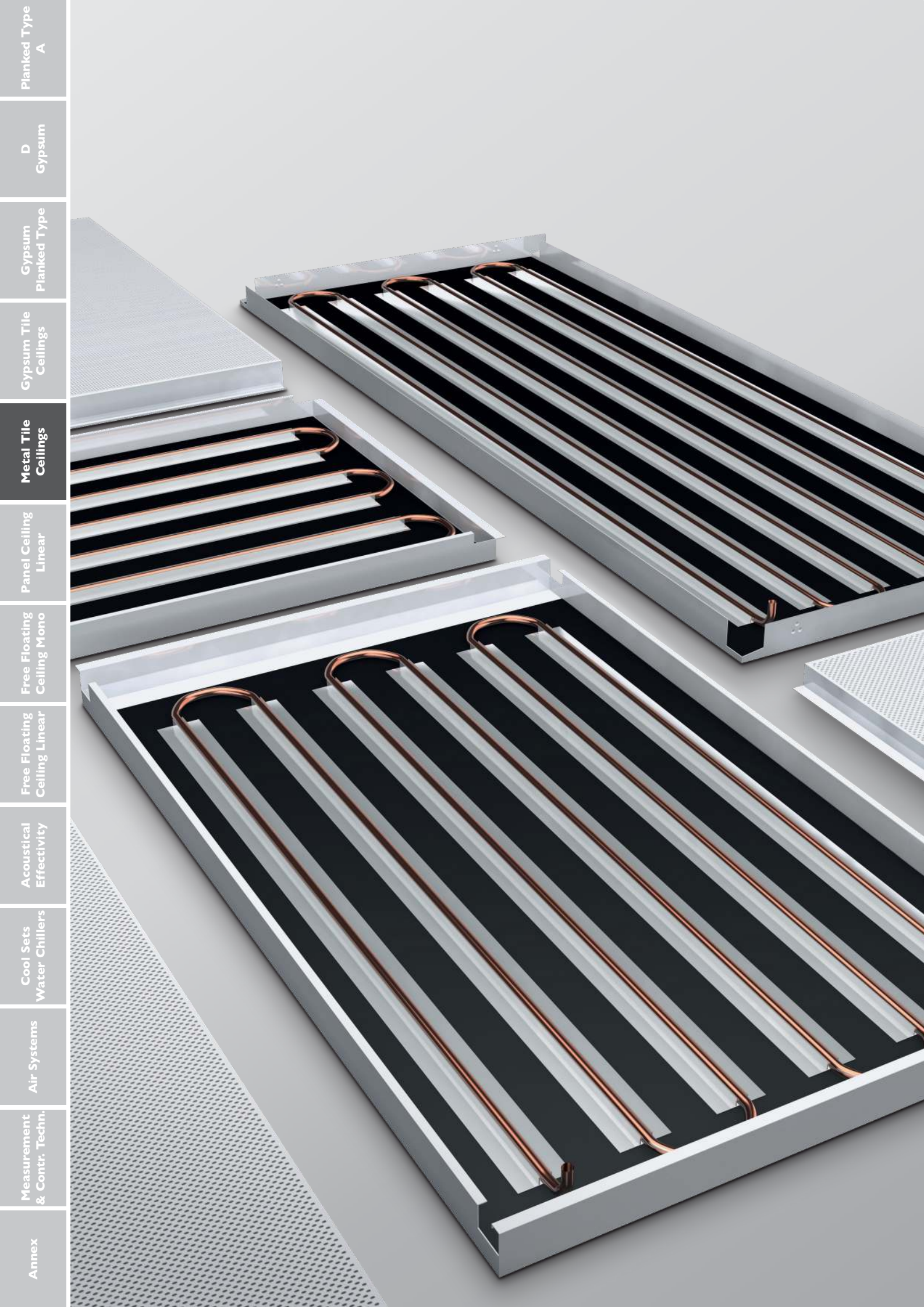


CLIMALINE

Metal Tile Ceilings

Strip grid assembly
Folding clamp assembly
Hook assembly

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Annex

Measurement & Contr. Techn.

Air Systems

Cool Sets
Water Chillers

Acoustical
Effectivity

Free Floating
Ceiling Linear

Free Floating
Ceiling Mono

Panel Ceiling
Linear

Metal Tile
Ceilings

Gypsum Tile
Ceilings

Gypsum
Planked Type

D
Gypsum

Planked Type
A

The almost infinite variations offered by metal tile ceilings and their various designs open up many advantages for designing cooling and heating areas. In particular, the accessibility and possibility of flexible layout by the creation of separate zones make the metal tile ceiling a real alternative to monolithic ceilings.

