

# Chilled Ceiling Elements

- Type WK-D-WF
- Convective chilled ceilings providing excellent visual results



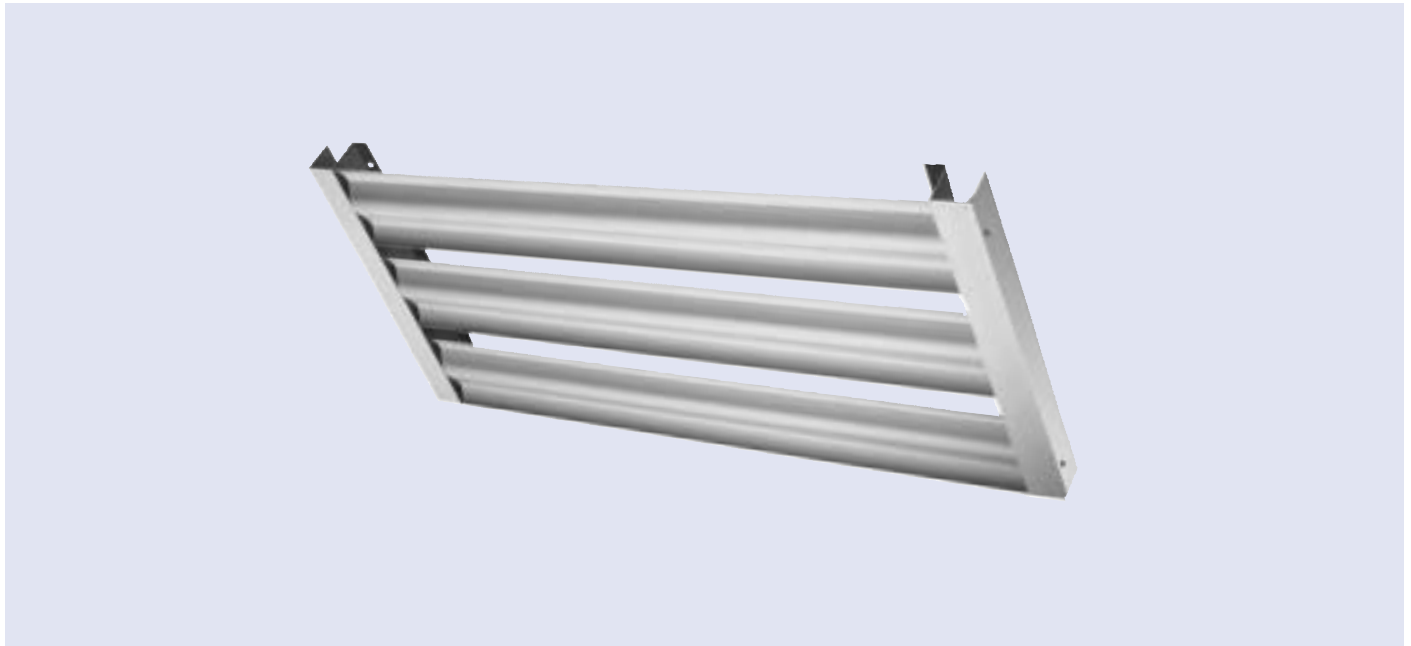
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## Description

Chilled ceiling elements Type WK-D-WF can be used as an exposed system or combined with grid ceilings to provide a convective chilled ceiling installation.

The proportion of convection is approximately 70% and that of radiation approximately 30%. Due to the high proportion of convection very high internal loads can be dealt with hence demonstrating to particularly good effect the advantages of water as the medium for this purpose.

Where an additional open grid ceiling is suspended underneath, the effective open area should be as large as possible to maintain the high efficiency of the convective chilled ceiling.

Depending on the structural conditions and the maximum required water pressure drop, the chilled elements are provided as large units or fitted together in groups.

Rigid piping (soldering) or push fit flexible hose connections can be provided for joining the individual chilled elements together or connecting them to the header system. The flexible hose connection is easy and inexpensive to fit.

Additional soldering is not required if flexible hoses are used.

After assembly the whole system should be tested for leaks. The tests can be carried out with air or water depending on the chilled facilities available.

As with all chilled ceilings the chilled water flow temperature is selected to prevent it falling below the room dew point.

## Construction

Chilled elements Type WK-D-WF comprise 170 mm wide wave-shaped flanged slats. In the standard construction the spacing between the blades is 30 mm, giving an overall modular dimension of 200 mm.

