



COMMERCIAL HEATING SOLUTIONS



ALUMINIUM RANGE

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A brand of IRSAP, Italy's leading manufacturer of design led radiators.

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# Contents

Clyde is a brand of the IRSAP; Italy's leading manufacturer of design led radiators. With over 50 years experience, we have the expertise to produce the best in quality & customer service.

Clyde provides bespoke solutions for LSTs, Cast Iron, Multi Column and Aluminium radiators. With a wide range of traditional and contemporary radiators, Clyde's solution based approach is designed to ensure we supply the ideal solution for all commercial and industrial requirements.

Our dedicated team of technical advisors and estimators will discuss your installation including the calculation of your heat output requirements (from drawings if necessary), arrange a full quotation based on your exact project specifications and provide lead times. They can also arrange a site visit from our National Sales Network if required.

For more information about Clyde or any of our products, please contact our customer service department: 01342 305522 / 305566

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## TECHNICAL DATA

### PRODUCT FEATURES

- Light weight Aluminium
- Low water content
- High thermal efficiency
- 5 heights
- Sold by section
- 10 Year guarantee
- White RAL 9010 standard, 25 RAL colours & 28 special finishes
- Max. Working Temperature: 100°C



### HEAT EMISSION RATES

- ΔT50 (75°C / 65°C / 20°C)
- ΔT55.5 (82°C / 71°C / 21°C)
- ΔT60 (90°C / 70°C / 20°C)
- BS EN 442-1 conditions of ΔT50

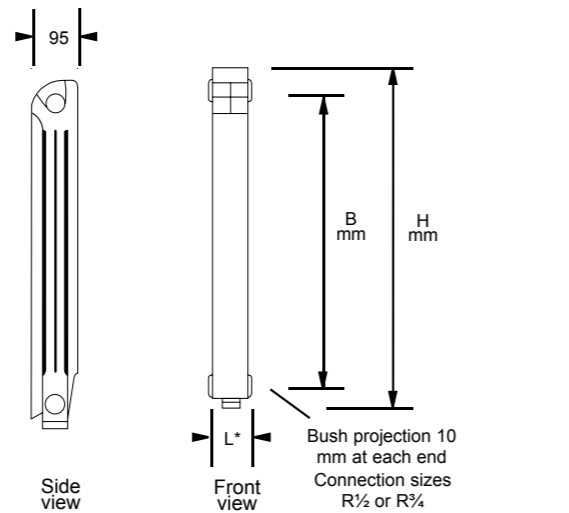
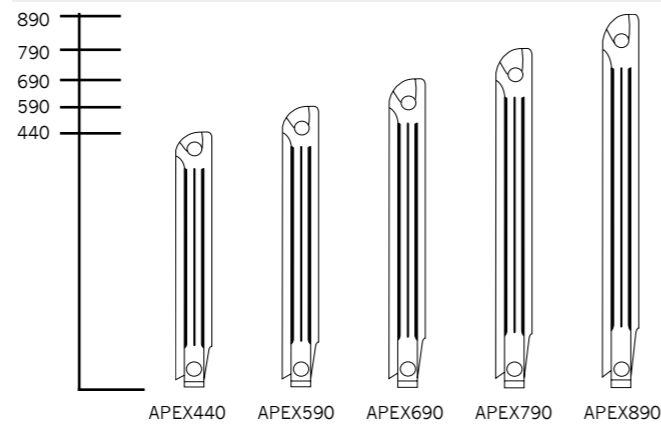
### RANGE SELECTION

- 5 heights from 440mm to 890mm
- Supplied pre-assembled in up to 20 sections (1600mm wide). Wider radiators to be joined on site
- BOE (Bottom Opposite End) Connections

### TECHNICAL SPECIFICATIONS

- Tested to EN442 by a UNI EN ISO 9001:2000 certified company
- Made from aluminium alloy EN AB 46100
- Overall width of each section = 80.8mm (section + join ring)
- Connection / blank bushes, flow diverter, airvent are supplied with each radiator
- Maximum operating pressure 6 bar

