



# Webinar - Data Centers

Investor Relations - May 2022

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# Webinar - Data Centers

## Strategy & Operations

Acquisition of EDPAC

Munters offering





# Increasing digitalization fuels need for data centers...



Increased Internet usage and digitalization leading to larger growth in connectivity and data usage



Global population classified as internet users has grown from 51 per cent to 66 per cent in 5 years



Growing number of M2M\* applications (smart meters, video surveillance, healthcare monitoring devices, transportation, package or asset tracking, etc)

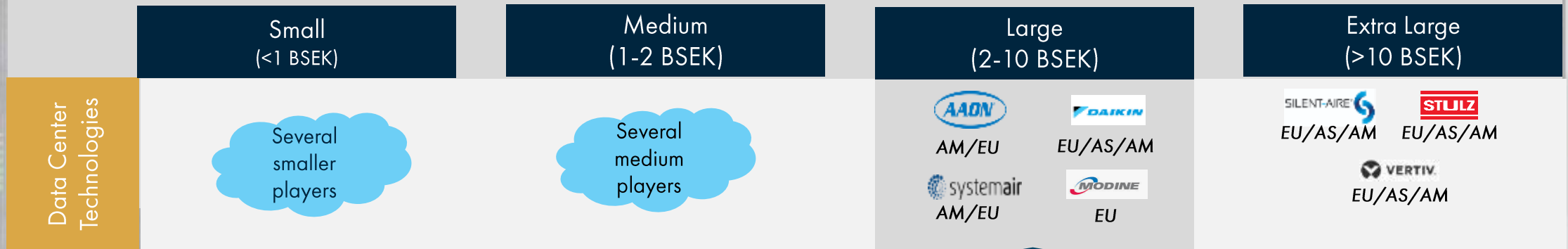


5G speeds will be 13 times higher than the average mobile connection by 2023

\* M2M – Machine to machine

# ... and Munters is well positioned for growth

- Munters Data Center\*: ~12% of net sales and ~25% of order intake
- Cooling solutions offered by many smaller, local players as well as few large global players
- In general, an order in Data Center is a project with a lead time of 9-15 months consisting of several equipment deliveries
- Munters well positioned in both North America and Europe



# Customer segments have different requirements



**Hyperscalers** - house critical compute and network infrastructure with the ability to scale

- Operate large sites (50+ MW) and 15+ sites
- Require customized solutions
- Behind the large market growth



**Colocation ("colo") data centers** – let companies rent space off company premises to host their infrastructure

- Operate mid-to-large sites (10-50MW) and 5-15 sites
- Require customized solutions
- Hyperscale growth also drives colo growth



**Telco and enterprises** - built, owned, and operated by companies and are optimized for their end users. Most often they are housed on the corporate campus

- Typically, between 2-10MW and 2-5 sites
- Moderate level of customization



# Balanced market approach – setting ourselves up for growth

History

Today

Future

## Step- by-step growth

### Step 1

- Refocus on the North American market
- Strengthen market position through new product launches and broadening of customer base
- Build a stable manufacturing base
- Creating solid recurring revenues

### Step 2

- Acquisition of European EDPAC
  - Several cooling solutions transferred
  - Smaller scale, shorter production runs
  - Broader product portfolio
  - Targeted customers
  - No one large account
- Strengthen market position

### Step 3

- Grow through expansion of customer base and with existing customers
- Ensure production capacity

# Strengthening our market and technology position



**Experienced  
sales &  
application  
engineering  
team**



**Broad  
technology  
portfolio**



**Strong customer  
relationships**



**Flexible  
manufacturing  
fit for business**



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# Successful integration of EDPAC in Munters

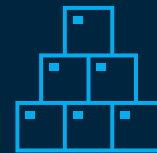


- European data center market shows strong growth
- Munters North American business model has a winning value proposition and business model to address its target market
- Global customers are looking for providers to supply global support



- Manufacturer of data center cooling equipment and air handling systems
- Founded in 1985
- Sales primarily in Ireland, Europe and smaller share in APAC
- Established manufacturer of Munters Oasis systems in EMEA
- Two manufacturing facilities in Ireland

## Product offering:



- Indirect Free cooling
- Direct cooling
- General precision Air Handling

## Sales Channels:



- Direct sales to end users
- General and mechanical contractors
- Design engineering firms

