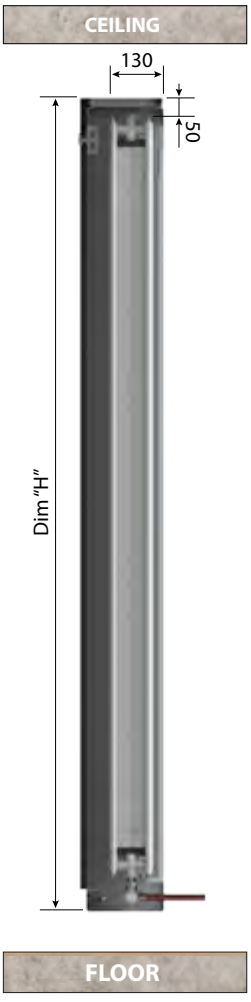
Product Dimensions

Armis Vertical

All dimensions in mm

Model Ref.	LST Cover Size (mm)			Maximum Radiator Installed Dimensions (mm)	
	Width "W" (mm)	Height "H" (mm)	Length "L" (mm)	*Max. Rad Length "R" (mm)	Max. Radiator Height "Y" (mm)
ARMV 200-1950-525	200	1950	525	400	1800
ARMV 200-1950-625	200	1950	625	500	1800
ARMV 200-1950-725	200	1950	725	600	1800
ARMV 200-2050-525	200	2050	525	400	1900
ARMV 200-2050-625	200	2050	625	500	1900
ARMV 200-2050-725	200	2050	725	600	1900
ARMV 200-2150-525	200	2150	525	400	2000
ARMV 200-2150-625	200	2150	625	500	2000
ARMV 200-2150-725	200	2150	725	600	2000

*Maximum recommended length based on typical valving arrangements, purchaser to determine length needed based on site plumbing dimensions.

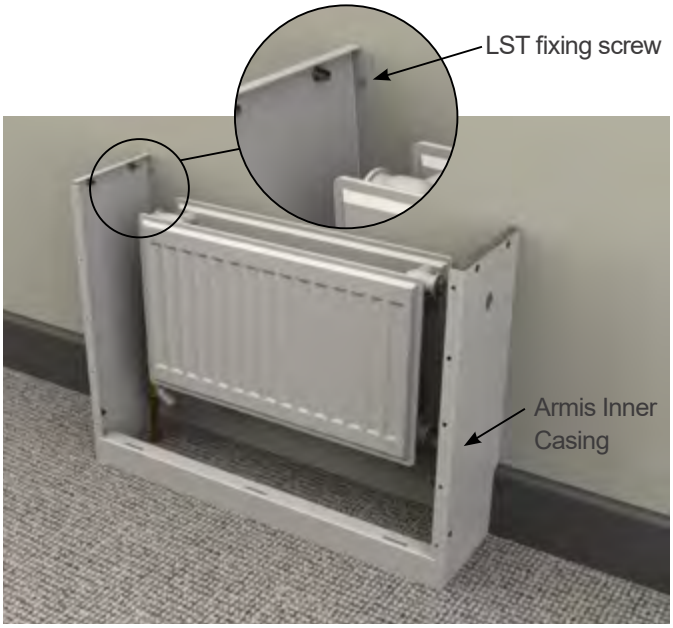


Installation

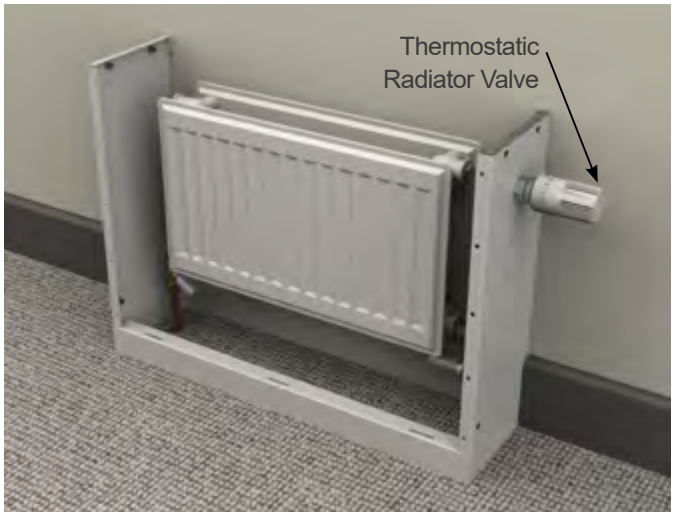
The Armis LST Radiator Cover is quick and easy to install, only requiring a few steps and no specialist equipment. The steps below show the method for fitting the Armis Horizontal and Armis Vertical to a generic radiator. The steps may vary depending on the installed radiator. Ensure the correctly sized Armis is selected before attempting installation.

Armis Horizontal

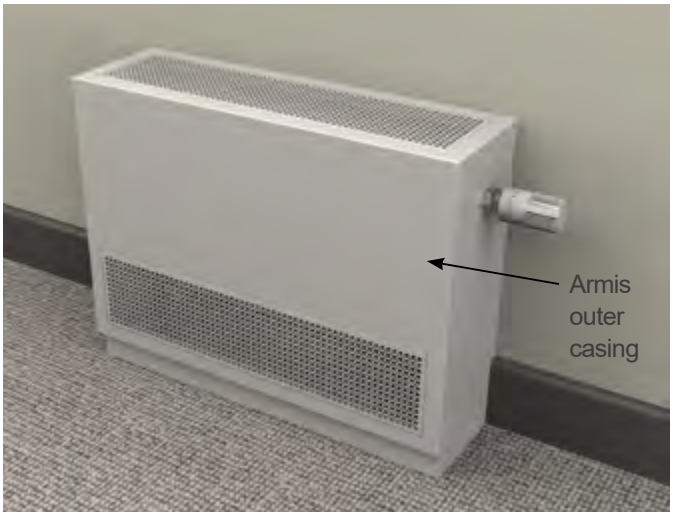
1. Prepare the area surrounding the radiator to allow fitment of the Armis. This includes cleaning the environment around the radiator and removing any obstructions, such as skirting boards that may clash with the Armis installation. Fit four suitable wall plugs to the wall the radiator is fixed to, in the locations indicated in the installation guide.



2. Carefully line up the wall plugs with the four corresponding holes on the Armis inner casing. The inner casing can now be secured to the wall using the LST wall fixing screws



3. Once the inner casing of the Armis is fixed to the wall, the Thermostatic Radiator Valve (supplied as an optional extra or by others) can be installed onto the case.



4. The outer casing of the Armis can now be secured to the inner casing with the supplied LST casing screws.

Installation

Armis Vertical

1. Prepare the area surrounding the radiator to allow fitment of the Armis. This includes cleaning the environment around the radiator and removing any obstructions that may clash with the Armis installation. Fit suitable wall plugs to the wall the radiator is fixed to, in the locations indicated in the installation guide.

2. Carefully line up the wall plugs with the corresponding holes on the LST wall frame. The wall frame can now be secured to the wall using the LST wall fixing screws. Once the LST wall frame is fixed to the wall, the Thermostatic Radiator Valve (supplied as an optional extra or by others) can be installed onto the frame.

3. Once the LST wall frame is fixed to the wall, the LST front cover can now be fitted to the LST wall frame by fixing the bracket at the bottom of the LST front cover to the corresponding section of the LST wall frame and connecting the safety cords at the top of the panel.

4. The LST front cover can now be pivoted onto the LST wall frame and secured by turning both the quarter turn locking latches.

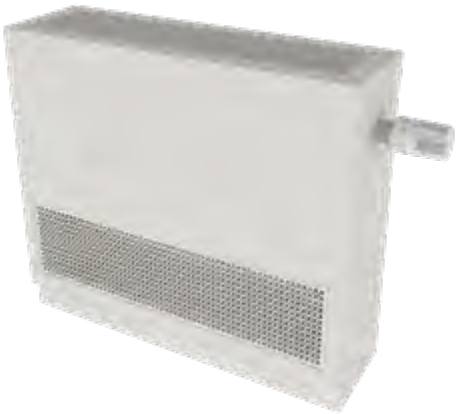
Colour Options

Colour helps to create atmosphere within a space, the Armis LST Radiator Cover provides a unique way to integrate colour into different environments. Frenger's Armis LST Radiator Covers are powder coated in white or black as standard, Frenger also offer all RAL classic colour options to suit any architectural aesthetics (other colours available on request).

Research has been done into the effects different colours have on wellbeing and from this their suitability for different environments has been established. Blue has been found to induce calmness and improve concentration, it's mental benefits make it a perfect choice for learning environments such as classrooms, red has been shown to have more physical effects, encouraging activity, yellow is associated with creativity and is ideal for creative workspaces, neutral and cool tones are more suited for healthcare environments but depending on the purpose it can be useful to include colour such as for children's hospitals to provide stimulation.

