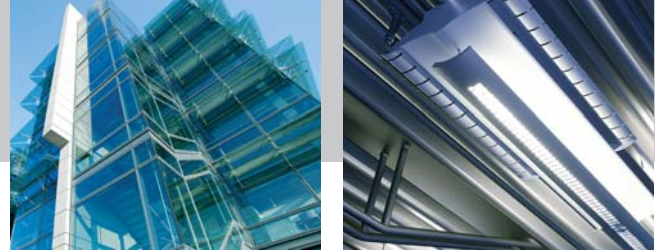





Air-water systems for efficient air conditioning



TROX[®] TECHNİK

The art of handling air



	Passive cooling systems		Active chilled beams		
	Page 4		Page 6		
	Passive chilled beams	Chilled ceiling components and elements	Ceiling mounted chilled beams	Displacement chilled beams	Underfloor chilled beams
					
Page	4	5	6-8	7	7
Type of building					
Lobby or exhibit space			•		
Hotel			•	•	•
School, university			•	•	
Office, administration	•	•	•	•	•
Airport, train station	•	•	•		
Installation location					
Ceiling					
Flush-mounted		•	•		
Freely suspended	•	•	•		
Floor					•
External wall/façade				•	
Air distribution					
Mixed flow			•		
Displacement flow				•	•
General functions					
Heating		•	•	•	•
Cooling	•	•	•	•	•
Supply air			•	•	•
Additional functions					
Lighting	•	•	•		
Safety	•	•	•		
Information		•			
Sound absorption		•			
Performance data					
Typical cooling capacity [btuh/ft²]	30 – 45	20 – 30	50 – 100	30-40	40 – 45
Typical ducted airflow rate [CFM/ft²]			0.2 - 0.8	0.4 - 0.6	0.2 - 0.8
Typical sound pressure level in the space [dB(A)]	≤20	≤20	≤35	≤30	≤35

Air for the people – water for the loads

Today, air-water systems are used in many modern buildings and, especially in office and administration buildings, offer energy-efficient solutions for the internal space ventilation and air conditioning.

There are a variety of installation possibilities for air-water systems, which means that, for almost every building, variants that meet the most demanding architectural requirements are available.

What are the architectural advantages

- **Improved efficiency of space utilization**

Air-water systems require comparatively low air flow rates, this means that the required air supply and extract duct cross sectional areas are significantly reduced.

- **Architectural flexibility**

With the ability to install units in the floor, ceilings or walls/façades there is always an option to meet specific requirements.

- **Ideal flexibility for change of usage**

Thanks to the modular configuration of air-water systems it is possible to change the usage of the building at a later stage without changes to the installation of equipment.

- **Preserving the original building**

Air-water systems are ideally suited for the refurbishment of existing buildings and for retrofit.



TROX Headquarters, Neukirchen-Vluyn, Germany

The art of handling air

TROX understands the art of competently handling air like no other company.

Working in close partnership with sophisticated customers all over the world, TROX is the leader in the development, manufacturing, and sale of components and systems for the air conditioning and ventilation of internal spaces.

The systematic research and development associated with individual products continues to expand based on project specific requirements.

With its customer-specific solutions, TROX sets a trail-blazing standard and continues to enter new markets and maintain sustainable business opportunities. As a result, TROX, since the introduction of the first ceiling mounted chilled beams in the 80's, has been the leading supplier of these multifaceted products in Europe and is responsible for their introduction in the Americas.

For further information and more details on these products please refer to the chilled beam design manual and to the selection programs at www.troxusa.com.



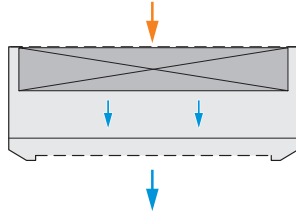
*Greenspun Hall, UNLV, Las Vegas, Nevada
DID302 active chilled beams*

Depending on the building function all the systems presented here can create a comfortable indoor climate. Individual system types can provide the ideal solution for particular applications depending on the activity in the building and its proposed layout. The use of air-water systems provides performance that reacts to the specific thermal needs of an internal space.