# EDPAC provides a platform for growth in Europe



## OFFERING

Expansion of the product portfolio

Previous experience as manufacturer of Munters Oasis systems



## CUSTOMERS

Attractive end-customers within Munters prioritized customers in EMEA

Common key customers



## PEOPLE

Access to skilled engineering workforce

Established commercial team with sales, contracts/project management, and strong engineering teams



## MANUFACTURING

Well located factory in Ireland with possibilities for expansion

Ireland is one of the EMEA data center hubs

Proven quality from Oasis manufacturing



## OTHER

Strong similarities and competencies with Munters North American data center business

Limited overlap with Munters in US

Potential upside from cross-selling to each others' customer bases



# EDPAC officially rebranded as Munters



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# Munters offer a broad range of sustainable solutions



**Cooling Components and Air Handlers**

- Wide range of media options and system designs to meet customer specific needs
- Patented MRM technology for water conservation
- End Users /OEMs– Hyperscale



**Oasis**

- Very efficient indirect airside economizer, with low peak and annual power use
- Polymer tube heat exchanger
- End Users – Hyperscale & Co-los



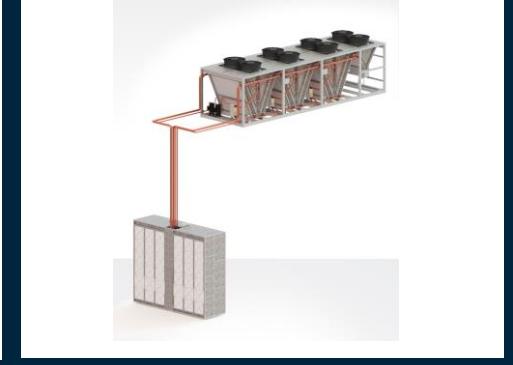
**PVX**

- Efficient, packaged dry economizer solution
- Indirect Airside Economizer with dry plate-type heat exchanger.
- No water use
- End Users –Co-los



**MCW – Modular Chilled Wall**

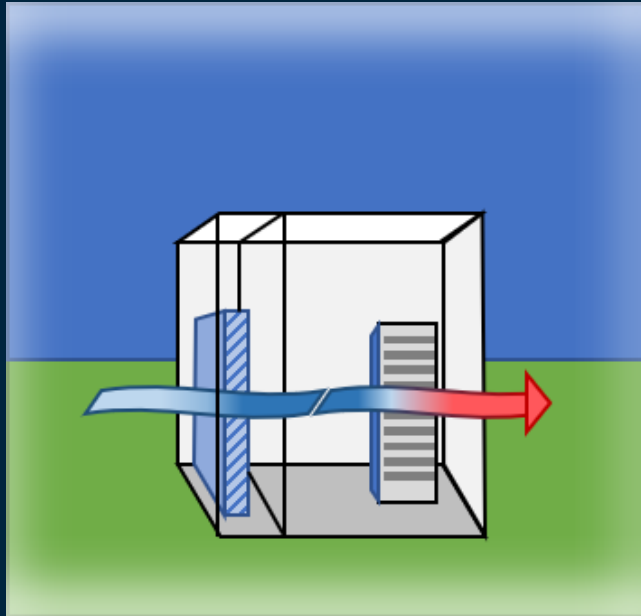
- Pre-engineered fan coil array for pair with 3<sup>rd</sup>-party OEM chillers
- Efficient flooded room air delivery with custom coil options
- End Users –Co-los



**SyCool Split**

- Unique thermosyphon driven heat rejection provides industry leading dry economization
- Patented product
- 250-500 kW capacity
- End Users –Co-los

