

Merriott

DESIGN RADIATORS

*HORIZONTAL LST RADIATORS TECHNICAL INFORMATION
RT - SERIES EMITTERS*



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Horizontal LST Products

Introduction

The Merriott Radiators range of low surface temperature (LST) radiators operates within NHS / HSE guidelines, (the near ambient temperature of the front panel surface complies with department of DHSS Engineering data DN4 and conforms to NHS / HSE guidelines covering the surface temperature of radiators in areas where special care is provided). The use of heavy gauge flat steel tubing in the construction of the front panel provides a double insulation and enables the front panel to operate at a cool 25C making it the best and most effective LST front panel available. The performance of the Merriott LST range is constantly being expanded to meet the demands of the NHS / HSE.

When coupled to a properly balanced LPHW system operating with normal flow and return temperatures, the front panel will not exceed 43C. Obviously the lower the flow and return temperatures, the cooler the casing will be, and taller casings will provide more effective convection with lower issuing air temperatures. Merriott LST's enable you to comply with the requirements of DHSS Engineering Data DN4 and subsequent School Building Bulletins and disabled access regulations.

The Merriott Radiators LST offers architects and specifiers total flexibility in system design for hospitals, schools, nursing homes and sheltered accommodation. Special requirements for high security in prisons and for low level protection in pediatric wards are easily met from our standard range.

The smooth unobtrusive lines of the panel and the uniquely wide range of the sizes available enable it to adapt to any architectural or design scheme. All styles have rounded edges for safety and feature grilles for additional security.

Paint Finish

Our standard paint finish is semi - gloss RAL 9016 (White) in epoxy polyester powder. An extensive range of other RAL and BS colours are available on request, at a surcharge.

Emitter Size & Heat Emissions

Merriott Radiators pressed panel emitters or 'RT' series emitters offer emissions ranging from 209 watts to 5884 watts at $\Delta T 50^{\circ}\text{C}$. Emitter sizes ranging from (300mm X 400mm) to (700mm X 2200mm).

Features

The Merriott Radiators Horizontal LST is available in seven different styles which cater for all possible combinations. Such as

- Standard wall mounted Unit
- Free standing unit (in front of full height glazing)
- Wall to wall applications
- Corner (Internal and external 45°, 90°, 135°) applications
- Elevated units (Kitchens, toilets)
- High output performance
- Low surface temperature
- Rounded grilles for optimum safety
- No sharp edges (note: solid tops have rounded edges for added safety)
- Robust construction - front cover is a single unit

Quality

All Merriott Radiators emitters used behind Horizontal LST's are manufactured and tested in accordance with BS EN 442 and the NF quality mark requirements, in its state of the art BS EN ISO 9001:2008 accredited manufacturing facility.

Warranty

Merriott LST Radiators are guaranteed for a period of ten years in respect of defective materials and workmanship. In order for the warranty to be valid, designers and installers must observe and adhere to **BS EN 12828:2003**. Heating systems in buildings - design for water based heating systems" and installers must adhere to **BS EN 14336:2004**. Heating system in buildings - installation and commissioning of water based heating systems. In addition Merriott Radiators recommends that designers and installers observe and adhere to the British Standard code of practice for the treatment of water in domestic hot water central heating systems and **BS 7593:2006**, the use of corrosion inhibitor is recommended for all applications, failure to observe this may result in the invalidation of warranty.

Design & Performance

As products are subject to continued research to improve design and performance, Merriott Radiators reserves the right to alter specifications without notice.

Merriott Radiators LST System

You should indicate whether you require any of the following non-standard items:

- Special colours (BS or RAL number) other than RAL 9016 which is standard.
- Knockouts or Cutouts in the side casing (Endbox) for TRVs
- Cutouts in the front panel for a TRVs
- Cutouts for pipework (See Valve option feature section for details)
- Wall-to-wall LST

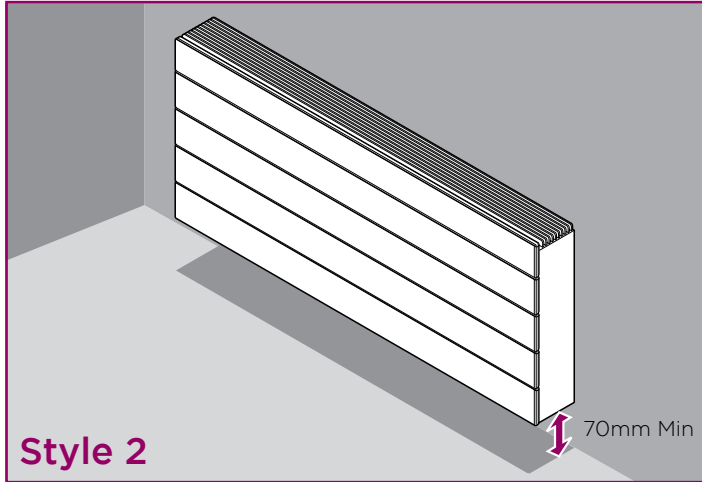
For full wall-to-wall applications, full wall lengths are to be submitted. The Merriott Radiators Technical Sales Department will then make the necessary modifications to the lengths to facilitate spacers and internal/external corners (see page 61 for further details).

How to select sizes not shown in this manual

Please contact the Merriott Radiators sales office or your Regional Sales Manager.

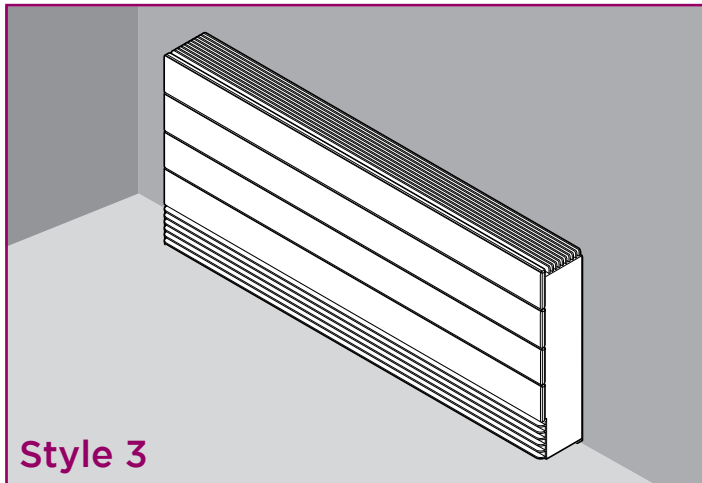
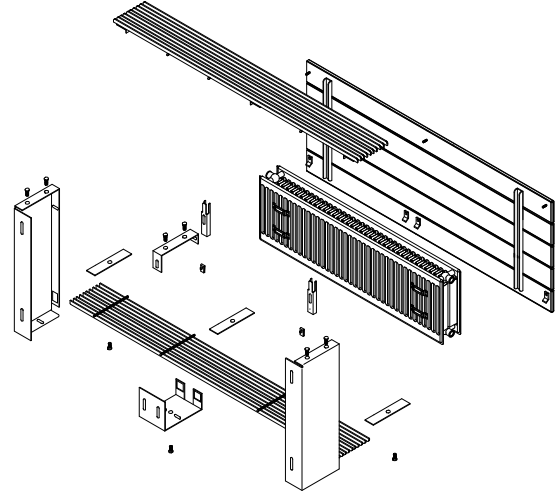
Low Surface Temperature System Overview

LST Case styles



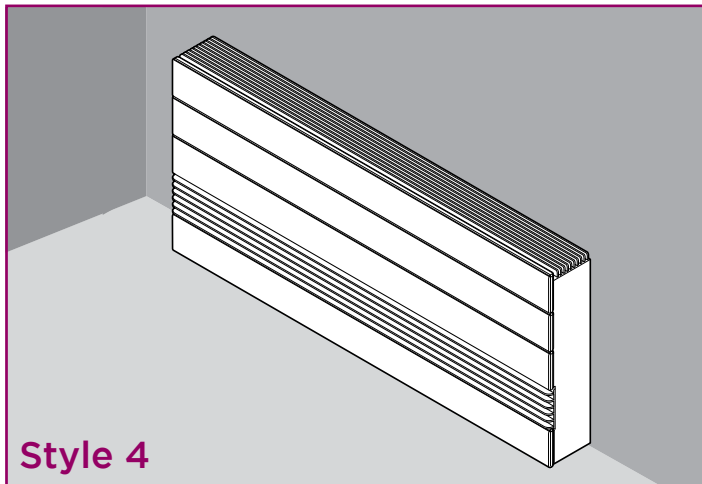
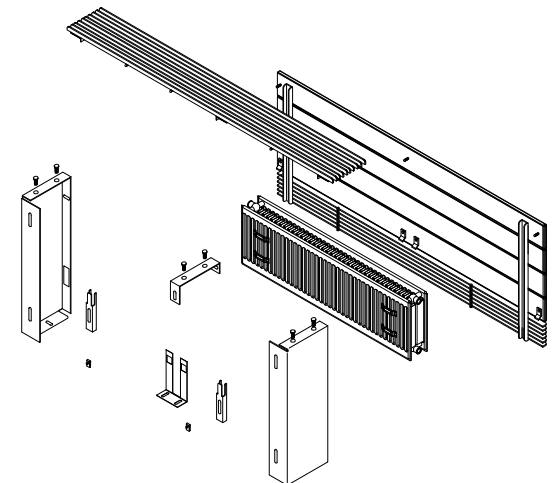
- Top grille
- Bottom grille

Suitable for wall-mounted applications above skirting. eg. Wet floor areas, WC, etc. with pipes fed from rear or side.



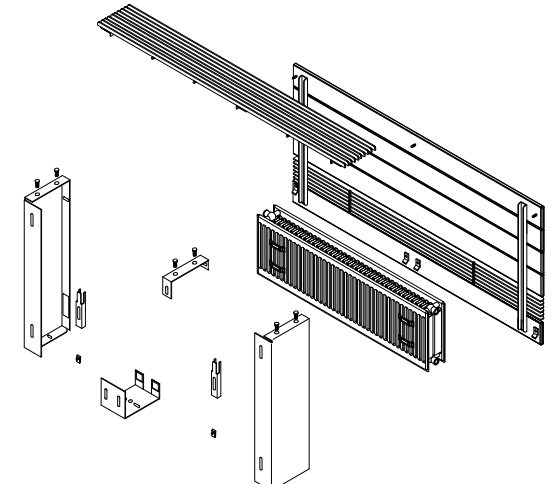
- Forward-facing bottom grille
- Top grille

Wall-mounted. Suitable for sitting on pipe boxing only with pipes fed up from below.



- Forward-facing bottom grille
- Top grille

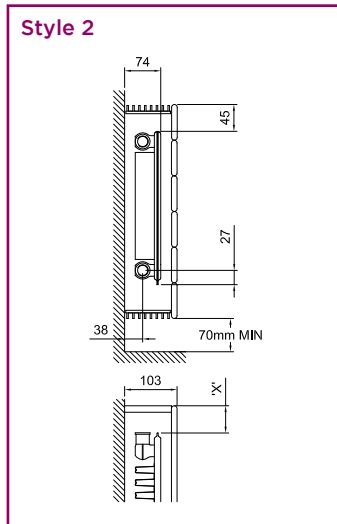
Wall-mounted to/at floor level. Suitable for sitting on floor or pipe boxing with pipes fed from side, rear or below.



