Matrix

A versatile range of stylish modern radiators

Features and Benefits

- *Designed for commercial and domestic applications*
- *Manufactured from 70mm x 1.5mm steel tubes*
- *½", ¾"and 1" connections on most models*
- *Standard RAL 9016 finish*
  Other RAL colours also available
- *Radiators can be connected in series*
- *Complemented by a full range of valves*

Models: Horizontal, Vertical & Convector

Outputs: 98 - 3146 watts (per metre)

Maximum working pressure: 5.4 bar (10 bar on request to be specified)

Maximum test pressure: Standard 7 bar (13 bar on request to be specified)

Heights: 70 - 3600mm

Depths: 32 - 351mm

Types: Wall-mounted and floor standing options available on some models depending on application

EN EUROPEAN NORM 442

5 FIVE YEAR WARRANTY

Matrix

Matrix Radiators are a modern range of flat fronted heat emitters designed for commercial and domestic applications.

The Matrix portfolio consists of vertical and horizontal models together with a low line, high output convector designed for use as a perimeter heater in heavily glazed applications such as conservatories and reception areas.

Manufactured from 70mm x 1.5mm steel tubes with 1/2", 3/4" and 1" connections available on most models. The Matrix has a standard working pressure of 5.4 bar, (10 bar by special request), is guaranteed for five years against manufacturing defects and comes as standard finished RAL 9016 Traffic White. Other RAL colours are available on request (chargeable). Each radiator has the option of wall or floor mounting brackets, depending on application.

Horizontal

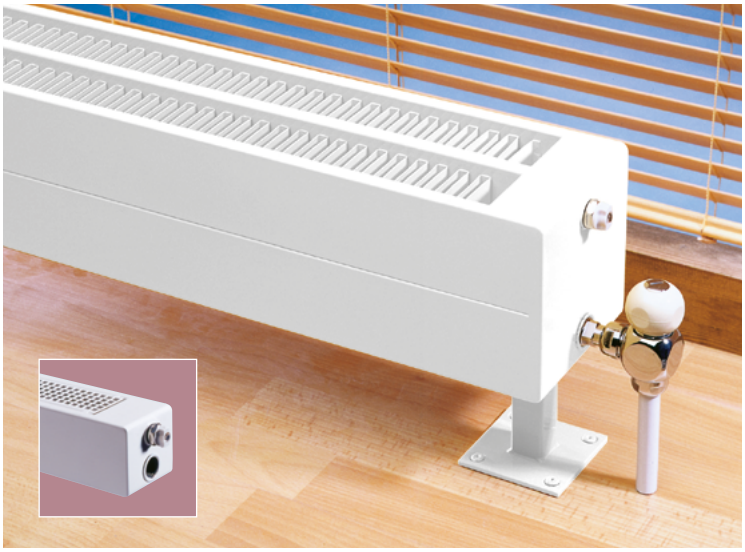
The Matrix horizontal is available in single panel, double panel, single panel - single convector fin, double panel - single convector fin, double panel - double convector fin configurations in depths from 32 - 133mm. 12 standard heights are available from 70 to 840mm in 70mm increments. Lengths available range from 500 to 6000mm in 100mm increments.

Vertical

The striking vertical Matrix is available in four models. A single panel, a double panel and single panel -single fin and double panel - single fin. Depths of 32 - 103 mm, fourteen heights from 1000 to 3600mm and lengths from 70 - 1400 in 70mm increments are available.

Convector

The Matrix standard convector is available in four basic models, two, three, four and five panels in depths of 73 - 296mm and heights from 70 - 280mm in 70mm increments and lengths from 500 to 6000mm in 100mm increments. The high output version is available in the same number and size of models with the only difference being depth which ranges from 92 to 351mm.



Key

H . . . . . Horizontal Panel

V . . . . . Vertical Panel

C . . . . . Convector Panel

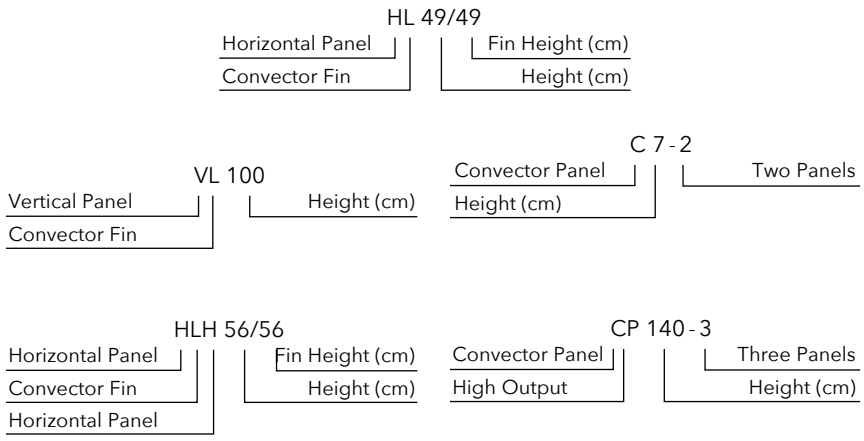
CP . . . . . High Output Convector Panel