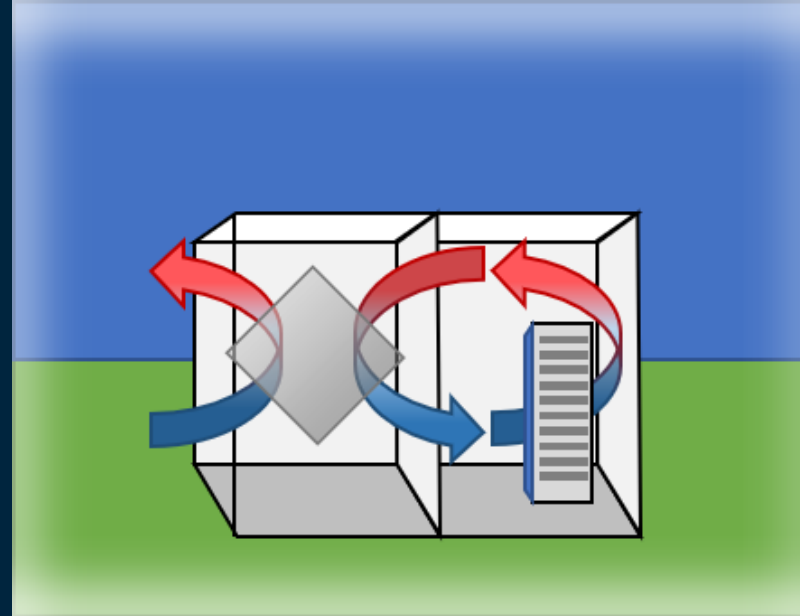
## Direct Air Cooling



### Direct Evaporative

- Media
- FA6
- Packaged DEC Systems

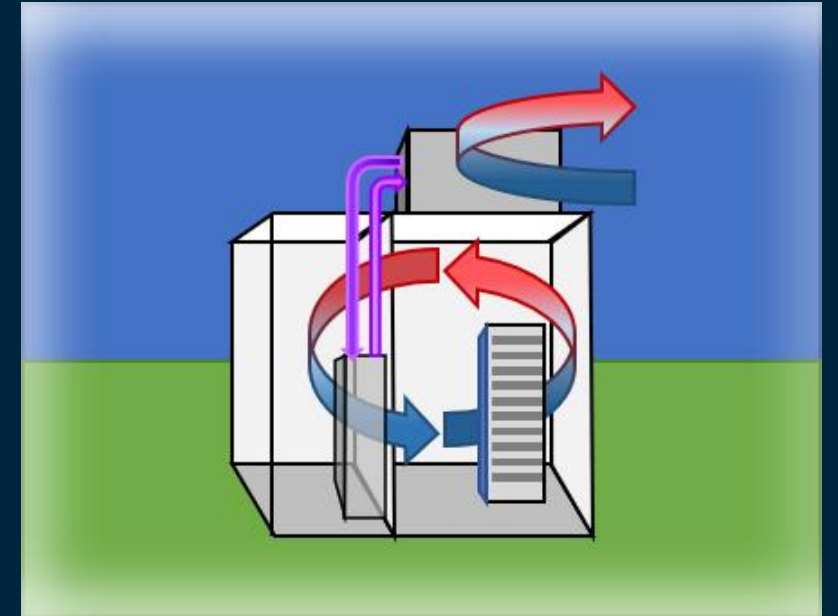
## Indirect Air Cooling



### Packaged Indirect Systems

- OASIS (wet)
- PVX (Dry)

## Indirect Split System Air Cooling



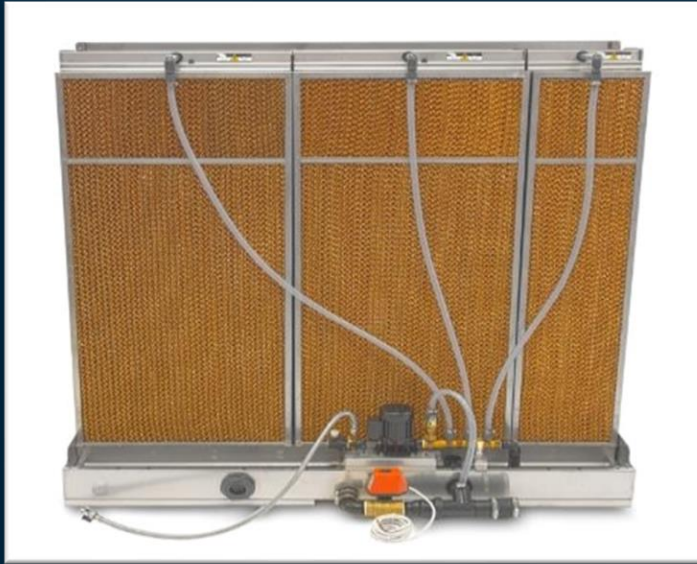
### Split Systems

- MCW & Aligned D3
- SyCool



# Original inventor of structured media, produced for over 50 years

## Munters FA6 Direct Evaporative Cooling Module



- Media encased in stainless steel frames for easy replacement
- Face split staging for capacity control
- Available for incorporating into building infrastructure or air handlers
- High Efficiency, low pressure drop

## Munters Evaporative Media



### GX30

- Fire-rated according to UL<sup>®</sup>900, ULC-S111 Class 1
- GREENGUARD Gold certified, which means the chemical emissions from the material are extremely low.

