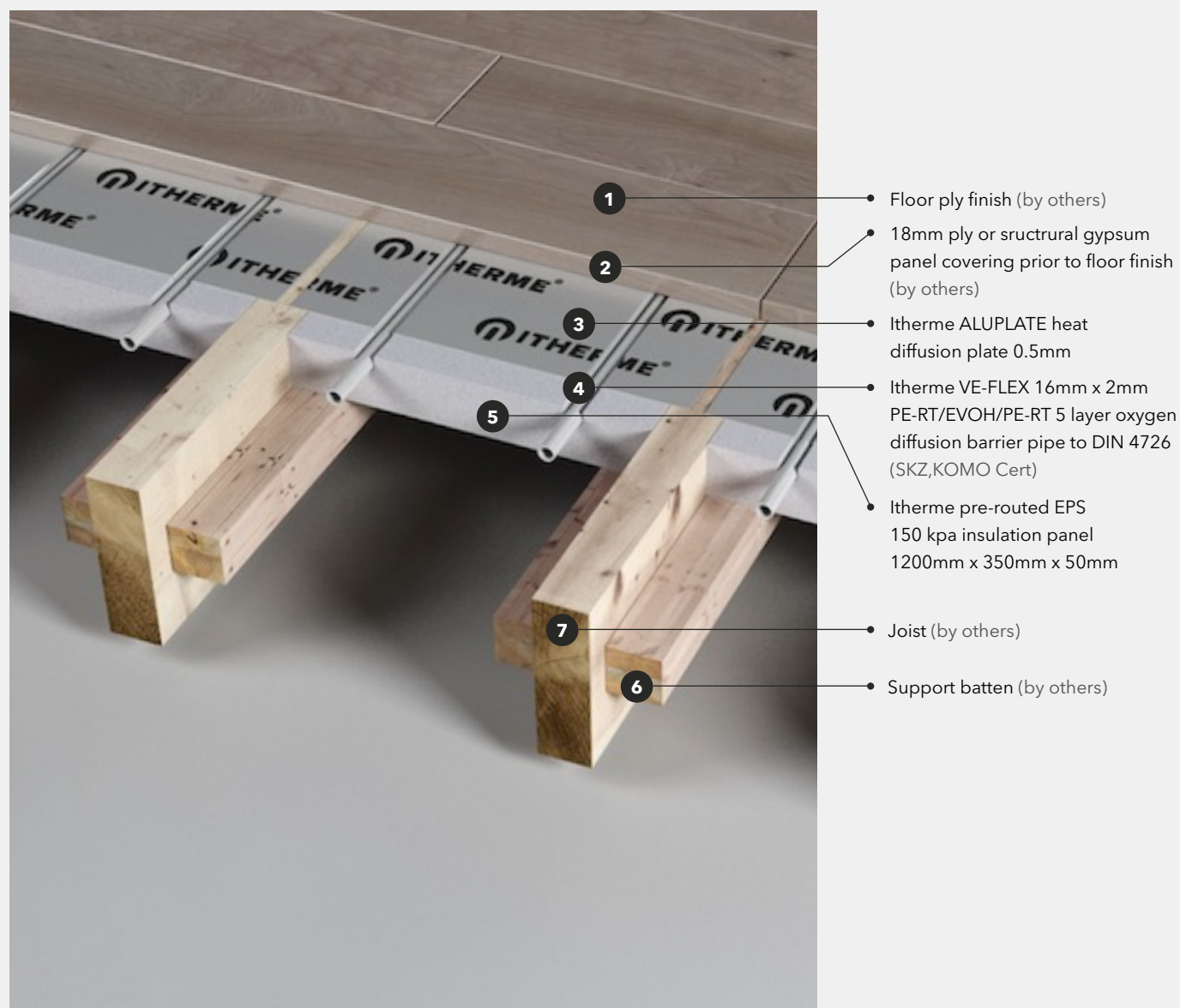


ITHERME ALUPLATE 50

JOISTED/BATTENED FLOOR CONSTRUCTION



Specification

- Itherme ALUPLATE 50 system designed for use within for use within a joisted floor construction.
- Itherme ALUPLATE 50 heat diffusion plate to install directly in to pre-routed Itherme EPS 150 kpa insulation channels to accept Itherme VE-FLEX 16mm x 2mm PE-RT/EVOH/PE-RT 5 layer oxygen diffusion barrier pipe to DIN 4726 (SKZ,KOMO Cert).
- Itherme 50mm EPS 150 kpa pre-routed insulation to be installed on to supporting battens.
- Itherme Aluplate 50 system to finish flush with top of joist prior to ply/structural Gypsum fibre covering to accept final floor finish.

