

Merriott **SMART LST** Low Surface Temperature Radiator



We strive to offer world class manufacturing of bespoke radiators in the UK and Ireland.

Our unwavering commitment to sustainability and enthusiasm for innovation, ensure that we are paving the way to consistently offer our customers new, exciting and energy efficient products.

Understanding our customer needs is of paramount importance and drives us to support customers from quote through to delivery, thus ensuring they receive best in class customer service.



BS EN 442
KM507661



ISO 9001
FM507683

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SMART

At Merriott we're always looking for ways to work SMARTer. Our innovative designs, rigorous quality procedures and best in class manufacturing processes, guarantee the highest quality, efficient, bespoke design radiators, coupled with premium levels of customer service.

Our heating solutions are fit for purpose and easy to use, whilst being low maintenance and easy to manage. They can be used in any commercial environment with our quality seal of approval and are made using only the finest components to ensure a durable, strong finish. We design products to make people feel comfortable.

Safe & Simple

Manageable

Adaptable & Assured

Robust

Temperate

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Introduction

Merriott's SMART LST is a fully compliant NHS Safe Surface Temperature LST solution with lower water content and high heat output emitters. Through a UK patent application 13142161, this new design offers ease of installation through a single piece frame and a simple to manage two stage drop to floor case to ensure the system is fully accessible for all cleaning tasks.

Simplicity through design

All cleaning tasks have been made easier through a one piece cover panel. Designed with users in mind, the simple hinged cover opens easily allowing space for effective cleaning. With smooth contours, simple flat surfaces and minimized recesses and corners, the SMART LST is perfectly designed for commercial environments.

User Friendly

Versatility of access coupled with a durable reduced weight design, enables a single person to suitably position the cover for all cleaning tasks. The simple drop to floor cover offers a secure opening at 30° which enables complete accessibility for cleaning the radiator and inside cover.

Health and Safety cleaning and care guidelines

Comprehensively tested at BSRIA, Merriott's New SMART LST complies with the NHS guidelines of 43° Safe Surface Temperature.

Patent pending innovation

Through continued Research & Development, Merriott Radiators have developed an innovative and unique design to optimise heat output whilst complying with NHS Safe Surface Temperature guidelines.



Overview

Paint Finish

Beautifully finished, all Merriott radiators use 60% semi-gloss RAL 9016 epoxy polyester powder paint as standard. This finish is anti-bacterial and meets BS22196.

Emitter Operating Pressures

Merriott's standard test pressure for Pressed Panel radiators is 13 bar, allowing the LST to offer a maximum operating pressure of 10 bar. Horizontal Panel and Column radiators are tested to 7 bar with a maximum operating pressure of 5.38 bar.

Features

Merriott's SMART LST is constructed of a single sheet of 2mm steel providing a lightweight yet strong cover.

Featuring a hinge mechanism the cover can be dropped to 30° from its closed position to enable easy access and cleaning. Releasing the hinges allows the cover to be dropped to the floor and even removed for a deep clean. With a single piece construction, the lightweight cover can be operated easily with the tilt and drop feature.

Installation of the unit is made easy through the ready constructed frame.

Merriott's SMART LST is available in 6 heights and 15 lengths with 3 emitter options:

Horizontal Panel

Column

Pressed Panel

The LST comes with a Dual Locking Mechanism for security in the form of a key operated lock located at the top of each side panel.

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Additional Features

- Highly ventilated design for high heat output performance
- Compliant with NHS Guidelines
- Rounded corners on cover for optimum safety
- Robust construction - one piece cover

Quality

All Merriott emitters used in conjunction with our SMART LSTs are manufactured in our state of the art BS EN ISO 9001:2008 accredited manufacturing facility and are tested in accordance with BS EN 442 quality standards.

Warranty

Merriott products are warranted for ten years with regards to defective materials or manufacture. In order for the warranty to be valid, Merriott insist that designers observe and adhere to BS EN 12828:2003, "Heating systems in buildings – design for water based heating systems" and that installation adheres to BS EN 14336:2004 "Heating systems in Buildings - Installation and commissioning of water based heating systems.

