

zehnder

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Always the best climate for

FLEXIBILITY AND EFFICIENCY

Zehnder ZFP radiant ceiling panels

A multitude of options with the new Zehnder ZFP radiant ceiling panel

Bespoke solutions

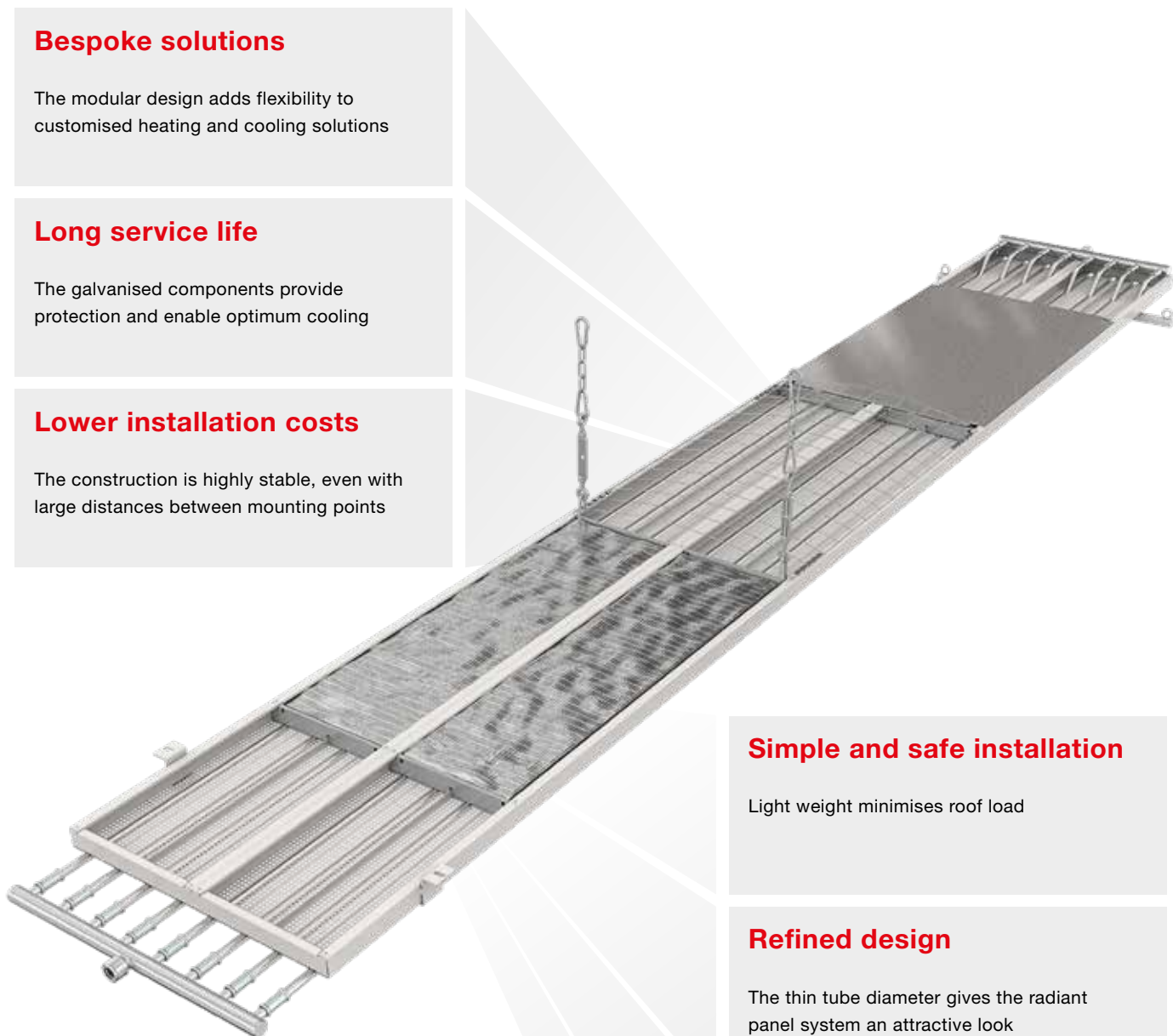
The modular design adds flexibility to customised heating and cooling solutions

Long service life

The galvanised components provide protection and enable optimum cooling

Lower installation costs

The construction is highly stable, even with large distances between mounting points



Simple and safe installation

Light weight minimises roof load

Refined design

The thin tube diameter gives the radiant panel system an attractive look

Efficient heating and cooling

The radiant panel's optimum heat distribution increases its efficiency

High performance

The radiant panel system's small tube diameter and low tube spacing make it suitable for low system temperatures

Available from autumn 2019 – Find out more

You will find more information on the fields of application and options by contacting Zehnder directly at www.international.zehnder-systems.com/zfp.

We are happy to offer support throughout your project.

