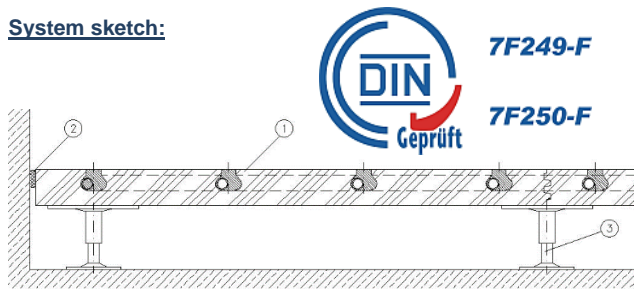


## Technical Data Functional Floors Heating & Cooling

### System sketch:



- 1 Supporting panel with cut-out for heating pipes  
600 x 600 mm  
Perimeter profile: tooth milling  
Aluminum foil underneath
- 2 Self adhesive foam tape
- 3 Pedestal

### Panel:

Panel material:  
Dimension:  
Diffusion barrier:  
System weight:  
Available pipe centres:  
Heating pipe:

Fibre-reinforced calcium sulphate 40 mm  
600 x 600 mm (ZF)  
underneath  
Approx. 50 to 68 kg/m<sup>2</sup>  
100 mm, 150 mm  
Protac PE-RT 14x2 mm,  
made of cross-linked polyethylene, oxygen-tight according to DIN 4726. For use as surface heating and cooling pipe.

Body filler:

Special body filler, wheel chair resistant, temperature-resistant

### Substructure:

Module:  
Reinforced peripheral zone:  
Pedestal material:  
Construction height:

600 x 600 mm  
Optional available  
Galvanized steel pedestals  
~ 65 – 2.000 mm FFH

### Floor coverings / readiness for laying of floor coverings: \*

Textile and elastic floor coverings, parquet, natural and artificial stone, ceramic

First heating:  
Readiness for laying of floor coverings:

Beginning 36 hours after grouting for a period of 48 hours directly after the first heating period and cooling down

### Load values:

Point load:  
Load class according to EN 13213:  
Ultimate load:  
Higher nominal loads:  
Safety factor:

3.000 – 5.000 N  
Claas 2 – 5  
≥ 6.000 – 10.000 N  
optional available  
≥ 2,0

### Fire protection:

Building material class  
acc. to EN 13501-1:  
Fire resistance class acc. to DIN 4102 T2:

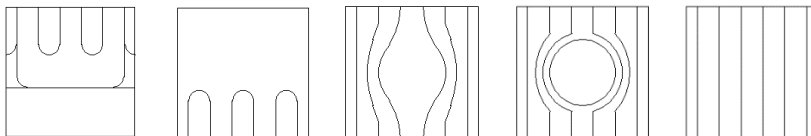
A1  
F30 possible

### Acoustic values:

- Sound reduction index  $R_{L,w,P}$
- Normalized impact sound pressure level  $L_{n,w,P}$
- Improvement of sound pressure level reduction  $\Delta L_{w,P}$

Depending on system and floor covering  
New terms acc. to DIN EN  
Standard flank level difference  $D_{n,f,w,P}$   
Standard flank impact sound level  $L_{n,f,w,P}$   
Impact sound reduction  $\Delta L_{w,P}$

### Survey of standard system panels:



Beside these standard system panels further special panels are available on request.

\* The MERO hollow floor corresponds to the standard DIN EN 13213. The allowed deflections are to be taken into consideration by the planning of the subsequent crafts.

### Technical Data Functional Floors Heating & Cooling

#### Performance diagrams heating and cooling

##### Heating

Heat flow density  $q_G$  acc. to DIN EN 1264-2 (without floor covering,  $R_{\lambda}=0,00 \text{ m}^2\text{K/W}$ ) 77,0 W/m<sup>2</sup>

at nominal heating liquid overtemperature  $\Delta\theta_H$  11,69 K

Heat flow density  $q_G$  acc. to DIN EN 1264-2 (with floor covering,  $R_{\lambda}=0,15 \text{ m}^2\text{K/W}$ ) at nominal heating liquid overtemperature  $\Delta\theta_H$  88,9 W/m<sup>2</sup>  
25,89 K

thermal resistance of coverings

$R_{\lambda,B}$  carpet 0,07 m<sup>2</sup>K/W

— 0,23

$R_{\lambda,B}$  ceramic tiles / stone 0,02 m<sup>2</sup>K/W

$R_{\lambda,B}$  PVC 0,01 m<sup>2</sup>K/W

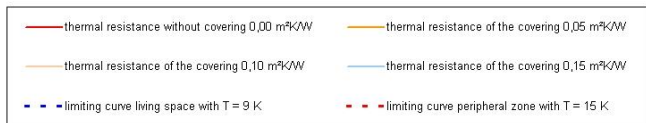
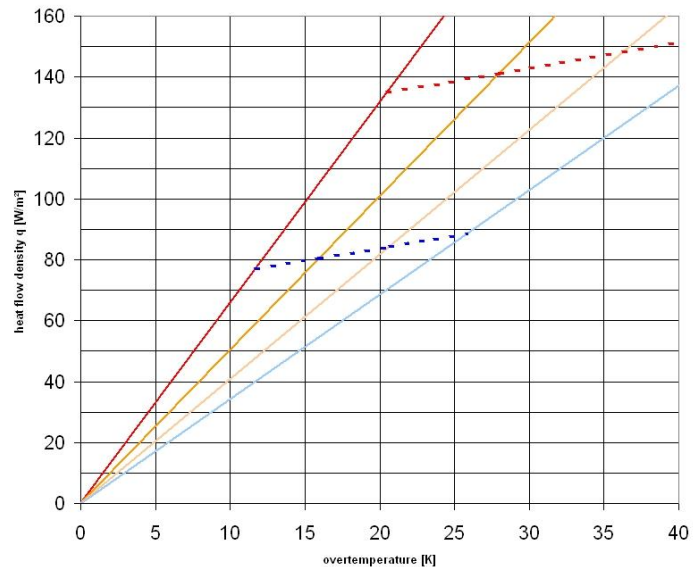