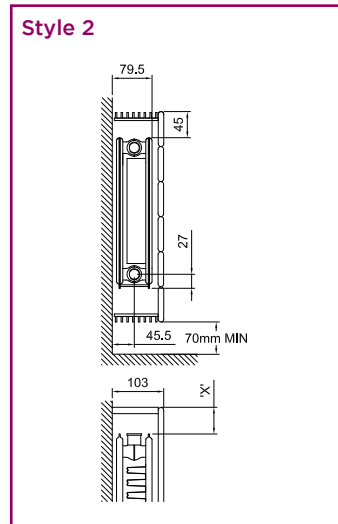
Low Surface Temperature System Overview

Styles: LC2 - LC4 with 'RT' Series Emitters

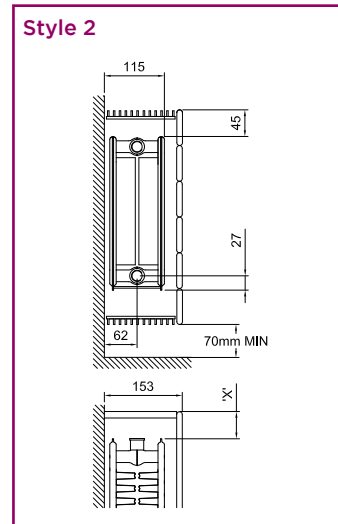
RT11 Emitter



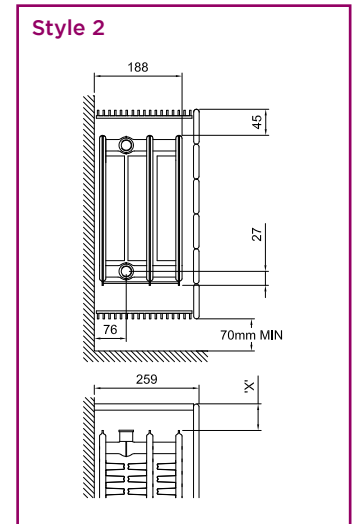
RT21 Emitter



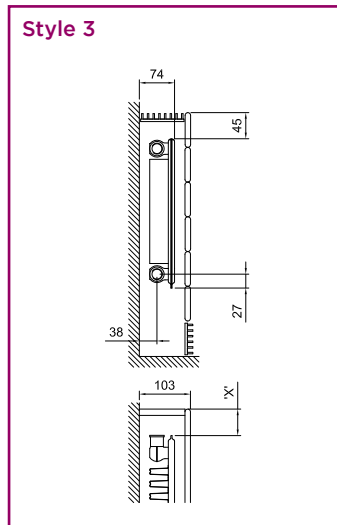
RT22 Emitter



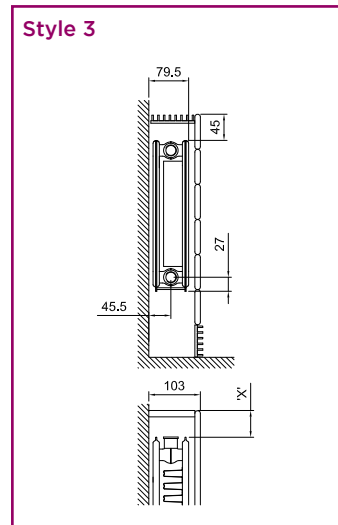
RT33 Emitter



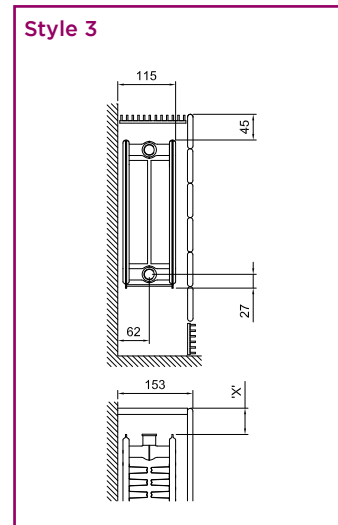
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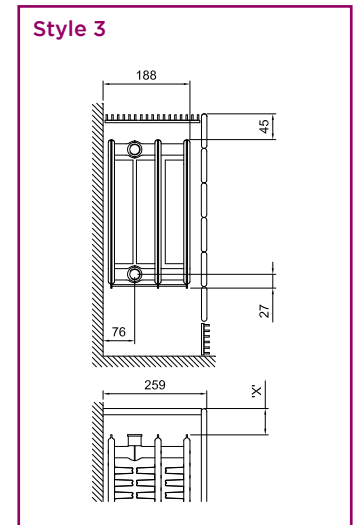
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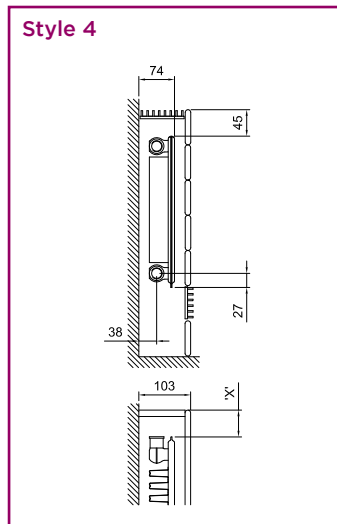
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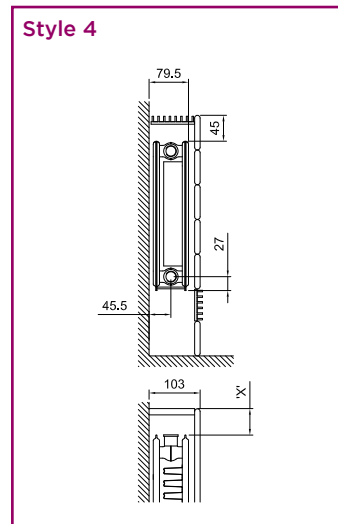
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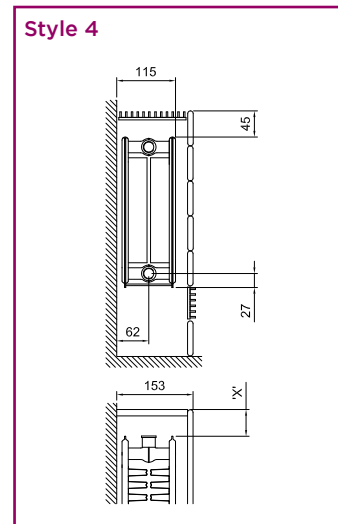
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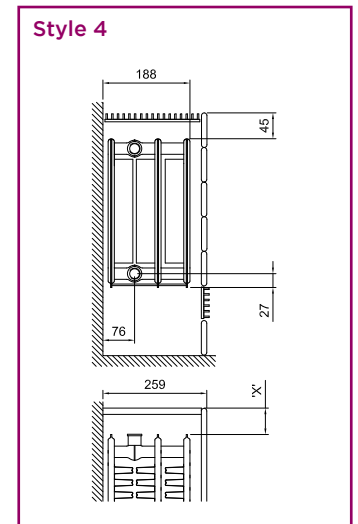
Style 4



Style 4

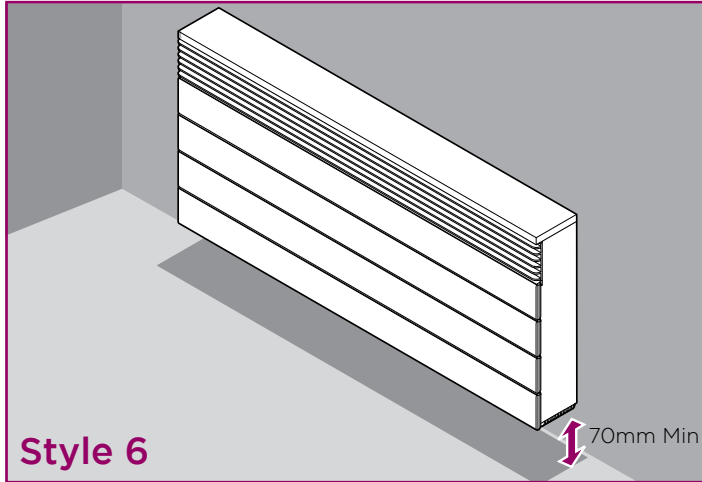


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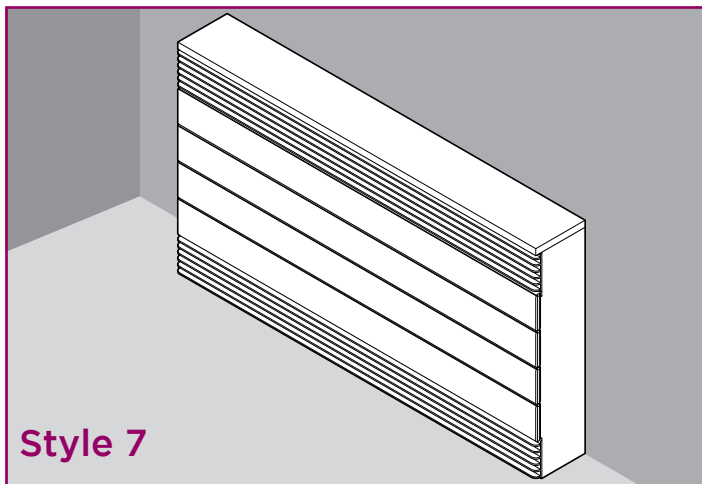
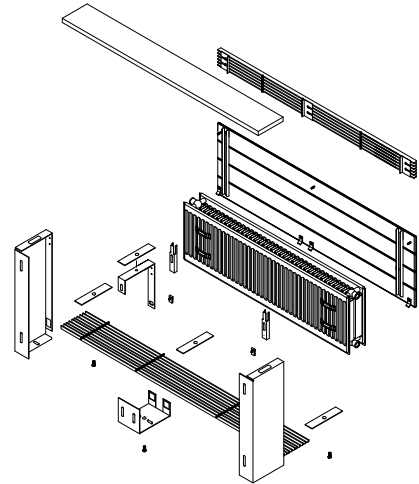
Low Surface Temperature System Overview

LST Case styles



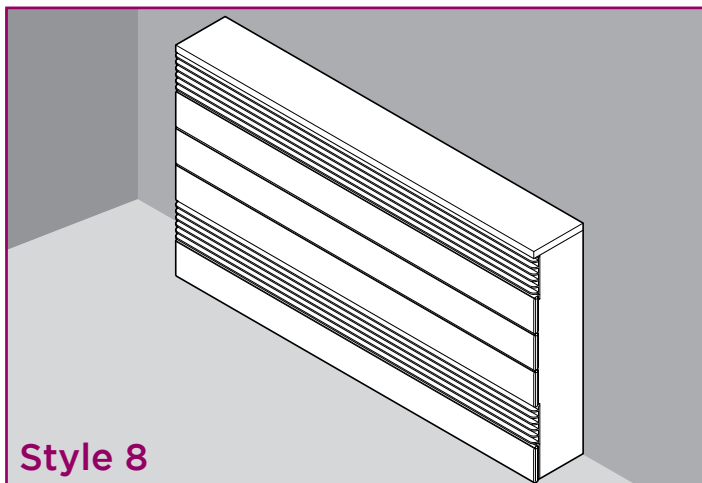
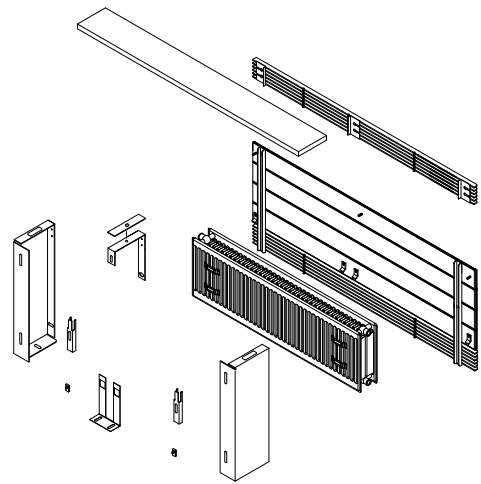
- Forward-facing top grille with solid top
- Bottom grille

Suitable for wall-mounted applications above skirting. eg. Wet floor areas, WC, etc. with pipes fed from rear or side.