The copper pipe meanders are pressed into the slats, guaranteeing an optimum thermal conducting contact between the blade and the copper tube.

The chilled elements are suspended on-site from the ceiling slab. There are flanges on the chilled elements for this purpose. None of the copper tubing is visible from below and a symmetrical visual effect is achieved.

The chilled elements can be used as a continuous tile ceiling or as freely suspended chilled elements. An aesthetically pleasing effect can also be created in combination with grid ceilings and/or plasterboard ceilings. Refer to Trox for further details.

The chilled elements can be suspended from the ceiling slab by means of threaded rods or Nonius hangers, or alternatively by suitable substructure systems, thus guaranteeing easy installation.

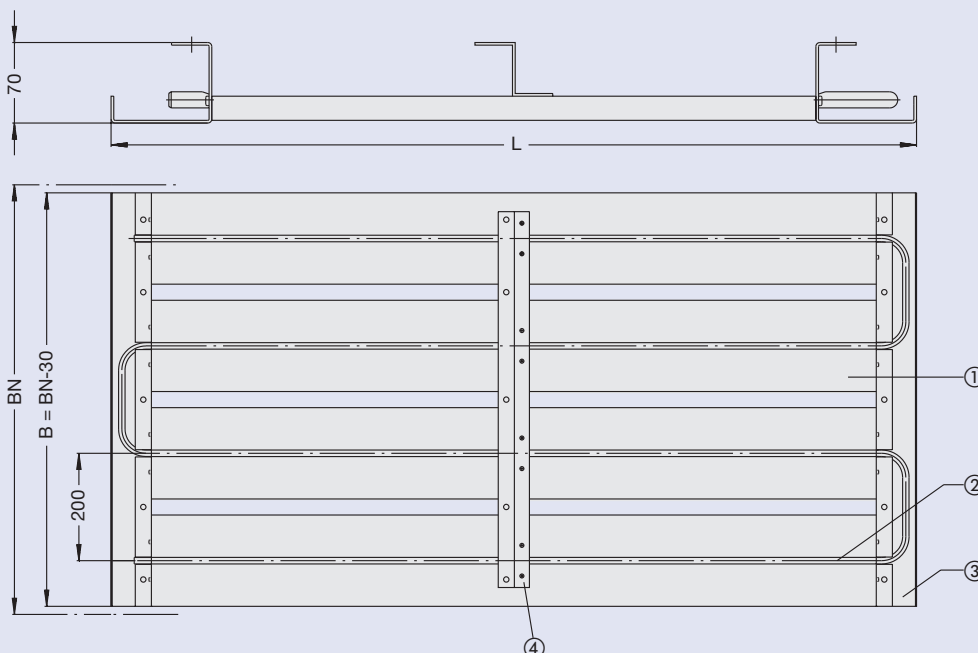
## Dimensions

The chilled elements vary in length. The width of the elements can be varied as multiples of modular dimension 200 mm.

Maximum length of the element: 4000 mm  
 Maximum width of the element: 1400 mm  
 Weight: 14 ... 28 kg/m<sup>2</sup>  
 (depending on construction)

| Dimensions  |     |     |     |      |      |      |
|---|-----|-----|-----|------|------|------|
| L x B <sub>N</sub>                                |     |     |     |      |      |      |
| Combinations are dependent on water pressure drop |     |     |     |      |      |      |
| Number of panels                                  | 2   | 3   | 4   | 5    | 6    | 7    |
| L / B <sub>N</sub> (mm)                           | 400 | 600 | 800 | 1000 | 1200 | 1400 |
| 1000  | x   | x   | x   | x    | x    | x    |
| 1500  | x   | x   | x   | x    | x    | x    |
| 2000  | x   | x   | x   | x    | x    | x    |
| 2500  | x   | x   | x   | x    | x    | x    |
| 3000  | x   | x   | x   | x    | x    |      |
| 3500  | x   | x   | x   | x    |      |      |
| 4000  | x   | x   | x   |      |      |      |

Length: Variable in 10 mm increments  
 B<sub>N</sub>: Nominal width  
 B: (B = B<sub>N</sub>-30 mm)



- ① Blade
- ② Cu meander
- ③ Cover/Installation flange
- ④ Additional z-angle (longer length cooling elements)