### TECHNICAL DRAWINGS



## APEX MODELS AND CODES

Model	BS EN 442 Emission Rates				Recommended max number of sections **	Section details					
	75/65/20°C Δt50		82/71/21°C Δt55.5	90/70/20°C Δt60		Overall Length * L (mm)	Overall height H (mm)	Bore centres B (mm)	Depth D (mm)	Dry weight (kg)	Water content (litres)
	watts	exponent	watts	watts							
APEX440	95	1.28	107	121	40	80.8	440	350	95	1.12	0.35
APEX590	127	1.30	144	161	38	80.8	590	500	95	1.45	0.46
APEX690	146	1.31	165	185	33	80.8	690	600	95	1.68	0.50
APEX790	164	1.32	185	208	29	80.8	790	700	95	1.95	0.53
APEX890	181	1.33	205	230	26	80.8	790	800	95	2.21	0.56

### QUICK SIZING CHARTS FOR APEX

#### ΔT50 - Inlet 75°C, Outlet 65°C, Room 20°C, BS EN 442-1:1995

Model	Watts per section	Radiator emission in kilowatts											
		0.6	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0	4.0	5.0	6.0
		Nearest number of sections required											
APEX440	95	6	8	11	13	16	18	21	26	32	—	—	—
APEX590	127	5	6	8	10	12	14	16	20	24	31	—	—
APEX690	146	4	5	7	9	10	12	14	17	21	27	—	—
APEX790	164	4	5	6	8	9	11	12	15	18	24	—	—
APEX890	181	3	4	6	7	8	10	11	14	17	22	—	—

#### ΔT55.5 - Inlet 82°C, Outlet 71°C, Room 21°C

Model	Watts per section	Radiator emission in kilowatts											
		0.6	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0	4.0	5.0	6.0
		Nearest number of sections required											
APEX440	107	6	7	9	12	14	16	19	23	28	37	—	—
APEX590	144	4	6	7	9	10	12	14	17	21	28	35	—
APEX690	165	4	5	6	8	9	11	12	15	18	24	30	—
APEX790	185	3	4	5	7	8	9	11	13	16	22	27	—
APEX890	205	3	4	5	6	7	9	10	12	15	20	24	—

#### ΔT60 - Inlet 90°C, Outlet 70°C, Room 20°C

Model	Watts per section	Radiator emission in kilowatts											
		0.6	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0	4.0	5.0	6.0
		Nearest number of sections required											
APEX440	120.65	5	7	8	10	12	15	17	21	25	33	—	—
APEX590	161.29	4	5	6	8	9	11	12	16	19	25	31	37
APEX690	185.42	3	4	5	7	8	9	11	13	16	22	27	32
APEX790	208.28	3	4	5	6	7	8	10	12	14	19	24	29
APEX890	229.87	3	3	4	5	7	8	9	11	13	17	22	26



## TECHNICAL DATA

### PRODUCT FEATURES

- Light weight Aluminium
- Low water content
- High thermal efficiency
- 6 heights
- Sold by section
- 10 Year guarantee
- White RAL 9010 standard, 25 RAL colours & 28 special finishes
- Max. Working Temperature: 100°C

### HEAT EMISSION RATES

- ΔT50 (75°C / 65°C / 20°C)
- ΔT60 (90°C / 70°C / 20°C)
- ΔT55.5 (82°C / 71°C / 21°C)
- BS EN 442-1 conditions of ΔT50