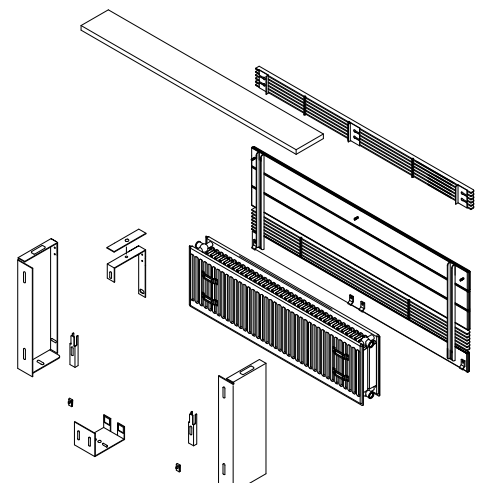
- Forward-facing bottom grille
- Forward-facing top grille with solid top

Wall-mounted. Suitable for sitting on pipe boxing only with pipes fed from below.



- Forward-facing bottom grille
- Forward-facing top grille with solid top

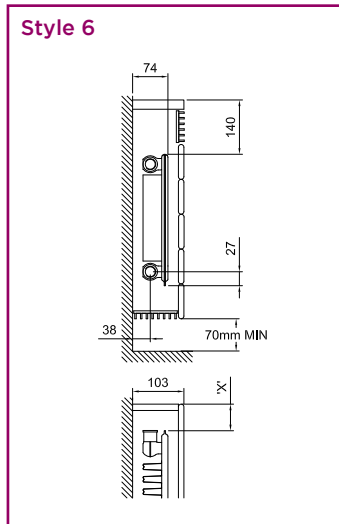
Wall-mounted to/at floor level. Suitable for sitting on floor or pipe boxing with pipes fed from side, rear or below.



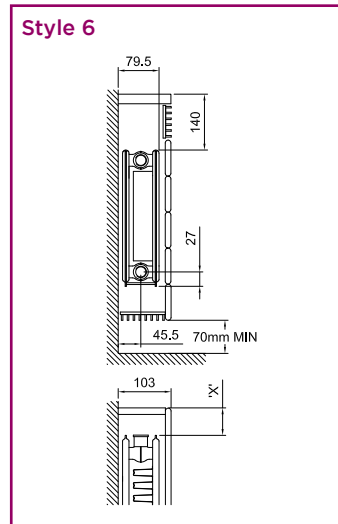
Low Surface Temperature System Overview

Styles: LC6 - LC8 with 'RT' Series Emitters

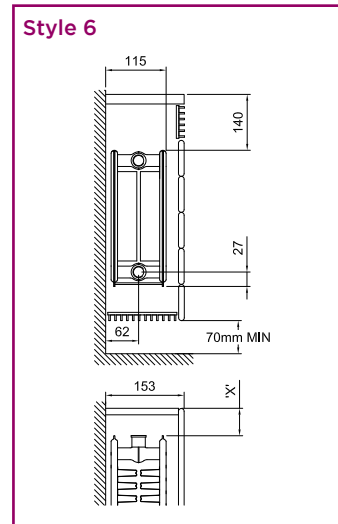
RT11 Emitter



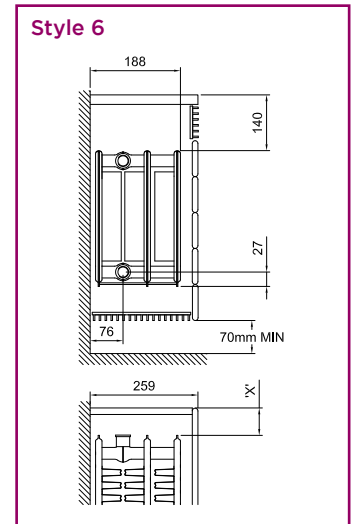
RT21 Emitter



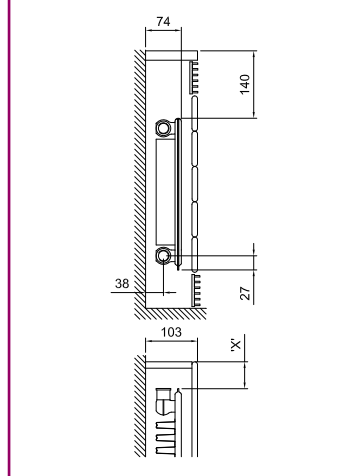
RT22 Emitter



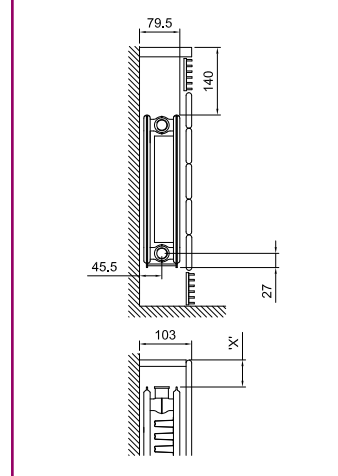
RT33 Emitter



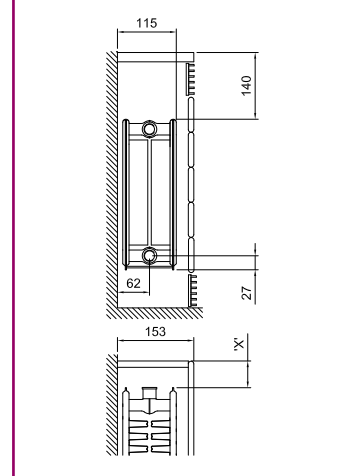
Style 7



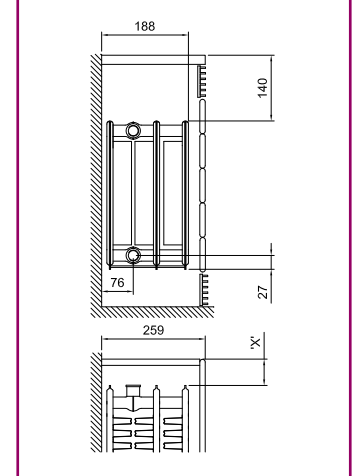
Style 7



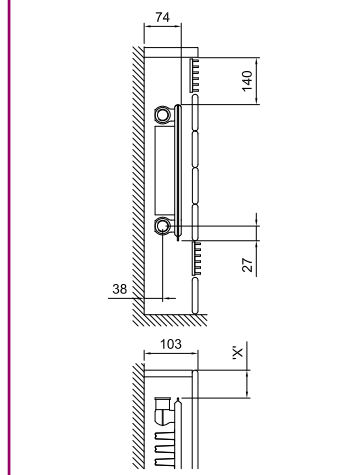
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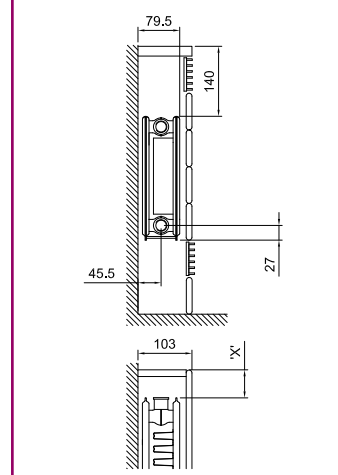
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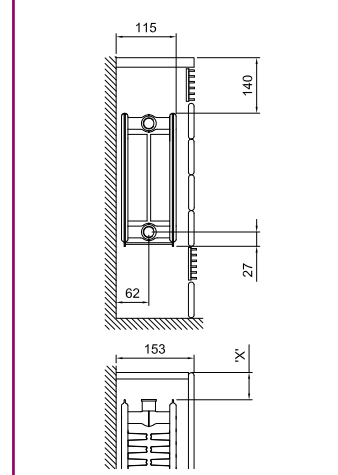
Style 8



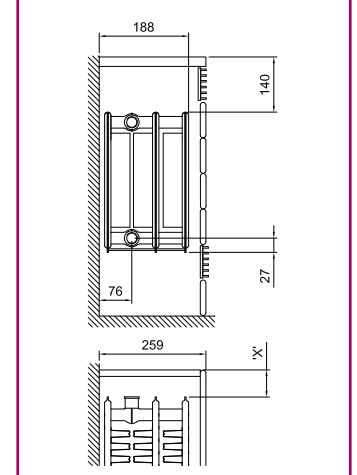
Style 8



Style 8

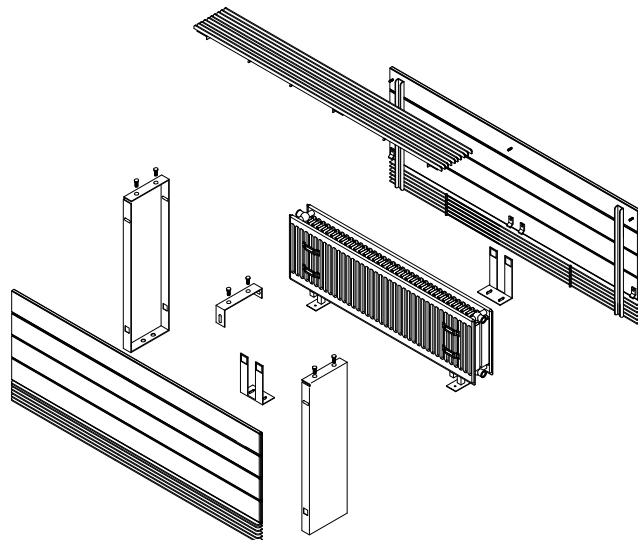
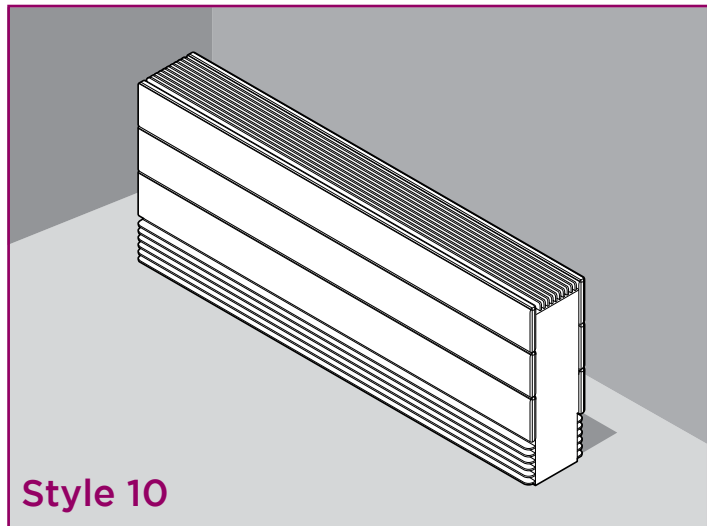