Below are some examples of different LST Radiator Cover, RAL Colour options. Available in RAL Classic Colour (Other colours available on request):

RAL 9016 - Traffic White



RAL 9004 - Signal Black

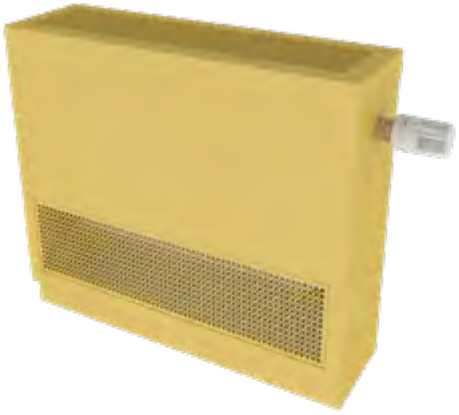
Colour Options

RAL 5012 - Light Blue

RAL 4008 - Signal Violet

RAL 3018 - Strawberry Red

RAL1003 - Signal Yellow

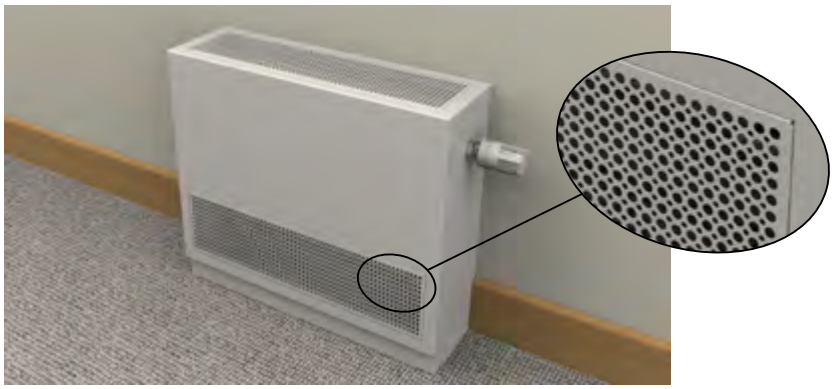


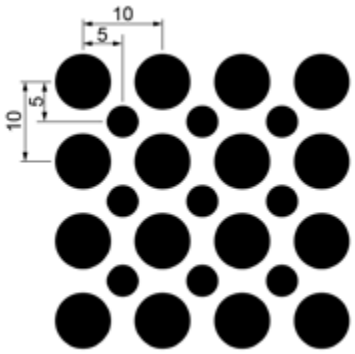
Perforation Options

Frenger's Armis LST Radiator covers have perforated sections to allow air flow that is required to facilitate convective heating from the encased radiator. As standard Frenger offer four perforations and alternative perforation pattern orientations can be designed to fit different design aesthetics, please contact sales@frenger.co.uk for further Information.

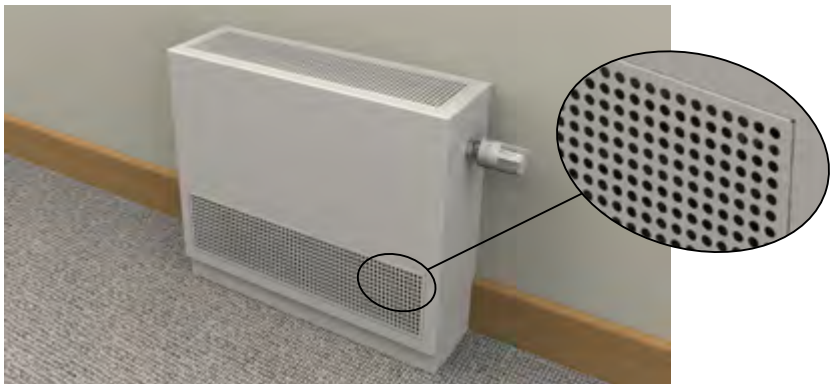
Detailed below are the four perforations offered as standard for Frenger's Armis LST Radiator Cover:

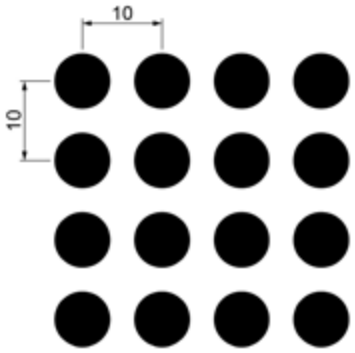
7mm and 4mm Double Dot Perforation - Order Code DD



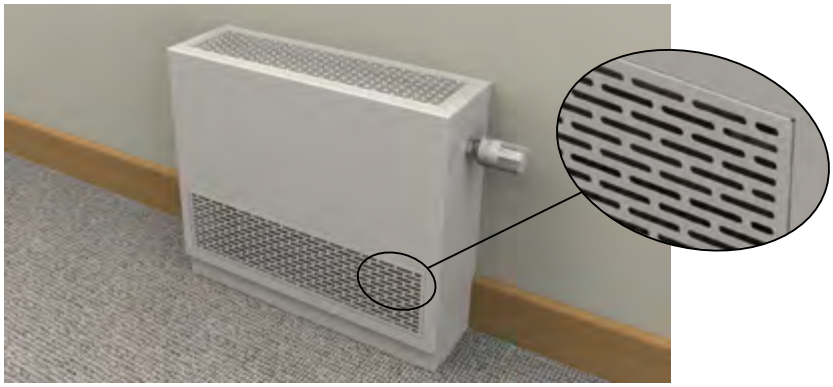


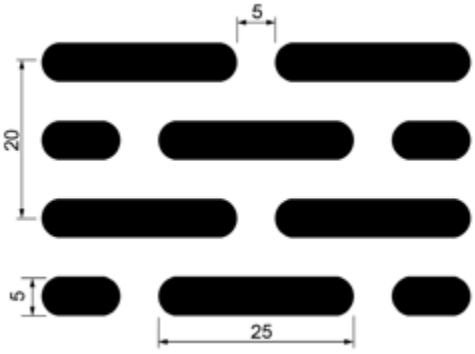
7mm Dot Perforation - Order Code 7D



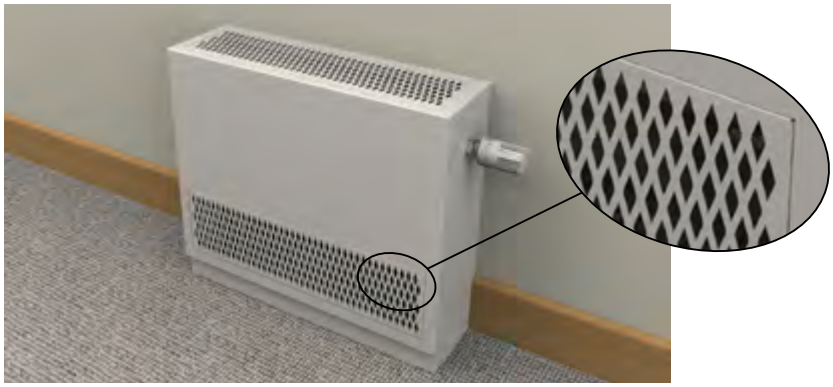


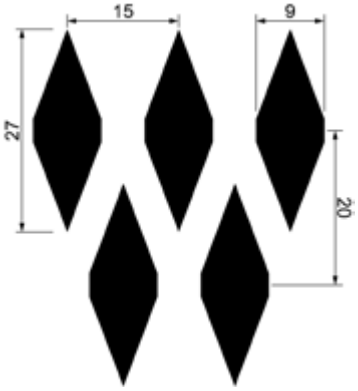
Slot Perforation - Order Code 5S





Diamond Perforation - Order Code DMD





Controls & Ancillaries

Frenger's Armis is able to accommodate a number of third party valves, controls and other ancillary products (contact Frenger directly for details), alternatively Frenger offer a number of products / components to aid in the installation of Armis LSTs:

Lockshield Valve Angled - LSVA

Lockshield Valve Straight - LSVS

90º Integration Elbow - IE

Integration Straight - IS

Thermostatic Radiator Valve - TRV

Thermostatic Radiator Valve Angled - TRVA

Thermostatic Radiator Valve Straight - TRVS

Armis Continuous - Bespoke Perimeter System

As well as the standard Armis LST radiators, Frenger also have the capability to produce bespoke sizes to help overcome challenges encountered on projects. The Armis Continuous is available as both sloped and flat topped and can be custom designed to fit various room shapes.

The Armis Continuous LST Radiator Cover variant is designed to fit radiators of various sizes and shapes, effortlessly adapting to any room's unique dimensions. Whether you have a small alcove or a larger open space, this bespoke LST cover ensures an aesthetically pleasing fit.

Installing and maintaining these bespoke LST covers is made easy due to its user-friendly design that enables quick access to the radiator, simplifying the cleaning process and ensuring hassle-free maintenance.