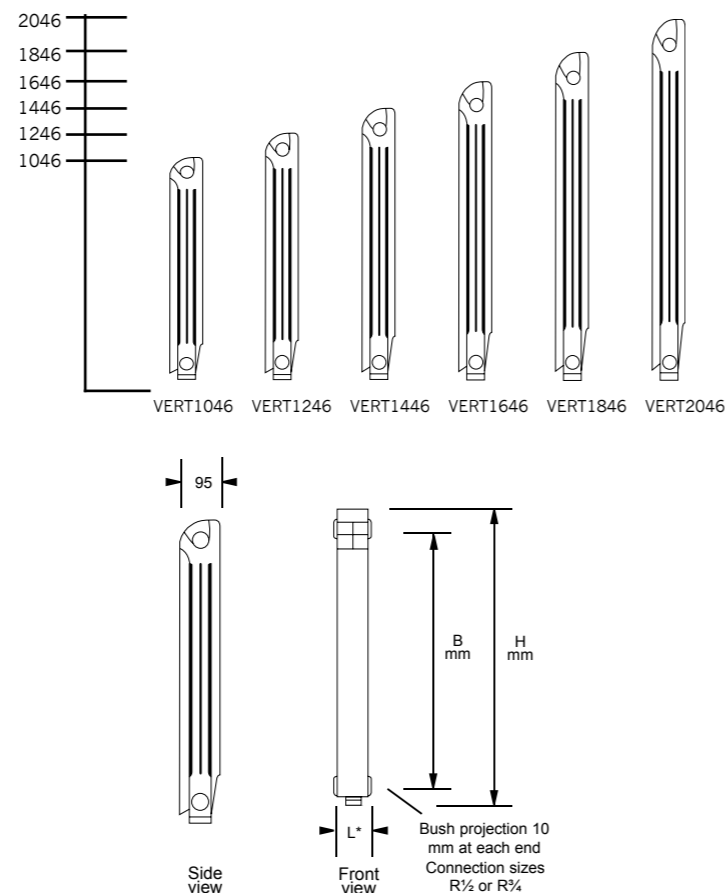
### RANGE SELECTION

- 6 heights from 1046mm to 2046mm
- Supplied pre-assembled in up to 10 sections (800mm wide). Wider radiators to be joined on site
- BOE (Bottom Opposite End) Connections

### TECHNICAL SPECIFICATIONS

- Tested to EN442 by a UNI EN ISO 9001:2000 certified company
- Made from aluminium alloy EN AB 46100
- Overall width of each section = 80.8mm (section + join ring)
- Connection / blank bushes, flow diverter, airvent are supplied with each radiator
- Maximum operating pressure 6 bar

### TECHNICAL DRAWINGS



## VERTEX MODELS AND CODES

Model	BS EN 442 Emission Rates				Recommended max number of sections **	Section details					
	75/65/20°C ΔT50		82/71/21°C ΔT55.5	90/70/20°C ΔT60		Overall Length * L (mm)	Overall height H (mm)	Bore centres B (mm)	Depth D (mm)	Dry weight (kg)	Water content (litres)
	watts	exponent	watts	watts							
VERT1046	189	1.34	214	240	25	80.8	1046	1000	95	2.09	0.45
VERT1246	217	1.34	245	276	22	80.8	1246	1200	95	2.41	0.51
VERT1446	244	1.35	276	310	19	80.8	1446	1400	95	2.73	0.58
VERT1646	272	1.35	307	345	17	80.8	1646	1600	95	3.08	0.64
VERT1846	300	1.36	339	381	16	80.8	1846	1800	95	3.41	0.70
VERT2046	327	1.36	370	415	15	80.8	2046	2000	95	3.77	0.77

### QUICK SIZING CHARTS FOR VERTEX

#### ΔT50 - Inlet 75°C, Outlet 65°C, Room 20°C, BS EN 442-1:1995

Model	Watts per section	Radiator emission in kilowatts											
		0.6	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0	4.0	5.0	6.0
		Nearest number of sections required											
VERT1046	189	3	4	5	7	8	9	11	13	16	21	—	—
VERT1246	217	3	4	5	6	7	8	9	12	14	18	—	—
VERT1446	244	2	3	4	5	6	7	8	10	12	16	—	—
VERT1646	272	2	3	4	5	6	6	7	9	11	15	—	—
VERT1846	300	2	3	3	4	5	6	7	8	10	13	—	—
VERT2046	327	2	2	3	4	5	5	6	8	9	12	—	—