Style 8



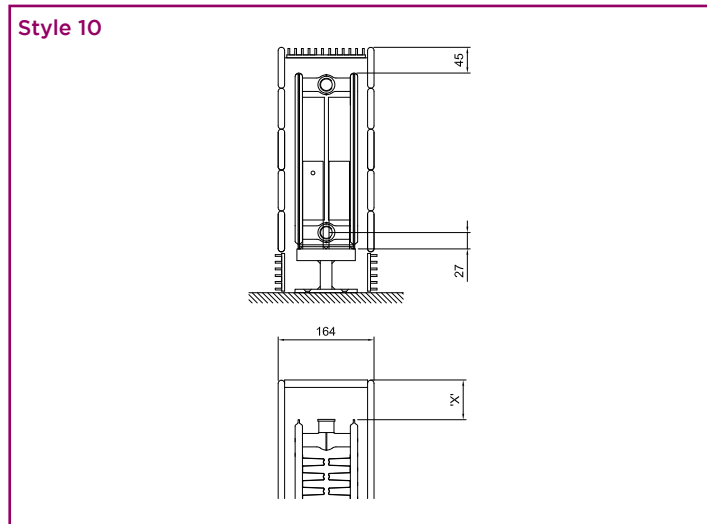
Low Surface Temperature System Overview

Style: LC10 with 'RT' Series Emitters

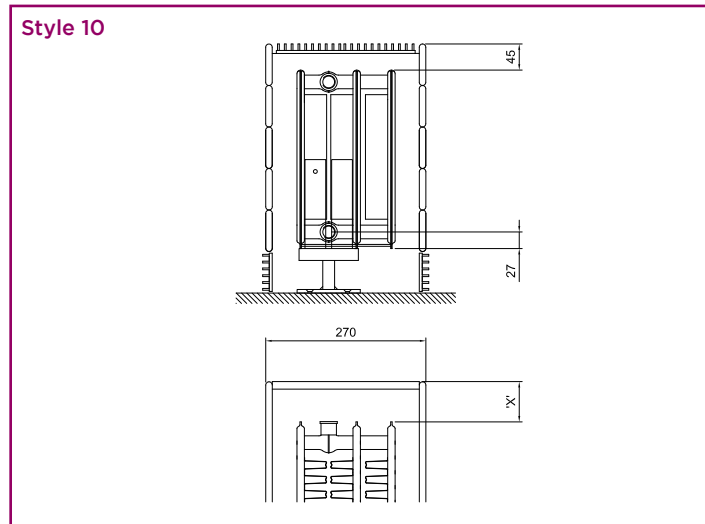


- Double-sided (free standing) • Bottom front & back grilles • Top grille
- Suitable for floor-mounted applications with pipes fed from below.

RT22 Emitter

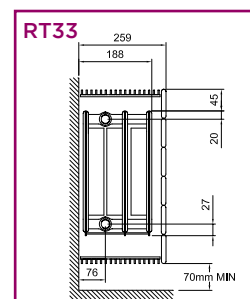
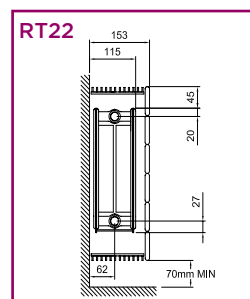
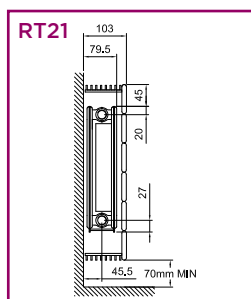
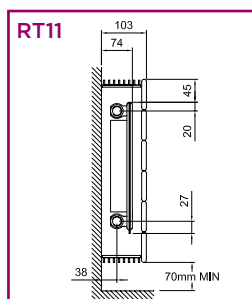


RT33 Emitter



Style 2 - Full Range Summary

Heat Emissions: Watts per metre of emitter



Emitter Type:	
Case Depth:	
Case Height (mm)	Maximum Emitter Height (mm)
490	300
560	300
560	400
630	300
630	400
630	500
700	300
700	400
700	500
770	300
770	400
770	500
770	600
840	300
840	400
840	500
840	600
840	700

RT11 103mm	
ΔT50	ΔT56
522	604
522	604
678	786
522	604
678	786
823	954
522	604
678	786
823	954
522	604
678	786
823	954
958	1110
522	604
678	786
823	954
958	1110
1084	1256

RT21 103mm	
ΔT50	ΔT56
783	908
783	908
987	1144
783	908
987	1144
1175	1361
783	908
987	1144
1175	1361
783	908
987	1144
1175	1361
1351	1565
783	908
987	1144
1175	1361
1351	1565
1514	1755

RT22 153mm	
ΔT50	ΔT56
1031	1195
1031	1195
1301	1507
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1797	2083
1031	1195
1301	1507
1555	1802
1797	2083
2028	2349

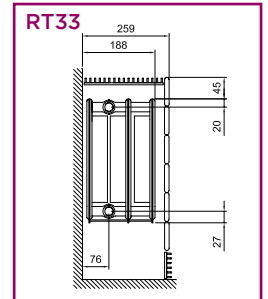
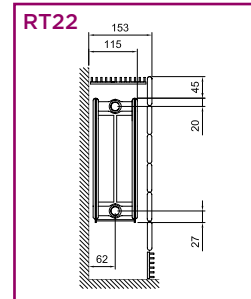
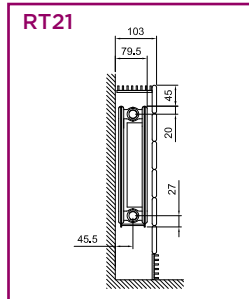
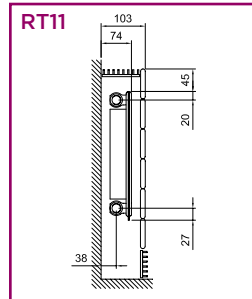
RT33 259mm	
ΔT50	ΔT56
1512	1752
1512	1752
1930	2237
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
2643	3062
1512	1752
1930	2237
2307	2673
2643	3062
2942	3408

*Note: It is recommended that the case length is 300mm longer than emitter length. However, this will vary depending on the valve option selected. For LST over 3000mm long a joiner bracket is required – for further information please contact Merriott Radiators.

Emitter Type:	Height (mm)	Available Lengths (mm)															
		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
RT11	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT21	300	400	500	600	700	900	1000	1100	1200	1400	1600	-	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
RT22	300	400	500	600	800	1000	1200	1400	1600	1800	2000	-	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT33	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT33	700	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	700	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-

Style 3 - Full Range Summary

Heat Emissions: Watts per metre of emitter



Emitter Type:	
Case Depth:	
Case Height (mm)	Maximum Emitter Height (mm)
490	300
560	300
560	400
630	300
630	400
630	500
700	300
700	400
700	500
770	300
770	400
770	500
770	600
840	300
840	400
840	500
840	600
840	700

RT11 103mm	
ΔT50	ΔT56
522	604
522	604
678	786
522	604
678	786
823	954
522	604
678	786
823	954
522	604
678	786
823	954
958	1110
522	604
678	786
823	954
958	1110
1084	1256

RT21 103mm	
ΔT50	ΔT56
783	908
783	908
987	1144
783	908
987	1144
1175	1361
783	908
987	1144
1175	1361
783	908
987	1144
1175	1361
1351	1565
783	908
987	1144
1175	1361
1351	1565
1514	1755

RT22 153mm	
ΔT50	ΔT56
1031	1195
1031	1195
1301	1507
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1797	2083
1031	1195
1301	1507
1555	1802
1797	2083
2028	2349

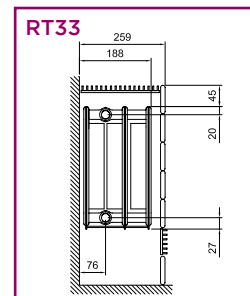
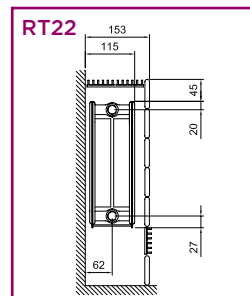
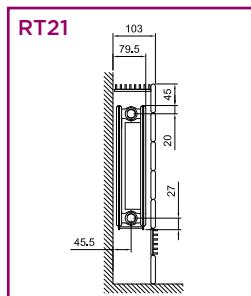
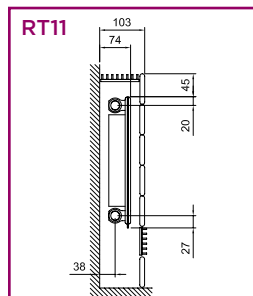
RT33 259mm	
ΔT50	ΔT56
1512	1752
1512	1752
1930	2237
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
2643	3062
1512	1752
1930	2237
2307	2673
2643	3062
2942	3408

*Note: It is recommended that the case length is 300mm longer than emitter length. However, this will vary depending on the valve option selected. For LST over 3000mm long a joiner bracket is required - for further information please contact Merriott Radiators.

Emitter Type:	Height (mm)	Available Lengths (mm)															
		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
RT11	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT21	300	400	500	600	700	900	1000	1100	1200	1400	1600	-	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
RT22	300	400	500	600	800	1000	1200	1400	1600	1800	2000	-	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT33	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT33	700	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	700	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-

Style 4 - Full Range Summary

Heat Emissions: Watts per metre of emitter



Emitter Type:	
Case Depth:	
Case Height (mm)	Maximum Emitter Height (mm)
490	300
560	300
630	300
630	400
700	300
700	400
700	500
770	300
770	400
770	500
840	300
840	400
840	500
840	600

RT11 103mm	
ΔT50	ΔT56
522	604
522	604
522	604
678	786
522	604
678	786
823	954
522	604
678	786
823	954
522	604
678	786
823	954
958	1110

RT21 103mm	
ΔT50	ΔT56
783	908
783	908
783	908
987	1144
783	908
987	1144
1175	1361
783	908
987	1144
1175	1361
783	908
987	1144
1175	1361
1351	1565

RT22 153mm	
ΔT50	ΔT56
1031	1195
1031	1195
1031	1195
1301	1507
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1797	2083

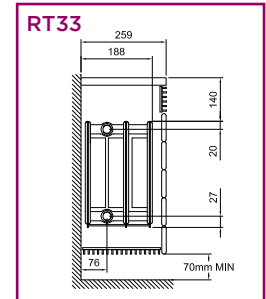
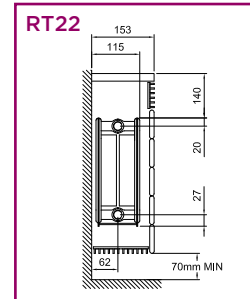
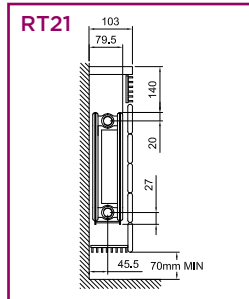
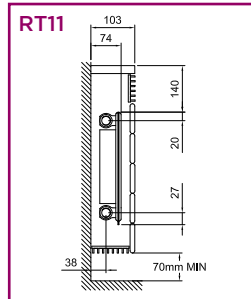
RT33 259mm	
ΔT50	ΔT56
1512	1752
1512	1752
1512	1752
1930	2237
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
2643	3062

*Note: It is recommended that the case length is 300mm longer than emitter length. However, this will vary depending on the valve option selected. For LST over 3000mm long a joiner bracket is required - for further information please contact Merriott Radiators.