In addition, Merriott radiators recommend that the designer and installer observe and adhere to the British standard Code of Practice for the "Treatment of Water in Domestic Hot Water Central Heating systems - BS 7593". Merriott recommends the use of corrosion inhibitors for all applications. Failure to observe these recommendations may result in the invalidation of warranty.

Further details of warranty are available on request, please contact Merriott radiators for terms and conditions.

Design & Performance

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

The Merriott SMART LST has been tested for Thermal Performance at BSRIA (report reference: 57222-1 Edition 2.)

Merriott SMART LST

Merriott's SMART LST offers an all in one package solution:

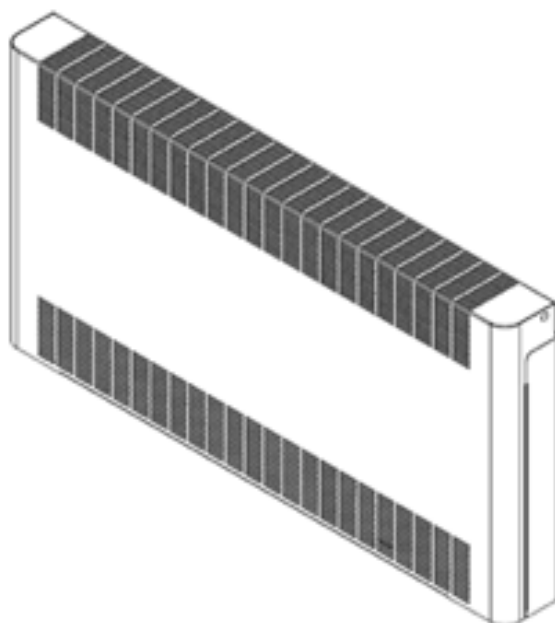
- All Merriott SMART LST's have an emitter paired with a cover that allow it to reach optimum output levels.
- The cover and brace will be supplied separately from the emitter.
- Each cover will come with a pre-built easy install brace and will have a key lock mechanism at either end.

**** Please note - Cut outs for TRV's are not currently available for the Merriott SMART LST**

Merriott recommend the use of a remote temperature adjuster with the SMART LST. These can be ordered through Merriott.

Merriott SMART LST Design Features

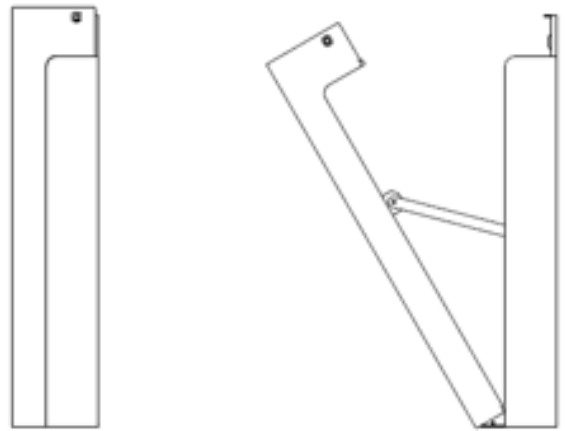
Merriott SMART LST wall mounted at floor level



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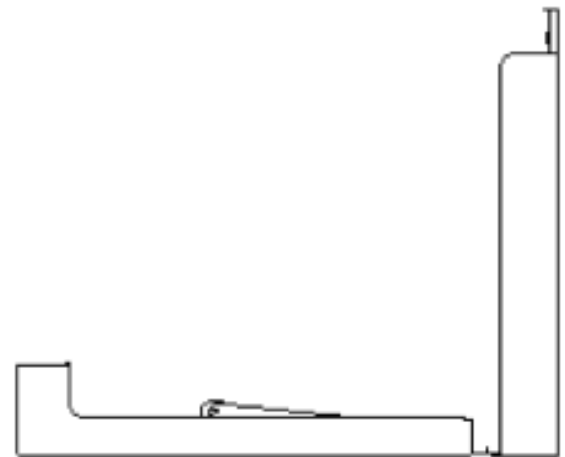
Tilt and open design