Key Features

- Option of security screws/fixings or quarter turn locking latches to allow for quick removal of cover for access to the radiator for cleaning and maintenance.
- Bespoke designed to fit any room dimensions.
- As with the standard Armis, the Armis Continuous can be supplied in any RAL classic colour to suit any aesthetic and anti bacterial coated if required.
- Can be supplied with Frenger's TRV valves or with apertures to accommodate a variety or other valves.

Armis Healthcare

Typically Low Surface Temperature radiator covers are very useful items for preventing injuries which can be caused by the hot surface of the radiator however conventionally they have been manufactured to be installed fixed to a floor or the wall. Conventional LST Covers by others maybe suitable for many applications however it can make it difficult to clean the radiator and the internals of the case as the whole case needs to be removed and this can make cleaning of the radiator and case in buildings such as hospitals which require regular cleaning of all surfaces quite difficult. Some units may come in multiple parts, require complete disassemble or need multiple people to move for larger units.

Conventional LST Covers inevitably increases maintenance costs; staffing costs/requirements and increases the time to clean all radiators in a building leaning to a continuous schedule of cleaning the radiators and cases.

Also, radiator guards where the inside surfaces and the radiator have not been cleaned can become a haven for the growth of bacteria which can be distributed by the convective nature of a radiator which would be especially dangerous in healthcare environments.

To combat this, Frenger have introduced the Armis Healthcare LST radiator cover which not only helps prevent occupants from injuries due to hot radiator surface temperatures but is combined with a pivot down front cover which allows easy (Quarter turn key/entry locking) access to all internal surfaces of the radiator cover and the radiator. This enables easier access for cleaning of the case and the radiator but also the cleaning/maintenance can be performed by one person quickly and efficiently without having to disassemble the case or the use of Facilities/ Estates staff. This ultimately reduces maintenance time & staffing requirements which then reduces the overall maintenance costs and most importantly raises hygiene standard.

The cover is manufactured from 1.5mm thick Zintec steel and is finished with Anti-Bacterial RAL 9016 powder coat to all external & internal surfaces (other colour are available).

The Swing Down front cover hinges from the bottom and is fitted with a safety cord at the top on both sides to allow the front cover to swing down steadily and not to drop onto the floor. The front cover can also be completely removed to help with access for maintenance.

Covers can be manufactured up to 2.2m in length in a single section to accommodate most standard radiators. If longer covers are required, please contact Frenger to discuss your project requirements.

Key Features

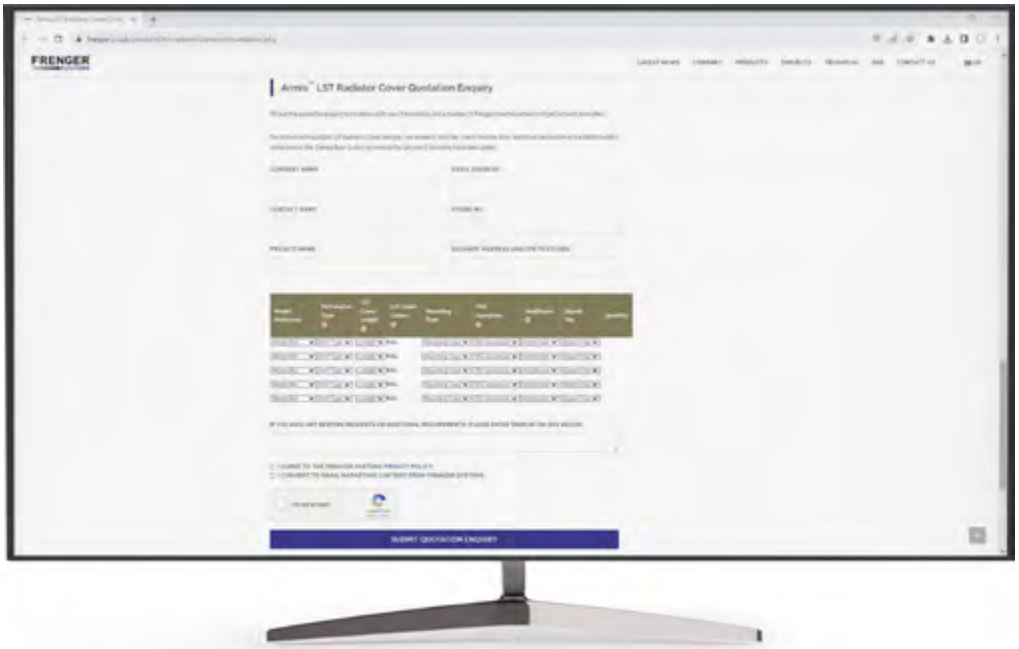
- Swing Down front cover for easy access to internal surfaces and radiator. Cover is lockable via security fixings.
- All internal & external surfaces finished in RAL 9016 Antibacterial powder coat finish as standard. Other colours are available.
- Manufactured from 1.5mm thick Zintec Steel. 2mm thick Zintec casings available for secure applications.
- Perforated grilles to allow heated air to be circulated but also prevents objects and fingers touching the heated radiator surface.
- Can be provided with apertures to allow for fitment of TRVs or pipe pass through.
- Quarter turn key access / security locking.

Armis Healthcare Radiator Cover

Wall Mounted Radiator Cover

Quotation Enquiry Form

To request a quotation for Frenger's Armis LST Radiator Cover please visit: www.frenger.co.uk/LST. The enquiry form will allow project selections to be sent to Frenger, allowing a quote to be produced. The table below will provide the information required to make the selections.



		Model Reference	Perforation Type	LST Cover Length	LST Cover Colour	Mounting Type	TRV Aperture	Healthcare	Sloped Top
Example Selection		**ARM 145-520**	**7D**	**1075**	**RAL 9016**	**Floor**	**Yes**	**No**	**No**
Selection Information	**Description**	Formulated with LST Product Model, LST Cover Width and LST Cover Height.	**DD** = Ø7mm & Ø4mm 'Double' Dot. **7D** = Ø7mm Dot. **5S** = 5mm x 20mm Wide Slot. **DMD** = Diamond Shaped.	Recommended at least 175mm longer than the radiator (depending on valve arrangement).	All Ral Classic colours available: www.ralcolorchart.com/ral-classic. For additional colours email: sales@frenger.co.uk	Floor or Wall mounted.	Is an aperture required to accommodate a Thermostatic Radiator Valve (TRV). TRV supplied by others.	Design altered to suit hospital walls, allow for easy access for cleaning, anti-bacterial finish.	Top of unit is sloped instead of flat.
	Brochure Page	5-7	12	6-7	10-11	3-4	6	15	3

Frenger Radiator Options

Frenger's Armis is designed to accommodate most major radiator brands, but can also be supplied with Frenger's FRE and FREv ranges of wall mounted radiators.

Frenger's wall mounted radiators offer excellent quality with high heating performance and cover a wide selection of sizes. All Frenger's wall mounted radiators have RAL 9016 (Traffic White) waterproof coating.

The FRE range of horizontal radiators is available in three models (R1, R2 and R3). These provide options for radiator depths and heating performance. The FRE radiators are some of the slimmest on the market and can be mounted either "horizontally" or "Vertically", due to their symmetrical design that features heating converters welded onto the water ways of the radiator.

The FREv double panel vertical radiators are 1800mm in height and are available in 400, 500 and 600mm lengths with a 129mm installation depth.

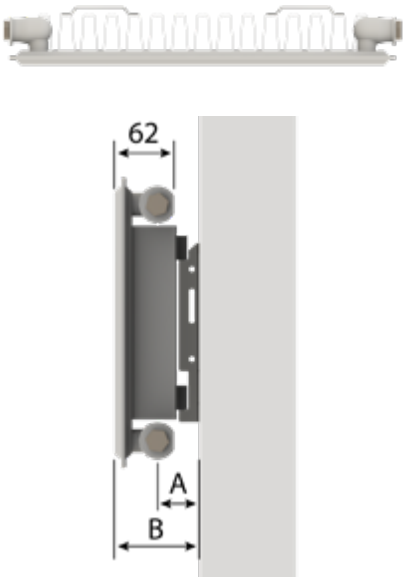
FRE - Horizontal Radiator

FREv - Vertical Radiator

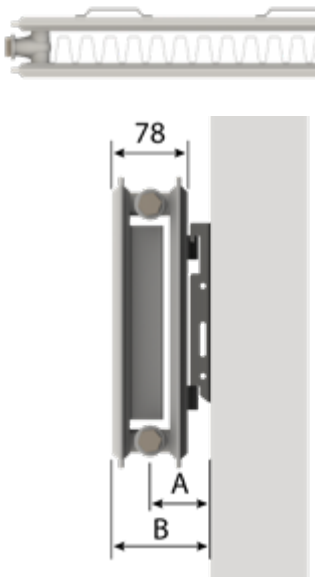
Dimensions - Horizontal

All dimensions in mm

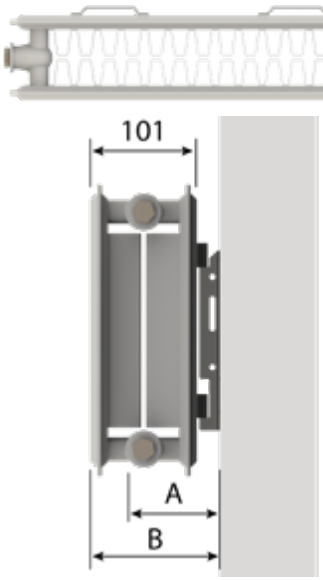
R1



R2



R3



Model Ref.	Dim "A" Minimum (mm)	Dim "A" Maximum (mm)	Dim "B" Minimum (mm)	Dim "B" Maximum (mm)
R1	52	63	82	93
R2	63	74	100	111
R3	74	85	123	134

