



SLOVENSKI STANDARD
SIST EN ISO 11855-3:2021/oprA1:2023
01-marec-2023

Načrtovanje notranjega okolja v stavbah - Vgrajeni sevalni ogrevalni in hladilni sistemi - 3. del: Načrtovanje in dimenzioniranje - Dopolnilo A1 (ISO 11855-3:2021/DAM 1:2023)

Building environment design - Embedded radiant heating and cooling systems - Part 3: Design and dimensioning - Amendment 1 (ISO 11855-3:2021/DAM 1:2023)

Umweltgerechte Gebäudeplanung - Flächenintegrierte Strahlungsheiz- und -kühlsysteme - Teil 3: Planung und Auslegung (ISO 11855-3:2021/DAM 1:2023)

Conception de l'environnement des bâtiments - Systèmes intégrés de chauffage et de refroidissement par rayonnement - Partie 3: Conception et dimensionnement - Amendement 1 (ISO 11855-3:2021/DAM 1:2023)

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ICS:

91.140.10	Sistemi centralnega ogrevanja	Central heating systems
91.140.30	Prezračevalni in klimatski sistemi	Ventilation and air-conditioning systems

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ISO/TC 205

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Building environment design — Embedded radiant heating and cooling systems —

Part 3: Design and dimensioning

AMENDMENT 1

Conception de l'environnement des bâtiments — Systèmes intégrés de chauffage et de refroidissement par rayonnement —

Partie 3: Conception et dimensionnement

AMENDEMENT 1

ICS: 91.040.01

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ISO/CEN PARALLEL PROCESSING



Reference number
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Building environment design — Embedded radiant heating and cooling systems —

Part 3: Design and dimensioning

AMENDMENT 1

Foreword

Modify to the following:

The main changes compared to the previous edition are as follows:

- the Scope clause was modified, series-related information has been moved to the Introduction section;
- normative references were modified;
- informative references have been moved to the Bibliography;
- Annex A was added for the calculation of the thermal resistance of the insulating layers;
- the radiant system types have been redefined and figures are updated based on the amendment;
- Typing error in formula (24) was modified;

2 Normative references

Modify to the following:

ISO 11855-2, *Building environment design — Embedded radiant heating and cooling systems — Part 2: Determination of the design heating and cooling capacity*

ISO 11855-5, *Building environment design — Embedded radiant heating and cooling systems — Part 5: Installation*

5 Radiant panel

5.1 Floor heating systems

5.1.4 Field of characteristic curves

Modify to the following:

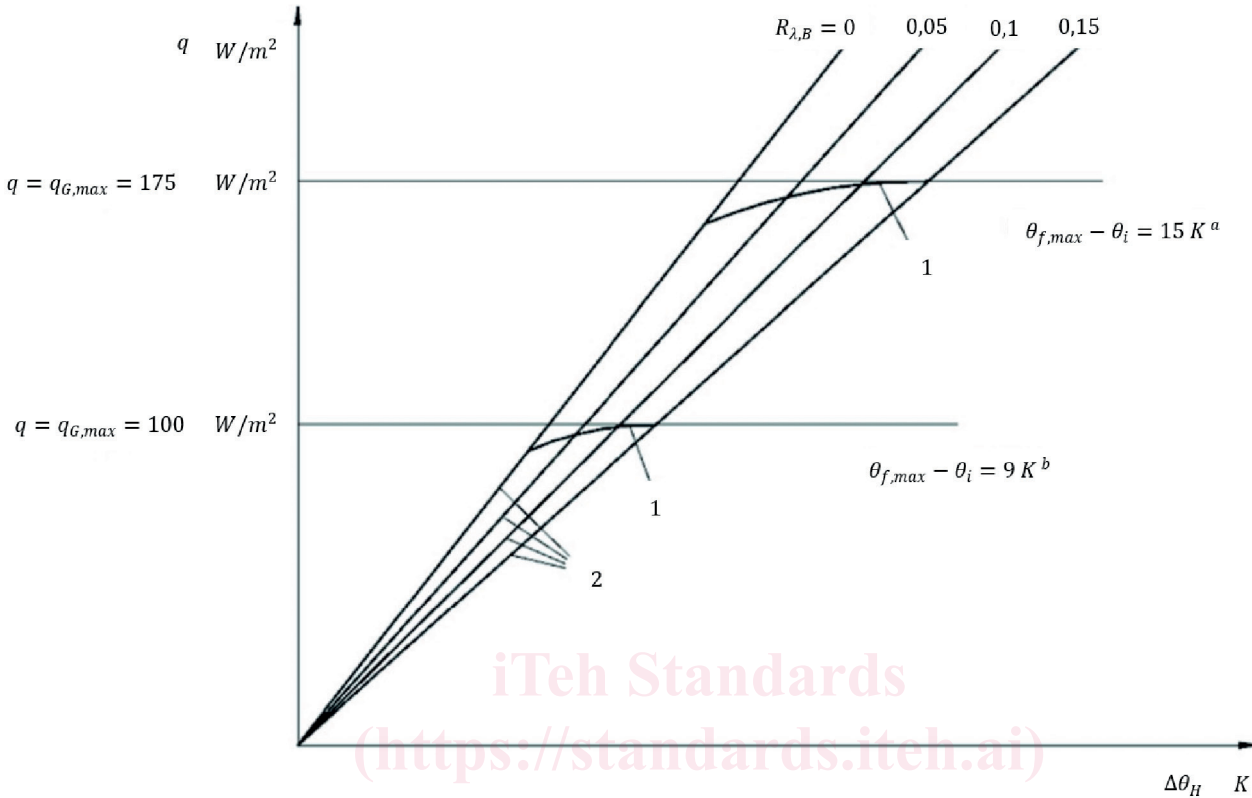
The field of characteristic curves of a floor heating system with a specific pipe spacing W shall at least contain the characteristic curves for values of the thermal resistance of surface covering $R_{\lambda,B} = 0$, $R_{\lambda,B} = 0,05$, $R_{\lambda,B} = 0,10$ and $R_{\lambda,B} = 0,15$ ($\text{m}^2\text{K}/\text{W}$), in accordance with ISO 11855-2 (see Figure 1). Values of $R_{\lambda,B} > 0,15$ ($\text{m}^2\text{K}/\text{W}$) shall not be used if possible.

ISO 11855-3:2021/DAM 1:2022(E)

5.1.5 Limit curves

Figure 1

Modify to the following:



Key

X $\Delta\theta_H$ K

Y q W/m²

1/limit curves

2 performance characteristic curves

^a Peripheral area.

^b Occupied area.

Figure 1 — Field of characteristic curves, including limit curves for floor heating, for constant pipe spacing

5.1.6 Downwards thermal insulation

Modify to the following:

In order to limit the heat flow through the floor towards the space below, the required back-side thermal resistance of the insulating layer $R_{\lambda,ins}$ shall be specified in the design to be not lower than the value in ISO 11855-5, 5.1.2.3.2.

For systems which have a flat insulating layer (system types I, II and IV in ISO 11855-1), the back-side thermal resistance of the insulating layer $R_{\lambda,ins}$ is calculated by Formula (7) where there is no stud. And the effective thickness of thermal insulating layer s_{ins} is identical to the thickness of the thermal