System overview

- Itherme ALUPLATE 50 provides even heat distribution across heated floor area via aluminium heat diffusion spreader plates.
- Ideal for intermediate floors over heated floor below.
- Can accept all floor finishes after plywood or structural Gypsum panel covering layer.
- Design flexibility with 150mm and 200mm pipe centre options available according to design requirement and joist spacing.
- Adds no additional height to existing joist when build up is available.
- Ultra thin commercial grade aluminium heat diffusion ALUPLATE 0.5mm

System output performance ALUPLATE 50

Mean water flow temperature	Room design temperature	Pipe spacing	Indicative system heat output W/m ² based on TOG rating		
			0.0	1.0	1.5
35oC	20oC	150mm	45 W/m ²	32 W/m ²	28 W/m ²
45oC	20oC	150mm	76 W/m ²	53 W/m ²	46 W/m ²
55oC	20oC	150mm	100 W/m ²	74 W/m ²	65 W/m ²

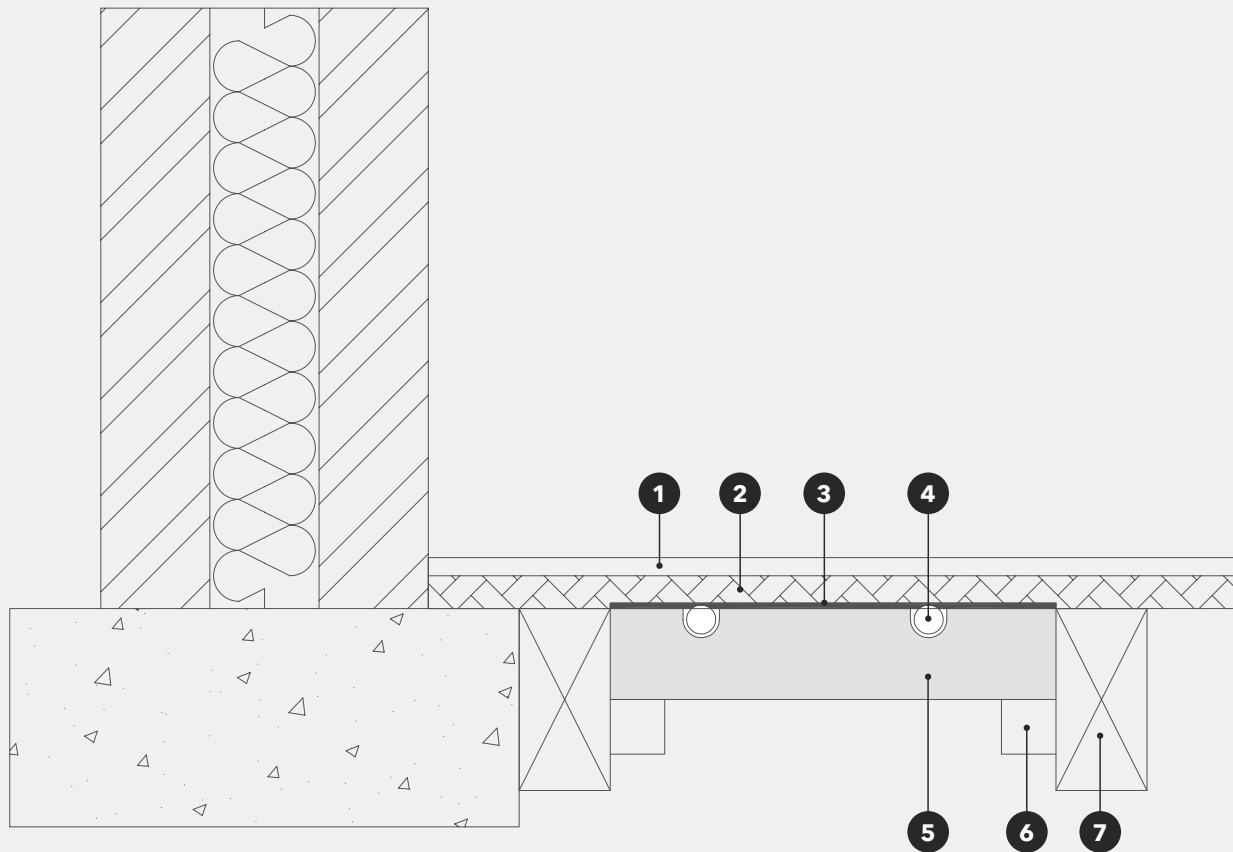
Based on 18mm ply covering prior to floor finish
 Summary guide of system outputs based on a typical room design temperature of 20oC with pipe spacing at 150mm centre. Specific factors for each individual system design will need to be considered

System output performance ALUPLATE 50

Mean water flow temperature	Room design temperature	Pipe spacing	Indicative system heat output W/m ² based on TOG rating resistance		
			0.0	1.0	1.5
35oC	20oC	150mm	70 W/m ²	43 W/m ²	36 W/m ²
45oC	20oC	150mm	100 W/m ²	71 W/m ²	59 W/m ²
55oC	20oC	150mm	100 W/m ²	99 W/m ²	83 W/m ²