Note: All dimensions have a tolerance of ± 2mm

LST Radiator Output - R1 - 50ΔtK

Horizontal Radiator Details - Outputs at 50ΔtK Mean Water Temperature - Room Temperature (75/65/20)

Model: R1

Radiator ID Code	Height "H" (mm)	Length "L" (mm)	Width "W" (mm)	Output in LST Cover (W)	Output in LST Cover (Btu/hr)
FRE-R1-300-500	300	500	61	236	804
FRE-R1-300-1000	300	1000	61	470	1605
FRE-R1-300-1500	300	1500	61	706	2410
FRE-R1-450-400	450	400	61	279	953
FRE-R1-450-500	450	500	61	349	1192
FRE-R1-450-600	450	600	61	420	1431
FRE-R1-450-700	450	700	61	490	1671
FRE-R1-450-800	450	800	61	559	1907
FRE-R1-450-900	450	900	61	629	2146
FRE-R1-450-1000	450	1000	61	699	2385
FRE-R1-450-1100	450	1100	61	769	2624
FRE-R1-450-1200	450	1200	61	839	2863
FRE-R1-450-1400	450	1400	61	978	3338
FRE-R1-450-1600	450	1600	61	1118	3816
FRE-R1-450-1800	450	1800	61	1258	4291
FRE-R1-450-2000	450	2000	61	1398	4769
FRE-R1-600-400	600	400	61	364	1242
FRE-R1-600-500	600	500	61	455	1553
FRE-R1-600-600	600	600	61	546	1863
FRE-R1-600-700	600	700	61	637	2174
FRE-R1-600-800	600	800	61	728	2484
FRE-R1-600-900	600	900	61	819	2795
FRE-R1-600-1000	600	1000	61	910	3105
FRE-R1-600-1100	600	1100	61	1001	3416
FRE-R1-600-1200	600	1200	61	1092	3726
FRE-R1-600-1400	600	1400	61	1274	4347
FRE-R1-600-1600	600	1600	61	1456	4968
FRE-R1-600-1800	600	1800	61	1638	5589
FRE-R1-700-400	700	400	61	416	1419
FRE-R1-700-500	700	500	61	520	1773
FRE-R1-700-600	700	600	61	623	2127
FRE-R1-700-700	700	700	61	727	2481
FRE-R1-700-800	700	800	61	832	2838
FRE-R1-700-900	700	900	61	935	3192
FRE-R1-700-1000	700	1000	61	1039	3546
FRE-R1-700-1100	700	1100	61	1143	3900
FRE-R1-700-1200	700	1200	61	1247	4254
FRE-R1-700-1400	700	1400	61	1455	4965
FRE-R1-700-1600	700	1600	61	1663	5673
FRE-R1-700-1800	700	1800	61	1871	6384
FRE-R1-700-2000	700	2000	61	2078	7092

LST Radiator Output - R2 - 50ΔtK

Horizontal Radiator Details - Outputs at 50ΔtK Mean Water Temperature - Room Temperature (75/65/20)

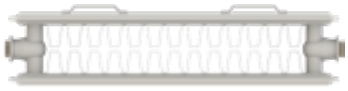
Model: R2

Radiator ID Code	Height "H" (mm)	Length "L" (mm)	Width "W" (mm)	Output in LST Cover (W)	Output in LST Cover (Btu/hr)
FRE-R2-300-500	300	500	77	338	1152
FRE-R2-300-1000	300	1000	77	675	2304
FRE-R2-300-1500	300	1500	77	1013	3455
FRE-R2-450-400	450	400	77	385	1312
FRE-R2-450-500	450	500	77	481	1642
FRE-R2-450-600	450	600	77	578	1971
FRE-R2-450-700	450	700	77	673	2298
FRE-R2-450-800	450	800	77	770	2627
FRE-R2-450-900	450	900	77	866	2954
FRE-R2-450-1000	450	1000	77	962	3283
FRE-R2-450-1100	450	1100	77	1059	3613
FRE-R2-450-1200	450	1200	77	1154	3939
FRE-R2-450-1400	450	1400	77	1347	4595
FRE-R2-450-1600	450	1600	77	1540	5254
FRE-R2-450-1800	450	1800	77	1732	5910
FRE-R2-450-2000	450	2000	77	1924	6566
FRE-R2-600-400	600	400	77	491	1674
FRE-R2-600-500	600	500	77	613	2093
FRE-R2-600-600	600	600	77	735	2508
FRE-R2-600-700	600	700	77	858	2927
FRE-R2-600-800	600	800	77	980	3346
FRE-R2-600-900	600	900	77	1103	3764
FRE-R2-600-1000	600	1000	77	1226	4183
FRE-R2-600-1100	600	1100	77	1349	4601
FRE-R2-600-1200	600	1200	77	1471	5020
FRE-R2-600-1400	600	1400	77	1717	5857
FRE-R2-600-1600	600	1600	77	1961	6691
FRE-R2-600-1800	600	1800	77	2206	7528
FRE-R2-600-2000	600	2000	77	2452	8365
FRE-R2-700-400	700	400	77	556	1897
FRE-R2-700-500	700	500	77	695	2372
FRE-R2-700-600	700	600	77	833	2844
FRE-R2-700-700	700	700	77	973	3319
FRE-R2-700-800	700	800	77	1112	3794
FRE-R2-700-900	700	900	77	1250	4266
FRE-R2-700-1000	700	1000	77	1389	4741
FRE-R2-700-1100	700	1100	77	1529	5216
FRE-R2-700-1200	700	1200	77	1667	5688
FRE-R2-700-1400	700	1400	77	1945	6638
FRE-R2-700-1600	700	1600	77	2223	7585
FRE-R2-700-1800	700	1800	77	2501	8535

LST Radiator Output - R3 - 50ΔtK

Horizontal Radiator Details - Outputs at 50ΔtK Mean Water Temperature - Room Temperature (75/65/20)

Model: R3



Radiator ID Code	Height "H" (mm)	Length "L" (mm)	Width "W" (mm)	Output in LST Cover (W)	Output in LST Cover (Btu/hr)
FRE-R3-300-500	300	500	100	430	1468
FRE-R3-300-1000	300	1000	100	860	2935
FRE-R3-300-1500	300	1500	100	1290	4403
FRE-R3-450-400	450	400	100	479	1636
FRE-R3-450-500	450	500	100	599	2045
FRE-R3-450-600	450	600	100	718	2451
FRE-R3-450-700	450	700	100	838	2860
FRE-R3-450-800	450	800	100	958	3269
FRE-R3-450-900	450	900	100	1078	3678
FRE-R3-450-1000	450	1000	100	1198	4087
FRE-R3-450-1100	450	1100	100	1318	4495
FRE-R3-450-1200	450	1200	100	1437	4904
FRE-R3-450-1400	450	1400	100	1677	5722
FRE-R3-450-1600	450	1600	100	1916	6537
FRE-R3-450-1800	450	1800	100	2156	7355
FRE-R3-450-2000	450	2000	100	2395	8173
FRE-R3-600-400	600	400	100	604	2062
FRE-R3-600-500	600	500	100	756	2578
FRE-R3-600-600	600	600	100	907	3095
FRE-R3-600-700	600	700	100	1058	3611
FRE-R3-600-800	600	800	100	1209	4124
FRE-R3-600-900	600	900	100	1360	4641
FRE-R3-600-1000	600	1000	100	1511	5157
FRE-R3-600-1100	600	1100	100	1663	5673
FRE-R3-600-1200	600	1200	100	1814	6189
FRE-R3-600-1400	600	1400	100	2116	7219
FRE-R3-600-1600	600	1600	100	2418	8251
FRE-R3-600-1800	600	1800	100	2720	9281
FRE-R3-600-2000	600	2000	100	3023	10314
FRE-R3-700-400	700	400	100	683	2332
FRE-R3-700-500	700	500	100	855	2918
FRE-R3-700-600	700	600	100	1026	3501
FRE-R3-700-700	700	700	100	1197	4084
FRE-R3-700-800	700	800	100	1368	4667
FRE-R3-700-900	700	900	100	1539	5250
FRE-R3-700-1000	700	1000	100	1709	5833
FRE-R3-700-1100	700	1100	100	1880	6416
FRE-R3-700-1200	700	1200	100	2051	6998
FRE-R3-700-1400	700	1400	100	2393	8164
FRE-R3-700-1600	700	1600	100	2735	9333
FRE-R3-700-1800	700	1800	100	3077	10499
FRE-R3-700-2000	700	2000	100	3419	11665