L . . . . . Convector Fin

35/35 (cm) Radiator height / convector fin height (cm)

- 2 . . . . . Times two

Examples



Matrix Horizontal (Available from 500mm to 6000mm in 100mm Increments)

Model Type H (Single Panel)

Description	Height mm	Depth mm	Per Metre		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix H7	70	32	98	2.06	0.56
Matrix H14	140	32	166	4.06	1.10
Matrix H21	210	32	225	6.18	1.80
Matrix H28	280	32	288	8.19	2.35
Matrix H35	350	32	355	10.38	3.05
Matrix H42	420	32	434	12.55	3.78
Matrix H49	490	32	492	14.58	4.30
Matrix H56	560	32	551	16.68	4.92
Matrix H63	630	32	610	18.79	5.55
Matrix H70	700	32	651	20.89	6.18
Matrix H77	770	32	729	22.99	6.80
Matrix H84	840	32	787	25.00	7.47

Model Type HL (Single Panel Single Convector)

Description	Height mm	Depth mm	Per Metre		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix HL7-7	70	62	207	3.54	0.56
Matrix HL14-14	140	62	368	7.35	1.10
Matrix HL21-21	210	62	505	10.98	1.80
Matrix HL28-28	280	62	628	14.52	2.35
Matrix HL35-35	350	62	733	18.44	3.05
Matrix HL42-42	420	62	834	22.18	3.78
Matrix HL49-49	490	62	931	25.91	4.30
Matrix HL56-56	560	62	1022	29.72	4.92
Matrix HL63-63	630	62	1113	33.37	5.55
Matrix HL70-70	700	62	1196	37.09	6.18
Matrix HL77-70	770	62	1248	38.84	6.80
Matrix HL84-70	840	62	1303	40.60	7.47

Model Type H-2 (Double Panel)

Description	Height mm	Depth mm	Per Metre		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix H7-2	70	103	180	4.24	1.14
Matrix H14-2	140	103	283	8.45	2.25
Matrix H21-2	210	103	393	12.61	3.61
Matrix H28-2	280	103	511	16.37	4.92
Matrix H35-2	350	103	616	20.85	6.25
Matrix H42-2	420	103	723	24.68	7.91
Matrix H49-2	490	103	830	29.09	8.89
Matrix H56-2	560	103	938	33.20	10.21
Matrix H63-2	630	103	1044	37.32	11.53
Matrix H70-2	700	103	1148	41.44	12.85
Matrix H77-2	770	103	1252	45.56	14.17
Matrix H84-2	840	103	1355	49.70	15.24

Model Type HLH (Double Panel Single Convector)

Description	Height mm	Depth mm	Per Metre		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix HLH35-35	350	103	1002	28.58	6.25
Matrix HLH42-42	420	103	1139	34.21	7.91
Matrix HLH49-49	490	103	1271	39.83	8.89
Matrix HLH56-56	560	103	1394	45.37	10.21
Matrix HLH63-63	630	103	1513	51.08	11.53
Matrix HLH70-70	700	103	1623	56.77	12.85
Matrix HLH77-70	770	103	1730	61.02	14.17
Matrix HLH84-70	840	103	1839	65.27	15.24

Model Type HL-2 (Double Panel Double Convector)

Description	Height mm	Depth mm	Per Metre		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix HL35-35-2	350	133	1362	36.43	6.25
Matrix HL42-42-2	420	133	1535	43.53	7.91
Matrix HL49-49-2	490	133	1698	50.65	8.89
Matrix HL56-56-2	560	133	1848	57.66	10.21
Matrix HL63-63-2	630	133	1989	64.87	11.53
Matrix HL70-70-2	700	133	2112	72.04	12.85
Matrix HL77-70-2	770	133	2208	76.53	14.17
Matrix HL84-70-2	840	133	2307	81.14	15.24

Matrix Convectors (Available from 500mm to 6000mm in 100mm Increments)