#### ΔT55.5 - Inlet 82°C, Outlet 71°C, Room 21°C

Model	Watts per section	Radiator emission in kilowatts											
		0.6	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0	4.0	5.0	6.0
		Nearest number of sections required											
VERT1046	214	3	4	5	6	7	8	9	12	14	19	23	—
VERT1246	245	2	3	4	5	6	7	8	10	12	16	20	—
VERT1446	276	2	3	4	5	5	6	7	9	11	15	18	—
VERT1646	307	2	3	3	4	5	6	7	8	10	13	16	—
VERT1846	339	2	2	3	4	4	5	6	7	9	12	15	—
VERT2046	370	2	2	3	3	4	5	5	7	8	11	14	—

#### ΔT60 - Inlet 90°C, Outlet 70°C, Room 20°C

Model	Watts per section	Radiator emission in kilowatts											
		0.6	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0	4.0	5.0	6.0
		Nearest number of sections required											
VERT1046	240	2	3	4	5	6	7	8	10	12	17	21	25
VERT1246	276	2	3	4	5	5	6	7	9	11	15	18	22
VERT1446	310	2	3	3	4	5	6	6	8	10	13	16	19
VERT1646	345	2	2	3	4	4	5	6	7	9	12	14	17
VERT1846	381	2	2	3	3	4	5	5	7	8	10	13	16
VERT2046	415	1	2	2	3	4	4	5	6	7	10	12	14

## PACKAGING, CONNECTIONS, BRACKETS

### PACKING, HANDLING & SITE WORK

Radiator blocks are supplied with protective cardboard packaging to facilitate handling.

Accessories are delivered packed separately for fitting by the installer. It is important that radiators are protected from the elements during offloading and are stored in dry and adequately heated premises. Radiators must be kept vertical whilst being carried to their installation locations to avoid damage to the section joints - refer page 9.

**Apex radiators are factory assembled up to 20 sections long and Vertex radiators up to 10 sections long. For longer radiators additional blocks are supplied complete with nipples and joints for site assembling** - refer page 10. Assembling tools are optionally available to purchase or hire where additional blocks are supplied, see page 10.

### CONNECTIONS, BRACKETS AND FLOW DIVERTER

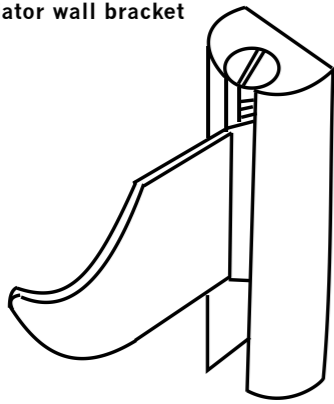
The maximum number of sections for each model for the R½ pipe connection bushes is shown in the table below.

The number of wall brackets required for each radiator length is also shown in this table. The end brackets should be located one section in from the end, and additional brackets evenly spaced.

Flow diverters are supplied for the Vertex range.

Allow 10mm at the end of each radiator for the connection bushes.

Adjustable Radiator wall bracket



Clyde Model	Max no. sections for R1/2 connections	Diverter required	Number of brackets		
			up to 20 sections	up to 30 sections	up to 40 sections
APEX440	28	no	4	6	8
APEX590	21	no	4	6	NA
APEX690	18	no	4	6	NA
APEX790	16	no	4	NA	NA
APEX890	14	no	4	NA	NA
VERT1046	14	yes	4	NA	NA
VERT1246	12	yes	4	NA	NA
VERT1446	11	yes	4	NA	NA
VERT1646	10	yes	4	NA	NA
VERT1846	9	yes	4	NA	NA
VERT2046	8	yes	4	NA	NA