LST Radiator Output - R1 - 40ΔtK

Horizontal Radiator Details - Outputs at 40ΔtK Mean Water Temperature - Room Temperature (65/55/20)

Model: R1

Radiator ID Code	Height "H" (mm)	Length "L" (mm)	Width "W" (mm)	Output in LST Cover (W)	Output in LST Cover (Btu/hr)
FRE-R1-300-500	300	500	61	177	602
FRE-R1-300-1000	300	1000	61	352	1202
FRE-R1-300-1500	300	1500	61	528	1801
FRE-R1-450-400	450	400	61	209	714
FRE-R1-450-500	450	500	61	261	891
FRE-R1-450-600	450	600	61	314	1071
FRE-R1-450-700	450	700	61	366	1248
FRE-R1-450-800	450	800	61	418	1425
FRE-R1-450-900	450	900	61	470	1605
FRE-R1-450-1000	450	1000	61	522	1782
FRE-R1-450-1100	450	1100	61	575	1962
FRE-R1-450-1200	450	1200	61	628	2142
FRE-R1-450-1400	450	1400	61	732	2496
FRE-R1-450-1600	450	1600	61	836	2854
FRE-R1-450-1800	450	1800	61	941	3211
FRE-R1-450-2000	450	2000	61	1046	3568
FRE-R1-600-400	600	400	61	272	928
FRE-R1-600-500	600	500	61	340	1161
FRE-R1-600-600	600	600	61	409	1394
FRE-R1-600-700	600	700	61	477	1627
FRE-R1-600-800	600	800	61	544	1857
FRE-R1-600-900	600	900	61	612	2090
FRE-R1-600-1000	600	1000	61	681	2323
FRE-R1-600-1100	600	1100	61	749	2555
FRE-R1-600-1200	600	1200	61	817	2788
FRE-R1-600-1400	600	1400	61	953	3251
FRE-R1-600-1600	600	1600	61	1089	3717
FRE-R1-600-1800	600	1800	61	1225	4179
FRE-R1-700-400	700	400	61	311	1062
FRE-R1-700-500	700	500	61	389	1326
FRE-R1-700-600	700	600	61	466	1590
FRE-R1-700-700	700	700	61	544	1857
FRE-R1-700-800	700	800	61	622	2124
FRE-R1-700-900	700	900	61	700	2388
FRE-R1-700-1000	700	1000	61	777	2652
FRE-R1-700-1100	700	1100	61	854	2916
FRE-R1-700-1200	700	1200	61	933	3183
FRE-R1-700-1400	700	1400	61	1088	3714
FRE-R1-700-1600	700	1600	61	1244	4245
FRE-R1-700-1800	700	1800	61	1400	4776
FRE-R1-700-2000	700	2000	61	1554	5303

LST Radiator Output - R2 - 40ΔtK

Horizontal Radiator Details - Outputs at 40ΔtK Mean Water Temperature - Room Temperature (65/55/20)

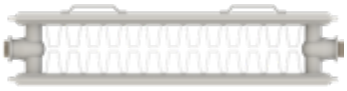
Model: R2

Radiator ID Code	Height "H" (mm)	Length "L" (mm)	Width "W" (mm)	Output in LST Cover (W)	Output in LST Cover (Btu/hr)
FRE-R2-300-500	300	500	77	252	861
FRE-R2-300-1000	300	1000	77	505	1722
FRE-R2-300-1500	300	1500	77	758	2586
FRE-R2-450-400	450	400	77	288	983
FRE-R2-450-500	450	500	77	360	1229
FRE-R2-450-600	450	600	77	432	1475
FRE-R2-450-700	450	700	77	504	1719
FRE-R2-450-800	450	800	77	576	1965
FRE-R2-450-900	450	900	77	647	2209
FRE-R2-450-1000	450	1000	77	719	2455
FRE-R2-450-1100	450	1100	77	792	2701
FRE-R2-450-1200	450	1200	77	864	2948
FRE-R2-450-1400	450	1400	77	1007	3438
FRE-R2-450-1600	450	1600	77	1152	3930
FRE-R2-450-1800	450	1800	77	1295	4420
FRE-R2-450-2000	450	2000	77	1440	4913
FRE-R2-600-400	600	400	77	367	1253
FRE-R2-600-500	600	500	77	458	1564
FRE-R2-600-600	600	600	77	550	1876
FRE-R2-600-700	600	700	77	642	2191
FRE-R2-600-800	600	800	77	733	2502
FRE-R2-600-900	600	900	77	825	2814
FRE-R2-600-1000	600	1000	77	917	3129
FRE-R2-600-1100	600	1100	77	1008	3441
FRE-R2-600-1200	600	1200	77	1101	3755
FRE-R2-600-1400	600	1400	77	1284	4382
FRE-R2-600-1600	600	1600	77	1467	5005
FRE-R2-600-1800	600	1800	77	1650	5631
FRE-R2-600-2000	600	2000	77	1834	6258
FRE-R2-700-400	700	400	77	416	1419
FRE-R2-700-500	700	500	77	520	1775
FRE-R2-700-600	700	600	77	624	2128
FRE-R2-700-700	700	700	77	727	2482
FRE-R2-700-800	700	800	77	832	2838
FRE-R2-700-900	700	900	77	935	3191
FRE-R2-700-1000	700	1000	77	1040	3547
FRE-R2-700-1100	700	1100	77	1143	3901
FRE-R2-700-1200	700	1200	77	1247	4254
FRE-R2-700-1400	700	1400	77	1456	4966
FRE-R2-700-1600	700	1600	77	1663	5673
FRE-R2-700-1800	700	1800	77	1871	6385

LST Radiator Output - R3 - 40ΔtK

Horizontal Radiator Details - Outputs at 40ΔtK Mean Water Temperature - Room Temperature (65/55/20)

Model: R3



Radiator ID Code	Height "H" (mm)	Length "L" (mm)	Width "W" (mm)	Output in LST Cover (W)	Output in LST Cover (Btu/hr)
FRE-R3-300-500	300	500	100	321	1096
FRE-R3-300-1000	300	1000	100	643	2196
FRE-R3-300-1500	300	1500	100	965	3292
FRE-R3-450-400	450	400	100	359	1224
FRE-R3-450-500	450	500	100	448	1528
FRE-R3-450-600	450	600	100	537	1833
FRE-R3-450-700	450	700	100	627	2140
FRE-R3-450-800	450	800	100	717	2445
FRE-R3-450-900	450	900	100	806	2750
FRE-R3-450-1000	450	1000	100	896	3057
FRE-R3-450-1100	450	1100	100	985	3361
FRE-R3-450-1200	450	1200	100	1075	3669
FRE-R3-450-1400	450	1400	100	1255	4281
FRE-R3-450-1600	450	1600	100	1433	4890
FRE-R3-450-1800	450	1800	100	1612	5502
FRE-R3-450-2000	450	2000	100	1792	6114
FRE-R3-600-400	600	400	100	452	1543
FRE-R3-600-500	600	500	100	565	1929
FRE-R3-600-600	600	600	100	678	2314
FRE-R3-600-700	600	700	100	791	2700
FRE-R3-600-800	600	800	100	904	3086
FRE-R3-600-900	600	900	100	1017	3472
FRE-R3-600-1000	600	1000	100	1131	3857
FRE-R3-600-1100	600	1100	100	1244	4243
FRE-R3-600-1200	600	1200	100	1357	4629
FRE-R3-600-1400	600	1400	100	1583	5400
FRE-R3-600-1600	600	1600	100	1809	6172
FRE-R3-600-1800	600	1800	100	2035	6943
FRE-R3-600-2000	600	2000	100	2261	7715
FRE-R3-700-400	700	400	100	511	1743
FRE-R3-700-500	700	500	100	639	2181
FRE-R3-700-600	700	600	100	768	2619
FRE-R3-700-700	700	700	100	895	3054
FRE-R3-700-800	700	800	100	1023	3492
FRE-R3-700-900	700	900	100	1151	3927
FRE-R3-700-1000	700	1000	100	1278	4362
FRE-R3-700-1100	700	1100	100	1407	4800
FRE-R3-700-1200	700	1200	100	1534	5235
FRE-R3-700-1400	700	1400	100	1790	6108
FRE-R3-700-1600	700	1600	100	2046	6981
FRE-R3-700-1800	700	1800	100	2302	7854
FRE-R3-700-2000	700	2000	100	2557	8724