Description	Height mm	Depth mm	Per Metre		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix Convector C7-2	70	73	344	5.67	1.15
Matrix Convector C7-3	70	134	599	9.34	1.82
Matrix Convector C7-4	70	196	821	13.03	2.42
Matrix Convector C7-5	70	256	986	16.63	3.02
Matrix Convector C14-2	140	73	503	11.28	2.40
Matrix Convector C14-3	140	134	925	19.10	4.05
Matrix Convector C14-4	140	196	1277	27.03	5.01
Matrix Convector C14-5	140	256	1519	34.55	6.09
Matrix Convector C21-2	210	83	717	17.72	3.75
Matrix Convector C21-3	210	154	1188	29.68	5.78
Matrix Convector C21-4	210	226	1643	41.49	8.05
Matrix Convector C21-5	210	296	2060	53.51	10.29
Matrix Convector C28-2	280	83	877	23.63	5.02
Matrix Convector C28-3	280	154	1447	39.39	7.72
Matrix Convector C28-4	280	226	2002	55.28	10.83
Matrix Convector C28-5	280	296	2509	71.36	13.89

High Output Matrix Convectors (Available from 500mm to 6000mm in 100mm Increments)

Description	Height mm	Depth mm	Per Metre		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix Convector CP7-2	70	96	382	6.17	1.15
Matrix Convector CP7-3	70	181	639	10.23	1.82
Matrix Convector CP7-4	70	266	860	14.90	2.42
Matrix Convector CP7-5	70	351	1120	19.15	3.02
Matrix Convector CP14-2	140	96	632	12.85	2.40
Matrix Convector CP14-3	140	181	1073	21.95	4.05
Matrix Convector CP14-4	140	266	1504	31.45	5.01
Matrix Convector CP14-5	140	351	1920	41.17	6.09
Matrix Convector CP21-2	210	96	851	19.76	3.75
Matrix Convector CP21-3	210	181	1447	33.85	5.78
Matrix Convector CP21-4	210	266	2046	48.26	8.05
Matrix Convector CP21-5	210	351	2605	62.50	10.29
Matrix Convector CP28-2	280	96	1030	26.67	5.02
Matrix Convector CP28-3	280	181	1747	45.75	7.72
Matrix Convector CP28-4	280	266	2473	65.08	10.83
Matrix Convector CP28-5	280	351	3146	83.83	13.89

Matrix Vertical (Available from 70mm to 1400mm in 70mm Increments)

Model Type V (Single Panel)

Description	Height mm	Depth mm	Per 70mm		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix Vertical V100	1000	32	68	2.11	0.59
Matrix Vertical V120	1200	32	81	2.43	0.69
Matrix Vertical V140	1400	32	93	2.87	0.80
Matrix Vertical V160	1600	32	105	3.25	0.90
Matrix Vertical V180	1800	32	117	3.63	1.00
Matrix Vertical V200	2000	32	128	4.01	1.11
Matrix Vertical V220	2200	32	139	4.39	1.21
Matrix Vertical V240	2400	32	150	4.77	1.31
Matrix Vertical V260	2600	32	161	5.15	1.45
Matrix Vertical V280	2800	32	172	5.53	1.56
Matrix Vertical V300	3000	32	182	5.90	1.67
Matrix Vertical V320	3200	32	193	6.28	1.78
Matrix Vertical V340	3400	32	204	6.66	1.88
Matrix Vertical V360	3600	32	214	7.04	1.99

Model Type VL (Single Panel Single Convector)

Description	Height mm	Depth mm	Per 70mm		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix Vertical VL100	1000	62	107	3.35	0.59
Matrix Vertical VL120	1200	62	123	3.95	0.69
Matrix Vertical VL140	1400	62	141	4.87	0.80
Matrix Vertical VL160	1600	62	157	5.64	0.90
Matrix Vertical VL180	1800	62	172	6.40	1.00
Matrix Vertical VL200	2000	62	186	7.24	1.11
Matrix Vertical VL220	2200	62	201	8.00	1.21

Model Type V-2 (Double Panel)

Description	Height mm	Depth mm	Per 70mm		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix Vertical V100-2	1000	103	108	4.25	1.20
Matrix Vertical V120-2	1200	103	127	5.04	1.41
Matrix Vertical V140-2	1400	103	145	5.81	1.60
Matrix Vertical V160-2	1600	103	163	6.59	1.80
Matrix Vertical V180-2	1800	103	180	7.37	2.00
Matrix Vertical V200-2	2000	103	197	8.14	2.20
Matrix Vertical V220-2	2200	103	213	8.92	2.40
Matrix Vertical V240-2	2400	103	228	9.70	2.60
Matrix Vertical V260-2	2600	103	243	10.29	2.91
Matrix Vertical V280-2	2800	103	258	11.05	3.12
Matrix Vertical V300-2	3000	103	273	11.81	3.34
Matrix Vertical V320-2	3200	103	288	12.57	3.55
Matrix Vertical V340-2	3400	103	303	13.33	3.77
Matrix Vertical V360-2	3600	103	318	14.08	3.98

Model Type VLV (Double Panel Single Convector)

