

DIN EN 1264-3:2021-08 (E)

Water based surface embedded heating and cooling systems - Part 3: Dimensioning

Contents		Page
European foreword		3
1	Scope	4
2	Normative references	4
3	Terms and definitions	5
4	Heating systems	5
4.1	Floor heating systems	5
4.1.1	Basic principles	5
4.1.2	Boundary conditions	6
4.1.3	Design	9
4.1.4	Peripheral areas	11
4.2	Ceiling heating systems	12
4.2.1	Basic principles	12
4.2.2	Boundary conditions	12
4.2.3	Design	13
4.3	Wall heating systems	13
4.3.1	Basic principles	13
4.3.2	Boundary conditions	13
4.3.3	Design	14
5	Cooling systems	14
5.1	General	14
5.1.1	Basic principles	14
5.1.2	Temperature differences	14
5.1.3	Regional dew point and standard indoor room temperature	14
5.1.4	Temperature difference between room and cooling water	15
5.1.5	Characteristic curves	15
5.1.6	Field of characteristic curves	15
5.1.7	Limit curve	15
5.1.8	Thermal insulation	16
5.2	Design	16
5.2.1	Pressure loss	16
5.2.2	Design specific cooling load	16
5.2.3	Determination of the design flow (inlet) temperature and the design specific thermal output	16
5.2.4	Determination of the design cooling water flow rate	18
Annex A (normative) Figures		19
Bibliography		21