Emitter Type:	Height (mm)	Available Lengths (mm)															
		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
RT11	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT21	300	400	500	600	700	900	1000	1100	1200	1400	1600	-	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
RT22	300	400	500	600	800	1000	1200	1400	1600	1800	2000	-	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT33	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT33	700	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-

Style 6 - Full Range Summary

Heat Emissions: Watts per metre of emitter



Emitter Type:	
Case Depth:	
Case Height (mm)	Maximum Emitter Height (mm)
515	300
585	300
585	400
655	300
655	400
725	500
795	300
795	400
795	500
865	300
865	400
865	500
865	600
935	300
935	400
935	500
935	600
935	700

RT11 103mm	
ΔT50	ΔT56
522	604
522	604
678	786
522	604
678	786
823	954
522	604
678	786
823	954
522	604
678	786
823	954
958	1110
522	604
678	786
823	954
958	1110
1084	1256

RT21 103mm	
ΔT50	ΔT56
783	908
783	908
987	1144
783	908
987	1144
1175	1361
783	908
987	1144
1175	1361
783	908
987	1144
1175	1361
1351	1565
783	908
987	1144
1175	1361
1351	1565
1514	1755

RT22 153mm	
ΔT50	ΔT56
1031	1195
1031	1195
1301	1507
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1797	2083
1031	1195
1301	1507
1555	1802
1797	2083
2028	2349

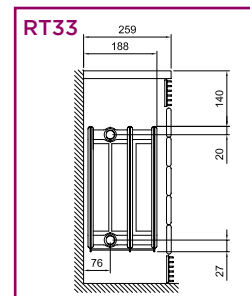
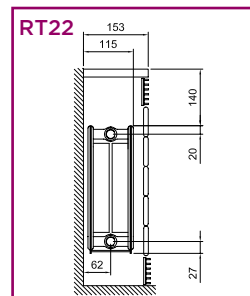
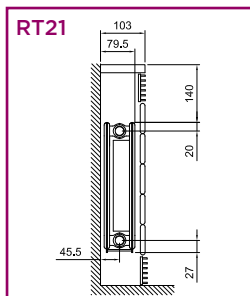
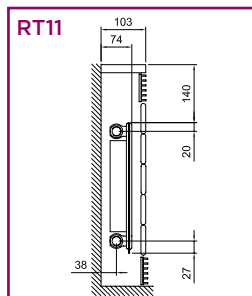
RT33 259mm	
ΔT50	ΔT56
1512	1752
1512	1752
1930	2237
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
2643	3062
1512	1752
1930	2237
2307	2673
2643	3062
2942	3408

*Note: It is recommended that the case length is 300mm longer than emitter length. However, this will vary depending on the valve option selected. For LST over 3000mm long a joiner bracket is required – for further information please contact Merriott Radiators.

Emitter Type:	Height (mm)	Available Lengths (mm)															
		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
RT11	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT21	300	400	500	600	700	900	1000	1100	1200	1400	1600	-	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
RT22	300	400	500	600	800	1000	1200	1400	1600	1800	2000	-	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT33	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-

Style 7 - Full Range Summary

Heat Emissions: Watts per metre of emitter



Emitter Type:	
Case Depth:	
Case Height (mm)	Maximum Emitter Height (mm)
585	300
655	300
655	400
725	300
725	400
725	500
795	300
795	400
795	500
865	300
865	400
865	500
865	600
935	300
935	400
935	500
935	600
935	700
1005	300
1005	400
1005	500
1005	600
1005	700

RT11 103mm	
ΔT50	ΔT56
522	604
522	604
678	786
522	604
678	786
823	954
823	954
522	604
678	786
823	954
522	604
678	786
823	954
958	1110
522	604
678	786
823	954
958	1110
1084	1256
522	604
678	786
823	954
958	1110
1084	1256

RT21 103mm	
ΔT50	ΔT56
783	908
783	908
987	1144
783	908
987	1144
1175	1361
1175	1361
783	908
987	1144
1175	1361
783	908
987	1144
1175	1361
1351	1565
783	908
987	1144
1175	1361
1351	1565
1514	1755
783	908
987	1144
1175	1361
1351	1565
1514	1755

RT22 153mm	
ΔT50	ΔT56
1031	1195
1031	1195
1301	1507
1031	1195
1301	1507
1555	1802
1555	1802
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1797	2083
1031	1195
1301	1507
1555	1802
1797	2083
2028	2349
1031	1195
1301	1507
1555	1802
1797	2083
2028	2349

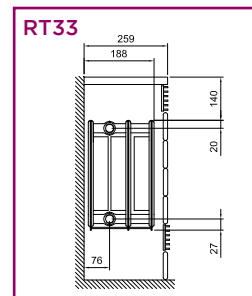
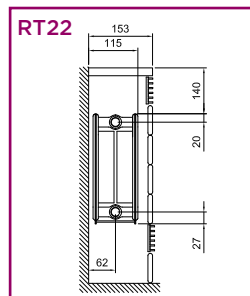
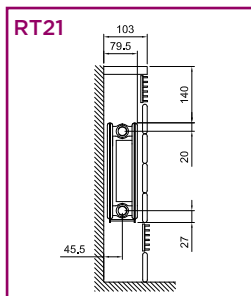
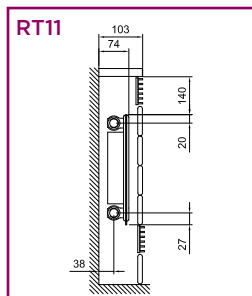
RT33 259mm	
ΔT50	ΔT56
1512	1752
1512	1752
1930	2237
1512	1752
1930	2237
2307	2673
2307	2673
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
2643	3062
1512	1752
1930	2237
2307	2673
2643	3062
2942	3408
1512	1752
1930	2237
2307	2673
2643	3062
2942	3408

*Note: It is recommended that the case length is 300mm longer than emitter length. However, this will vary depending on the valve option selected. For LST over 3000mm long a joiner bracket is required - for further information please contact Merriott Radiators.

Emitter Type:	Height (mm)	Available Lengths (mm)															
		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
RT11	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT21	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
RT22	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT33	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-

Style 8 - Full Range Summary

Heat Emissions: Watts per metre of emitter



Emitter Type:	
Case Depth:	
Case Height (mm)	Maximum Emitter Height (mm)
585	300
655	300
725	300
725	400
795	300
795	400
795	500
865	300
865	400
865	500
935	300
935	400
935	500
935	600
1005	300
1005	400
1005	500
1005	600
1005	700

RT11 103mm	
ΔT50	ΔT56
522	604
522	604
522	604
678	786
522	604
678	786
823	954
522	604
678	786
823	954
522	604
678	786
823	954
958	1110
522	604
678	786
823	954
958	1110
1084	1256

RT21 103mm	
ΔT50	ΔT56
783	908
783	908
783	908
987	1144
783	908
987	1144
1175	1361
783	908
987	1144
1175	1361
1351	1565
783	908
987	1144
1175	1361
1351	1565
1514	1755

RT22 153mm	
ΔT50	ΔT56
1031	1195
1031	1195
1031	1195
1301	1507
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1031	1195
1301	1507
1555	1802
1797	2083
1031	1195
1301	1507
1555	1802
1797	2083
2028	2349

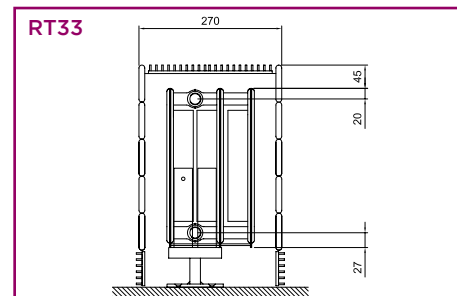
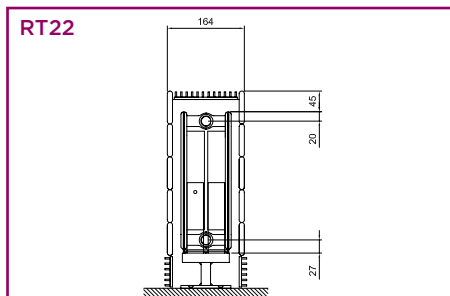
RT33 259mm	
ΔT50	ΔT56
1512	1752
1512	1752
1512	1752
1930	2237
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
1512	1752
1930	2237
2307	2673
2643	3062
1512	1752
1930	2237
2307	2673
2643	3062
2942	3408

*Note: It is recommended that the case length is 300mm longer than emitter length. However, this will vary depending on the valve option selected. For LST over 3000mm long a joiner bracket is required - for further information please contact Merriott Radiators.

Emitter Type:	Height (mm)	Available Lengths (mm)															
		400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
RT11	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT21	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	-	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
RT22	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT33	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
RT33	700	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	700	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-

Style 10 - Full Range Summary

Heat Emissions: Watts per metre of emitter



Emitter Type:	
Case Depth:	
Case Height (mm)	Maximum Emitter Height (mm)
420	300
490	300

RT22 153mm	
$\Delta T50$	$\Delta T56$
1031	1195
1031	1195

RT33 259mm	
$\Delta T50$	$\Delta T56$
1512	1752
1512	1752

*Note: Style: 10 LST's are quoted to be 153mm & 259mm deep. However, the actual depth is 164mm & 270mm; this is due to the introduction of the rear panel. It is recommended that the case length is 300mm longer than emitter length. However, this will vary depending on the valve option selected. For LST over 3000mm long a joiner bracket is required - for further information please contact Merriott Radiators.

Emitter Type:	Height (mm)	Available Lengths (mm)														
		400	500	600	700	800	1000	1200	1400	1600	1800	2000	-	-	-	-
RT22	300	400	500	600	700	800	1000	1200	1400	1600	1800	2000	-	-	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
	700	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
RT33	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	-	-
	400	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000	-
	500	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
	600	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
	700	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000

Technical Data

Water Contents & Dry Weights

To calculate, take the water content or dry weight per metre, divide by 1,000 and multiply it by the length of the radiator shown in the catalogue.

Round Top Radiators

Merriott Round Top - Radiator Water Content						
Height	300mm	400mm	500mm	600mm	700mm	900mm
<i>Litres/Metre</i>						
RT11	1.81	2.24	2.67	3.10	3.53	4.40
RT21	3.60	4.47	5.33	6.20	7.07	8.80
RT22	3.50	4.37	5.23	6.10	7.00	8.80
RT33	5.40	6.60	7.80	9.00	10.38	13.14

Merriott Round Top - Radiator Dry Weight						
Height	300mm	400mm	500mm	600mm	700mm	900mm
<i>Kgs/Metre</i>						
RT11	8.53	11.44	14.35	17.26	20.16	25.98
RT21	14.33	19.04	23.75	28.47	33.18	42.61
RT22	16.92	22.73	28.55	34.36	40.18	51.81
RT33	26.80	36.53	46.27	56.00	57.10	59.30