### GX40

- More resistant to high and low pH levels
- Fire tested and classified as non-combustible material according to EN ISO 1182. Also fire-rated according to UL<sup>®</sup>900, ULC-S111 Class 1
- GREENGUARD Gold certified



# Oasis – Indirect air-side economizer with indirect evaporative cooling

## OASIS® STANDARD

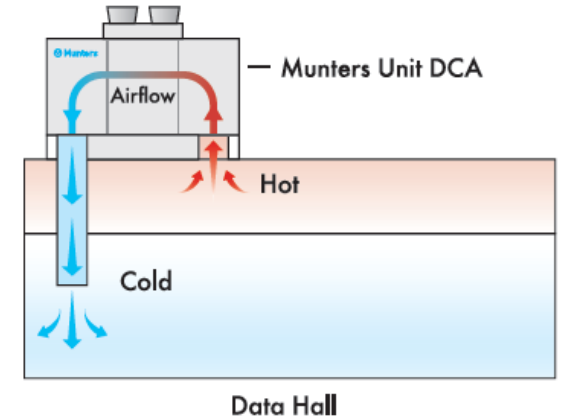


Indirect air-side economizer with indirect evaporative cooling (IEC)

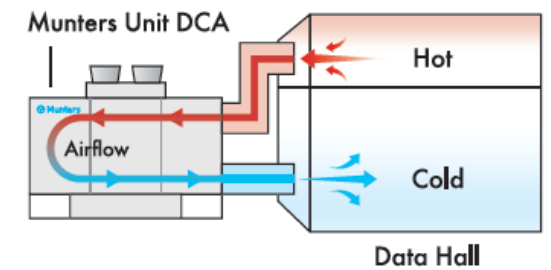
### FEATURES

- Up to 500kW cooling capacity per unit depending on delta T and altitude
- 3 modes of cooling: Dry HX, IEC, IEC + trim DX
- Munters polymer tube heat exchanger technology
- Reduced peak operating kW
- Low annual pPUE