30° tilt angled opening to allow easy access for cleaning and maintenance



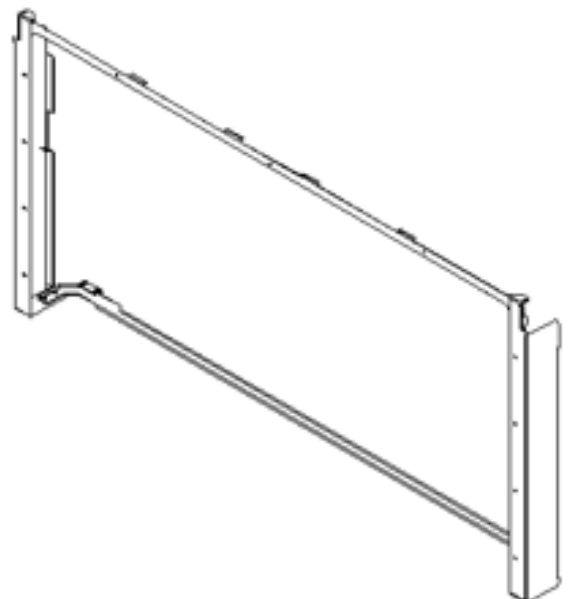
Drop to floor design

Easy access for deep cleaning and maintenance. Full removal of cover can also be achieved



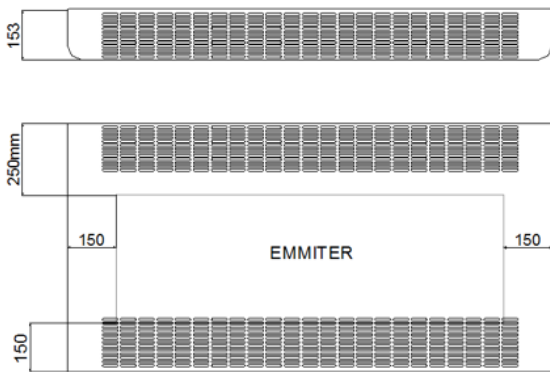
Easy install brace

Ready assembled for easy install



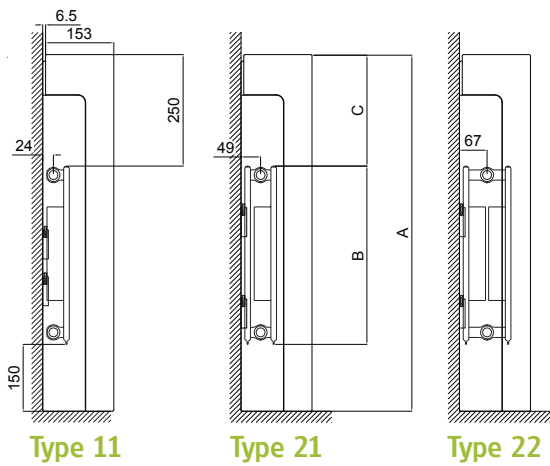
Merriott SMART LST Case and Emitter Dimensions

External dimensions



Internal dimension

Cross sectional view



**250mm Dimension is 150mm for 600mm High LST cases only

Dimension	Case Height (mm)			
	600	700	800	900
A	600	700	800	900
B	300	300	400	500
C	150	250	250	250

Performance

NHS Compliant with Pressed Panel only. For further information on Horizontal Panel and Column ranges (non-compliant), please contact Merriott (see back page for contact details).