Features and Options

Wall-to-Wall System

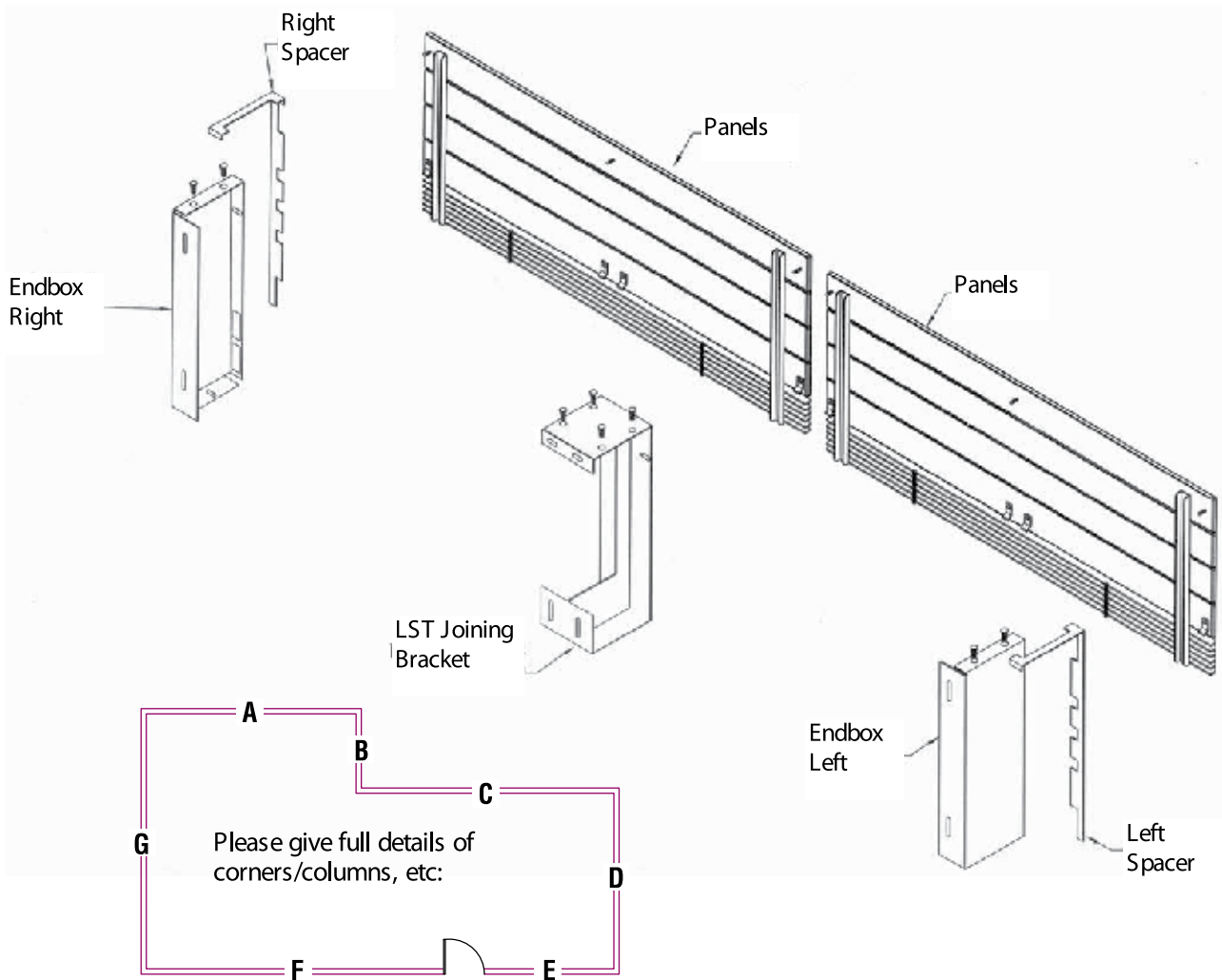
Ordering & Installation Instructions

When ordering Merriott Radiators Wall-to-Wall LSTs, simply specify the full wall length and indicate what LST style you require to be used.

Merriott Radiators technical department will make the appropriate alterations for the panel length and will supply all required End-Spacers and Joiner brackets (see diagram below).

How to measure wall to wall

The diagram below shows an isometric view of a typical Merriott Radiators LST in a wall-to-wall application with left hand Spacer, Joiner Bracket and right hand Spacer. Special corner pieces can also be supplied if required.



Merriott Radiators will be pleased to offer you full technical back-up.

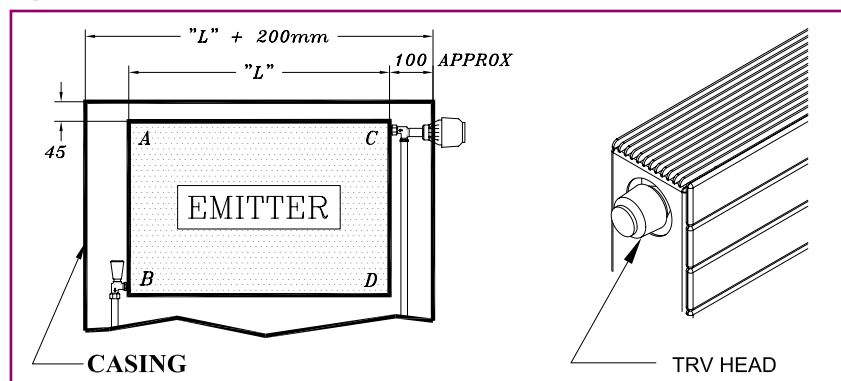
For specifying your wall-to-wall LSTs, your regional manager is available by appointment and full technical information necessary for the specification is available from Merriott Radiators.

Valve Option Features

Merriott Radiators has a number of Thermostatic Radiator Valve (TRV) options and features available. For each valve option the valve make and model is required, the handings for the TRVs (left or right side of the LST casing) may also be required depending on the valve option selected. There are additional features such as access-doors (Cat-Flaps) and Hinged Top Grilles available, these may help accomplish your job requirements. If however, you are unsure as to which additional feature might suit your required LST application. Please contact Merriott Radiators.

When selecting valve options T1 or T2 please note TRV knock-outs are supplied on both sides of the casing as emitters are supplied with four connections unless otherwise specified, thus eliminating the need for handings. Only the make and model of the TRV is required.

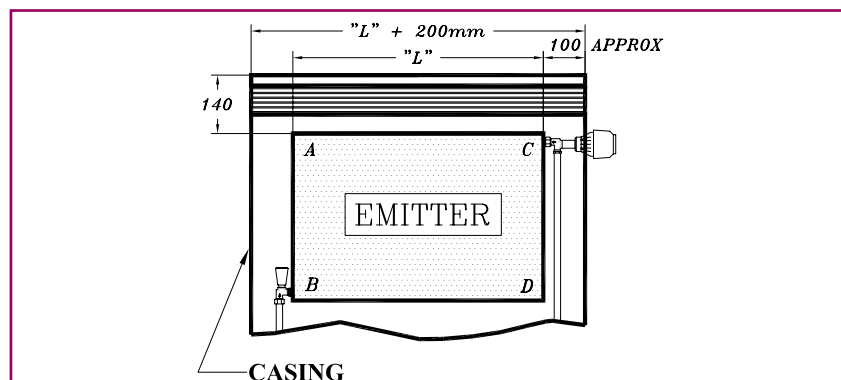
Option: T1



Option: T1

Is available on styles 2, 3, 4 & 10
The TRV head protrudes through a knock-out or punched hole (Cutout) in the endbox. Radiator connected TBOE, left or right handings. (All TRVs by others)

Option: T2

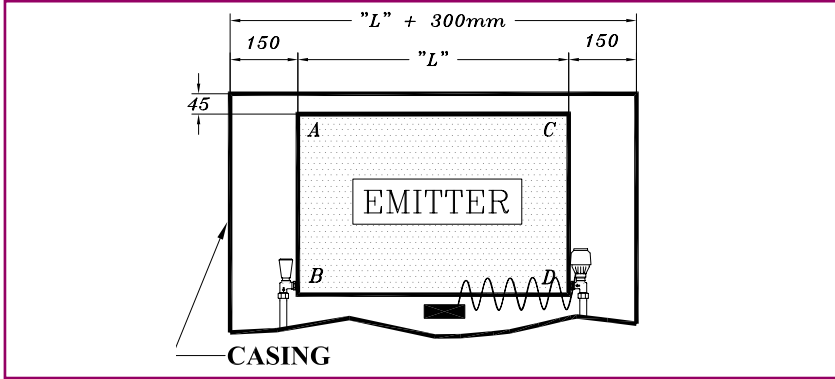


Option: T2

Is available on styles 6, 7 & 8
The TRV head protrudes through a knock-out or punched hole (cutout) in the endbox. Radiator connected TBOE, left or right handings. (All TRVs by others)

Valve Option Features

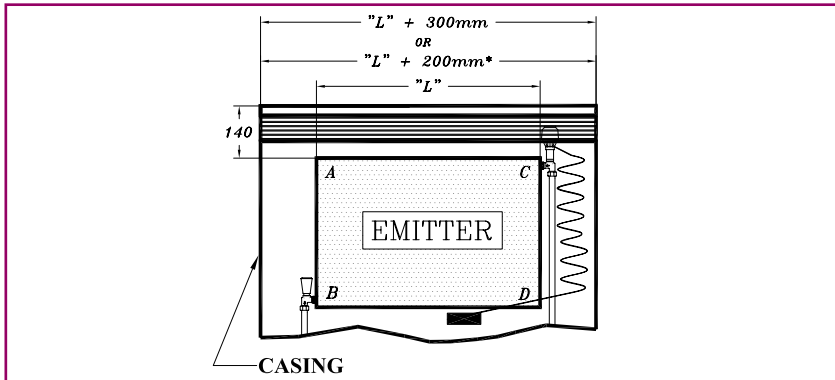
Option: T3



Option: T3

Is available on styles 2, 3, 4 & 10
 Remote capillary sensor TRV. Access via top grille removal, hinged top grille or cat-flap in side plate
 Radiator connected TBOE, left or right handings.
 (All TRVs by others)

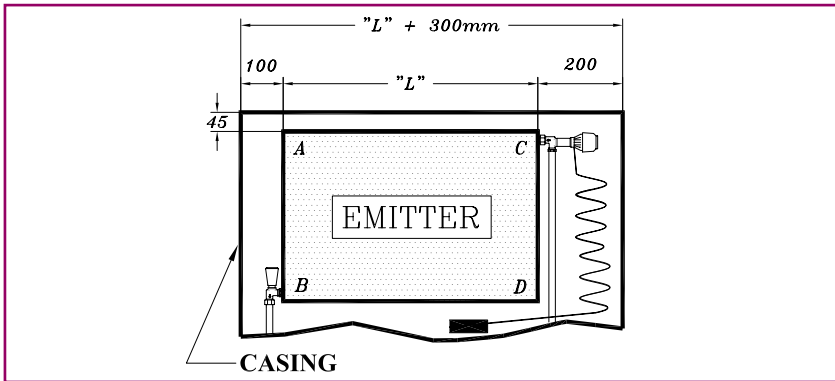
Option: T4



Option: T4

Is available on styles 6, 7 & 8
 Remote capillary sensor TRV. Access via top front grille removal or via cat-flap in side plate.
 Radiator connected TBOE, left or right handings.
 (All TRVs by others)

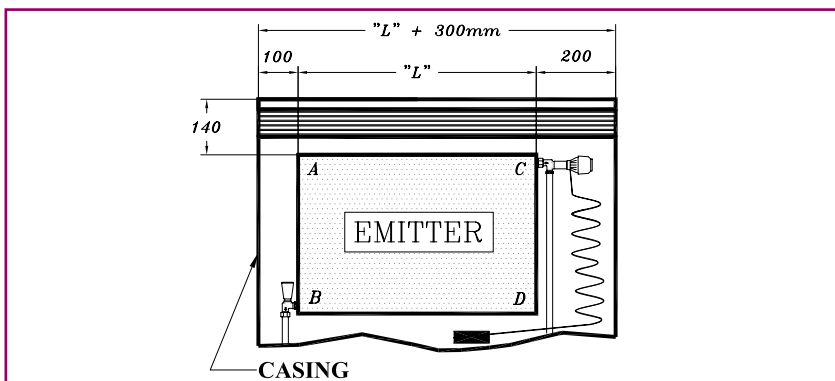
Option: T5



Option: T5

Is available on styles 2, 3, 4 & 10
 Remote capillary sensor TRV. Access via hinged top grille or cat-flap in side plate.
 Radiator connected TBOE, left or right handings.
 (All TRVs by others)

