



The Fully Electric Building

March 12, 2026 | Rosewood Commons | Pleasanton, CA



TRAMA

Our 2026 Partners

Together we serve the Oakland/East Bay CRE Industry.

Thank you to our 2026 Partners

Diamond Partner



There for you

Gold Partners



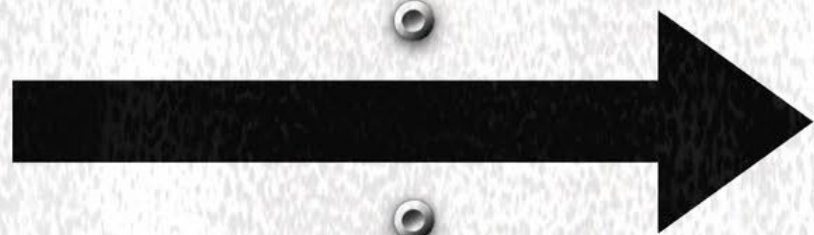
Silver Partners



Bronze Partners



**BECOME A
MEMBER**



Welcome to Our New Members

Action Asphalt & Concrete
Century Pyramid Building Maintenance
King's Roofing
Lakeside Group, LLC
LEA Relocation Services
Quill
Professional Powerwashing & Prop.
Maintenance
Tree West

2026 MARCH MADNESS

19
MARCH
5-7 PM



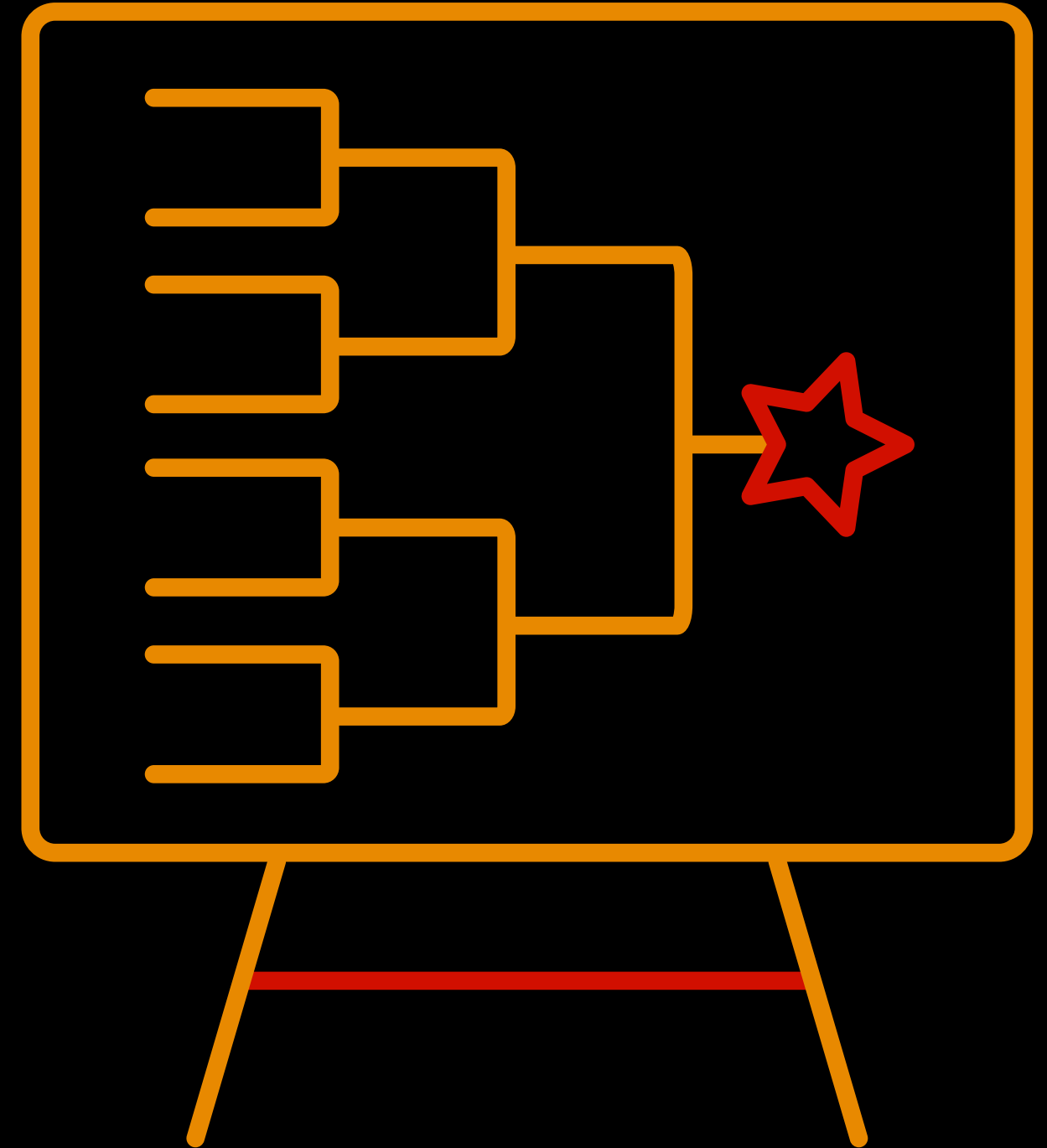
NETWORKING
FOOD & DRINKS
BRACKETOLOGY

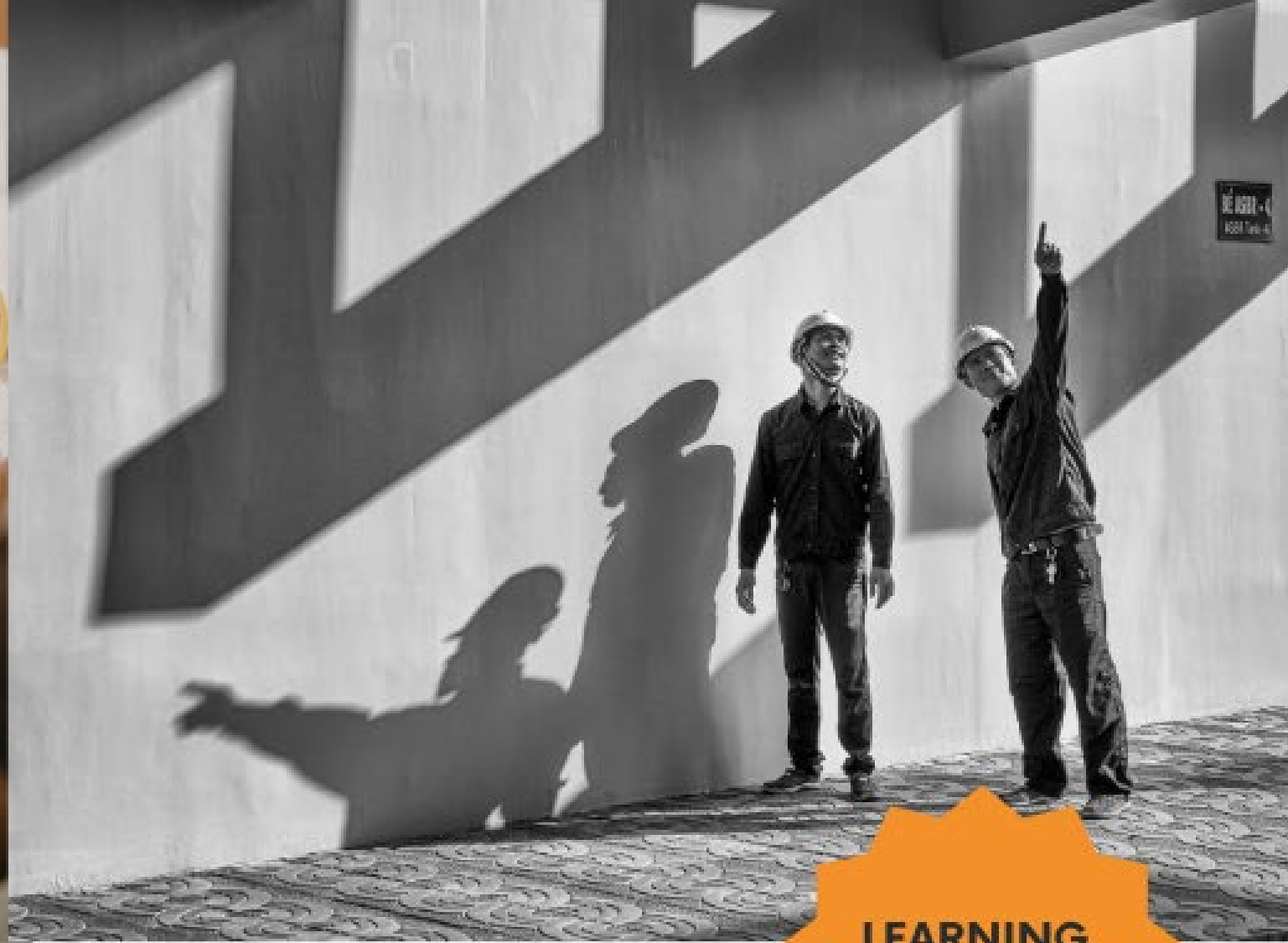
REGISTER TODAY

EACH REGISTRATION INCLUDES AN ENTRY IN BOMA DEB'S NCAA MENS BRACKET
DRAKE'S BARREL HOUSE | 1933 DAVIS ST #177, SAN LEANDRO, CA 945775