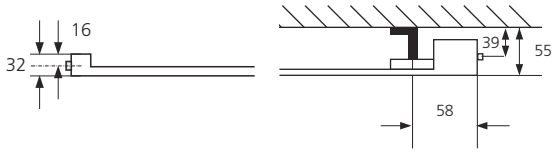
Description	Height mm	Depth mm	Per 70mm		
			Output watts	**Weight** kg	**Water Content** Litres
Matrix Vertical VLV100	1000	103	149	5.47	1.20
Matrix Vertical VLV120	1200	103	176	6.39	1.41
Matrix Vertical VLV140	1400	103	200	7.75	1.60
Matrix Vertical VLV160	1600	103	215	8.89	1.80
Matrix Vertical VLV180	1800	103	237	10.03	2.00
Matrix Vertical VLV200	2000	103	257	11.25	2.20
Matrix Vertical VLV220	2200	103	277	12.47	2.40

Dimensional data

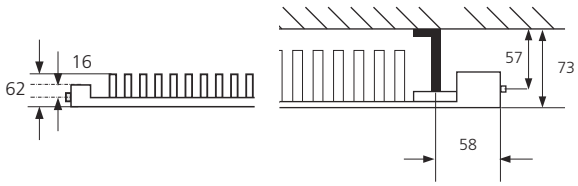
Horizontal Models

Bracket Positions – Horizontal Models

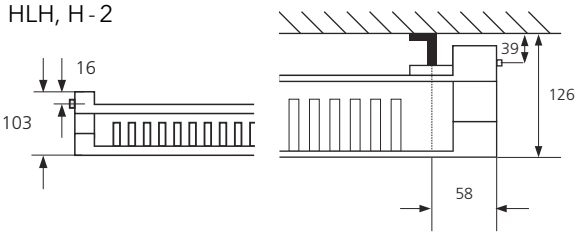
H



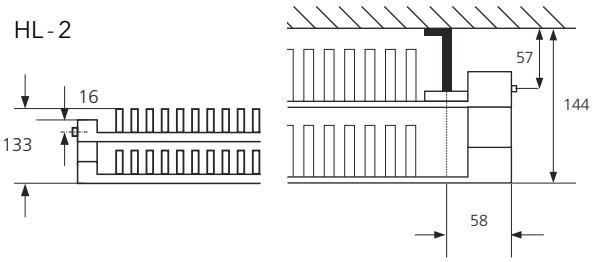
HL



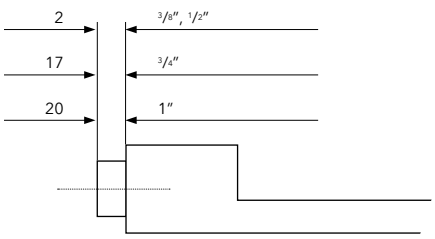
HLH, H - 2