Passive chilled beams

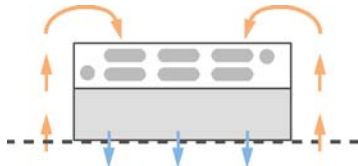
Type PKV



- Models for recessed mounting behind suspended ceiling (PKV-RB) or exposed (shown) pendant mounting (PKV-EB)
- Freely suspended and flush ceiling installation

◀▶ L: 4 – 10 ft · W: 7 – 24 in · H: 6 – 12 in
❄ Cooling capacity up to 400 btuh/lf

Type TCB

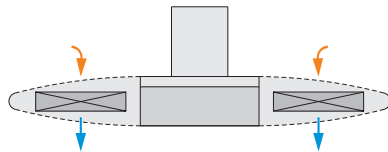


- Models for recessed mounting (shown) behind suspended ceiling (TCB-RB) or exposed pendant mounting (TCB-EB)
- Freely suspended and flush ceiling installation

◀▶ L: 4 – 10 ft · W: 10 – 26 in · H: 6 – 12 in
❄ Cooling capacity up to 600 btuh/lf

Multi-service chilled beams

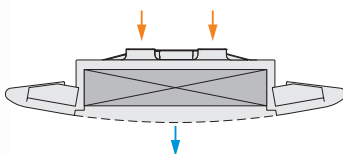
Type PKV-B



- Attractive design in low height construction
- Also for heating operation
- Integration of linear light fittings and halogen spotlights
- Freely suspended installation
- Project determined multi-service integration

◀▶ L: 10 ft · W: 20 ½ in · H: 2 ¾ in
❄ Cooling capacity up to 875 btuh

Type MSCB (Passive)



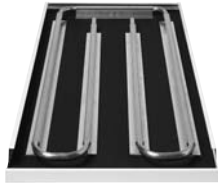
- Attractive design
- Freely suspended installation
- Cooling capacities to meet specific requirements
- Project determined multi-service integration

◀▶ L: 5 – 10 ft · W: 2 ft · H: 8 in
❄ Cooling capacity up to 3000 btuh



Radiant chilled ceiling components

Type WK-D-UG



- Fits most ceiling suspension systems
 - Assembly of ceiling tiles and chilled ceiling elements at the factory
 - Can be incorporated into a plaster ceiling
- ◀▶ L: 8 ft · W: 29½ in per element
- ❄ Cooling capacity up to 25 btuh/ft²

Type WK-D-UM



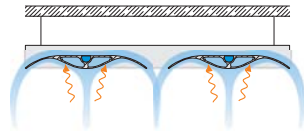
Type WK-D-UL



- Can fit in all commercial ceiling tiles
 - Can be incorporated into a plaster ceiling
 - Easy assembly
- ◀▶ L: max. 8 ft · W: 35 in per element
- ❄ Cooling capacity up to 25 btuh/ft²

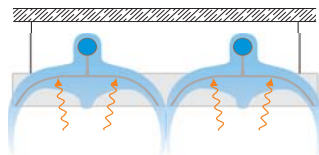
Convective chilled ceiling elements

Type WK-D-WF



- Attractive curved shaped profiles
 - Installed as freely suspended elements (plank style)
 - Can be combined with grid ceilings
 - Can be installed above open grid ceilings
- ◀▶ L: max 13 ft · W: 55 in
- ❄ Cooling capacity up to 40 btuh/ft²

Type WK-D-EL



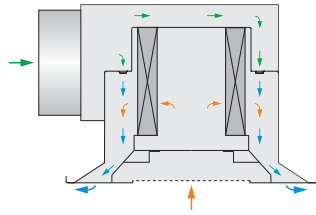
- Attractive elliptically shaped profiles
 - Optional integration of air terminal devices and lights
 - Also with mineral fiberboard for sound absorption
 - Can be installed above open grid ceilings
- ◀▶ L: max 19 ft · W: 5 ft
- ❄ Cooling capacity up to 35 btuh/ft²