PARTNER SPONSOR





2026

EMERGING PROFESSIONALS: BACKPACK TO BRIEFCASE SERIES: CONSTRUCTION PLAN READING

Thursday, March 26

3:00 - 5:30 pm Education & Networking

2100 Powell Street | Emeryville

LEARNING,
NETWORKING
AND FUN



Partner Sponsor

Mark Your Calendars

April 3 - 17 | RPA Investment & Finance

April 9 | AI in CRE Luncheon

April 10 | Swing & Sip Golf Clinic

April 27-29 | BOMA PSW/PNW Regional Conference

April 30 | BOMA Gives Back: Shoreline Cleanup

May 7 | Backpack to Briefcase: Sustainable Landscape Maintenance

May 11 | Annual Walter Finch Spring Golf - Reg Opens March 17

May 20 | Engineering Webinar - FLS Sprinkler Inspection



The Fully Electric Building



Bill Smart
Chief Engineer,
CBRE

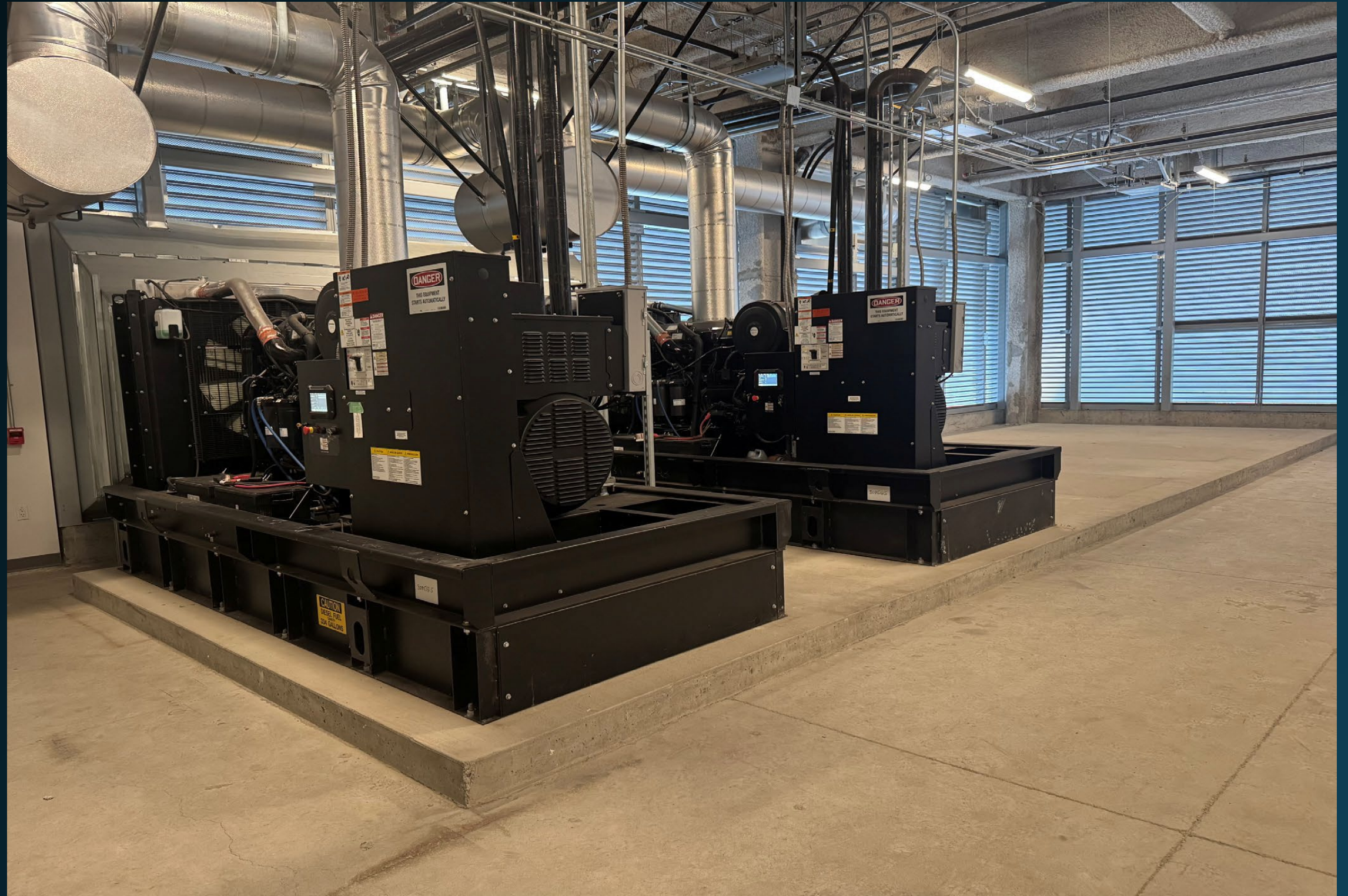




Berkeley Commons Project Overview: Fully Electric Building

Presented by: CBRE Union Chief Engineer, William Smart

- Building A – 600 Addison Street – 305,000 GSF
- Building B – 601 Bancroft Way – 269,466 GSF
- Net-zero core & shell operations
- Solar panels +/- 1 acre = 500kW
- All-electric
 - Two 4,000-Amp Transformers, total of 8,000 Amps for each building
 - Two 500 kW generators per building installed, capacity for 5 watts/sf for tenants based on 7-8 hrs. of runtime, per building.
 - Space for three additional generators per building (one per floor)



29 EV Charges dual head - Building A

24 EV Charges dual head – Building B

HVAC equipment – Multistack with cooling and heating modes

Building A 1560 Tons

Building B 720 Tons

No Cooling Tower

No Boilers

Domestic Hot water supplied by electric hot water heaters with recirculation pumps

Green roof areas +/- 25,000 sf

LEED Gold Certified Buildings





Thank you!