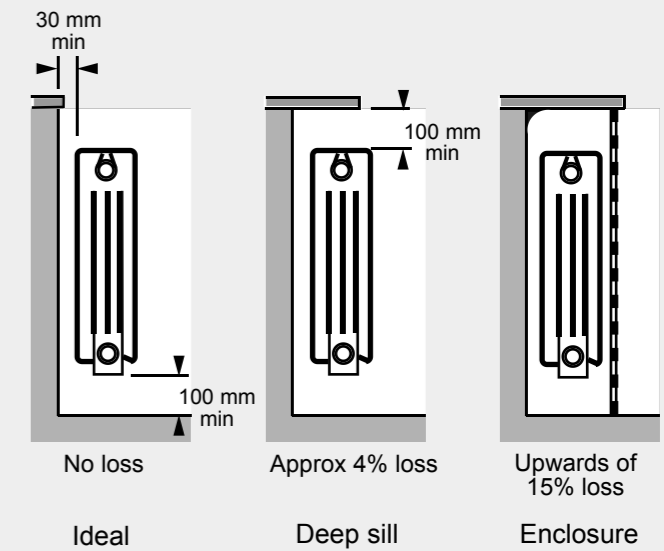
## BOXING & ENCLOSURES, CARRYING RADIATORS

### BOXING & ENCLOSURES

It is recommended that radiators are installed with a minimum gap of 100mm above floor level.

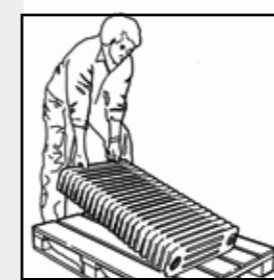
A full width window sill above the radiator will reduce emission rates by approximately 4%.

Boxing of radiators or the use of decorative enclosures will reduce emission rates by upwards of 15%, according to the design of the boxing. Any restriction of the free flow of air over the radiator surface is detrimental to convected heat emission. Obscuring the front surface of the radiator eliminates the beneficial effect of radiated heat.

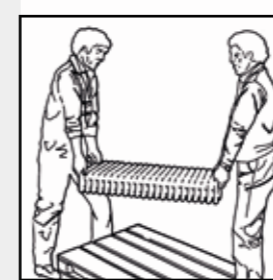


### CARRYING RADIATORS

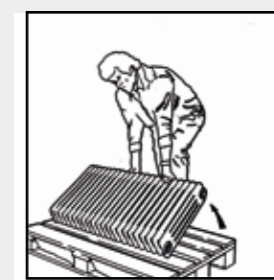
Always provide for sufficient manpower to make carrying safe. Incorrect handling of radiator blocks can cause water leaks from section joints. Lift the radiator blocks in the centre to bring them to the vertical position before lifting and carrying. Never carry radiators stretcher fashion. Although lighter than cast iron or steel column radiators they must still be handled correctly and with care.



**DO NOT**  
Lift from one end



**DO NOT**  
Carry radiators flat



**ALWAYS**  
Lift in centre



**ALWAYS**  
Keep sections vertical

### COMMISSIONING

In accordance with Part L1 2006 of the Building Regulations and BS7593:1992 code of practice for the treatment of hot water and central heating systems, we strongly recommend flushing the heating system post installation of new radiators and then adding the correct quantity and type of inhibitor for use with your radiator and system to prevent corrosion. Damage caused to systems not protected by a suitable inhibitor will not be covered by manufacturer's guarantee

## ASSEMBLING RADIATORS

### ASSEMBLING RADIATORS

Sections are joined with fitted joint rings between the machined faces of each section (a small amount of joining compound may be used - not hemp tape). Bushes and plugs are dry sealed in the connections at each end of the radiator with a joint ring supplied as part of the bush or plug. Hemp, tape or sealing compounds must not be used on the bush join.