HL - 2

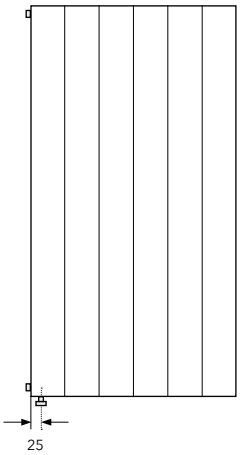


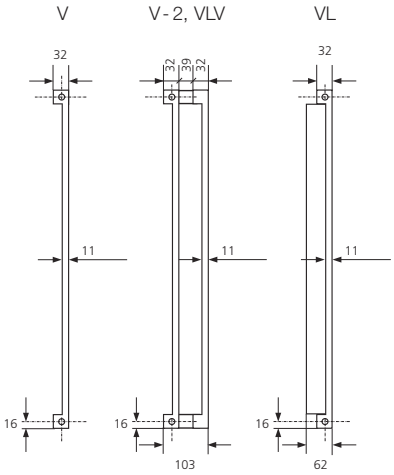
Connection Detail



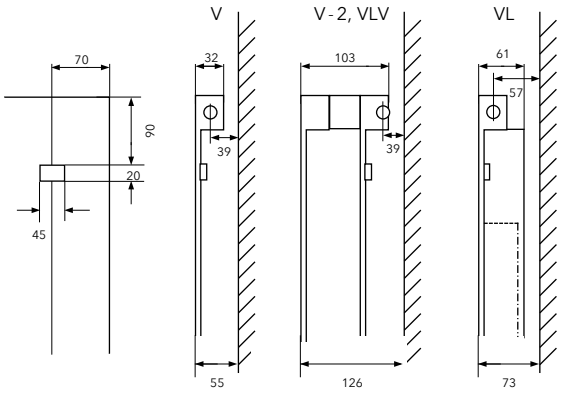
Dimensions in millimetres

Vertical Models

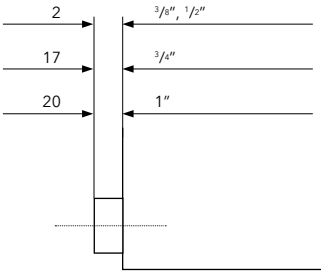




Bracket Positions - Vertical Models



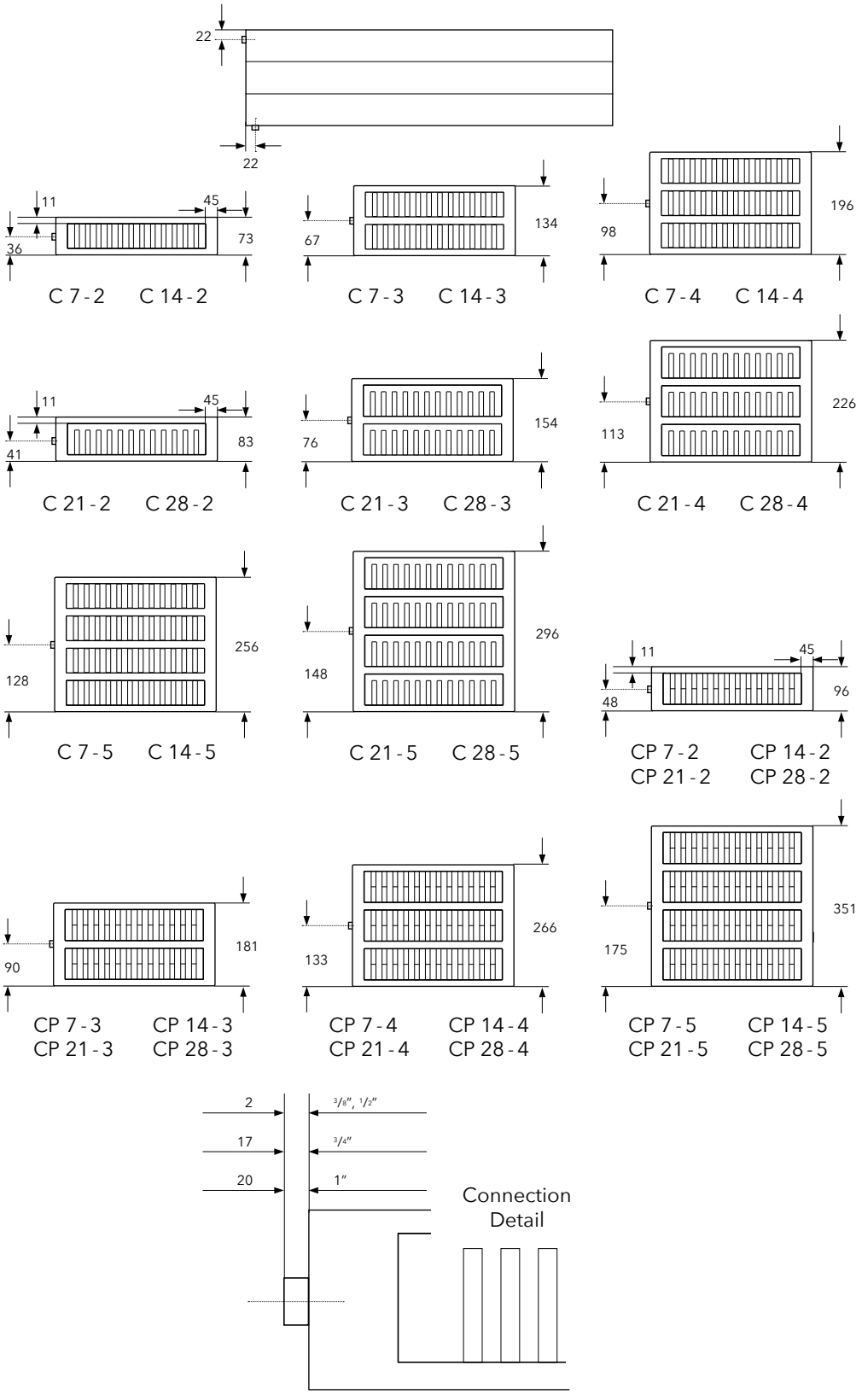
Connection Detail



Dimensions in millimetres

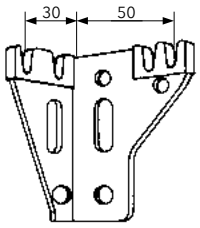
Dimensional data

Convector Models



Dimensions in millimetres

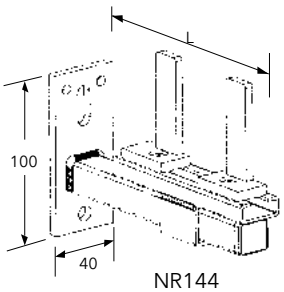
Brackets & Accessories



Wall Bracket – Horizontal & Vertical Models

Fixed position at 30mm and 50mm

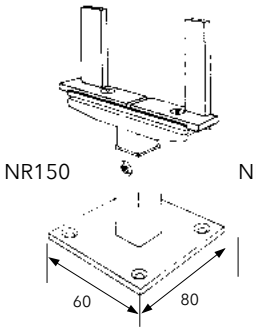
117/L = Left hand bracket
117/R = Right hand bracket