Jason Bates
Training Director,
Alameda County
Electrical JATC



Zero Net Energy Center

San Leandro, CA

JASON BATES



Zero Net Energy Center

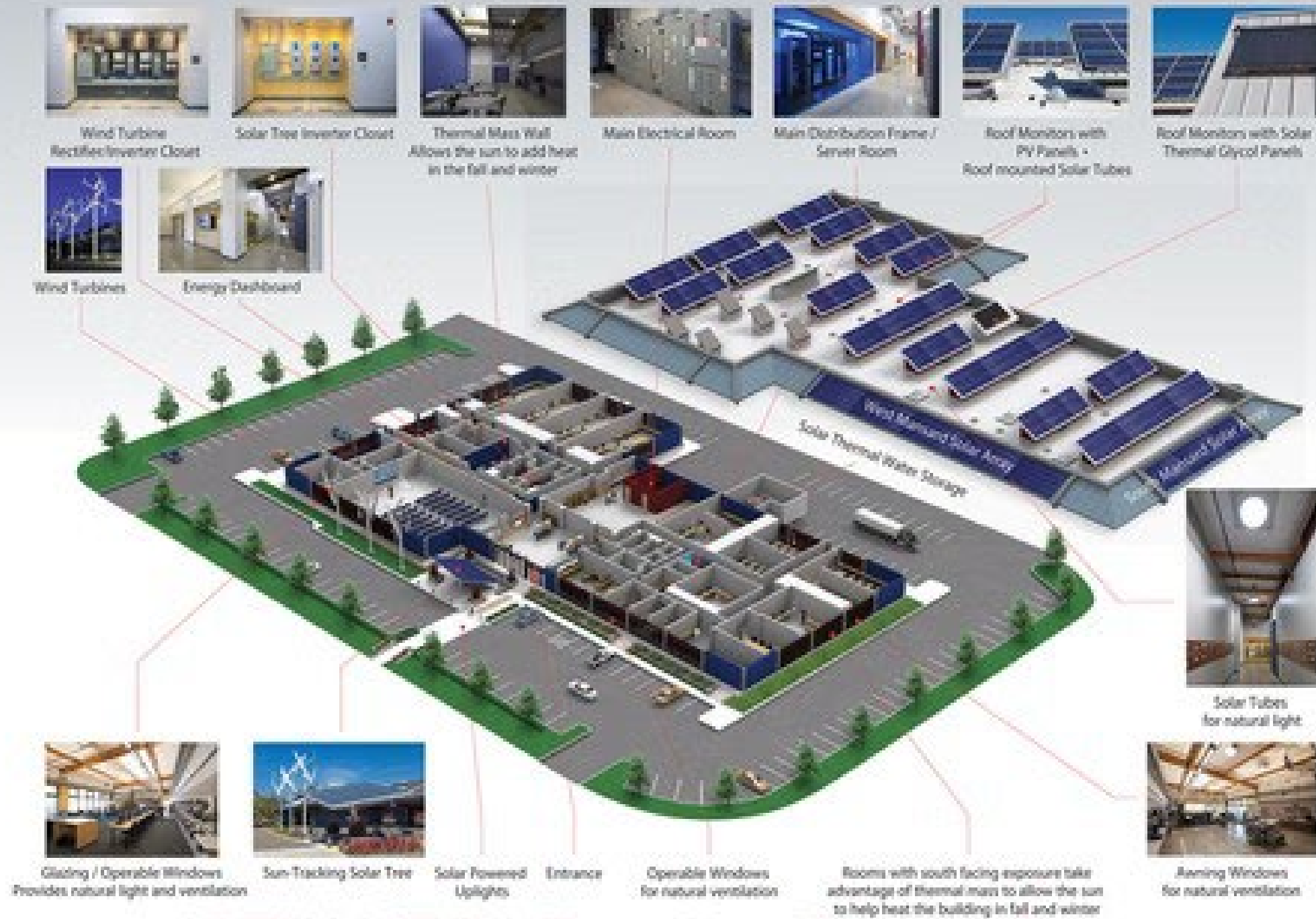
Wind Turbines

Static Panels

2-Axis Solar Tree



Zero Net Energy Center



IBEW-NECA Zero Net Energy Center
 Electrical Training for Sustainable Careers



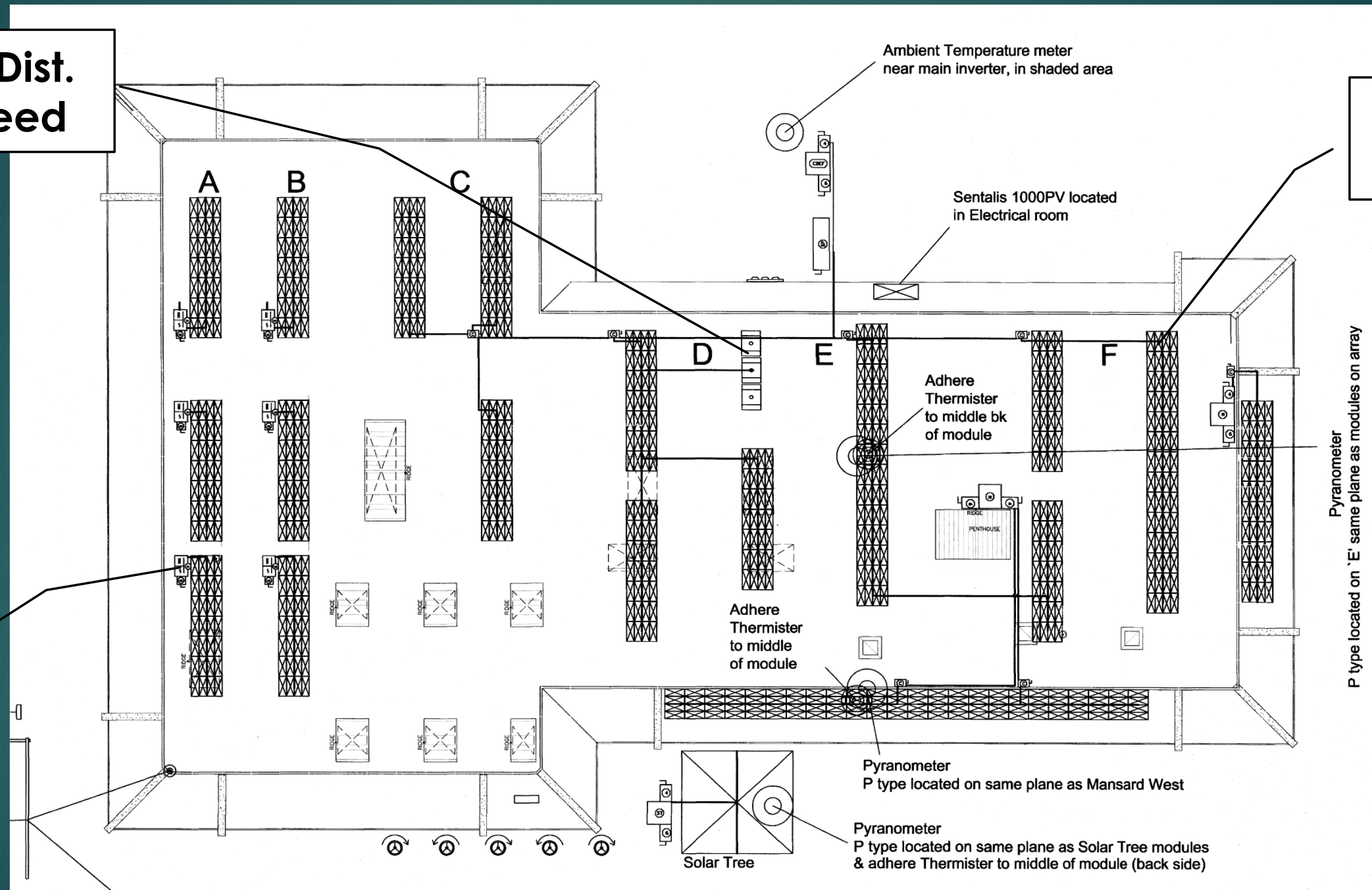
Zero Net Energy Center



Central Dist.
Panel Feed

650 Panels

Multiple Array
Feeds



Zero Net Energy Center



