

Zehnder ZIP

Zehnder ZIP radiant ceiling panel in accordance with DIN EN 14037, consisting of radiant plate galvanised on both sides. Maximum operating temperature 120 °C, maximum operating pressure 10 bar.

Fully galvanised radiant plate design, also coated externally with polyester paint, similar to RAL 9016, and on the back with protective lacquer. All modules are fully galvanised and therefore protected against corrosion. Testing is carried out in accordance with DIN 50017.

Zehnder special clip profile to hold four externally galvanised precision steel tubes with an external diameter of 15 mm according to DIN EN 10305-3. The radiant panel sheets are statically self-bearing due to lateral and upper chamfers. The chamfers help to integrate as well as hold down the thermal insulation. Two end front plates (similar to RAL 9016) are attached to the end of the radiant plate.

Fastening is carried out using the suspension axes that are secured at the factory in a 1 m grid size. The positions of the suspension axes can be moved as required. Parallel radiant ceiling panels are installed using suspension bars. Only two suspension points per suspension bar are required for the ceiling. For structural reasons, it is necessary to ensure that an attachment distance of three metres is present without any additional securing structures or carrier systems. If the attachment distance is too short or if securing structures or carrier systems are used as auxiliary materials, proof of structural strength must be provided due to the higher loads. The operating weight is a maximum of 4.3 kg/m.

Delivery is possible for 320 mm wide and any of 2, 3, 4, 5 or 6 m long modules. The individual modules are connected using crimp/sliding couplings or screw connections. Special lengths are available on request.

Thermal insulation consisting of mineral wool free lined with black fleece according to EU directive 97/69 (note Q).

$\lambda = 0.040 \text{ W/mK}$, thickness 40 mm

The manifolds consisting of a round tube (external diameter of 30 mm) are equipped with the required R1" male thread connectors (DIN EN 10266), blind cover and 1/2" straight connector opposite for venting/draining. The manifolds (headers) are supplied loose and connected to the radiant panel systems on site using crimp/sliding couplings or screw connections.

Zehnder ZIP radiant ceiling panels are tested for their ball impact resistance according to DIN 18032.

Water quality in accordance with VDI 2035.

Thermal insulation

Mineral wool free lined with black fleece according to EU directive 97/69 (note Q)

$\lambda = 0.040 \text{ W/mK}$, thickness 40 mm

Thermal insulation shrink-wrapped in foil

Mineral wool free lined with black fleece according to EU directive 97/69 (note Q) and shrink-wrapped in LDPE foil

$\lambda = 0.040$ W/mK, thickness 40 mm

XPS insulation

Extruded polystyrene rigid foam insulation

$\lambda = 0.032$ W/mK, thickness 20 mm

Cover plates

Made of 0.45 mm thick sheet steel, galvanised on both sides, coated externally with polyester paint similar to RAL 9016, used to cover the crimp or threaded connections at the connection points and to the headers

Upper covers

Dust protector panel

Galvanised upper plate cover (thickness 0.63 mm) incl. fixing clamps and screws – delivered loose

Ball guards

Galvanised metal grill cover incl. fixing clips and screws for use in sports facilities – delivered loose

Special solution for wet rooms

Special solution for wet rooms incl. XPS insulation and galvanised upper plate cover, sealed and installed at the factory

Volume flow controller

VSRK-15

Zehnder VSRK-15 (150–700 l/h) volume flow control combination consisting of a volume flow controller and a ball valve.

The volume flow controller is a valve combination which consists of an automatic flow rate controller (with a factory-set nominal value) and an actuator head. The actuator head can be equipped with an actuator (threaded connection M30 x 1.5).

The volume flow controller is used for hydraulic balancing of radiant ceiling panels.

Technical specifications:

Dimensions: DN15
Max. operating temperature ts: 120 °C
Min. operating temperature ts: -10 °C
Max. operating pressure ps: 16 bar (1600 kPa)
Max. differential pressure: 4 bar (400 kPa)
Medium: Water or ethylene/propylene glycol water mix
(max. 50%), pH value 6.5–10

Housing made of dezincification-resistant brass, seals made of EPDM or PTFE, valve spindle made of stainless steel.

Armoured DN15 hose

Zehnder armoured hose for heating systems, consisting of temperature-resistant and age-resistant EPDM with stainless-steel braided sleeve. Max. operating temperature of 100°C and operating pressure of 12 bar.'