

# THERMAL

Perimeter Heating Systems



CEILING PANELS  
FREE HANGING PANELS  
WALL PANELS  
FLOOR PANELS

Suitable for Hospitals • Nursing Homes • Schools  
Offices • Sports Halls • Assembly Halls  
Airports • Public Buildings • Workshops



## MODULAR RANGE

### SPECIFICATION

The panels are manufactured from shaped 15mm copper tubes securely strapped to the top surface of a rolled aluminium panel 2.0mm gauge.

The panels are provided in modular size to coincide with the suspended ceiling panels and to fit within the suspended ceiling grid.

Panel modular sizes are 600x600, 1200x600, 1800x600, 2400x600. Other sizes to suit application.

The panels have returned edges to provide added strength.

The 15mm copper heating coils are at 100mm to 150mm centres and are finished with 15mm pipes facing upwards at one end of the panel. Venting is via flow and return connection above panels by others.

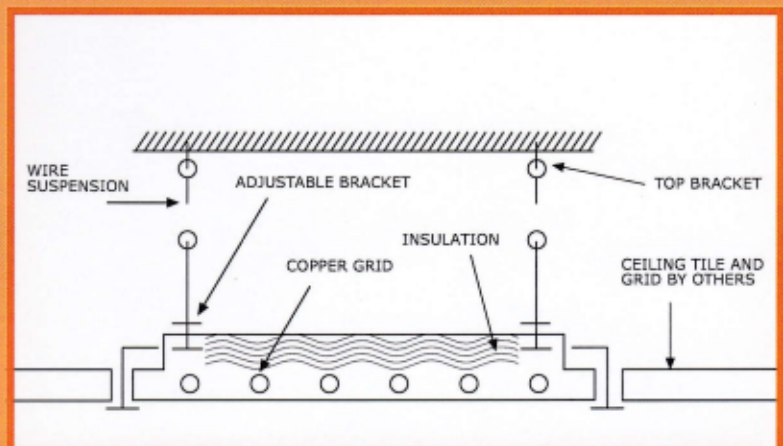
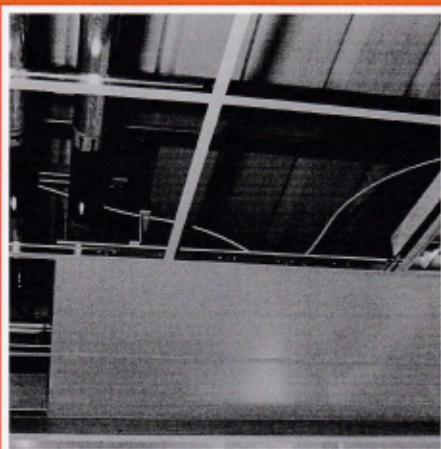
25mm aluminium foil backed insulated.

Panels tested at works for Test Pressure 10 bar.

The panels shall be independently supported via adjustable support wires - of 4 per panel - securely fixed to the site structure above the false ceiling.

Output  $\Delta T$  60°C 600Watts per metre.

Panels finished Powder Coat RAL Colours.





## RADIANT PANELS

### SPECIFICATION

Manufactured to meet design requirements.

Can be free suspended or fitted within suspended ceiling tiles. Can also be wall mounted or floor fitted.

When overhead projection above the panel is required (such as in a sports hall) an angled top can be provided to deflect objects.

### MATERIALS

- 2.0mm aluminium face plate.
- 16mm diameter copper emitter tubes.
- Aluminium contact clips.
- Insulation - 25mm thick. Aluminium foil backed.
- Finish - polyester powder coat.
- Floor panels stainless steel.

### DIMENSIONS & WEIGHTS

To customer's requirements. Weights - 9kg per sq.m.

### FLOW RATE

$$\text{kg per sec} = \frac{\text{Output}}{4200 \times \text{temp. drop}}$$

### OUTPUTS PER SQ. M

Room temp. 21°C.