LST Radiator Output - R1 - 30ΔtK

Horizontal Radiator Details - Outputs at 30ΔtK Mean Water Temperature - Room Temperature (55/45/20)

Model: R1

Radiator ID Code	Height "H" (mm)	Length "L" (mm)	Width "W" (mm)	Output in LST Cover (W)	Output in LST Cover (Btu/hr)
FRE-R1-300-500	300	500	61	121	413
FRE-R1-300-1000	300	1000	61	242	826
FRE-R1-300-1500	300	1500	61	364	1242
FRE-R1-450-400	450	400	61	144	491
FRE-R1-450-500	450	500	61	180	615
FRE-R1-450-600	450	600	61	216	736
FRE-R1-450-700	450	700	61	252	860
FRE-R1-450-800	450	800	61	288	981
FRE-R1-450-900	450	900	61	324	1105
FRE-R1-450-1000	450	1000	61	360	1230
FRE-R1-450-1100	450	1100	61	396	1351
FRE-R1-450-1200	450	1200	61	432	1475
FRE-R1-450-1400	450	1400	61	504	1720
FRE-R1-450-1600	450	1600	61	576	1965
FRE-R1-450-1800	450	1800	61	648	2211
FRE-R1-450-2000	450	2000	61	720	2456
FRE-R1-600-400	600	400	61	187	640
FRE-R1-600-500	600	500	61	235	801
FRE-R1-600-600	600	600	61	281	959
FRE-R1-600-700	600	700	61	329	1121
FRE-R1-600-800	600	800	61	375	1279
FRE-R1-600-900	600	900	61	422	1441
FRE-R1-600-1000	600	1000	61	469	1599
FRE-R1-600-1100	600	1100	61	516	1761
FRE-R1-600-1200	600	1200	61	562	1919
FRE-R1-600-1400	600	1400	61	656	2239
FRE-R1-600-1600	600	1600	61	750	2559
FRE-R1-600-1800	600	1800	61	844	2878
FRE-R1-700-400	700	400	61	214	730
FRE-R1-700-500	700	500	61	268	913
FRE-R1-700-600	700	600	61	321	1096
FRE-R1-700-700	700	700	61	374	1276
FRE-R1-700-800	700	800	61	429	1462
FRE-R1-700-900	700	900	61	481	1643
FRE-R1-700-1000	700	1000	61	535	1826
FRE-R1-700-1100	700	1100	61	589	2009
FRE-R1-700-1200	700	1200	61	642	2192
FRE-R1-700-1400	700	1400	61	749	2555
FRE-R1-700-1600	700	1600	61	856	2922
FRE-R1-700-1800	700	1800	61	964	3288
FRE-R1-700-2000	700	2000	61	1070	3652

LST Radiator Output - R2 - 30ΔtK

Horizontal Radiator Details - Outputs at 30ΔtK Mean Water Temperature - Room Temperature (55/45/20)

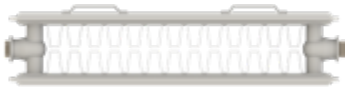
Model: R2

Radiator ID Code	Height "H" (mm)	Length "L" (mm)	Width "W" (mm)	Output in LST Cover (W)	Output in LST Cover (Btu/hr)
FRE-R2-300-500	300	500	77	174	594
FRE-R2-300-1000	300	1000	77	348	1187
FRE-R2-300-1500	300	1500	77	521	1778
FRE-R2-450-400	450	400	77	198	677
FRE-R2-450-500	450	500	77	248	846
FRE-R2-450-600	450	600	77	298	1015
FRE-R2-450-700	450	700	77	347	1184
FRE-R2-450-800	450	800	77	397	1354
FRE-R2-450-900	450	900	77	445	1520
FRE-R2-450-1000	450	1000	77	496	1692
FRE-R2-450-1100	450	1100	77	545	1861
FRE-R2-450-1200	450	1200	77	594	2028
FRE-R2-450-1400	450	1400	77	693	2366
FRE-R2-450-1600	450	1600	77	793	2707
FRE-R2-450-1800	450	1800	77	892	3043
FRE-R2-450-2000	450	2000	77	991	3381
FRE-R2-600-400	600	400	77	252	861
FRE-R2-600-500	600	500	77	316	1078
FRE-R2-600-600	600	600	77	378	1291
FRE-R2-600-700	600	700	77	442	1508
FRE-R2-600-800	600	800	77	505	1722
FRE-R2-600-900	600	900	77	568	1938
FRE-R2-600-1000	600	1000	77	632	2155
FRE-R2-600-1100	600	1100	77	694	2369
FRE-R2-600-1200	600	1200	77	758	2586
FRE-R2-600-1400	600	1400	77	884	3016
FRE-R2-600-1600	600	1600	77	1010	3447
FRE-R2-600-1800	600	1800	77	1136	3877
FRE-R2-600-2000	600	2000	77	1262	4307
FRE-R2-700-400	700	400	77	286	977
FRE-R2-700-500	700	500	77	358	1220
FRE-R2-700-600	700	600	77	429	1464
FRE-R2-700-700	700	700	77	501	1710
FRE-R2-700-800	700	800	77	572	1953
FRE-R2-700-900	700	900	77	644	2197
FRE-R2-700-1000	700	1000	77	715	2440
FRE-R2-700-1100	700	1100	77	787	2687
FRE-R2-700-1200	700	1200	77	859	2930
FRE-R2-700-1400	700	1400	77	1002	3420
FRE-R2-700-1600	700	1600	77	1145	3907
FRE-R2-700-1800	700	1800	77	1288	4396

LST Radiator Output - R3 - 30ΔtK

Horizontal Radiator Details - Outputs at 30ΔtK Mean Water Temperature - Room Temperature (55/45/20)