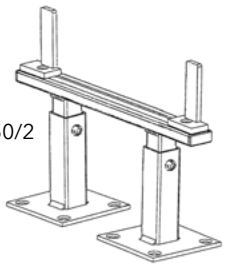
NR144

Wall Bracket – Convector Models

	L	Wall to back of radiator minimum
C - 2	100mm	30mm
C - 3	150mm	30mm
C - 4	200mm	30mm
C - 5	250mm	30mm



NR150



NR150/2

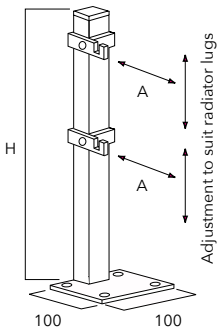
Floor Bracket – Convector Models

When ordering please specify the height required.
NR 150/_ _ _

Heavy Duty Floor Bracket – Convector Models

Recommended for 4 & 5 panel models. When ordering please specify the height required. NR150/2/_ _ _

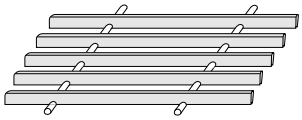
Heights	1*	3*	4*	5*	6*
Min	65	90	120	180	270
Max	90	120	180	270	370



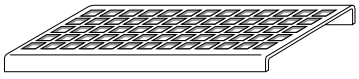
Floor Bracket – Horizontal

Code Nr.	2011/1-W	2012/1-W	2013/1-W
A =	13 - 30mm	13 - 30mm	13 - 30mm
H =	650mm	850mm	1100mm

Optional grilles for Matrix convectors (factory fitted).



NR19100
Type C only

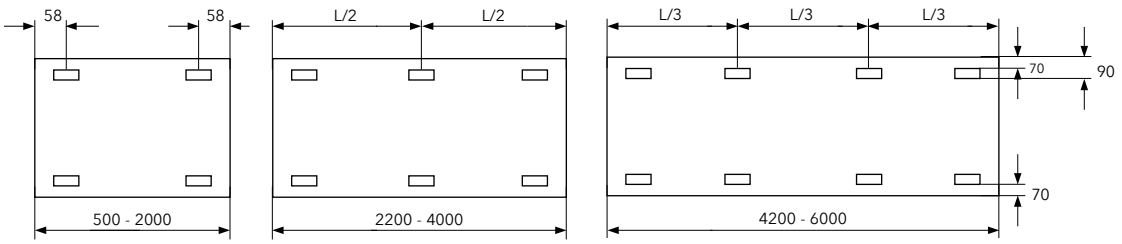


NR19500
Type C & Type CP

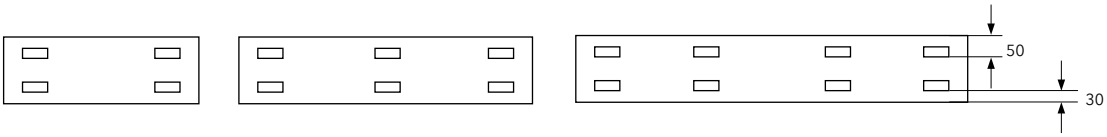
NR19500 - A 10% reduction in heat output can be expected from this grille type.