Product Advantages

Detailed assembly drawing
Modern look
Sound-absorbing
Accessible
Flexible room layout

Areas of Application

Office spaces
Training/seminar rooms
Sales rooms
Hospitals
Canteens

Technical Data

Colouring	according to RAL
Operational weight	approx. 15.0 kg/m ²
Water content	approx. 1.0 l/m ²
Pipe meander	copper 10 x 0.6 mm
Heat flux profiles	aluminium 51.5 mm wide

System Constructions

Strip grid assembly
Folding clamp assembly
Hook assembly

Technical Properties

Building material class

A2-s1, d0 according to EN 13501-1

Light reflection

Approx. 82 % (similar to RAL 9010)

Sound absorption

According to DIN EN 20354 (ISO 354)
ASTM C 423

Performance

Heating output according to DIN EN 14037
Cooling output according to DIN EN 14240

Durability

Stress class A
according to DIN EN 13964 table 7 and 8
Diffusion resistant according to DIN 4726



EN 13964

The tiles are
manufactured
according to the



quality standard

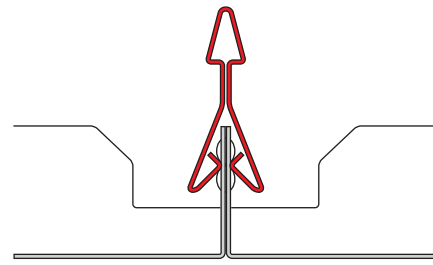
Strip Grid Assembly



Strip grid system
(grid parallel or crosswise)



Folding Clamp Assembly



Folding clamp system



Planked Type
A

D
Gypsum

Gypsum
Planked Type

Gypsum Tile
Ceilings

Metal Tile
Ceilings

Panel Ceiling
Linear

Free Floating
Ceiling Mono

Free Floating
Ceiling Linear

Acoustical
Effectivity

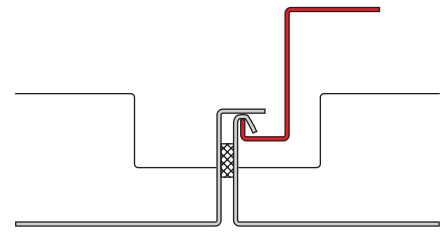
Cool Sets
Water Chillers

Air Systems

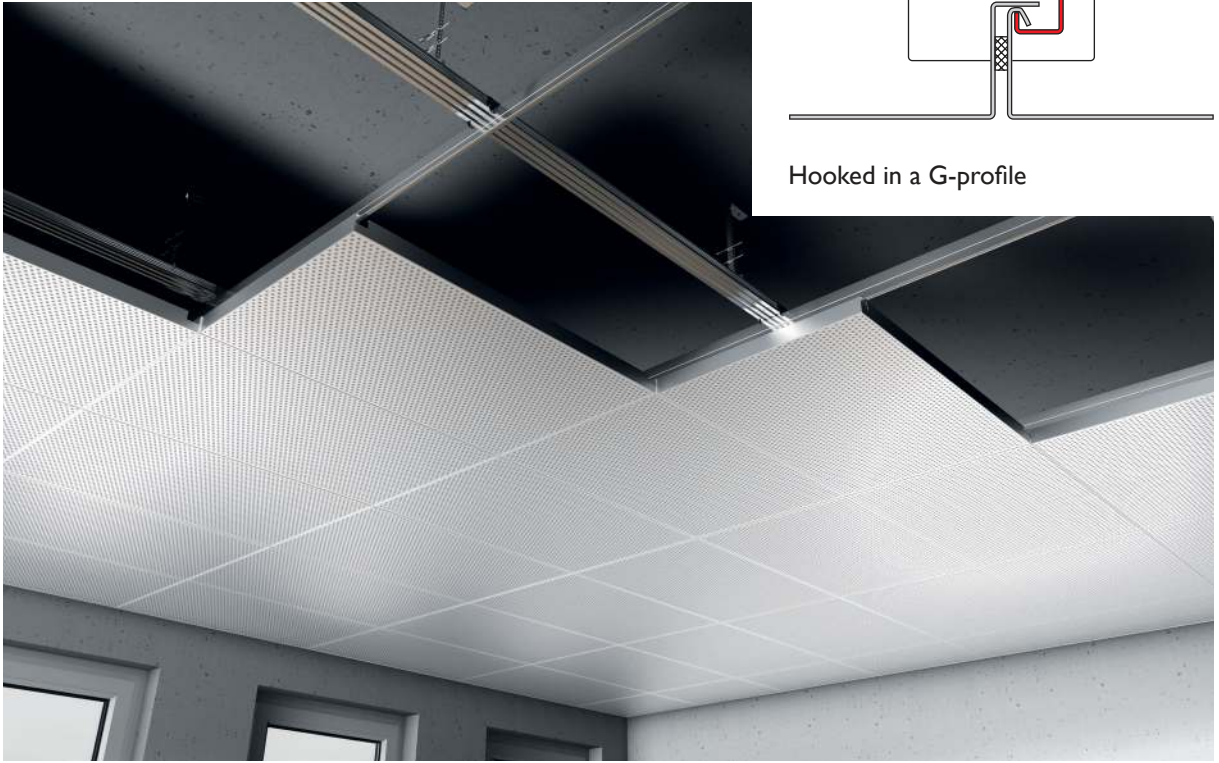
Measurement
& Contr. Techn.