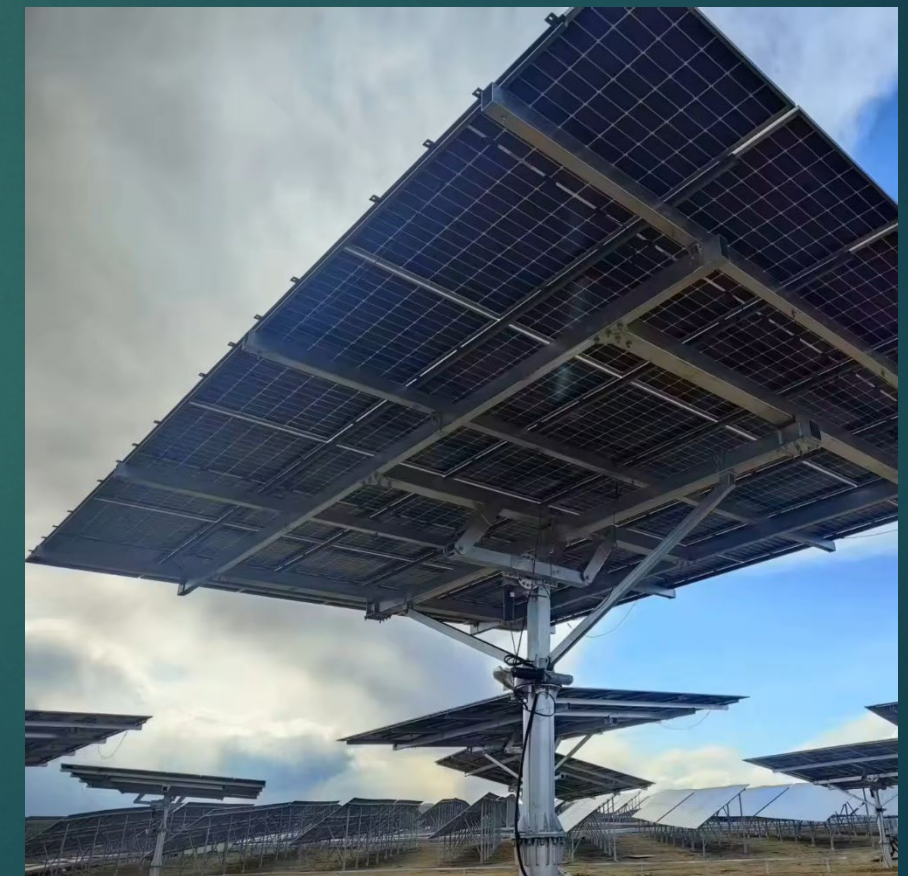
**45 Panels
8.8 kW**

**2-Axis
Rotation**

**Weather
Rated Base**



Zero Net Energy Center



Zero Net Energy Center



Zero Net Energy Center



JATC AC Output

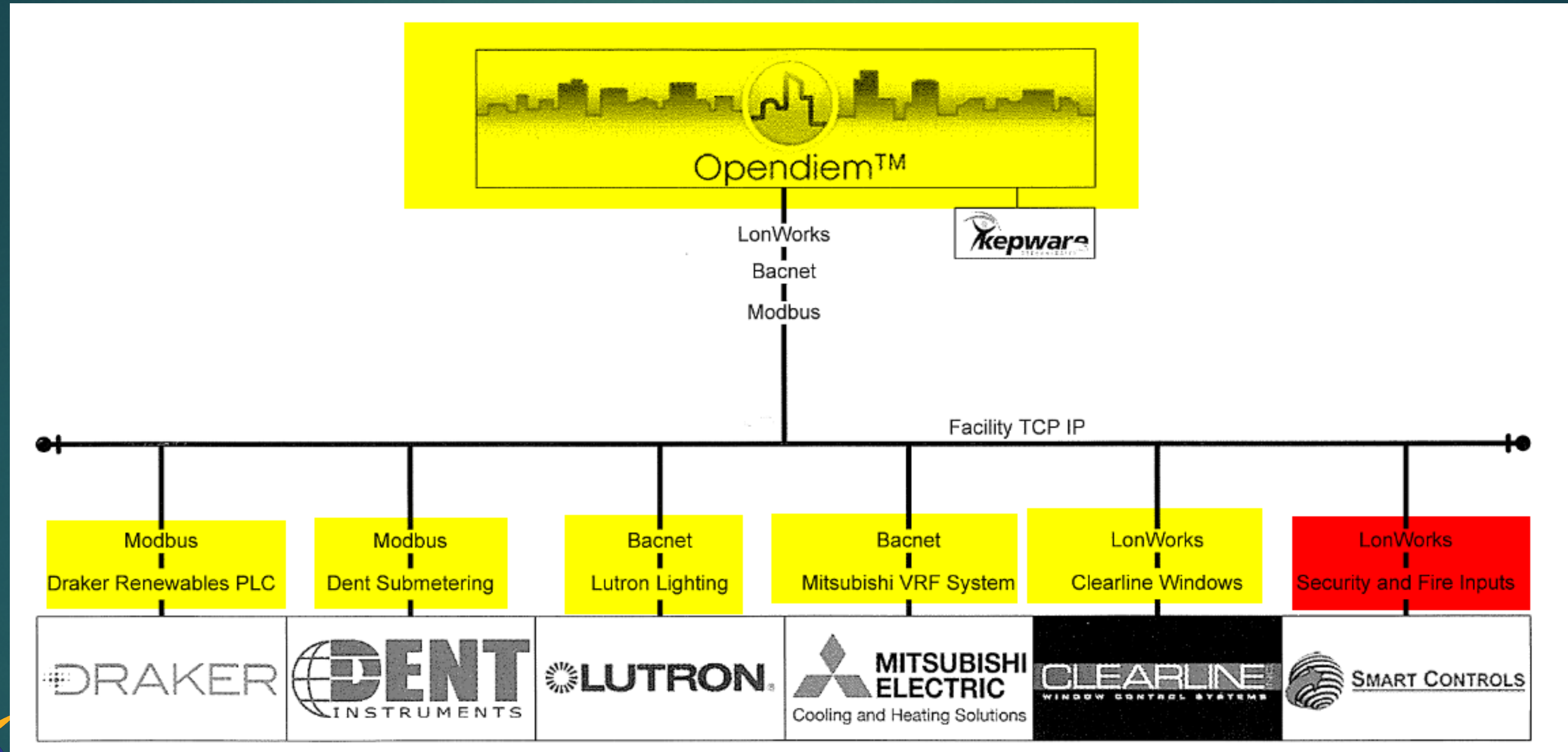
Wind	9.4	AC KW		6,498	yearly AC KWh
Solar Tree	8.8	AC KW		21,682	yearly AC KWh
South Mansard	8	AC KW		14,637	yearly AC KWh
West Mansard	19.1	AC KW		28,984	yearly AC KWh
A & B	33.4	AC KW		62,803	yearly AC KWh
Flat Roof	60.3	AC KW		117,002	yearly AC KWh
TOTAL	139	AC KW		251,606	yearly AC KWh



