

DIN EN 15377-2:2008-11 (E)

Heating systems in buildings - Design of embedded water based surface heating and cooling systems - Part 2: Design, dimensioning and installation

Contents		Page
Foreword		3
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms, definitions, symbols and units	6
4	Basic principles	6
4.1	Heating or cooling medium differential temperature	6
4.2	Performance characteristic curve	7
4.3	Field of system characteristic curves	7
4.4	Limit curves	7
5	Boundary conditions and limits	10
5.1	Supply pipes to adjacent rooms	10
5.2	Backing thermal insulation	10
6	Design	12
6.1	Design heat flow intensity	12
6.2	Required length of the heating or cooling circuit	13
6.3	Procedure for determining the design supply temperature	14
6.3.1	System only for heating	14
6.3.2	System only for cooling	16
6.4	Procedure for determining the design heating or cooling medium flow rate	16
7	Peripheral areas by floor heating	17
8	Installation	18
A.1	General	19
A.2	Equipment	19
A.2.1	General	19
A.2.2	Safety	19
A.2.3	Stop valves and balancing devices	19
A.2.4	Control	19
A.2.5	Piping (pipes and couplings)	20
A.3	Installation of piping	20
A.3.1	Storage and transport	20
A.3.2	Bending radius	20
A.3.3	Couplings	20
A.3.4	Joints	20
A.3.5	Holes in the embedded surface	21
A.4	Leak test	21
A.5	Initial heating up	21
Bibliography		23
Annex B (informative) Recommended minimum thermal resistance for floor heating systems		22

Annex A (informative) Installation 19