Ceiling Mounted Active chilled beams



Nominal width 12 inches

Type DID300 Series

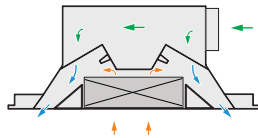


- One slot (DID301) and two slot (DID302) models available
- Heat exchanger vertically mounted with condensate drip tray for low chilled water temperatures
- Side entry spigot for fresh air

- ◀▶ L: 4 - 10 ft · H: <9 in
- ➡ Up to 15 cfm/lf primary (ducted) airflow capacity
- ❄ Cooling capacity up to 900 btuh/lf
- 🔥 Heating capacity up to 0.5 mbh/lf

Nominal width/size 24 inches

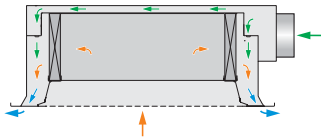
Type DID600 Series



- One slot (DID601) and two slot (DID602) models available
- Side or top entry spigot for primary air connection

- ◀▶ L: 4 - 10 ft · H: <10 in
- ➡ Up to 20 cfm/lf primary (ducted) airflow capacity
- ❄ Cooling capacity up to 1200 btuh/lf
- 🔥 Heating capacity up to 1.2 mbh/lf

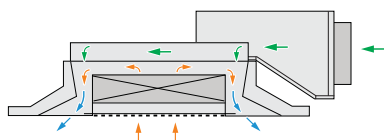
Type DID604



- Four-way air discharge
- Adjustable control blades to control the air discharge direction
- Side entry spigot for primary air connection
- Heat exchanger vertically mounted with condensate drip tray for low chilled water temperatures

- ◀▶ L: 2 ft and 4 ft · H: 8½ in
- ➡ Up to 100 cfm primary (ducted) airflow capacity
- ❄ Cooling capacity up to 5500 btuh
- 🔥 Heating capacity up to 6mbh

Type DID620 Series



- One slot (DID621) and two slot (DID622) models available
- Side or top entry spigot for primary air connection

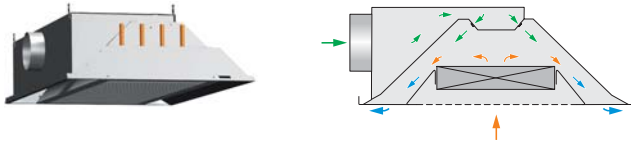
- ◀▶ L: 4 - 10 ft · H: <9 in
- ➡ Up to 17 cfm/lf primary (ducted) airflow capacity
- ❄ Cooling capacity up to 1100 btuh/lf
- 🔥 Heating capacity up to 1.2 mbh/lf

Soffit, Wall and Floor Mounting

Active chilled beams



Type DID630 Series

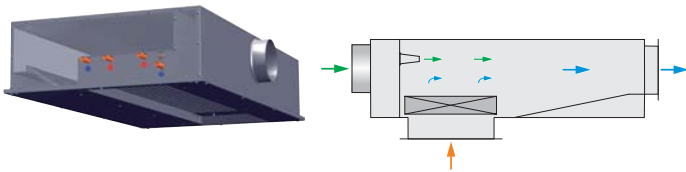


- Large cooling capacity
- Four options of induced air grille design
- Adjustable control blades to control the air discharge direction
- Adjustable induction nozzles
- Side entry primary air connection

- ◀▶ L: 4 – 10 ft • H: <9 in
- Up to 300 cfm primary (ducted) airflow capacity
- ❄ Cooling capacity up to 1500 btuh/lf
- 🔥 Heating capacity up to 1.2 mbh/lf