Option: T6

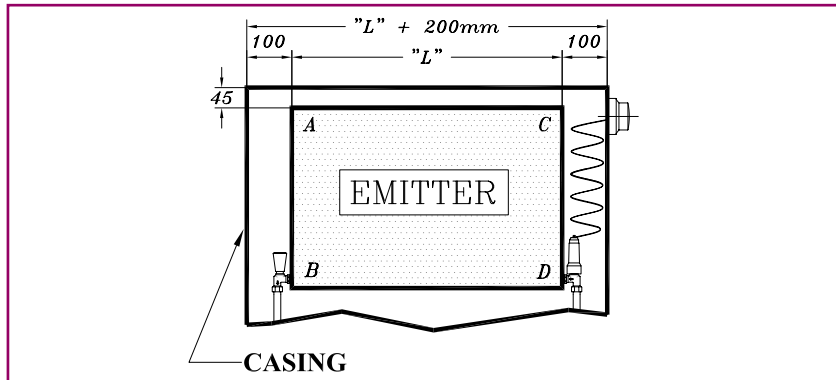


Option: T6

Is available on styles 6, 7 & 8
 Remote capillary sensor TRV. Access via top front grille removal or cat-flap in side plate.
 Radiator connected TBOE, left or right handings.
 (All TRVs by others)

Valve Option Features

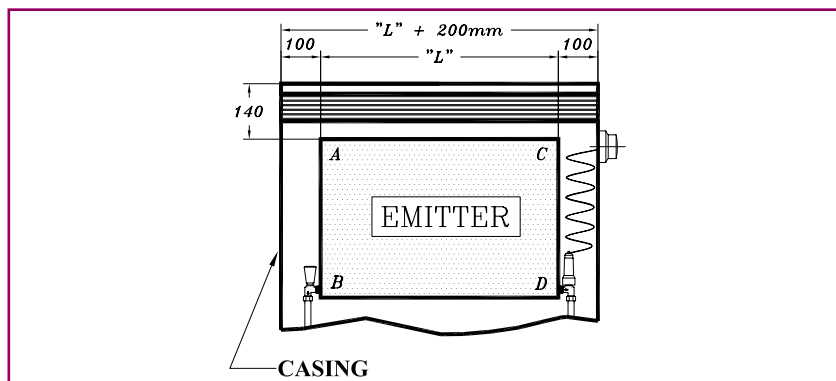
Option: T7



Option: T7

Is available on styles 2, 3, 4 & 10
 Remote capillary TRV sensor/adjuster is fixed to left or right of LST casing.
 Radiator connected BOE.
 (All TRVs by others)

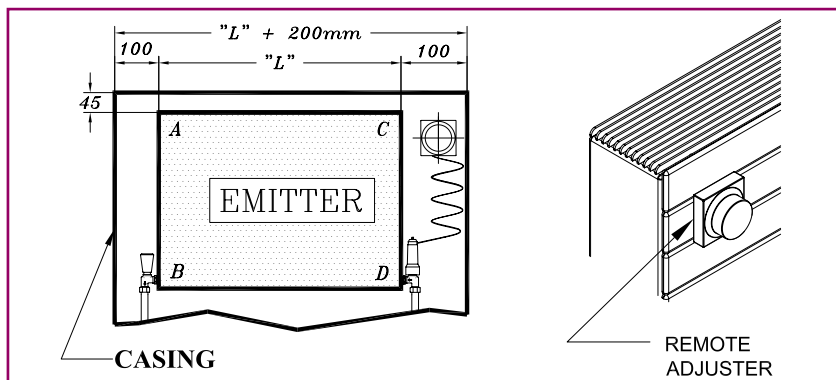
Option: T8



Option: T8

Is available on styles 6, 7 & 8
 Remote capillary TRV sensor/adjuster is fixed to left or right of LST casing.
 Radiator connected BOE.
 (All TRVs by others)

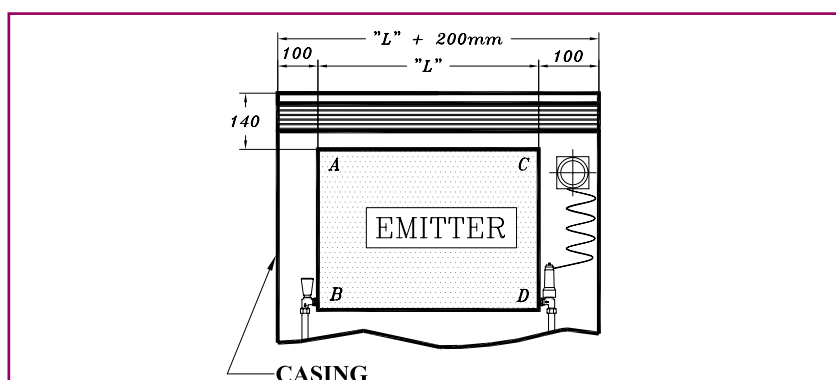
Option: T9



Option: T9

Is available on styles 2, 3, 4 & 10
 Remote capillary TRV sensor/adjuster is fixed to the front of the LST casing.
 Radiator connected TBOE, left or right handings.
 (All TRVs by others)

Option: T10



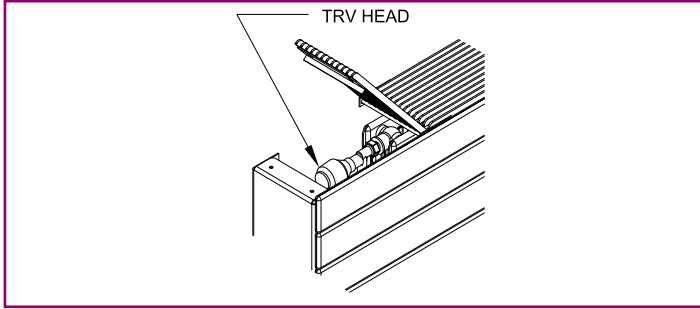
Option: T10

Is available on styles 6, 7 & 8
 Remote/adjuster capillary TRV, fixed to the front of the LST casing.
 Radiator connected TBOE, left or right handings.
 (All TRVs by others)

Valve Option Features

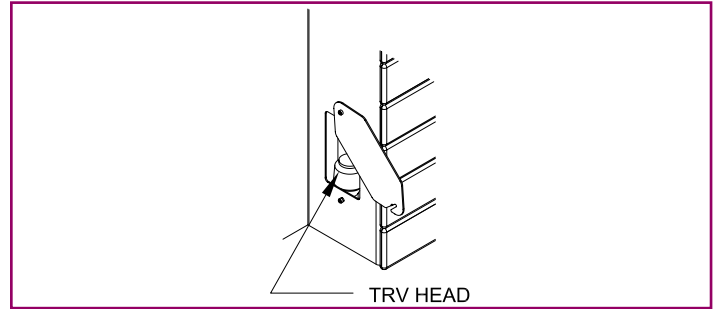
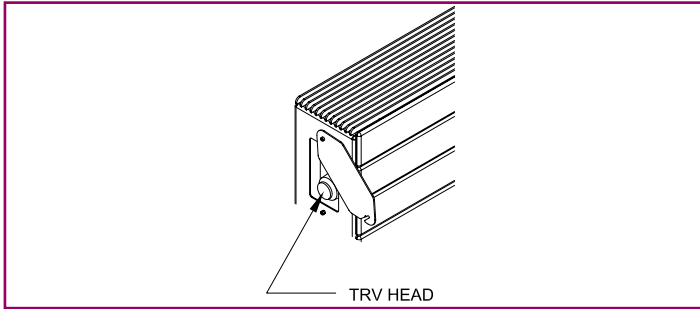
Additional features

Hinged Top Grille:



The hinged top grille is available on styles 2, 3, 4 & 10
 With valve option: T3 & T5
 This provides ideal access to the TRV head which is enclosed within the LST casing

Access-Door (Cat-Flap)

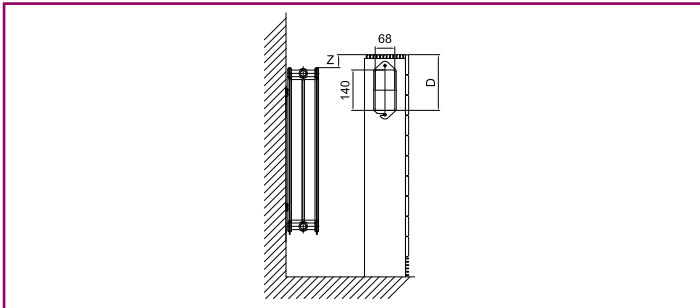


The access-door is available on all styles
 This is a useful option when valve options T3, T4, T5 or T6 have been selected.
 The Access-Door (Cat-Flap) is not lockable.

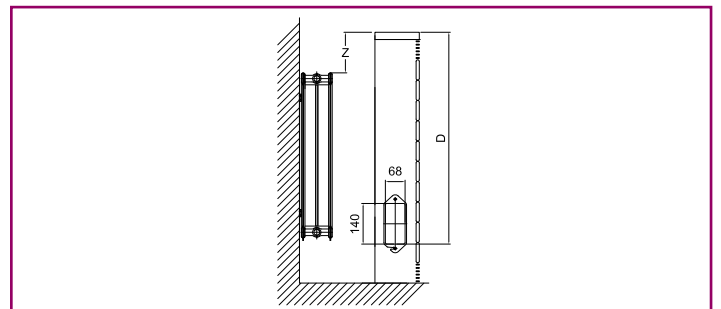
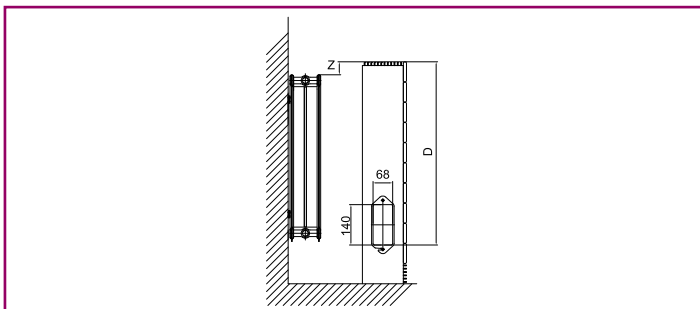
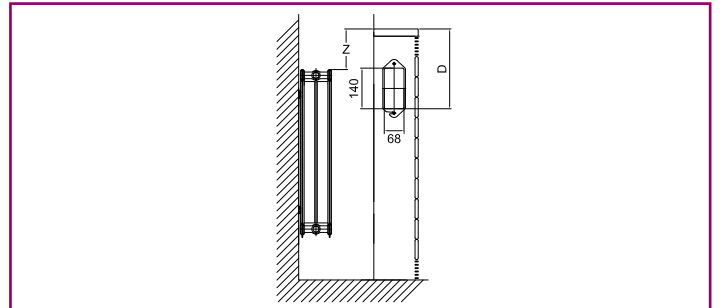
Access-Door Locations

Dimension	Styles: 2, 3, 4 & 10	Styles: 6, 7 & 8
Clearance: Z =	45mm	140mm
Access-Door @ Top: D =	190mm	275mm
Access-Door @ Bottom: D =	Emitter height+25mm	Emitter height+25mm