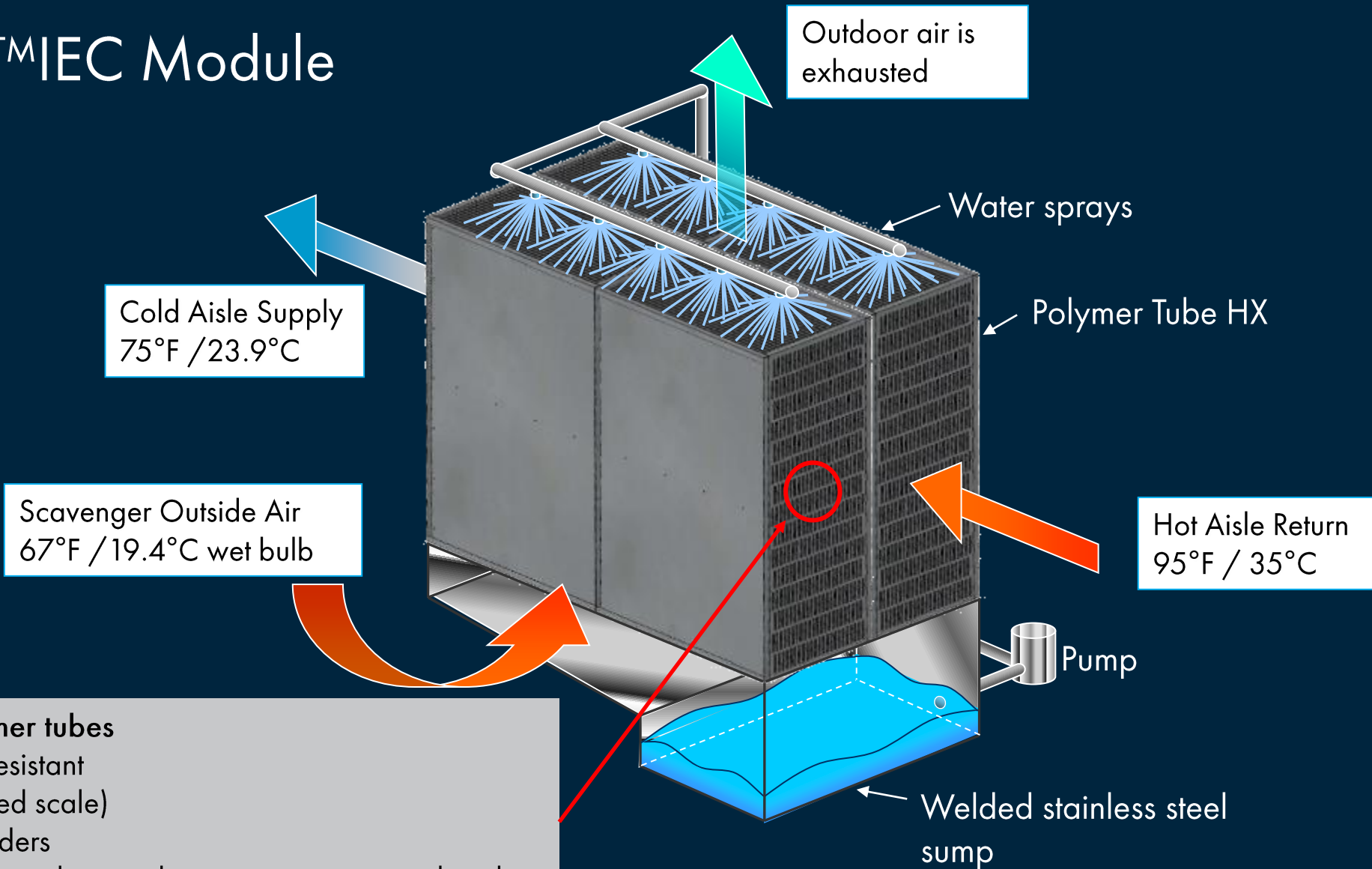
### Rooftop Mount



### Perimeter Mount



# Oasis™ IEC Module



## Elliptical Polymer tubes

- Corrosion resistant
- Flexible (shed scale)
- Sealed headers
- Dry operation when outdoor air temperature is less than 50°F / 10°C



# Oasis Roof Mount - OASIS Systems installed at Sabey Data Center

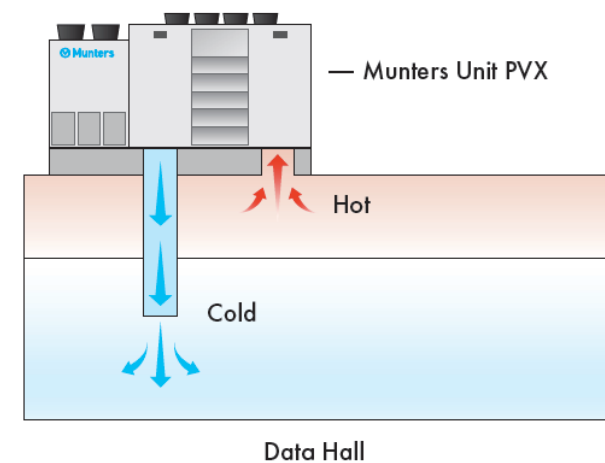
Approximately 400 MW of OASIS  
Capacity Installed Globally