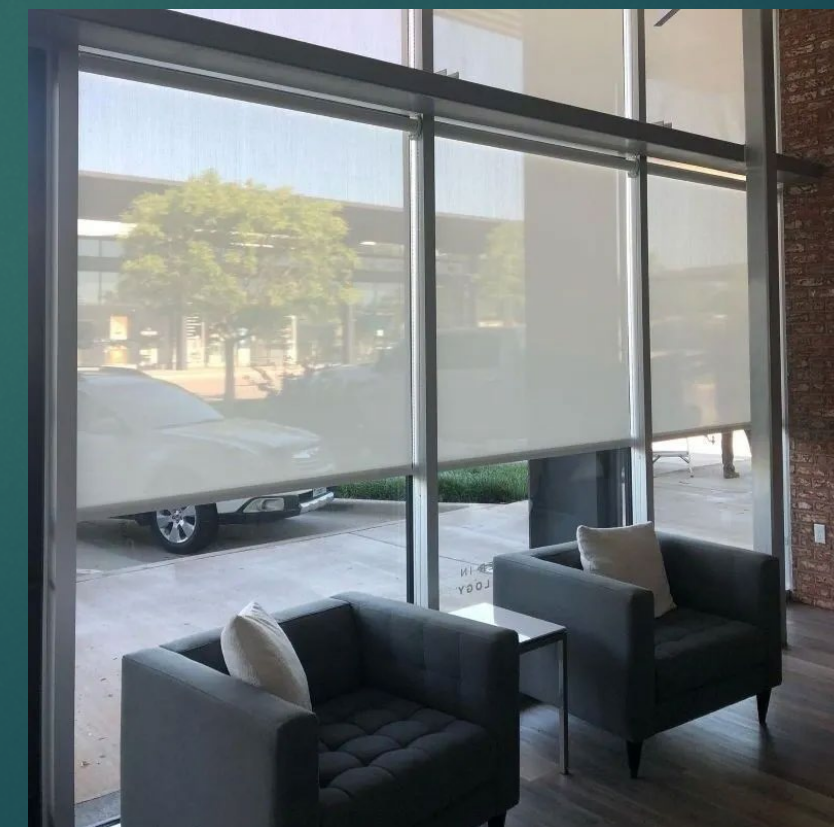
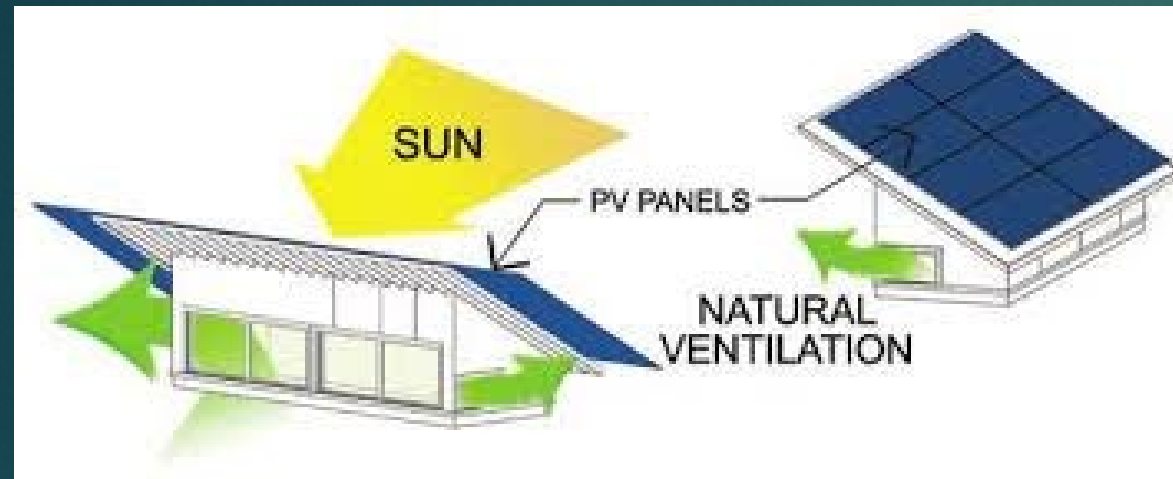
Zero Net Energy Center



Zero Net Energy Center



Zero Net Energy Center



Closing





Frank Ledda
HVAC & Controls
Buying Specialist





YMAE
Air-Source Heat Pump
North America



Local policy changes taking the lead

~80 California Cities with All-Electric or Reach Codes (As of 11/19/2025)

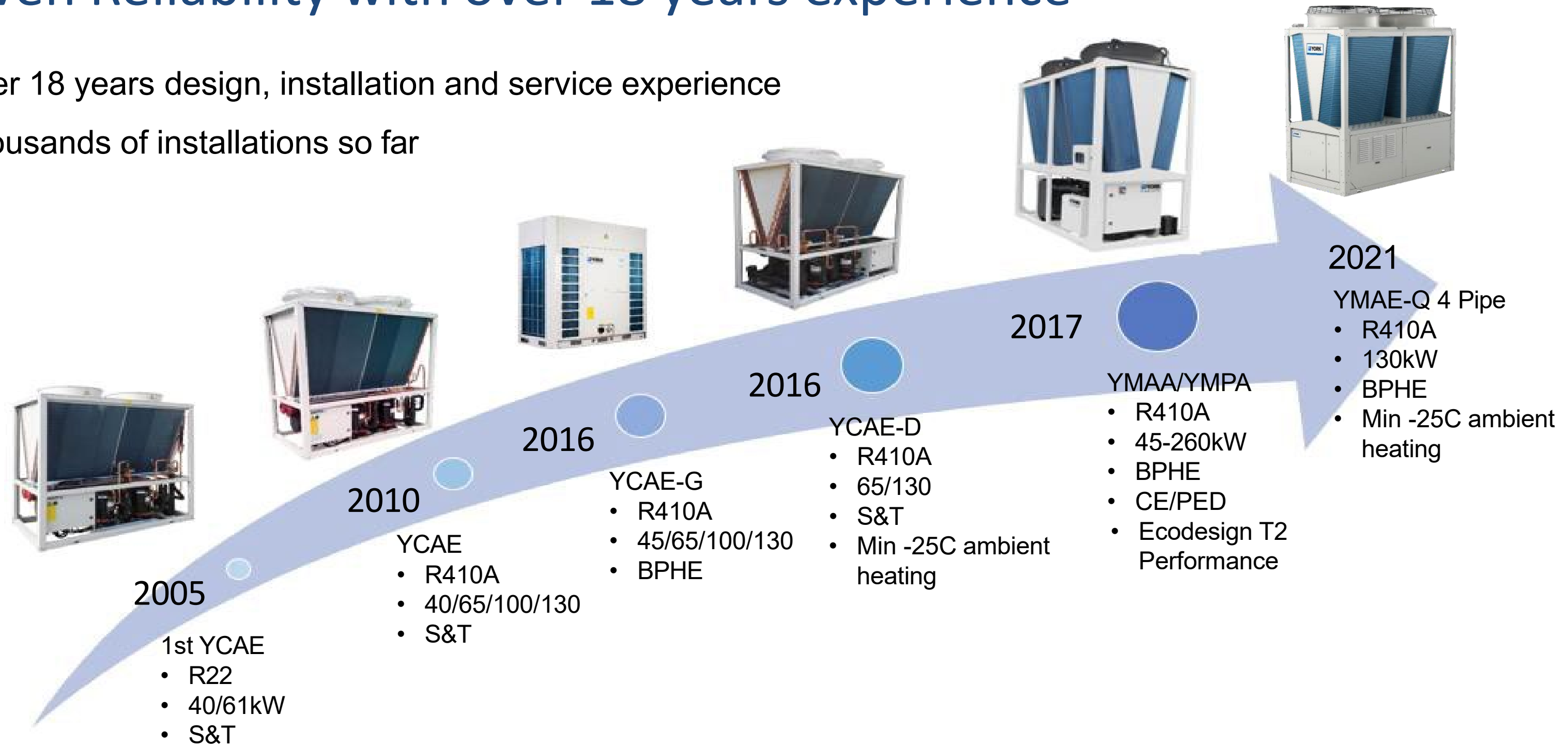
Cities and counties that have already adopted gas-free buildings commitments or electrification building codes (i.e., “reach codes” that go beyond the statewide building code)