A module for all requirements: Zehnder ZFP

These days as a specifier, you need to find heating systems for a variety of halls. Depending on the application or the user, these installation scenarios come with a long list of requirements for the perfect solution. So Zehnder has developed a system to meet your needs on an individual basis. With Zehnder ZFP radiant ceiling panels, you get a module designed for maximum flexibility. Discover the many benefits Zehnder ZFP can provide for you and learn more about the right solution for your project. We are also happy to offer advice and support throughout the planning process.

Zehnder ZFP modular design

Lighting

- ■ Recessed LED light fixtures
- ■ Lighting calculation

Coating

- ■ Standard colour
- ■ Special colour

Surface

- ■ Smooth
- ■ Perforation

Covers

- ■ Cover plate
- ■ Ball guards
 - ■ Dust protector panel
 - ■ End cover header
- ■ Raised headers

Control system technology

- ■ Controller
- ■ Radiant temperature sensor
- ■ Valve actuators
- ■ Dew point sensor

Ceiling fixture

- ■ Movable axes
- ■ Z-profiles
- ■ Support track (brace)
- ■ Wooden ceiling
- ■ Concrete ceiling
 - ■ Trapezoidal sheet metal
- ■ Steel girders

Dimensions

- ■ Band length
- ■ Model width
- ■ Module length

Hydraulics

- ■ Hoses
- ■ Volume flow controller
- ■ Vent

Connector technology

- ■ Press-fit connection
- ■ Threaded connection
- ■ Welded connection

Insulation

- ■ Foil-laminated mineral wool
- ■ Mineral wool in foil
- ■ Acoustic insulation

Special requirements

- ■ Non-continuous radiant panel plate
- ■ Cut-outs for installations
- ■ Thermal radiation shield

Key

- ■ All options available
- ■ Sports hall design example on p. 4
- ■ Logistics hall design example on p. 5

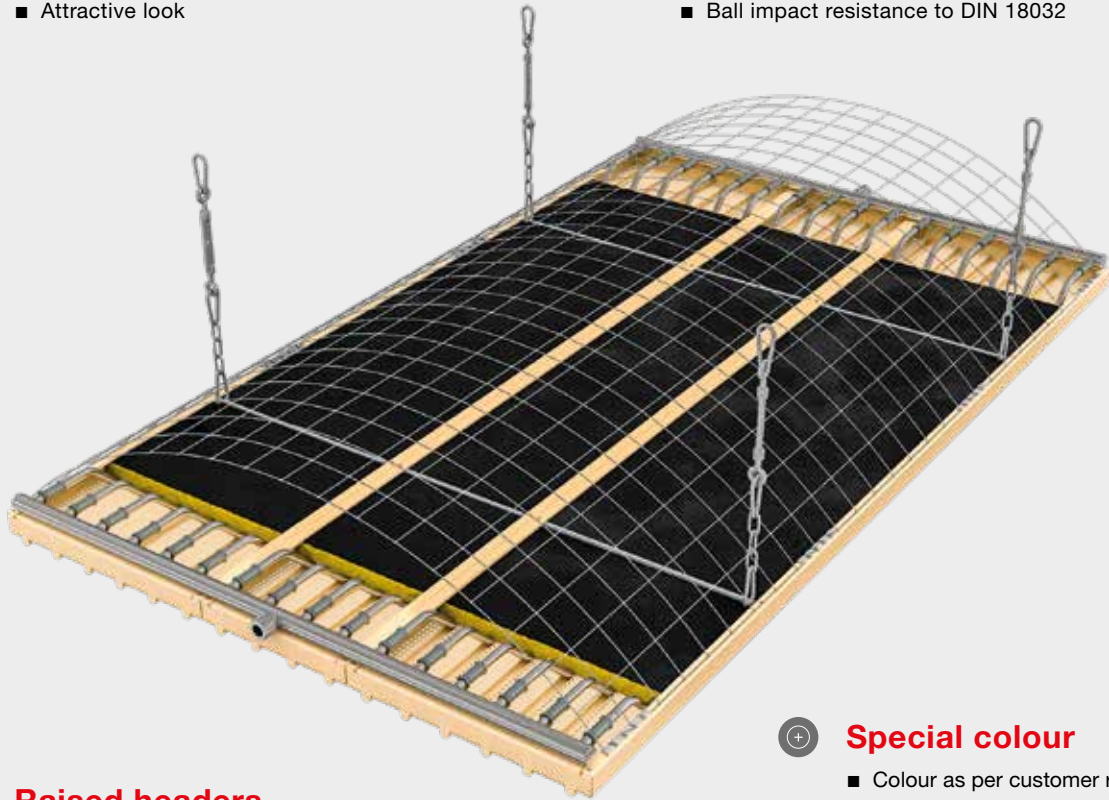
Example: sports hall

⊕ Perforation and acoustic insulation

- Optimised properties for room acoustics
- Low reverberation
- Attractive look

⊕ Ball guards

- Balls do not remain on the radiant panel system, they roll back down
- Ball impact resistance to DIN 18032