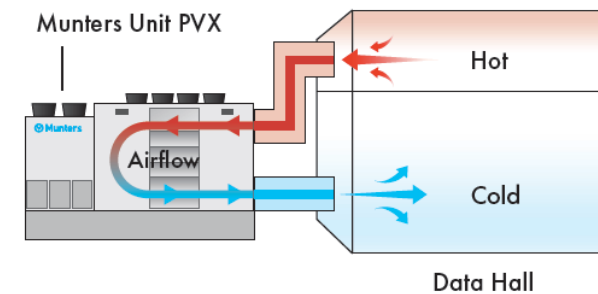
# Perimeter Mount PVX unit



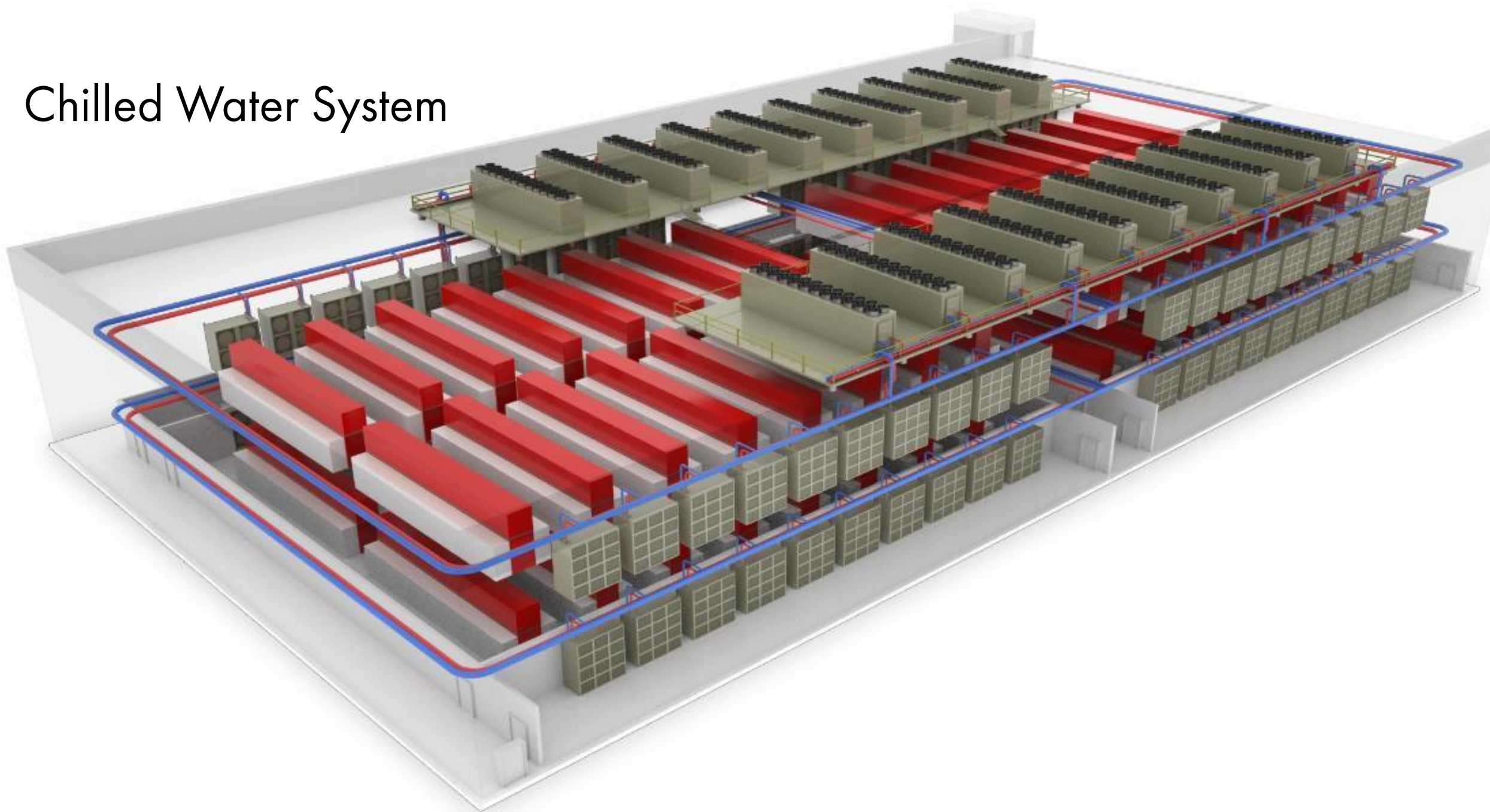
Rooftop mount



Perimeter mount



# Chilled Water System







# Delta 3 Fan/Coil Arrays

manufactured  
by Munters for  
Aligned



# SyCool Product Evolution

## Split Systems

- 400 kW: a) Initial offering with CRAH\* optimized for hyperscale  
b) Low height and Down-flow CRAH
- 250 kW: Offered with four different CRAH configurations
- 500 kW: Condenser pairs with single CRAH, or two 250 kW CRAH's

## Future

- Liquid Cooling heat rejection options
- Smaller size split systems
- Packaged System



\*CRAH – Computer Room Air-Handler



## Summary and Q&A