Type 11 Emitters

Case Height: 600mm
Case Depth: 153mm
Emitter Height: 300mm

Case Length (mm)	Watts Δ T50	Watts Δ T56
600	164	189
700	219	253
800	274	316
900	328	378
1000	383	442
1100	437	505
1200	493	569
1300	547	631
1400	601	694
1500	657	758
1600	711	821
1700	766	884
1800	821	947
1900	875	1010
2000	928	1071

Case Height: 700mm
Case Depth: 153mm
Emitter Height: 300mm

Case Length (mm)	Watts Δ T50	Watts Δ T56
600	164	189
700	219	253
800	274	316
900	328	378
1000	383	442
1100	437	505
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1300	547	631
1400	601	694
1500	657	758
1600	711	821
1700	766	884
1800	821	947
1900	875	1010
2000	928	1071

Case Height: 800mm
Case Depth: 153mm
Emitter Height: 400mm

Case Length (mm)	Watts Δ T50	Watts Δ T56
600	193	223
700	257	297
800	321	371
900	385	444
1000	449	518
1100	514	593
1200	578	667
1300	642	741
1400	706	815
1500	770	889
1600	835	964
1700	899	1038
1800	963	1112
1900	1027	1185
2000	1097	1266

Case Height: 900mm
Case Depth: 153mm
Emitter Height: 500mm

Case Length (mm)	Watts Δ T50	Watts Δ T56
600	227	262
700	303	349
800	379	438
900	455	525
1000	531	612
1100	604	697
1200	682	787
1300	758	874
1400	833	962
1500	909	1049
1600	985	1136
1700	1060	1223
1800	1137	1312
1900	1213	1399
2000	1314	1517

Type 21 Emitters

Case Height: 600mm
Case Depth: 153mm
Emitter Height: 300mm

Case Length (mm)	Watts $\Delta T50$	Watts $\Delta T56$
600	246	284
700	329	379
800	411	475
900	493	569
1000	575	664
1100	658	759
1200	739	853
1300	822	948
1400	904	1043
1500	986	1137
1600	1068	1232
1700	1150	1328
1800	1233	1423
1900	1314	1517
2000	1397	1612

Case Height: 700mm
Case Depth: 153mm
Emitter Height: 300mm

Case Length (mm)	Watts $\Delta T50$	Watts $\Delta T56$
600	246	284
700	329	379
800	411	475
900	493	569
1000	575	664
1100	658	759
1200	739	853
1300	822	948
1400	904	1043
1500	986	1137
1600	1068	1232
1700	1150	1328
1800	1233	1423
1900	1314	1517
2000	1397	1612

Case Height: 800mm
Case Depth: 153mm
Emitter Height: 400mm

Case Length (mm)	Watts $\Delta T50$	Watts $\Delta T56$
600	288	332
700	384	443
800	480	554
900	575	664
1000	671	775
1100	767	885
1200	863	996
1300	959	1107
1400	1055	1218
1500	1151	1329
1600	1247	1440
1700	1343	1550
1800	1439	1661
1900	1535	1771
2000	1592	1837

Case Height: 900mm
Case Depth: 153mm
Emitter Height: 500mm

Case Length (mm)	Watts $\Delta T50$	Watts $\Delta T56$
600	347	401
700	464	535
800	579	668
900	695	801
1000	811	936
1100	926	1069
1200	1043	1203
1300	1158	1337
1400	1274	1470
1500	1681	1940
1600	1505	1737
1700	1622	1872
1800	1737	2005
1900	1853	2138
2000	1906	2200

Type 22 Emitters

Case Height: 600mm
Case Depth: 153mm
Emitter Height: 300mm

Case Length (mm)	Watts Δ T50	Watts Δ T56
600	325	375
700	433	499
800	541	625
900	649	749
1000	758	874
1100	865	998
1200	974	1124
1300	1082	1248
1400	1190	1373
1500	1298	1498
1600	1407	1623
1700	1514	1747
1800	1623	1873
1900	1730	1997
2000	1838	2121