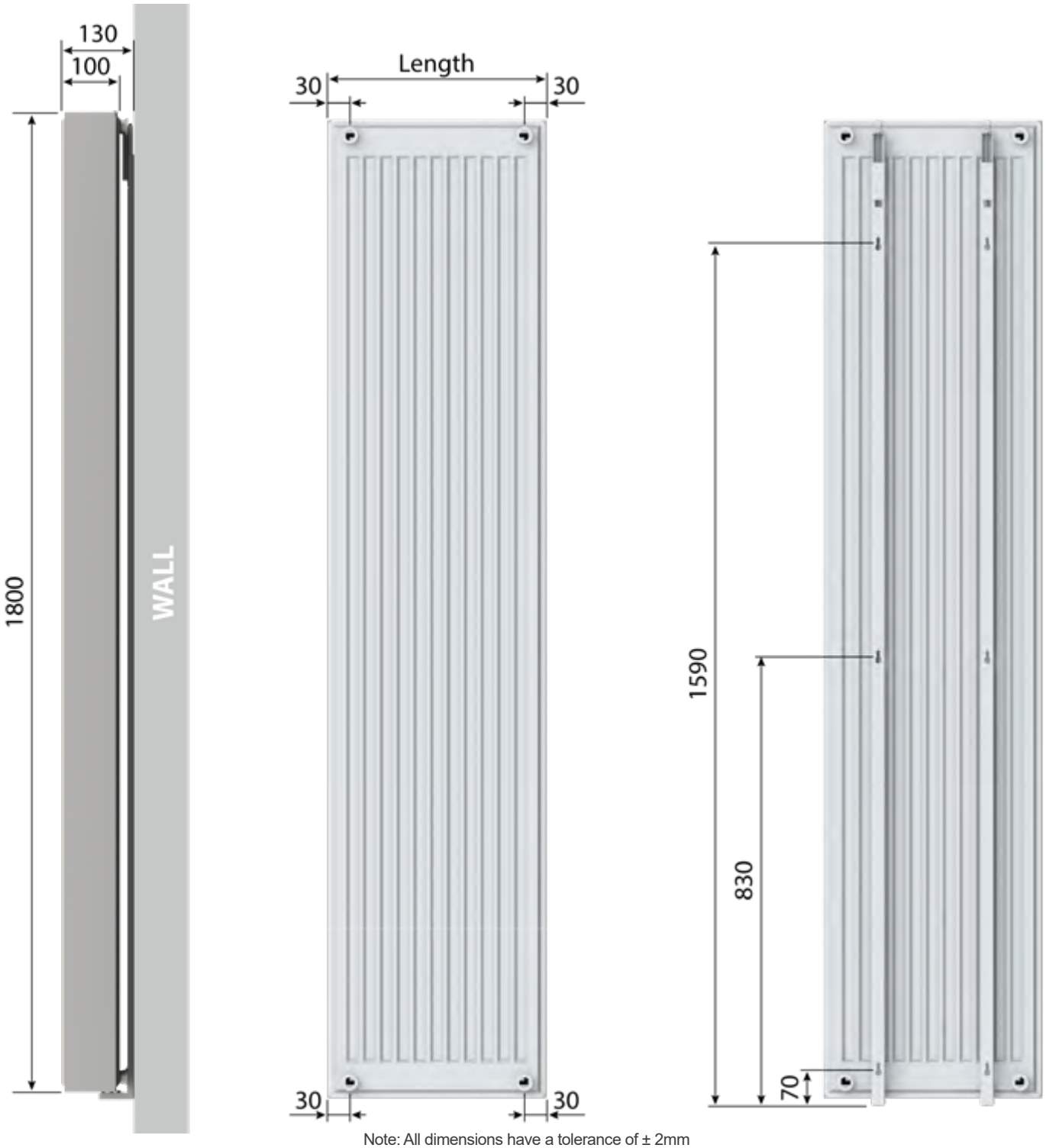
Model: R3



Radiator ID Code	Height "H" (mm)	Length "L" (mm)	Width "W" (mm)	Output in LST Cover (W)	Output in LST Cover (Btu/hr)
FRE-R3-300-500	300	500	100	222	757
FRE-R3-300-1000	300	1000	100	443	1511
FRE-R3-300-1500	300	1500	100	665	2268
FRE-R3-450-400	450	400	100	247	841
FRE-R3-450-500	450	500	100	309	1053
FRE-R3-450-600	450	600	100	370	1262
FRE-R3-450-700	450	700	100	432	1473
FRE-R3-450-800	450	800	100	493	1682
FRE-R3-450-900	450	900	100	555	1894
FRE-R3-450-1000	450	1000	100	617	2106
FRE-R3-450-1100	450	1100	100	678	2314
FRE-R3-450-1200	450	1200	100	740	2526
FRE-R3-450-1400	450	1400	100	864	2947
FRE-R3-450-1600	450	1600	100	987	3367
FRE-R3-450-1800	450	1800	100	1110	3788
FRE-R3-450-2000	450	2000	100	1233	4208
FRE-R3-600-400	600	400	100	311	1062
FRE-R3-600-500	600	500	100	389	1328
FRE-R3-600-600	600	600	100	468	1595
FRE-R3-600-700	600	700	100	545	1859
FRE-R3-600-800	600	800	100	622	2123
FRE-R3-600-900	600	900	100	700	2390
FRE-R3-600-1000	600	1000	100	779	2657
FRE-R3-600-1100	600	1100	100	856	2921
FRE-R3-600-1200	600	1200	100	934	3187
FRE-R3-600-1400	600	1400	100	1090	3718
FRE-R3-600-1600	600	1600	100	1245	4249
FRE-R3-600-1800	600	1800	100	1401	4780
FRE-R3-600-2000	600	2000	100	1556	5310
FRE-R3-700-400	700	400	100	352	1201
FRE-R3-700-500	700	500	100	440	1502
FRE-R3-700-600	700	600	100	529	1804
FRE-R3-700-700	700	700	100	616	2103
FRE-R3-700-800	700	800	100	705	2404
FRE-R3-700-900	700	900	100	792	2703
FRE-R3-700-1000	700	1000	100	881	3005
FRE-R3-700-1100	700	1100	100	968	3303
FRE-R3-700-1200	700	1200	100	1057	3605
FRE-R3-700-1400	700	1400	100	1233	4205
FRE-R3-700-1600	700	1600	100	1408	4806
FRE-R3-700-1800	700	1800	100	1584	5406
FRE-R3-700-2000	700	2000	100	1760	6007

Vertical Radiator Details

Dimensions - Vertical (All dimensions in mm)



Note: All dimensions have a tolerance of ± 2mm

Vertical LST Radiator Outputs

Model: RV

Radiator ID Code	Height "H" (mm)	Length "L" (mm)	Width "W" (mm)	50Δt (75/65/20°C) Output in LST Cover (W)	50Δt (75/65/20°C) Output in LST Cover (Btu/hr)	40Δt (65/55/20°C) Output in LST Cover (W)	40Δt (65/55/20°C) Output in LST Cover (Btu/hr)	30Δt (55/45/20°C) Output in LST Cover (W)	30Δt (55/45/20°C) Output in LST Cover (Btu/hr)
FRE-RV-1800-400	1800	400	102	1204	4108	901	3073	620	2116
FRE-RV-1800-500	1800	500	102	1505	5135	1126	3841	775	2645
FRE-RV-1800-600	1800	600	102	1806	6162	1351	4608	930	3174

Frenger Project Specific Testing Facility

The 3 number state-of-the-art Climatic Testing Laboratories at Frenger's technical facility in Derby (UK) have internal dimensions of 6.3m (L) x 5.7m (W) x 3.3m (H) high and includes a thermal wall so that both internal and perimeter zones can be simulated. Project specific testing validates product / solution performance (outputs) and resultant Room Comfort Conditions for compliance category grading in accordance with BS EN ISO 7730. All of Frenger's chilled beams have also been independently tested and certified by Eurovent in terms of product performance (output), as Eurovent can not test for thermal comfort; hence the need for Frenger's own laboratories.

Project Specific Testing

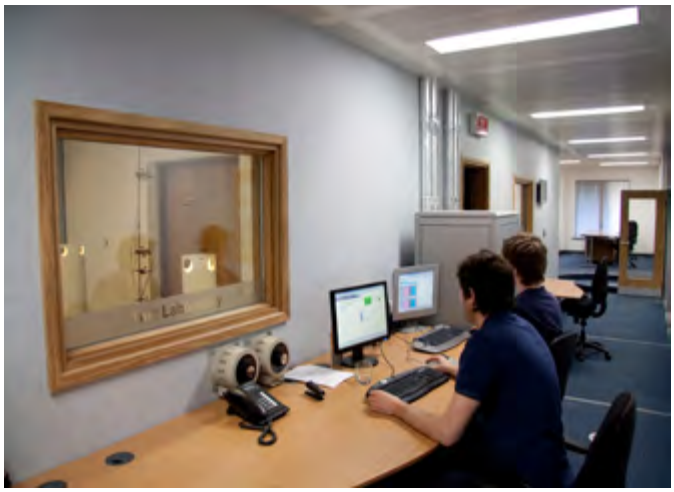
Project specific mock-up testing is a valuable tool which allows the Client to fully assess the proposed system and determine the resulting room occupancy Thermal Comfort conditions. The physical modelling is achieved by installing a full scale representation of a building zone complete with internal & external heat gains (Lighting, Small Power, Occupancy & Solar Gains).

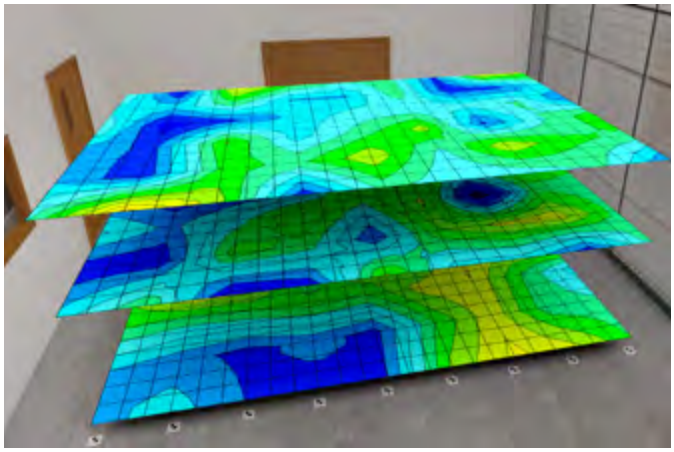
The installed mock-up enables the client to verify the following:

- Product performance under project specific conditions.
- Spatial air temperature distribution.
- Spatial air velocities.
- Experience thermal comfort.
- Project specific aesthetics.
- Experience lighting levels (where relevant).
- Investigate the specific design and allow the system to be optimised.

The project-specific installation and test is normally conducted to verify:

- Product capacity under design conditions.
- Comfort levels
  - air temperature distribution.
  - thermal stratification.
  - draft risk.
  - radiant temperature analysis.
- Smoke test video illustrating air movement.
- Live Thermal Imaging





Frenger Photometric Testing Facility

The in-house Photometric test laboratories at Frenger are used to evaluate the performance of luminaires. To measure the performance, it is necessary to obtain values of light intensity distribution from the luminaire. These light intensity distributions are used to mathematically model the lighting distribution envelope of a particular luminaire. This distribution along with the luminaires efficacy allows for the generation of a digital distribution that is the basis of the usual industry standard electronic file format. In order to assess the efficacy of the luminaire it is a requirement to compare the performance of the luminaire against either a calibrated light source for absolute output or against the “bare” light source for a relative performance ratio.