One-way air discharge

Type DID-E



- Ideal for individual rooms in hotels or hospitals
- Induction and supply air grilles in various designs
- Side entry spigot for primary air connection
- Heat exchanger horizontal
- Low height construction

- ◀▶ L: 22 and 24 in • W: 3.4 and 5 ft • H: 8 in
- Up to 165 cfm primary (ducted) airflow capacity
- ❄ Cooling capacity up to 3,400 btuh
- 🔥 Heating capacity up to 1.7 mbh

Displacement flow

Type QLCI

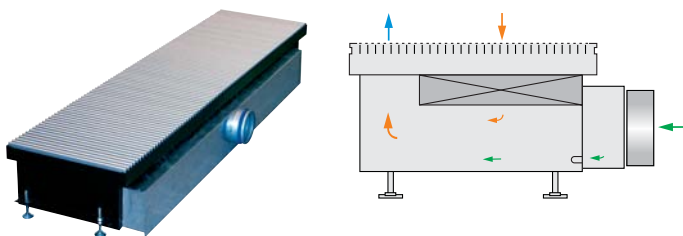


- Specifically designed for classroom and healthcare applications
- Top or end-mounted entry spigot for primary air
- Vertically mounted heat transfer coil with condensate tray allows operation with operable windows

- ◀▶ L: 68 or 88 in • H: 30 in • D: 13 1/2 in
- Up to 180 cfm primary (ducted) airflow capacity
- ❄ Cooling capacity up to 6,800 btuh
- 🔥 Heating capacity up to 4.5 mbh

Underfloor chilled beams

Type BID



- For perimeter use in UFAD systems
- Rectangular underfloor induction unit in various configurations and materials
- Low construction height

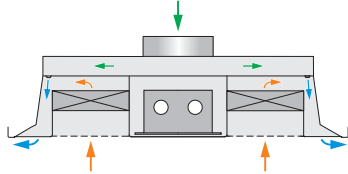
- ◀▶ W: 48 – 72 in • H: 8 – 12 in • D: 16 in
- Up to 85 cfm primary (ducted) airflow capacity
- ❄ Cooling capacity up to 3500 btuh
- 🔥 Heating capacity up to 4.2 mbh

Multi-Service Active chilled beams



Flush-mounted in the ceiling

Type DID622-L

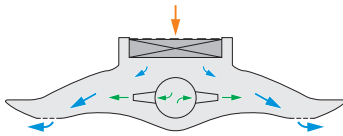


- Integrated linear light fittings
- Low height construction
- Top or side entry spigot for fresh air
- Heat exchanger horizontal

- ◀▶ L: 4 - 10 ft • W: 2 ft • H: < 9 in
- ➡ Up to 17 cfm/lf primary (ducted) air capacity
- ❄ Cooling capacity up to 900 btuh/lf
- 🔥 Heating capacity up to 950 btuh/lf

Freely suspended

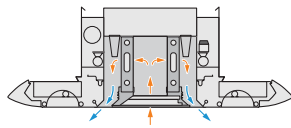
Type MFD



- Attractive design
- Heat exchanger horizontal
- Project bespoke multi-service integration
- Linear light fittings

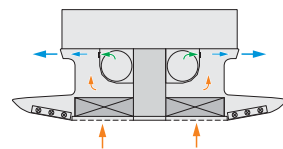
- ◀▶ L: 78 in • W: 32 in • H: 8 3/8 in
- ➡ Up to 50 cfm primary (ducted) air capacity
- ❄ Cooling capacity up to 2700 btuh
- 🔥 Heating capacity up to 1.7 mbh

Type MSCB (Active)



- Attractive design
- Cooling capacities to meet specific requirements
- Project determined multi-service integration
- Linear light fittings or halogen spotlights

- ◀▶ L: 5 - 15 ft • W: 24 - 48 in • H: 18 in
- ❄ Cooling capacity up to 650 btuh/lf
- 🔥 Heating capacity up to 0.5 mbh/lf



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