



**INTEGRA  
İKLİMLİ TAVANLAR  
INTEGRA CHILLED /  
HEATED CEILINGS**



## SİSTEM

### METAL ASMA TAVAN PANELİ

Alüminyum - Çelik alternatifli  
Düz - Perfore Alternatifleri  
Tüm RAL Renkleri  
Akustik Kumaşlı - Akustik Kumasız  
Ebat : En max. 1.200 mm  
Boy : max. 3.000 mm

### ISI TAŞIYICI SİSTEM

Bakır Borulama Sistemi  
Alüminyum Extrude Kanal Profilleri  
Esnek Bağlantı Boruları

### ASMA TAVAN TAŞIYICI SİSTEMİ

T Taşıyıcı - Hook On Sistem veya  
C/D Bandraster Sistemi

## SYSTEM

### METAL SUSPENDED CEILING PANEL

Aluminium – Steel alternatives  
Plain or perforated alternatives  
All RAL colours  
With or without acoustical in-lay  
Width: max. 1200mm  
Length: max. 3000mm

### HEAT CARRIER SYSTEM

Copper piping system  
Aluminium extruded channel profiles  
Flexible connection pipes

### SUSPENDED CEILING CARRIER SYSTEM

T Carrier – Hook-on system or C/D Bandraster system



## AVANTAJLAR

- Düşük enerji kullanımı / Enerji tasarrufu
- Klima ve radyatör gibi havalandırma sistemlerinin kullanılmasına ihtiyaç bırakmadığı için ortamda görsel estetik.
- Termal Radyasyona bağlı yüksek soğutma kapasitesi
- Sessiz - Ofislerde verimli ve rahat çalışma ortamı sağlayabilme
- Düşük bakım ve servis maliyetleri
- Soğutma sisteminde hava yerine su kullanılması sebebiyle küçük tedarik kesiti; dolayısı ile dar alanda uygulanabilme özelliği
- Tam modüler veya üzerə tavana entegre edilebilme
- Akustik özellik
- Patentli Miknatış Sistemi ile ister yerinde ister fabrikada kolay montaj olanağı
- Aydınlatma sistemleri ile tam entegrasyon olanağı
- Özgür mimari tasarım seçenekleri

## ADVANTAGES

- Low energy use / energy saving
- Because of no need for air conditioner and radiator, aesthetical spaces
- High cooling capacity related to thermal radiation
- Quiet – Efficient and comfortable working conditions in offices.
- Low maintenance and service costs
- Because of using water instead of air and small supplying section, making the installation in narrow spaces possible.
- Possibility to be integrated in full modular or floating ceiling systems
- Acoustical performance
- With its licensed magnet system, easy installation possibility whether on site or in factory.
- Full integration possibility with lighting systems
- Unique architectural design options



#### KULLANIM ALANLARI

- Ofisler
- Bankalar
- Hastaneler
- Okullar
- Oteller
- İdari Binalar

Integra iklimlendirmeli Tavan Sistemleri'nin en büyük avantajlarından bir tanesi, uygulama kolaylığıdır. Tüm Integra Metal Asma Tavanlarına entegre edilebilen iklimlendirme sistemleri, Zent-Frenger tarafından patentli, mıknatıslı montaj sistemi sayesinde, projeye ve kullanılacak olan panellere özel üretilen borulama üniteleri, şantiyede kolaylıkla panellere monte edilir.



#### AREA OF USAGE

- Offices
- Banks
- Hospitals
- Schools
- Hotels
- Administrative Buildings

One of the best advantages of Integra Chilled Heated Ceiling system is the easy installation. The System can be integrated in all Integra Metal Ceilings and also with its magnetic system, specially produced piping units can be mounted easily in ceiling panels on construction site.





**Lochem Belediyesi, Lochem / Hollanda**  
**Lochem Municipal Building, Lochem / Netherlands**

## METAL CEILING SPECIFICATION

... x ... mm Sized Air Conditioning Ceiling System

### General Description:

Galvanised Steel/Aluminium ceiling panels supported by fully concealed suspension system manufactured in accordance with European, American and TAIM (Technical Association of Industrial Metal Ceiling Manufacturers) standards by a manufacturer that have ISO9001:2008, TSE ve CE certificates.

Ceiling panels should have air conditioning system which is composed of copper pipes and aluminium profile. System should be installed inside of the ceiling panel.

Ceilings are tested in accordance with EN 13501-1 and must be designed to comply with at least Euroclass A2-s1, d0

### Panel Description:

<b>Raw material</b>	Ceiling panels manufactured from ... mm Galvanised Steel/Stainless Steel/Aluminium.
<b>Colour</b>	Ceiling panels coated electrostatically applied powder coating coloured RAL ... ( min. 40 $\mu$ thickness and approx. %20 Gloss Rate)
<b>Acoustical inlay</b>	Ceiling panels are manufactured with 0,2 mm thickness, black acoustical inlay (Ryalin/Soundtex) to achieve sound absorption aw= ... for Ø... mm Perforation (%.. open area)
<b>Perforation</b>	Ceiling panels are perforated Ø... mm (% ... open area) and plain borders are ... mm.
<b>Edge</b>	Square

### Installation:

C-Wall Angle(4) should be used for lateral sides facing inwards of the gypsum pool. C Bandraster wall anchor should be used if there is no C wall angle. The first hanger system should not exceed 450 mm distance from the wall and the distance between hangers could be max 1000mm. Threaded Rod(10) , Bolt/Nut (9) and threaded rod anchor(11) will be used to suspend the C Bandraster Profile(1) securely.(See System Drawing,pg.4) The distance between Wall-angle and the main runner should be max. 600 mm. The distance between the main runners should not exceed 1200mm. The cross runners should be positioned on 600 mm away from each. C Bandraster and Primary L runners are connected by C Bandraster Rigid Hanger(6). In order to add one C Bandraster profile or Primary L runner to another linearly; C Bandraster profile splice(3) or Primary L runner Splice(4) should be used.

### Suspension System:

<b>1-CBP-100-L400-9010</b>	C Bandraster Profile, 100 mm width, 4000 mm length, 1 mm thickness, galvanised steel
<b>2-AS 20</b>	Primary L Runner, Lsectioned, 30x30 mm sized, 4000 mm length, 1 mm thickness, galvanised steel
<b>3-CBP-ZL-100</b>	C Bandraster Profile Splice
<b>4-AS 25</b>	Primary L Runner splice
<b>5-CBP-ZW-100</b>	C Bandraster Wall Anchor, 1 mm thickness, galvanised steel. ( if there is no C-Wall Angle).
<b>6-CBP-ZA-100</b>	C Bandraster Rigid Hanger, 1 mm thickness, galvanised steel.
<b>7-CDPR 300</b>	C-Wall Angle, 20x40x20 mm sized, 3000 mm length, 0,5 mm thickness, pre-painted galvanised steel
<b>8-KT 40</b>	Wedge Clip, 0,5 mm thickness, galvanised steel
<b>9-VDS 60</b>	Bolt/nult, Ø6 mm
<b>10-ATJ 100</b>	Threaded Rod, Ø6 mm, 1000mm length (Standard)
<b>11-TD-06</b>	Threaded Rod Anchor