Annex

Hook Assembly



Hooked in a G-profile



Hydraulic Components

Unless otherwise explicitly requested, we forego internal piping in the rooms in the hydraulic design. We thus remain true to our idea of equipping each control area with a distributor.

Designation	Art. no.	Material	Dimension	Illustration
Connection hoses between the tiles Length: 0.6 m Length: 0.8 m Length: 1.0 m Length: 1.5 m Length: 2.0 m Length: 2.5 m	293493 293495 293497 293532 293587 293597	Stainless steel/polyethylene	Fitting 10 mm	
Hoses connecting the tiles to the distributor Length: 1.0 m Length: 1.5 m Length: 2.0 m Length: 2.5 m Length: 3.0 m Length: 4.0 m Length: 5.0 m Length: 6.0 m Length: 7.0 m Length: 8.0 m Length: 10.0 m	293575 293581 293586 293592 313515 313516 313517 313518 313519 313520 313521	Stainless steel/polyethylene	Fitting 10 x 12 mm	
CLIMALINE VR adapter for distributor, 2 pieces per circuit	317807	Plastic	16 mm	
CLIMALINE brass adapter for internal piping to flex hose, 2 pieces per circuit	317806	Brass	16 x 12 mm	
CLIMALINE circuit distributor for 2 circuits for 3 circuits for 4 circuits for 5 circuits for 6 circuits for 7 circuits for 8 circuits for 9 circuits for 10 circuits for 11 circuits for 12 circuits	317793 317794 317795 317796 317797 317798 317799 317800 317801 317802 317803	Stainless steel	for VR adapter 16 mm	

Performance Data

Cooling output acc. to DIN EN 14240 per m²

Heating output acc. to DIN EN 14037 per m²

CLIMALINE metal tile ceiling	
Pipe row spacing	60 mm
Δt	10 Kelvin
Cooling output	102 Watt
Active area ratio	1.00

CLIMALINE metal tile ceiling	
Pipe row spacing	60 mm
Δt	15 Kelvin
Heating output	122 Watt
Active area ratio	1.00

Design

The following tables show the heating or cooling output per tile for the specified system temperatures. To ensure the hydraulic compensation, there should be the maximum number of tiles in a row and they should be installed in areas of the same size.