The industry uses both methods. Generally absolute lumen outputs are used for solid state lighting sources and relative lighting output ratios (LOR) are used for the more traditional sources. Where the LOR method is chosen then published Lamp manufacturer’s data is used to calculate actual lighting levels in a scheme and for LED light source the integration chamber is used to measure LED luminance efficacy.

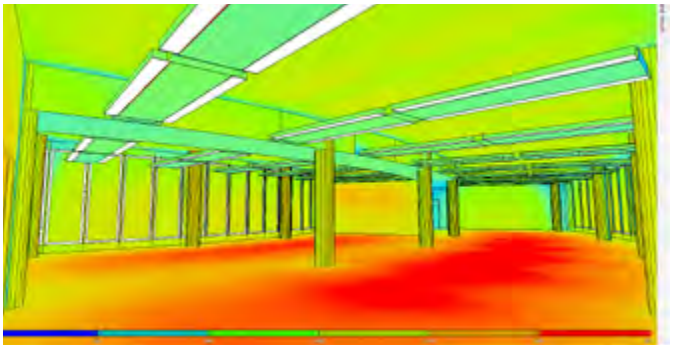
The intensity distribution is obtained by the use of a Goniophotometer to measure the intensity of light emitted from the surface of the fitting at pre-determined angles. The light intensity is measured using either a photometer with a corrective spectral response filter to match the CIE standard observer curves or our spectrometer for LED sources.

Luminaire outputs are measured using our integrating sphere for smaller luminaires or our large integrator room for large fittings and Multi Service Chilled Beams. For both methods we can use traceable calibrated radiant flux standards for absolute comparisons.

All tests use appropriate equipment to measure and control the characteristics of the luminaire and include air temperature measurements, luminaire supply voltage, luminaire current and power. Thermal characteristics of luminaire components can be recorded during the testing process as required.

A full test report is compiled and supplied in “locked” PDF format. Data is collected and correlated using applicable software and is presented electronically to suit, usually in Eulumdat, CIBSE TM14 or IESN standard file format.

Frenger conduct photometric tests in accordance with CIE 127:2007 and BS EN 13032-1 and sound engineering practice as applicable. During the course of these tests suitable temperature measurements of parts of LED’s can be recorded. These recorded and plotted temperature distributions can be used to provide feedback and help optimise the light output of solid state light source based luminaires which are often found to be sensitive to junction temperatures.



Frenger Acoustic Testing Facility

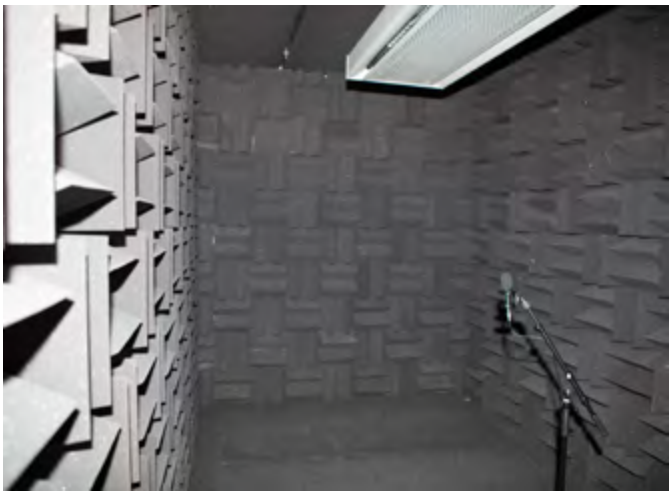
The Acoustic Test Room at Frenger is a hemi-anechoic chamber which utilises sound absorbing acoustic foam material in the shape of wedges to provide an echo free zone for acoustic measurements; the height of the acoustic foam wedge has a direct relationship with the maximum absorption frequency, hence Frenger had the acoustic wedges specifically designed to optimise the sound absorption at the peak frequency normally found with our active chilled beam products.

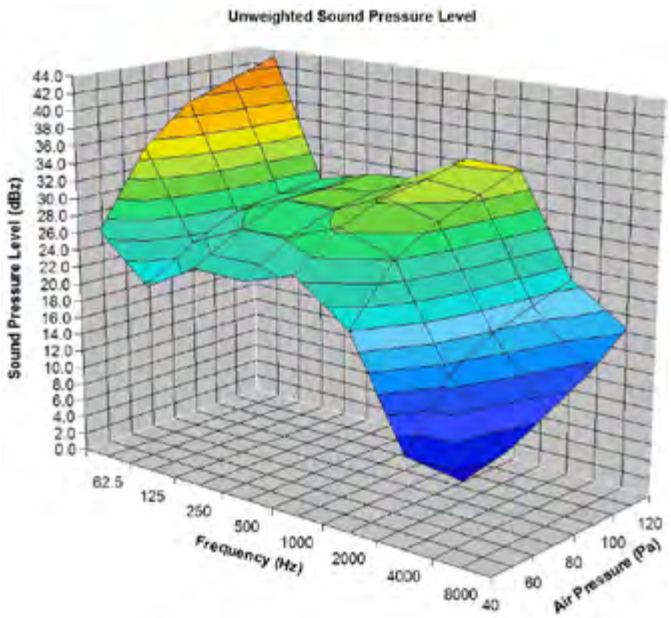
The use of acoustic absorbing material within the test room provides the simulation of a quiet open space without “reflections” which helps to ensure sound measurements from the sound source are accurate, in addition the acoustic material also helps reduce external noise entering the test room meaning that relatively low levels of sound can be accurately measured.

The acoustic facilities allow Frenger to provide express in-house sound evaluation so that all products, even project specific designs can be quickly and easily assessed and optimised.

To ensure accuracy, Frenger only use Class 1 measurement equipment which allows sound level measurements to be taken at 11 different ⅓ octave bands between 16 Hz to 16 kHz, with A, C and Z (un-weighted) simultaneous weightings.

In addition to the above, Frenger also send their new products to specialist third party Acoustic Testing. The results of which are very close and within measurement tolerances to that of Frenger’s in-house measurement of sound.





Bespoke Manufacturing

Frenger has the manufacturing capability required to deliver the most complex of bespoke solutions. Facilities include the latest full CNC machine centers, together with a dedicated powder-coat paint plant to paint all of the components of the products and project specific in-house testing laboratories.

Frenger Industry Associations

Always mindful of its place within the HEVAC industry, Frenger Systems pride themselves on broad range of trade associations and accreditations. With a clear service, product and environmental ethos across everything they do, Frenger is focused on meeting and consistently surpassing the expectations of its customers. Frenger invest heavily in achieving industry recognised accreditations and as part of ongoing commitment to their customers and continually assess the level of services they provide. Opening up their company to these independent organisations allows Frenger to continually improve their customer service and satisfaction.

As an engaged member of the HEVAC industry, Frenger are actively asked to participate in industry specific discussions and studies. With this in mind Frenger are proud to have achieved and be linked with the following associations:

BSI EN ISO 9001:2015

Frenger Systems are registered by BSI for operating a Quality Management System which complies with the requirements of BS EN 9001:2015.

Eurovent

Frenger Systems participate in the EC programme for Chilled Beams. Check ongoing validity of certificate: www.eurovent-certification.com or www.certiflash.com .

Chilled Beam and Ceiling Association

The Chilled Beam and Ceiling Association has been formed by leading companies within the construction industry. The objective of the Association is to promote the use of Chilled Beams and Chilled Ceilings, and encourage best practice in their development and application.

HEVAC Member

HEVAC is the heating and ventilating contractors association. As a HEVAC member Frenger Systems are subject to regular, third party inspection and assessment to ensure their technical and commercial competence.

Federation of Environment Trade Association

The Federation of Environment Trade Association (FETA), of which Frenger Systems is a member of, is the recognised UK body which represents the interests of manufacturers, suppliers, installers and contractors within the heat pump, controls, ventilating, refrigeration & air conditioning industry.

UK Trade & Investment

Frenger Systems are members of both the UK TI (the former Department of Trade and Industry) as well as the Chamber of Commerce for Export Documentation.

Certified CIBSE CPD

Frenger Systems is a CIBSE approved “Continued Professional Development” (CPD) provider. Frenger offers 1 hour lunch time CPD presentations regarding “Chilled Beam Technology”, CPD presentations are usually held at Consulting Engineers local practices with lunch provided courtesy of Frenger. Alternatively half or full day Chilled Beam Technology training is available at Frenger’s UK Technical Academy in a dedicated training theatre with fully operational BMS system with various different Chilled Beam and Ceiling solutions integrated.

Booking of a CPD Presentation can be requested on Frenger’s home page, under the drop down menu headed “Company”, then “CPD Booking”. Alternatively email sales@frenger.co.uk.

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