Case Height: 700mm
Case Depth: 153mm
Emitter Height: 300mm

Case Length (mm)	Watts Δ T50	Watts Δ T56
600	325	375
700	433	499
800	541	625
900	649	749
1000	758	874
1100	865	998
1200	974	1124
1300	1082	1248
1400	1190	1373
1500	1298	1498
1600	1407	1623
1700	1514	1747
1800	1623	1873
1900	1730	1997
2000	1838	2121

Case Height: 800mm
Case Depth: 153mm
Emitter Height: 400mm

Case Length (mm)	Watts Δ T50	Watts Δ T56
600	366	422
700	487	562
800	609	703
900	730	843
1000	853	984
1100	974	1124
1200	1096	1265
1300	1217	1405
1400	1340	1546
1500	1461	1686
1600	1583	1827
1700	1704	1967
1800	1827	2108
1900	1948	2248
2000	2030	2343

Case Height: 900mm
Case Depth: 153mm
Emitter Height: 500mm

Case Length (mm)	Watts Δ T50	Watts Δ T56
600	443	512
700	591	682
800	738	852
900	886	1022
1000	1033	1192
1100	1181	1363
1200	1329	1534
1300	1476	1704
1400	1624	1874
1500	1771	2044
1600	1920	2215
1700	2067	2385
1800	2215	2556
1900	2362	2726
2000	2434	2809



Installation

Please follow the installation instructions that are supplied with the SMART LST for details on how to install.

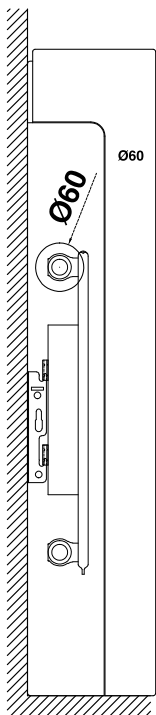
The standard SMART LST's will not be supplied with cut-outs. Should these be required, please see the guidelines below:

LST Case cuts outs: Radiator mounted TRV with external access

Maximum cut out hole (diameter) in line with mounted radiator connection.

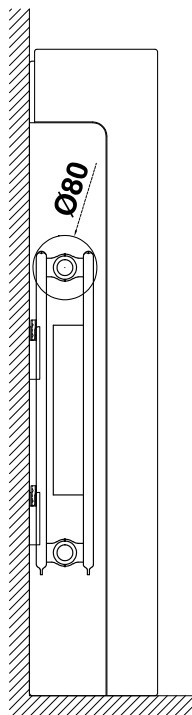
Cross sectional view

Type 11
60mm



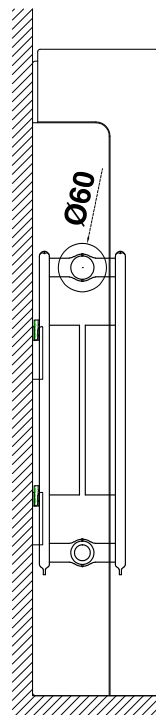
'L' bracket

Type 21
80mm



'A' bracket

Type 22
60mm

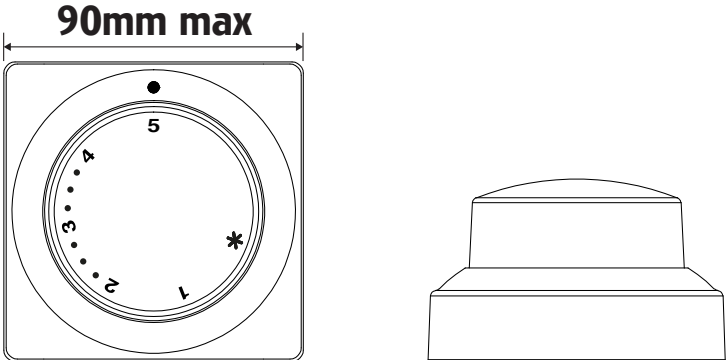


'A' bracket

Outer Case remote adjuster

Remote adjuster base plate must not exceed 90mm x 90mm. We recommend use of 80mm x 80mm remote adjusters.