Cooling System: Metal tile 1200 x 600 mm, pipe rows /spacing: 9/60 mm

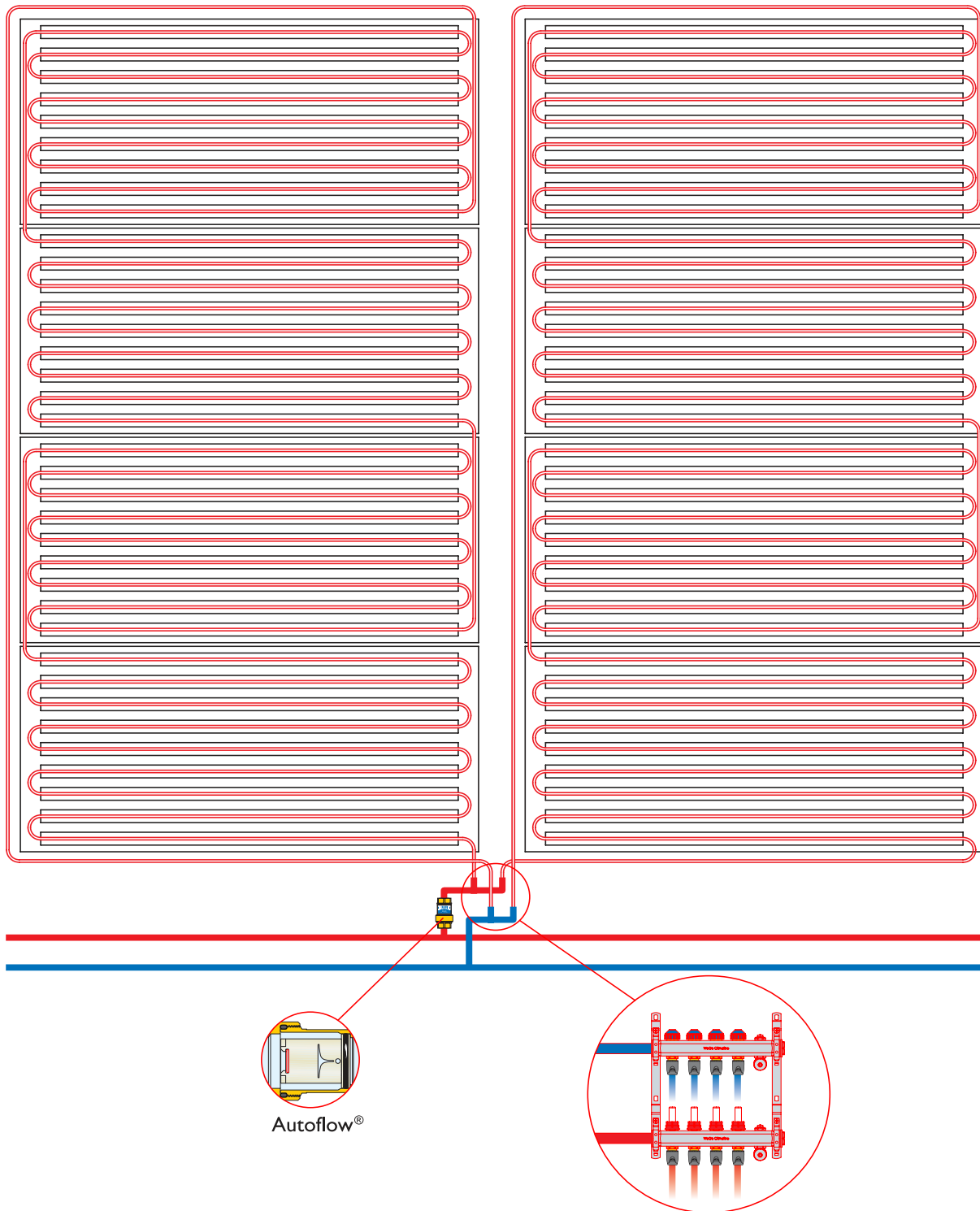
System temperature						
Supply temperature	15 °C	15 °C	15 °C	16 °C	16 °C	16 °C
Return temperature	17 °C	18 °C	19 °C	18 °C	19 °C	20 °C
Room temperature	26 °C	26 °C	26 °C	26 °C	26 °C	26 °C
Cooling output per tile	43.40 W	41.10 W	38.70 W	38.70 W	36.30 W	33.90 W
Mass flow per tile	19.00 kg/h	12.00 kg/h	8.00 kg/h	17.00 kg/h	11.00 kg/h	7.00 kg/h
Max. no. of tiles per circuit	5 pieces	6 pieces	8 pieces	5 pieces	7 pieces	9 pieces
Pressure loss per circuit	263.24 mbar	190.14 mbar	223.01 mbar	215.14 mbar	231.28 mbar	243.40 mbar

Heating System: Metal tile 1200 x 600 mm, pipe rows /spacing: 9/60 mm

System temperature						
Supply temperature	35 °C	35 °C	35 °C	32 °C	32 °C	32 °C
Return temperature	32 °C	30 °C	28 °C	29 °C	27 °C	25 °C
Room temperature	20 °C	20 °C	20 °C	20 °C	20 °C	20 °C
Heating output per tile	47.20 W	43.70 W	40.20 W	36.70 W	33.20 W	29.71 W
Mass flow per tile	14.00 kg/h	9.00 kg/h	9.00 kg/h	11.00 kg/h	9.00 kg/h	9.00 kg/h
Max. no. of tiles per circuit	6 pieces	9 pieces	9 pieces	7 pieces	8 pieces	8 pieces
Pressure loss per circuit	242.73 mbar	243.54 mbar	255.85 mbar	235.61 mbar	249.66 mbar	255.85 mbar

Hydraulic Connection

The hydraulic connection of CLIMALINE metal tile ceilings is explicitly planned for every area of application.



CLIMALINE Ceiling Systems Checklist

1. System selection

- Gypsum ceiling system
 Metal ceiling system
 Free floating ceiling
 Thermo Panel 4T

2. System

- Suspended assembly
 Heating → System temperature: supply: _____ return: _____
 Cooling → System temperature: supply: _____ return: _____
- Direct assembly
 Heating → System temperature: supply: _____ return: _____
 Cooling → System temperature: supply: _____ return: _____

3. Building

- Floor plan
 PDF format
 DWG format
- Heating load calculation
 available
 required*
 fixed value: _____ watts/m²
- Cooling load calculation
 available
 required*
 fixed value: _____ watts/m²

4. Measurement and control technology

- Climate control
 wired → Comfort Object
 wireless → Comfort Object
- Accessories
 Zone valve
 Automatic mass flow limiter

*A list of components with U-values and a floor plan in DWG format are required to calculate heating and cooling loads.