⊕ Raised headers

- Connections not visible
- Integrated ceiling solution possible

⊕ Special colour

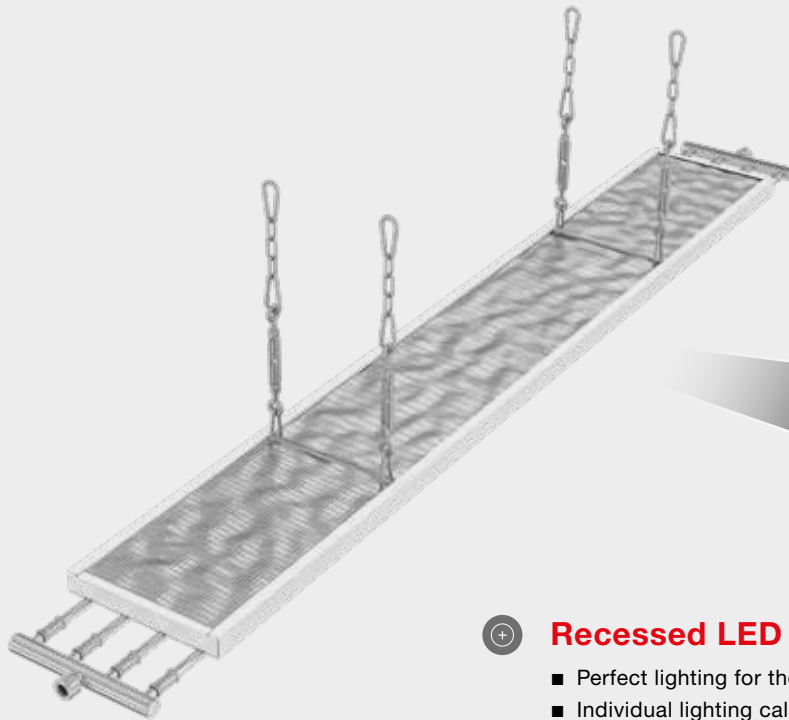
- Colour as per customer requirements



Example: logistics hall

⊕ **Model width**

- Slimline design – Perfect for high-bay warehouses
- Radiant heat can be supplied as per requirements
- Optimised use alongside sprinklers



Detailed view from below



⊕ **Recessed LED light fixtures**

- Perfect lighting for the hall
- Individual lighting calculations
- Harmonious look as lighting is integrated into the radiant panel system



Zehnder ZFP technical specifications

Whether dimensions, operating parameters or weight are critical design factors, Zehnder ZFP always provides maximum flexibility. You will find much of the information needed to design a system with Zehnder ZFP in the table below.

Dimensions, operating parameters and output											
Zehnder ZFP	Unit of measurement		Type								
Feature			300/4	450/6	600/8	750/10	900/12	1050/14	1200/16	1350/18	1500/20
Number of pipes		piece(s)	4	6	8	10	12	14	16	18	20
Pipe material		-	Precision steel tube 15 x 1 mm, welded, external galvanisation in line with EN 10305-3								
Sheet steel		-	Galvanised, coated sheet steel								
Dimensions											
Widths		mm	300	450	600	750	900	1050	1200	1350	1500
Tube spacing		mm	75								
Minimum module length		mm	2000								
Maximum module length		mm	6000								
Suspension points per axis		piece(s)	2								
Operating parameters											
Max. operating temperature		°C	120								
Max. operating pressure		bar	10								
Weights											
Weight without water content, with insulation	Radiant panel	kg/m	3.9	5.4	7.6	9.2	10.7	13.0	14.6	16.1	18.4
	Per manifold	kg	0.7	0.9	1.2	1.5	1.7	2.0	2.3	2.5	2.8
Insulation weight		kg/m	0.2	0.3	0.5	0.6	0.7	0.8	0.9	1.0	1.2
Water content		l/m	0.5	0.8	1.1	1.3	1.6	1.9	2.1	2.4	2.6
Operating weight with water content, with insulation	Radiant panel	kg/m	4.4	6.2	8.6	10.5	12.3	14.9	16.7	18.5	21.0
	Per manifold	kg	0.8	1.2	1.6	1.9	2.3	2.7	3.0	3.4	3.8
Thermal output*											
Thermal output according to EN 14037-3 at $\Delta t = 55$ K with insulation		W/m	203	287	367	446	522	596	671	740	811
Thermal output constant (K)		-	1.980	2.820	3.623	4.422	5.192	5.948	6.713	7.421	8.143
Thermal output exponent (n)		-	1.156	1.154	1.152	1.151	1.151	1.150	1.149	1.149	1.148

* Preliminary values, calculated based on EN 14037-3

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