Cross sectional view



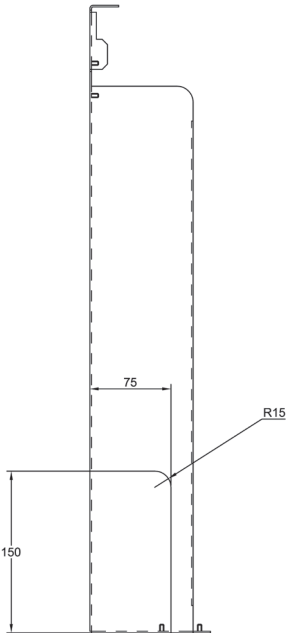
**250mm Dimension is 150mm for 600mm High LST cases only
**Brackets used must be 'RT Bracket'

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Valve option features

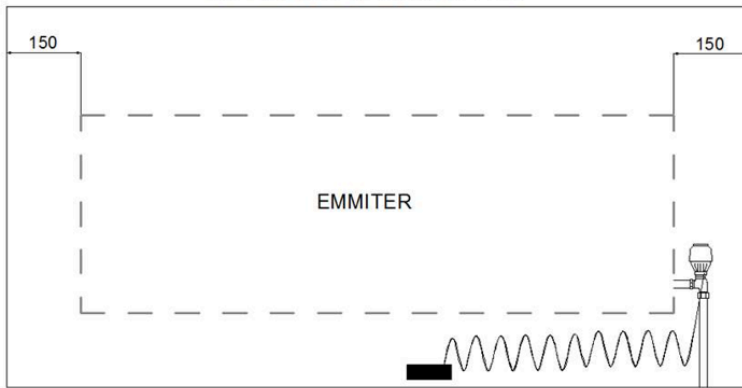
Pipe-work cut-out

Cut out on both left and right hand side, in standard height (150mm) and depth (75mm).



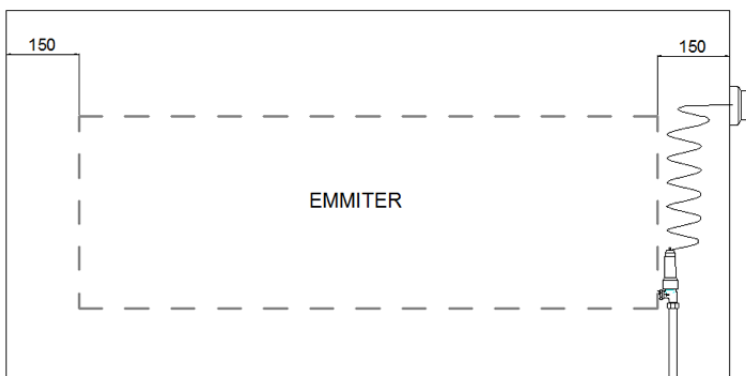
Internal Sensor TRV

Remote capillary sensor TRV. Access by unlocking and tilting cover to open.
Radiator connected *TBOE, or *BBOE left or right handings.



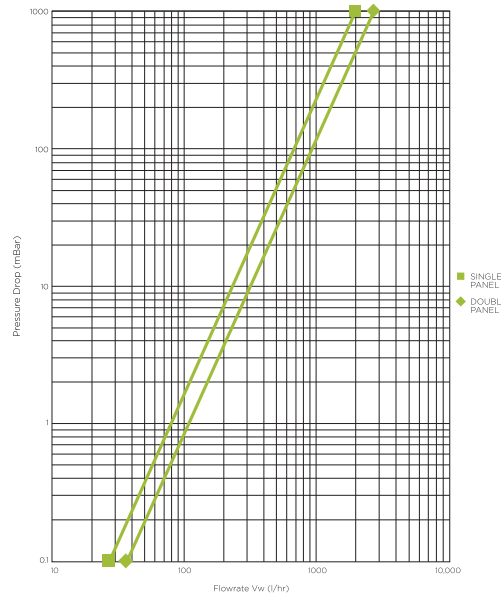
Remote Adjuster TRV

Remote capillary TRV sensor/adjuster is fixed to left or right of LST casing.
Radiator connected BBOE.