7F249-F

7F250-F

#### Pipe centre 100 mm

heat flow density (heating power) of the UFH with pipe centre 100 mm



##### Heating

Heat flow density  $q_G$  acc. to DIN EN 1264-2 (without floor covering)  $R_{\lambda}=0,00 \text{ m}^2\text{K/W}$  59,7 W/m<sup>2</sup>

at nominal heating liquid overtemperature  $\Delta\theta_H$  12,39 K

Heat flow density  $q_G$  acc. to DIN EN 1264-2 (with floor covering,  $R_{\lambda}=0,15 \text{ m}^2\text{K/W}$ ) at nominal heating liquid overtemperature  $\Delta\theta_H$  78,0 W/m<sup>2</sup>  
29,54 K

thermal resistance of coverings

$R_{\lambda,B}$  carpet 0,07 m<sup>2</sup>K/W

— 0,23

$R_{\lambda,B}$  ceramic tiles / stone 0,02 m<sup>2</sup>K/W

$R_{\lambda,B}$  PVC 0,01 m<sup>2</sup>K/W

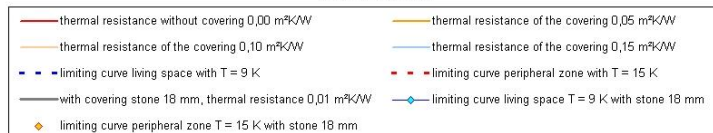
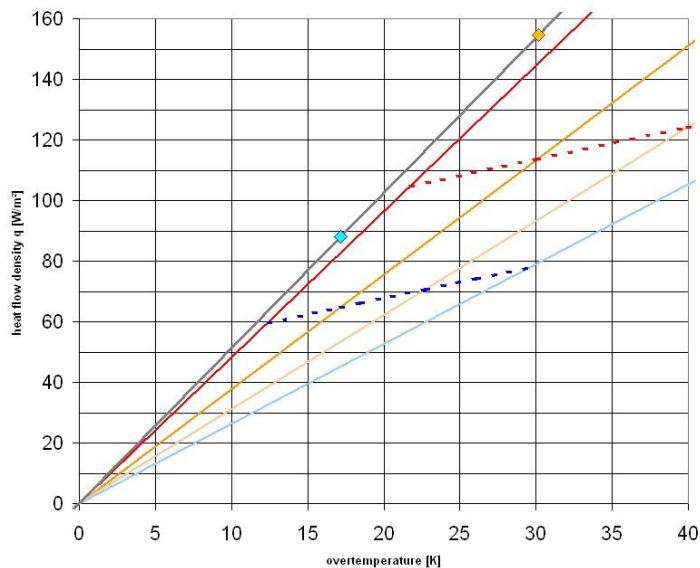


7F249-F

7F250-F

#### Pipe centre 150 mm

heat flow density (heating power) of the UFH with pipe centre 150 mm



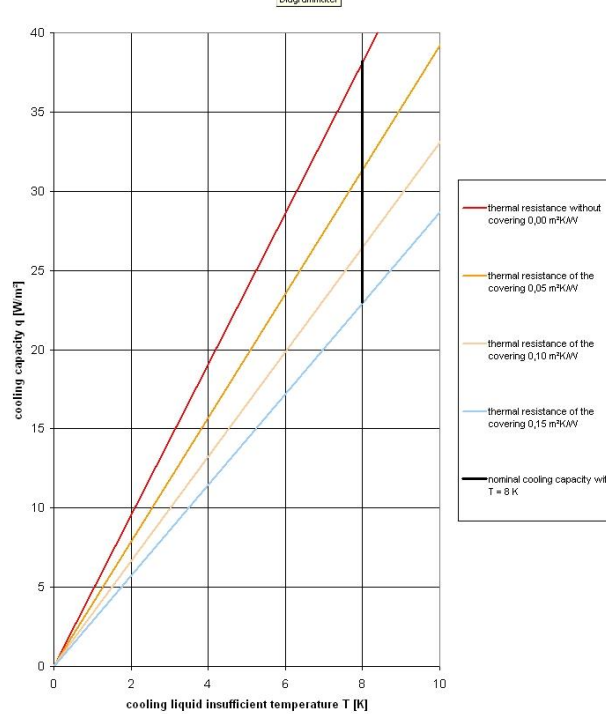
### Technical Data Functional Floors Heating & Cooling

#### Cooling

Specific cooling capacity acc. to DIN EN 1264-5 38,2 W/m<sup>2</sup>  
 nominal cooling liquid insufficient temperature  $\Delta\theta_K$  8 K

#### Pipe centre 100 mm

cooling capacity of the UFH with pipe centre 100 mm



#### Cooling

Specific cooling capacity acc. to DIN EN 1264-5 28,7 W/m<sup>2</sup>  
 nominal cooling liquid insufficient temperature  $\Delta\theta_K$  8 K

#### Pipe centre 150 mm

cooling capacity of the UFH with pipe centre 150 mm