Access-Door @ Top Styles: 2, 3, 4 & 10

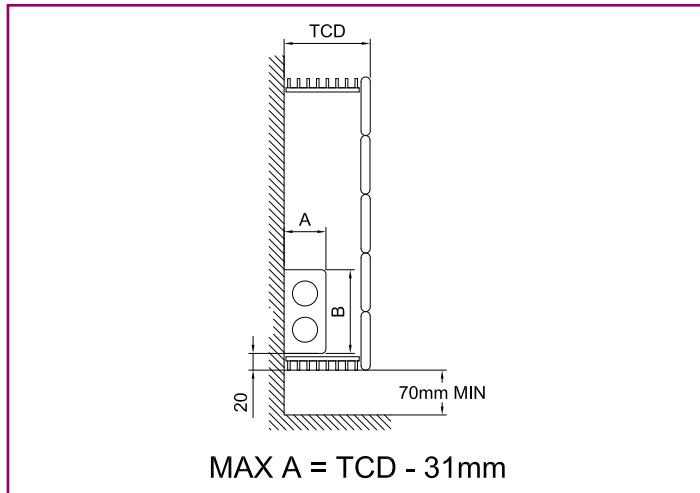


Access-Door @ Top Styles: 6, 7 & 8



Pipework Cutout Options

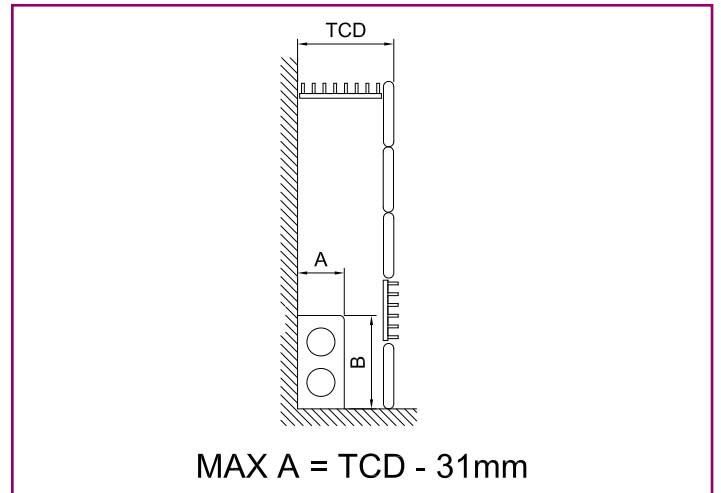
There is "BOX" pipework cutouts available. See below for details.



Box Pipework Cutout

For Styles 2 & 6

"TCD" = Total Case Depth (mm)



Box Pipework Cutout

For Styles 3, 4, 7 & 8

"TCD" = Total Case Depth (mm)

Correction Factors - 'RT' Series Emitters

Emissions at two separate Delta T°Cs ($\Delta T^\circ\text{C}$ s) are provided in the Heat Emission Charts in this catalogue.

Listed below are the correction factors needed to calculate the emission at other Delta Ts (ΔT s) between 10°C and 80°C. This is done by correcting your heat emission (from the two) with the appropriate correction factor selected from here.

Example:

Say, required room temperature = 21°C
 Flow temperature = 86°C
 Return temperature = 72°C
 How is the emission found?

Solution:

Mean Water Temperature = $(T \text{ flow} + T \text{ return})/2 = (86 + 72)/2 = 79^\circ\text{C}$
 DeltaT = Mean Water Temp - Required Room Temp = $79 - 21 = 58^\circ\text{C}$

From the tables below, the emission is:

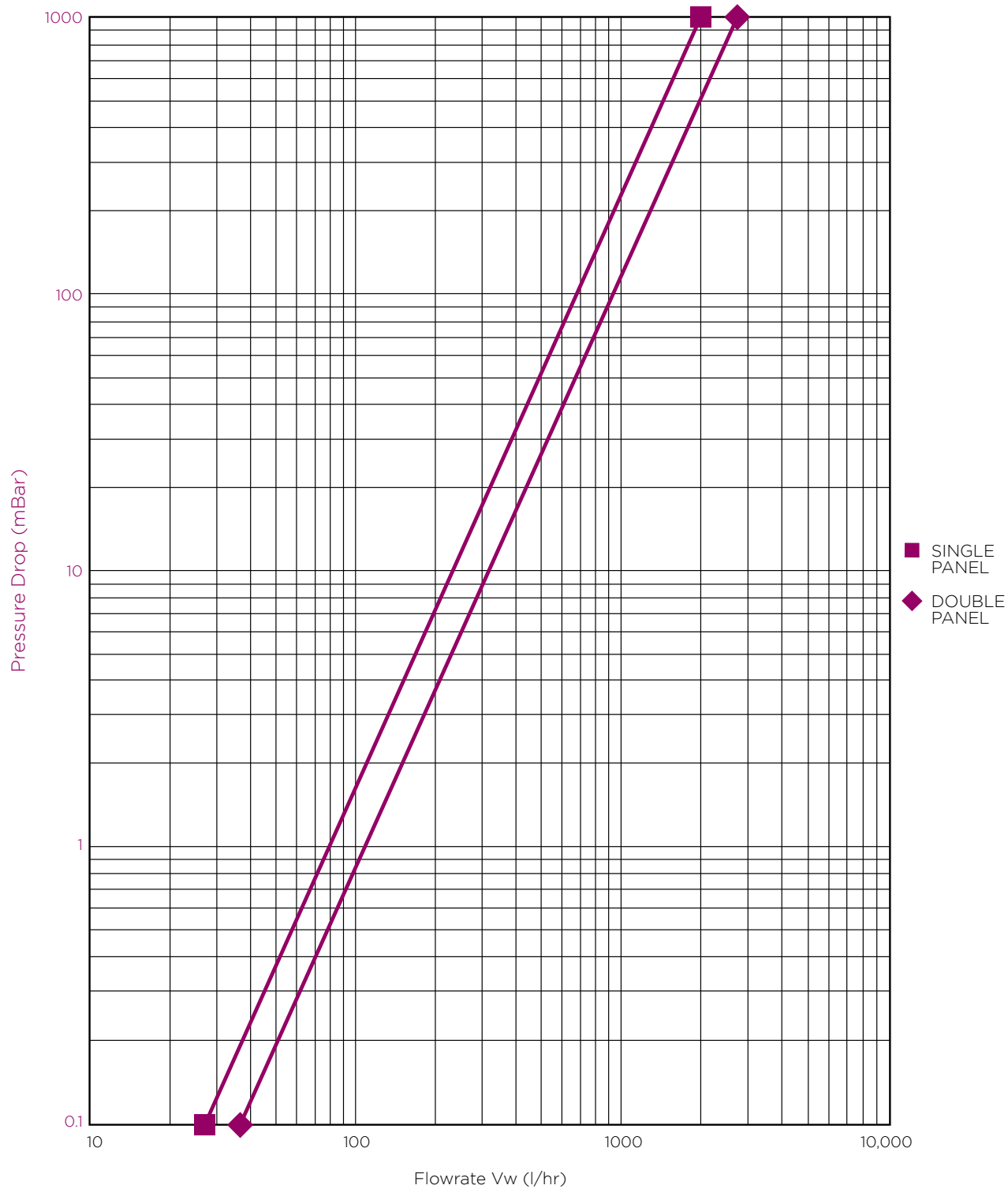
1.201 times the emission stated at $\Delta T50^\circ\text{C}$

1.044 times the emission stated at $\Delta T56^\circ\text{C}$

$\Delta T(^\circ\text{C})$	Based on $\Delta T50$	Based on $\Delta T56$
10	0.123	0.107
11	0.140	0.121
12	0.156	0.135
13	0.174	0.150
14	0.191	0.165
15	0.209	0.180
16	0.227	0.196
17	0.246	0.212
18	0.265	0.229
19	0.284	0.245
20	0.304	0.262
21	0.324	0.279
22	0.344	0.297
23	0.364	0.314
24	0.385	0.332
25	0.406	0.350
26	0.427	0.369
27	0.449	0.387
28	0.471	0.406
29	0.493	0.425
30	0.515	0.444
31	0.537	0.464
32	0.560	0.483
33	0.583	0.503
34	0.606	0.523
35	0.629	0.543
36	0.652	0.563
37	0.676	0.583
38	0.700	0.604
39	0.724	0.625
40	0.748	0.646
41	0.773	0.667
42	0.797	0.688
43	0.822	0.709
44	0.847	0.731
45	0.872	0.753

$\Delta T(^\circ\text{C})$	Based on $\Delta T50$	Based on $\Delta T56$
46	0.897	0.774
47	0.923	0.796
48	0.948	0.818
49	0.974	0.841
50	1	0.863
51	1.026	0.886
52	1.052	0.908
53	1.079	0.931
54	1.105	0.954
55	1.132	0.977
56	1.159	1
57	1.186	1.023
58	1.213	1.047
59	1.240	1.070
60	1.267	1.094
61	1.295	1.118
62	1.323	1.141
63	1.350	1.165
64	1.378	1.190
65	1.406	1.214
66	1.435	1.238
67	1.463	1.263
68	1.491	1.287
69	1.520	1.312
70	1.549	1.337
71	1.578	1.361
72	1.606	1.386
73	1.636	1.411
74	1.665	1.437
75	1.694	1.462
76	1.723	1.487
77	1.753	1.513
78	1.783	1.538
79	1.812	1.564
80	1.842	1.590
-	-	-

Resistance Diagram



Resistance

How to calculate the Resistance of a Horizontal LST

The following is how to find the resistance of a Horizontal LST using a horizontal emitter radiator type RT22 1600mm long X 500mm high:

First, establish what the output of the panel is.
This is found in the catalogue.
Output from the catalogue is 2488 Watts

In this example the system is operating at $\Delta T 56^{\circ}\text{C}$ (Flow @ 82°C , Return 71°C).

(If the output is for a $\Delta T^{\circ}\text{C}$ other than what is indicated in the emission tables ($\Delta T 50^{\circ}\text{C}$ or $\Delta T 56^{\circ}\text{C}$) please use the correction factor tables indicated to get the corrected output.)

C is the Specific Heat Constant (always $4187 \text{ J/Kg}^{\circ}\text{C}$)

Calculate the flow rate as follows

$$Q = (m) \times (C) \times (\Delta T)$$

$$\text{Output} = (\text{Flow Rate}) (\text{Constant}) (\text{Difference between flow and return temperature})$$

$$\text{Watts} = (l/s) (J/Kg^{\circ}\text{C}) (^{\circ}\text{C})$$

$$2488 = (m) (4187) (11)$$

Therefore

$$m = 2488 / ((4187) \times (11))$$

$$m = 0.054020018 \text{ Litres per Second (l/s) multiply by 3600 to convert to litres per hour}$$

$$m = 194.5 \text{ litres per hour (l/hr)}$$

Now, lookup the resistance diagram

Page 26 this section

Reading from the chart this gives a value of 4m Bar or 0.4Kpa

RT22 is a double panel radiator so the reading is taken from the double line, RT21, RT22, RT33.
For single panel radiators take the reading from the single line, RT11.

How to Order

Merriott Radiators Ireland

Derrylin, Co. Fermanagh, Northern Ireland, BT92 9AU

For contact numbers please see below.

Email : sales@merriott-radiators.com

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Fax : +44 (0) 1633 657 084

Irish Enquires

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Orders:

Tel : +44 (0) 28 6774 2535

Fax: +353 (0) 49 9525231

UK Enquires

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Orders:

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Fax: +44 (0) 28 6774 8107

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