Fixing positions

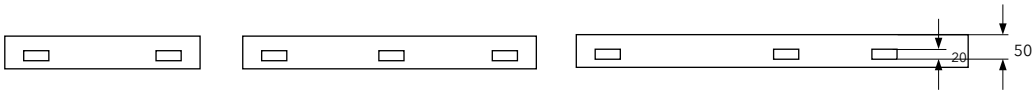
Models H, H - 2, HL, HLH, HL - 2



Fixing positions for 280 - 840mm height



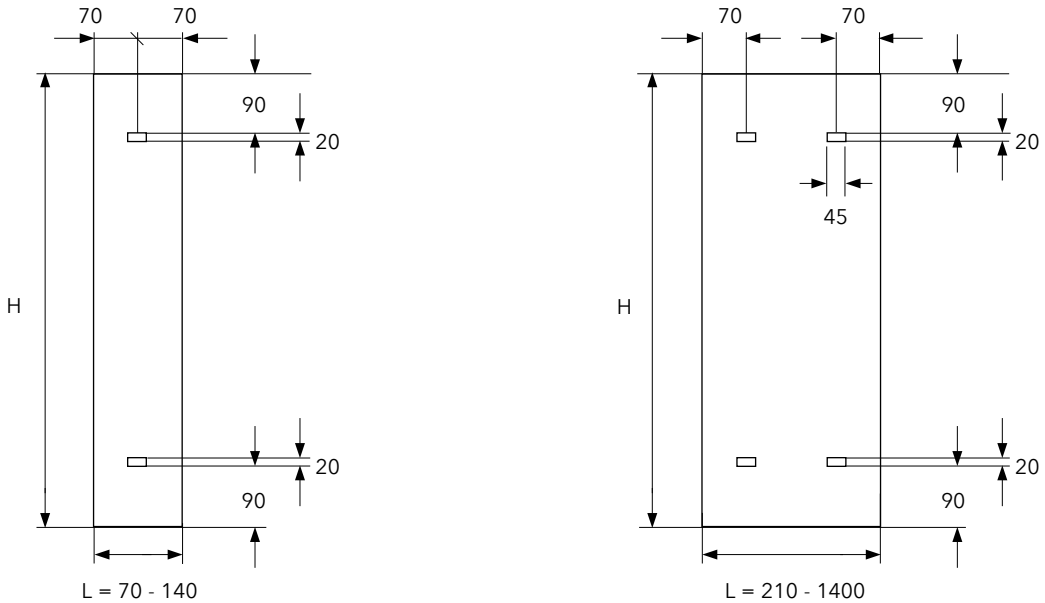
Fixing positions for 140 - 210mm height



Fixing positions for 70mm height

Dimensions in millimetres

Models V, V - 2, VL, VLH



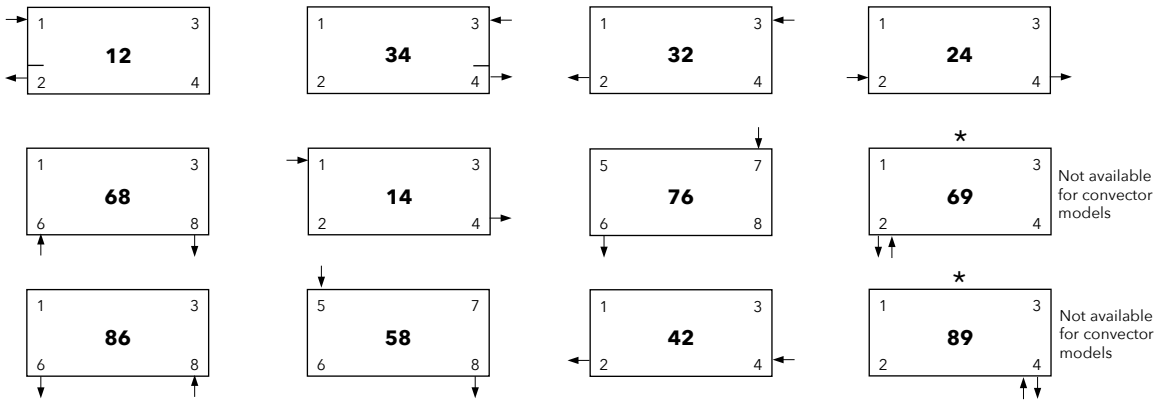
Dimensions in millimetres

Connection details

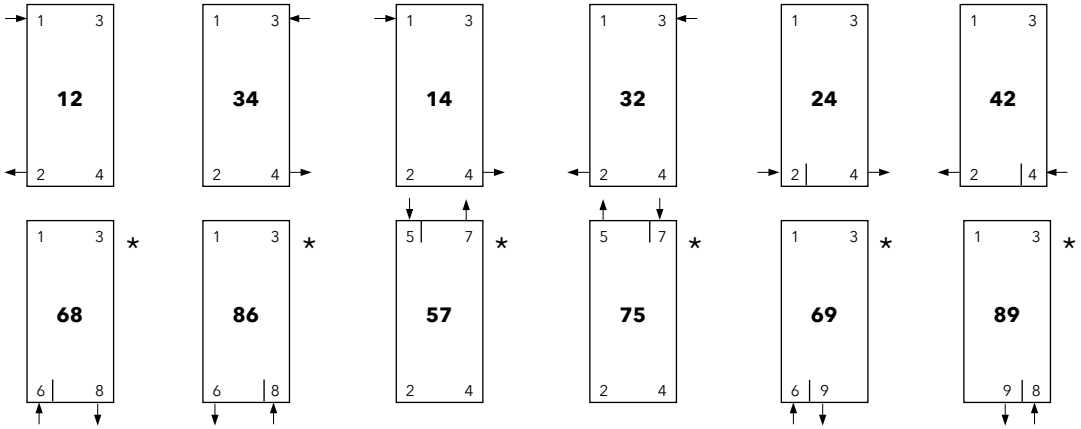
Connection sizes are available in ½", ¾" and 1" on most models. When ordering the connection size must be given together with the relevant connection number.