*TBOE - Top Bottom Opposite Ends *BOE - Bottom Opposite Ends

Resistance/flow diagram



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Correction Factors

Emissions at two separate Delta T°Cs (ΔT °Cs) 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 30°C and 80°C. This is done by correcting your heat emission with the appropriate correction factor selected from the table below.

Example:

Required room temperature = 20°C

Flow temperature = 80°C

Return temperature = 60°C

How is the emission found?

Solution:

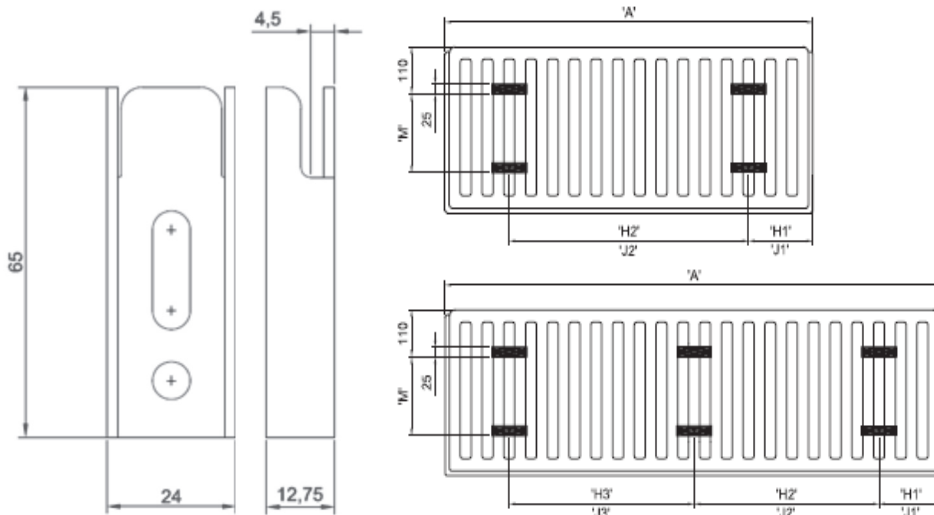
Mean Water Temperature = $(T \text{ flow} + T \text{ return})/2 = (80 + 60)/2 = 70^\circ\text{C}$

DeltaT = Mean Water Temp - Required Room Temp = $70 - 20 = 50^\circ\text{C}$

Degrees Centigrade						
Delta T factors in °C and °F other than 50°C (122 °F), Exponent n = 1.3	5°C	0.0501	30°C	0.5148	55°C	1.1319
	10°C	0.1234	35°C	0.6290	60°C	1.2675
	15°C	0.2091	40°C	0.7482	65°C	1.4065
	20°C	0.3039	45°C	0.8720	70°C	1.5487
	25°C	0.4061	50°C	1.000	75°C	1.6940

Q/RT series emitter bracket locations

Q/RT Bracket dimensions*



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"A"	"H1"	"J1"	"H2"	"J2"	"H3"	"J3"	Qty
400	122.5	135	150	75	-	-	4
500	122.5	160	250	175	-	-	4
600	122.5	160	350	275	-	-	4
700	122.5	160	450	375	-	-	4
800	122.5	160	550	475	-	-	4
900	122.5	160	650	575	-	-	4
1000	122.5	160	750	576	-	-	4
1100	122.5	160	850	775	-	-	4
1200	122.5	160	950	875	-	-	4
1300	122.5	160	1050	975	-	-	4
1400	122.5	160	1150	1075	-	-	4
1500	122.5	160	1250	1175	-	-	4
1600	122.5	160	1350	1275	-	-	4
1800	122.5	160	775	750	775	725	6
2000	122.5	160	875	850	875	825	6

"B"	"M"
300	105
400	205
500	305
600	405
700	505

*Other bracket locations and dimensions for Horizontal Panel and Column are available on request.

How to Order



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