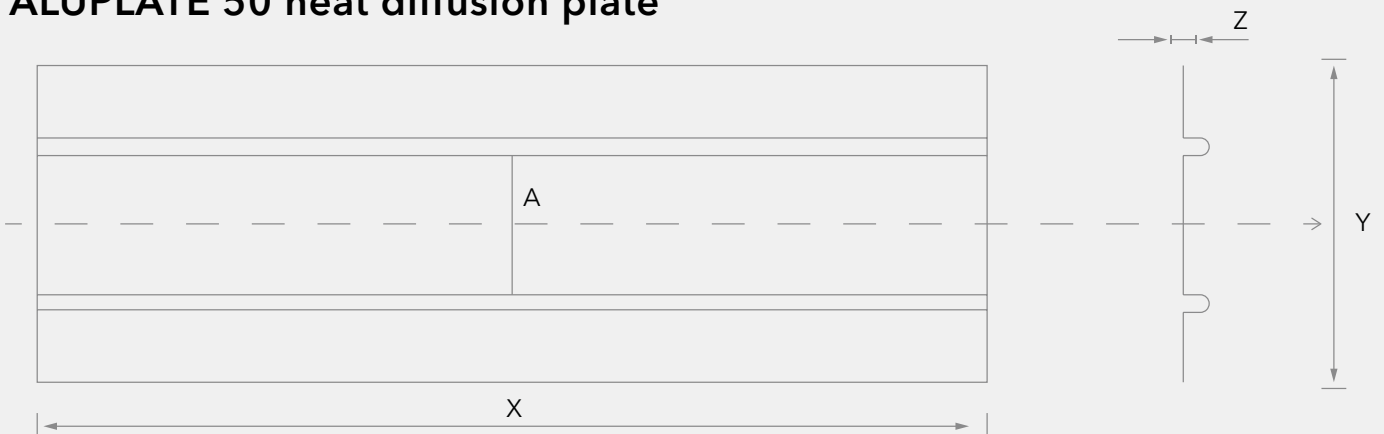
Based on structural Gypsum fibre board covering prior to floor finish
 Summary guide of system outputs based on a typical room design temperature of 20oC with pipe spacing at 150mm centre. Specific factors for each individual system design will need to be considered

Section



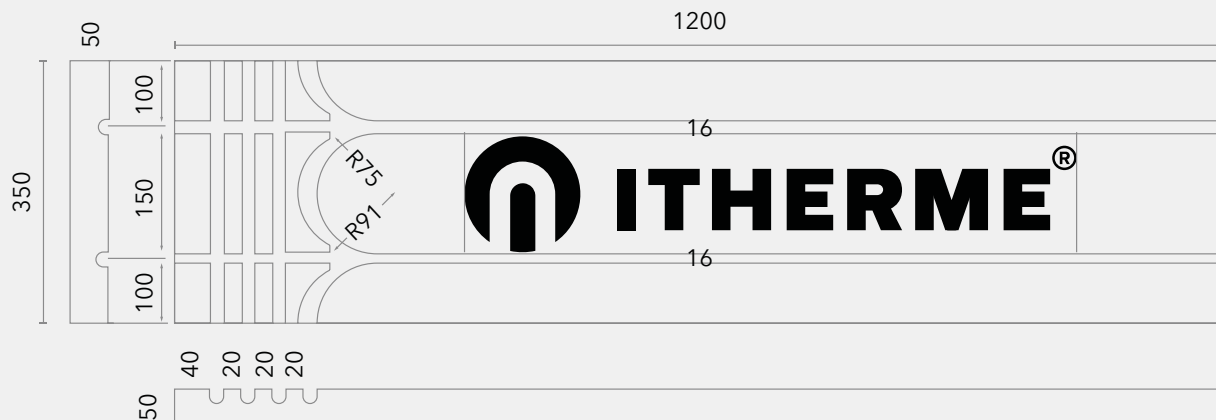
- | | |
|---|---|
| 1 Floor finish (by others) | 5 Itherme pre-routed EPS 150 kpa insulation panel 1200mm x 350mm x 50mm |
| 2 18mm ply or structural Gypsum panel covering prior to floor finish (by others) | 6 Support batten (by others) |
| 3 Itherme ALUPLATE heat diffusion plate 0.5mm | 7 Joist (by others) |
| 4 Itherme VE-FLEX 16mm x 2mm PE-RT/EVOH/PE-RT 5 layer oxygen diffusion barrier pipe to DIN 4726 (SKZ,KOMO Cert) | |

ALUPLATE 50 heat diffusion plate



X=1000mm Y=390mm Z=16mm Plate thickness 0.5mm. A=150mm /200mm

Itherme ALUPLATE 50 pre-routed EPS 150 kpa panel Euroclass F



Technical information

Features	Grades EPS						
	EPS70E	EPS100E	EPS150E	EPS200E	EPS250E	EPS300E	EPS500E
Thermal Conductivity [k] value W/mk (10.C mean)	0.038	0.036	0.035	0.034	0.033	0.033	0.033
Compress Strength kPa Min (at 10% compressive strengths)	70	100	150	200	250	300	500
Cross Breaking Strength kPa Min	115	150	200	250	350	450	750
Safe Working Load kPa at 1% nominal compression	21	45	70	90	100	120	190
Vapour Diffusion Resistance factor 11	20-40	30-70	30-70	30-100	40-100	40-100	40-100
Vapour Permeability omg [pa.h.m]	0.015 to 0.030	0.009 to 0.020	0.009 to 0.020	0.006 to 0.015	0.006 to 0.015	0.007 to 0.018	0.007 to 0.018