Standard connection = **24, ½" BSP** (unless specified otherwise)

Horizontal & Convector Models

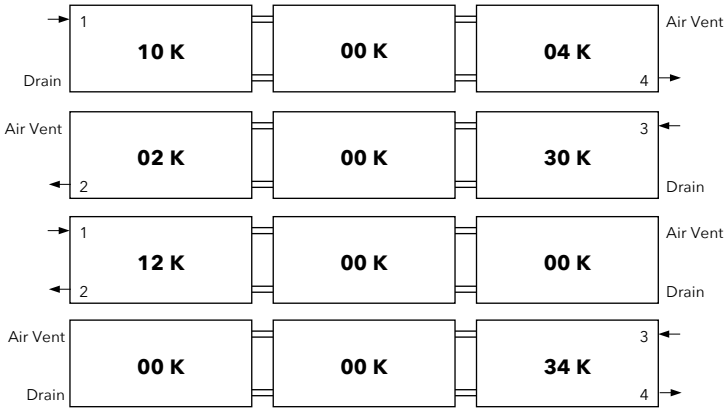


Vertical Models



*Extra cost

Connection Detail for Series Connected Radiators (extra cost)



Series Radiators

For series connected radiators there is a code for each radiator in the series which must be specified when ordering. Note connection size ½" only. Maximum number of radiators in series = 3 with a total combined length of 9000mm.

Valves

The fine detail of any installation makes all the difference, and a stylish radiator deserves an equally attractive finishing touch. It used to be that a radiator valve was just a radiator valve. But not any more. Valves come in all shapes and sizes – and they don't have to be plain or boring. To complement its extensive range of radiators, MHS has an unrivalled selection of designer valves for both period and contemporary settings, including straight and angled options.

With the current emphasis on energy efficiency, heating controls are at the forefront of fuel savings and to help meet these measures, most MHS radiator valves are available with TRV options too.
To complete the look, you can disguise plumbing with a carefully designed pipe sleeve and bezel.


Chrome manual angled valves


Chrome angled valves with MHS chrome TRV head


Chrome manual straight valves


Chrome straight valves with MHS chrome TRV head


Satin manual angled valves


Satin angled valves with MHS satin TRV head


Satin manual straight valves


Satin straight valves with MHS satin TRV head

Δt	CF
60	1.267
59	1.24
58	1.213
57	1.186
56	1.159
55.5	1.145
55	1.132
54	1.105
53	1.079
52	1.052
51	1.026
50	1.000
45	0.872
40	0.748
35	0.629

Correction Factor Table

The outputs shown within this brochure are based on BS EN442, 75-65-20°C operating conditions, giving a Δt of 50°C, for Δt's other than this, a correction factor must be applied. This correction factor table assumes an averaged exponent of 1.30. If a more accurate exponent / correction factor is required, please contact MHS Radiators.

Example: Output required @ 82-71-21°C Δt 55.5 the CF = 1.145, therefore multiply the listed output by the correction factor to give actual radiator output under these operating conditions.

Water Treatment: These products are for use on closed heating systems only; they are not suitable for installation on secondary HWS circuits. On completion of the installation the entire system MUST be thoroughly cleaned and flushed to remove debris/flux residues etc. If a chemical cleanser is used, it must be thoroughly flushed from the system. Following this, the system MUST be dosed with a good eminence water treatment to prevent corrosion. System design, flushing and dosing must be in accordance with BS 5449: 1990, BS EN 12828 & 12831: 2003 and BS 7593: 2006

IMPORTANT: Failure to observe these requirements will render the guarantee on the product void.
Corrosion inhibitor must be used in accordance with the manufacturer's instructions and recommendations and should take into account the particular metals within the system.

ISO 9001 REGISTERED FIRM
URS CERTIFICATE NO.75710

ISO 14001 REGISTERED FIRM
URS CERTIFICATE NO.07571

OHSAS 18001 REGISTERED FIRM
URS CERTIFICATE NO.07571

EN 442 EUROPEAN NORM

MHS Radiators Limited, 3 Juniper West, Fenton Way, Southfields Business Park, Basildon, Essex SS15 6SJ
Tel: 01268 546700 Fax: 01268 888260
orders@mhsradiators.co.uk enquiries@mhsradiators.co.uk www.mhsradiators.com

SALES OFFICE - 01268 546789 AFTER SALES SUPPORT - 01268 546775