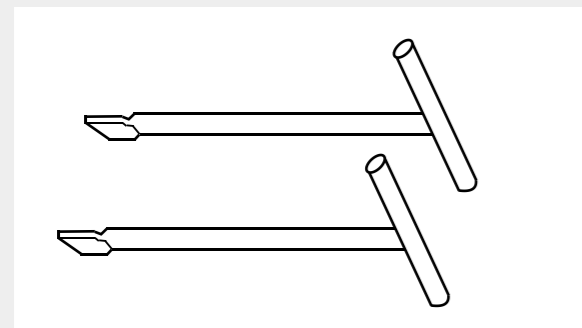
1. Before commencing assembly, ensure that the radiator blocks are adequately protected against scratching, abrasion or damage since the paint finish has already been applied. No responsibility can be accepted by Clyde Radiators for any damage to the paint finish that arises from handling, assembling or installing the radiators. It is essential to check that there is no damage to the paint finish before assembly is undertaken.
2. Position the section block horizontally on two lengths of timber.
3. Ensure that the machined faces and threads of the section are perfectly clean.
4. Screw two nipples one full turn into each of the section tappings. Note that the nipples have left and right handed threads.
5. Place a joint ring (as supplied) on each nipple.
6. Clean the machined surfaces and threads of the adjoining block or section. Lay this block or section beside the first block, ensuring that the threads mating to the nipples have the correct thread rotation.
7. Measure and mark off the length of the adjoining block or section on the nipple turning bars.
8. Insert the turning bars through the nippleways of the adjoining block or section to engage with the nipples.
9. Rotate both nipple turning bars equally to draw the blocks together keeping them parallel. If the blocks are not pulled together evenly, threads can be damaged and may give rise to leakage.
10. Repeat operations 2 to 9 until the radiator is fully assembled.
11. If a flow diverter is required, this should be fitted at the inlet to the radiator block.
12. Fit bushes, blank plug and vent valve according to the connection plan required.

Please visit our youtube channel where you can watch a demonstration on how to join & assemble a sectional aluminium radiator.

<https://www.youtube.com/playlist?list=PLMGnLO7Af-x4vZ-c-dWO5xwgfzLdhbseM>

#### Assembling tool set

#### 2 x Nipple turning bars



## VALVES

Choose from our AYR, CORNER AYR or SUSSEX TRV's to complement your APEX or VERTEX radiators

### AYR TRV

- For angled valves allow an extra 80mm in total
- Ayr valves are not Bi-directional
- Available in White, Chrome, Nickel, Black, Antique Copper & Antique Brass
- Valve height 125mm
- R $\frac{1}{2}$  x 15mm compression in angled or straight
- Supplied in pairs of one thermostatic valve & one lockshield



### CORNER AYR TRV

- For angled valves allow an extra 90mm in total
- Ayr valves are not Bi-directional
- Available in White, Chrome, Nickel, Black, Antique Copper & Antique Brass
- Valve height 116mm
- R $\frac{1}{2}$  x 15mm compression in angled or straight
- Supplied in pairs of one thermostatic valve & one lockshield



### SUSSEX TRV

- For angled valves allow an extra 80mm in total
- Sussex TRV valves are not Bi-directional
- Available in White, Chrome, Nickel, Antique Brass, Antique Copper
- R $\frac{1}{2}$  x 15mm compression in angled or straight
- Supplied in pairs of one thermostatic valve & one lockshield





## APEX & VERTEX COLOUR OPTIONS

If you are looking to have your Apex & Vertex radiator in an alternative colour we offer the following RAL colour options, please specify chosen colour at time of order.



To discuss a quotation for other colours outside of the above range please call 01342 305550

## APEX & VERTEX COLOUR OPTIONS

Choose from 28 Special finishes; Textured, Mottled, Bronze, Metallics and Golds, please specify chosen colour at time of order.



## OTHER CLYDE PRODUCTS



### COMMERCIAL HEATING SOLUTIONS

- 6 Flat Panel radiators
- Sectional Cast Iron in 4 styles
- 2 Bespoke LST options, made to specification
- Sectional Steel Multi Column in over 3200 sizes
- Radiant Panels
- Trench: Practical aluminium convector for underfloor heating
- Mini: Aluminium and copper convector, in steel casing with aluminium grille



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