MEAN WATER TEMP	65	70	75	80	85
OUTPUTS Watts	420	480	540	600	660

Outputs approval BISRIA REF: 18174/1



# CORRECTION FACTORS

## EXAMPLE

For

Flow 75°C

Return 65°C

Room 20°C

Factor 1.0

### Output per sq. m.

For  $\Delta T$  50°C output = 480 Watts/sq.m.

For  $\Delta T$  60°C output = 600 Watts/sq.m.

### Allowance for height up to 3m

Factor 1.0

For every metre over 3m allow 5%



U.K. Manufactured

Tv °C	Ti °C	Tr °C										Tt °C
		35	40	45	50	55	60	65	70	75	80	
90	16	0,91	0,97	1,04	1,11	1,17	1,24	1,31	1,38	1,45	1,52	16
	18	0,86	0,92	0,99	1,05	1,12	1,19	1,25	1,32	1,39	1,46	18
	20	0,81	0,87	0,94	1,00	1,07	1,13	1,20	1,27	1,34	1,41	20
	22	0,76	0,82	0,88	0,95	1,01	1,08	1,15	1,21	1,28	1,35	22
	24	0,71	0,77	0,83	0,90	0,96	1,03	1,09	1,16	1,23	1,29	24
85	16	0,85	0,91	0,97	1,04	1,11	1,17	1,24	1,31	1,38	16	
	18	0,80	0,86	0,92	0,99	1,05	1,12	1,19	1,25	1,32	18	
	20	0,75	0,81	0,87	0,94	1,00	1,07	1,13	1,20	1,27	20	
	22	0,70	0,76	0,82	0,88	0,95	1,01	1,08	1,15	1,21	22	
	24	0,65	0,71	0,77	0,83	0,90	0,96	1,03	1,09	1,16	24	
80	16	0,78	0,85	0,91	0,97	1,04	1,11	1,17	1,24	16		
	18	0,74	0,80	0,86	0,92	0,99	1,05	1,12	1,19	18		
	20	0,69	0,75	0,81	0,87	0,94	1,00	1,07	1,13	20		
	22	0,64	0,70	0,76	0,82	0,88	0,95	1,01	1,08	22		
	24	0,59	0,65	0,71	0,77	0,83	0,90	0,96	1,03	24		
75	16	0,72	0,78	0,85	0,91	0,97	1,04	1,11	16			
	18	0,68	0,74	0,80	0,86	0,92	0,99	1,05	18			
	20	0,63	0,69	0,75	0,81	0,87	0,94	1,00	20			
	22	0,58	0,64	0,70	0,76	0,82	0,88	0,95	22			
	24	0,54	0,59	0,65	0,71	0,77	0,83	0,90	24			
70	16	0,66	0,72	0,78	0,85	0,91	0,97	16				
	18	0,62	0,68	0,74	0,80	0,86	0,92	18				
	20	0,57	0,63	0,69	0,75	0,81	0,87	20				
	22	0,53	0,58	0,64	0,70	0,76	0,82	22				
	24	0,48	0,54	0,59	0,65	0,71	0,77	24				
65	16	0,61	0,66	0,72	0,78	0,85	16					
	18	0,56	0,62	0,68	0,74	0,80	18					
	20	0,51	0,57	0,63	0,69	0,75	20					
	22	0,47	0,53	0,58	0,64	0,70	22					
	24	0,43	0,48	0,54	0,59	0,65	24					
60	16	0,55	0,61	0,66	0,72	16						
	18	0,50	0,56	0,62	0,68	18						
	20	0,46	0,51	0,57	0,63	20						
	22	0,42	0,47	0,53	0,58	22						
	24	0,37	0,43	0,48	0,54	24						
55	16	0,49	0,55	0,61	16							
	18	0,45	0,50	0,56	18							
	20	0,41	0,46	0,51	20							
	22	0,36	0,42	0,47	22							
	24	0,32	0,37	0,43	24							
50	16	0,44	0,49	16								
	18	0,40	0,45	18								
	20	0,35	0,41	20								
	22	0,31	0,36	22								
	24	0,27	0,32	24								
45	16	0,39	16									
	18	0,34	18									
	20	0,30	20									
	22	0,26	22									
	24	0,23	24									