Aluminium Heat Emission Spreader Plate

Highly reflective pre-grooved aluminium spreader plates are laid between floor battens or timber joists. They are designed such that, when a floor deck is laid over the battens or timber joists, the floor will be in direct contact with the aluminium spreader plates, ensuring an effective transfer of heat into the room. Spreader plates dimensions are 1000mm x 390mm and are available in Twin Groove (150mm or 200mm pipe centres), and Triple Groove (133mm pipe centres) version to accommodate 16mm pipework. Spreader plates have the option to be easily trimmed on site; bespoke spreader plates may be available upon request for specific projects.

Installation

A minimum of 100mm quilt or 50mm polyurethane insulation supported on timber battens. It is very important that insulation zones above ventilated spaces (i.e. Ground floors) are air tight, use suitable foil tapes where required.

- Aluminium plates have extremely sharp edges, please handle with care and wear appropriate PPE.
- The plates are grooved with an omega shape ensuring a snug fit. Some plates are supplied with score marks these can be snapped along these marks and used as infill plates.
- Allow 200mm gap at end of runs for pipe returns, maintain a gap of 5mm between plates to allow for expansion.
- Simply fix the plates to the top of joists using a staple gun or tacks
- Connect the flow pipe to the required circuit on the flow manifold and begin to lay the pipe In accordance with your design.
- You may need to support the plate from below whilst inserting the pipe.
- Ensure the insulation placed below the plates forms a complete blanket without voids.
- Good practise recommends to use a thin layer of insulation quilt above rigid insulation boards. This forces the plates upwards towards the underside of the floor deck during installation ensuring complete contact of the plates with the decking.

MULTIPIPE

UNDERFLOOR HEATING

HEAT OUTPUT DATA (to BS EN1264-2 for 16mm OD MLCP, PE-RT PE-X pipes)

FOR TIMBER COVERED FLOORS CONTAINING ALUMINIUM (0.5mm) HEAT EMISSION PLATES

*** AFST = Average floor surface temperature**

FLOOR FINISH →		CERAMIC, STONE, SLATE R= 0.00m²k/W		CARPETS, PARQUET, LAMINATE FLOORING R= 0.10m²k/W		DEEP PILE CARPET/ THICK HARDWOOD FLOORING R= 0.20m²k/W	
MWT (°C)	Room Temp (°C)	Output Watts/m²	* AFST (°C)	Output Watts/m²	* AFST (°C)	Output Watts/m²	* AFST (°C)
40	15	76	22.0	58	20.5	47	19.5
	18	67	24.2	51	22.9	42	22.0
	20	61	25.7	47	24.5	38	23.7
	22	55	27.2	42	26.1	34	25.4
	24	48	28.7	37	27.7	30	27.0
45	15	91	23.3	70	21.5	57	20.4
	18	82	25.5	63	23.9	51	22.9
	20	76	27.0	58	25.5	47	24.5
	22	70	28.5	53	27.1	43	26.2
	24	64	30.0	49	28.7	40	27.9
50	15	106	24.5	81	22.5	66	21.2
	18	97	26.8	74	24.9	60	23.7
	20	91	28.3	70	26.5	57	25.4
	22	85	29.8	65	28.1	53	27.0
	24	79	31.2	60	29.7	49	28.7
55	15	121	25.7	93	23.4	75	22.0
	18	112	28.0	86	25.9	70	24.5
	20	106	29.5	81	27.5	66	26.2
	22	100	31.0	77	29.1	62	27.9
	24	94	32.5	72	30.7	58	29.5

Thermal Conductivity Kh-value	3.03	2.33	1.89

Note: Add 10w/m² for downward heat loss when using Building Regulation Compliance L1a or L2a

Occupied Area	Normal use
Not Recommended	Excessive - do not use

Notes:

1. Heat emissions shown are for 100% active heated aluminium covered areas only. Deduct all areas without HEP plates.
2. Active heated floor area in joisted floors are usually 80% of the gross area, but this may vary subject to design.
3. 18mm thick floor boards have been used in formulating the above outputs, for 22mm thick boards, deduct 6% of output.
4. Observe timber surface temperature of 27-28°C to avoid shrink damage - check manufacturers requirements.
5. Thermal insulation complying with BS EN1264 and Building Regulations must be fitted to all systems to reduce downward losses.