- Gas Ban: Prohibits gas infrastructure in certain buildings
- Electric-required reach code: Requires all-electric systems in new buildings (exemptions vary)
- Electric-preferred reach Code: Requires buildings with gas systems to achieve higher energy standards
- Multi-approach: Adopted both reach code types or a gas ban and reach code



Proven Reliability with over 18 years experience

- Over 18 years design, installation and service experience
- Thousands of installations so far



The YMAE is a new advancement, built upon decades of experience

Europe case studies

- YMPA with R410A since 2018; R454B since 2021
- >2100 machines installed and operating, 9500 compressors with R454B
- Similar machine; 4 compressors, only one on VSD

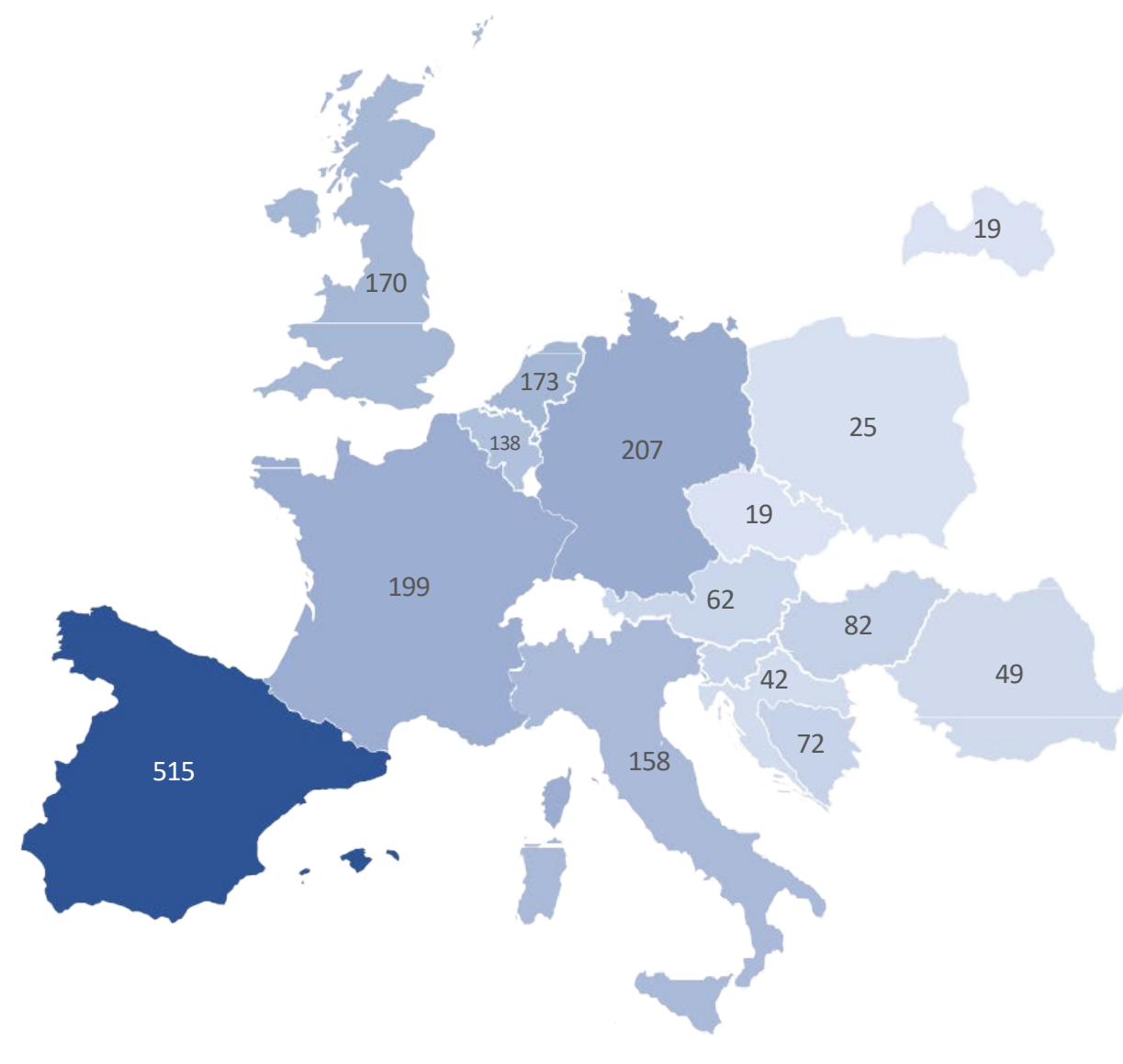
Project examples:

- UK: Biotech cold room for manufacturing
- UK: Bread manufacturing line

Both require 0.5C / 0.9F accurate temperature control made possible with the Amichi series

- Spain: Leon Ambulatory Health Center
 - 35k€ annual savings vs. heating oil
 - 55C / 131F setpoint

Europe YMPA Installs



Biotechnology Coldroom, Beswick Refrigeration, UK

Series1
515
19



Morrisons Wakefiled Pitta Line, Beswick Refrigeration, UK



Leon, Spain Ambulatory Center, YORK Distribution

YORK Heat Pump Solutions

- VFD Compressors
- Vapor Injected Compressors
- EC Fans
- 2 Independent Refrigerant Circuits
- Smart Defrost Cycle

YMAE – Full Inverter A/C Heat Pump



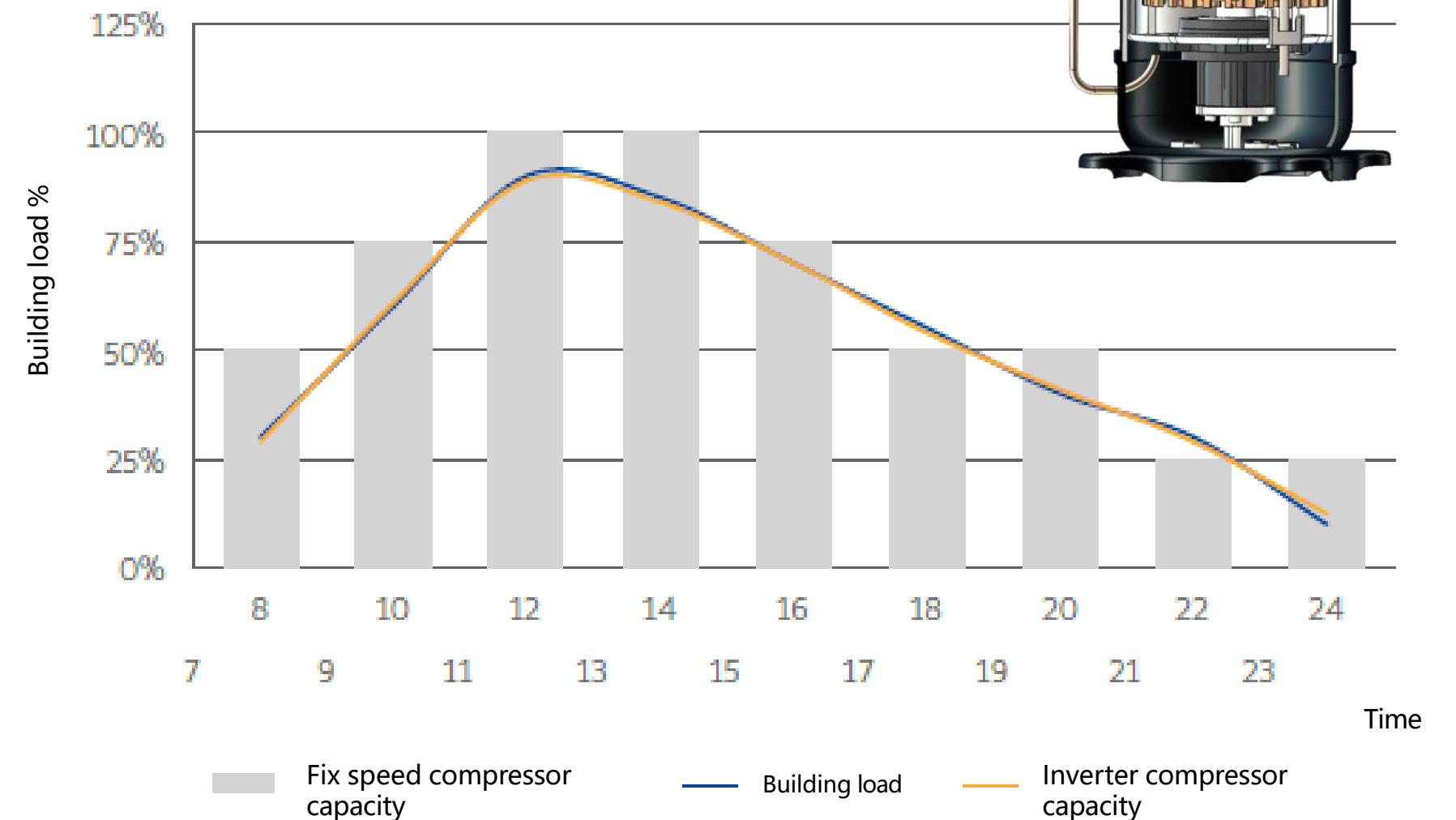
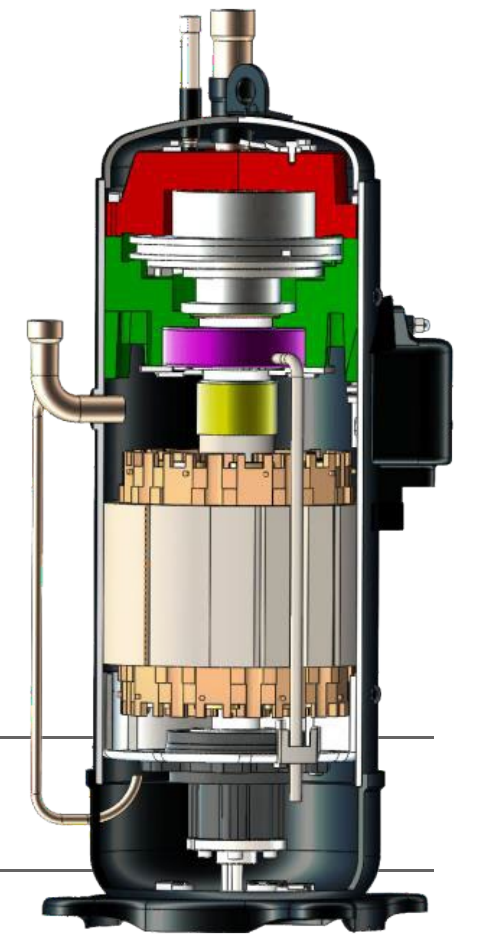
4 pipe

2 pipe

Key Technologies

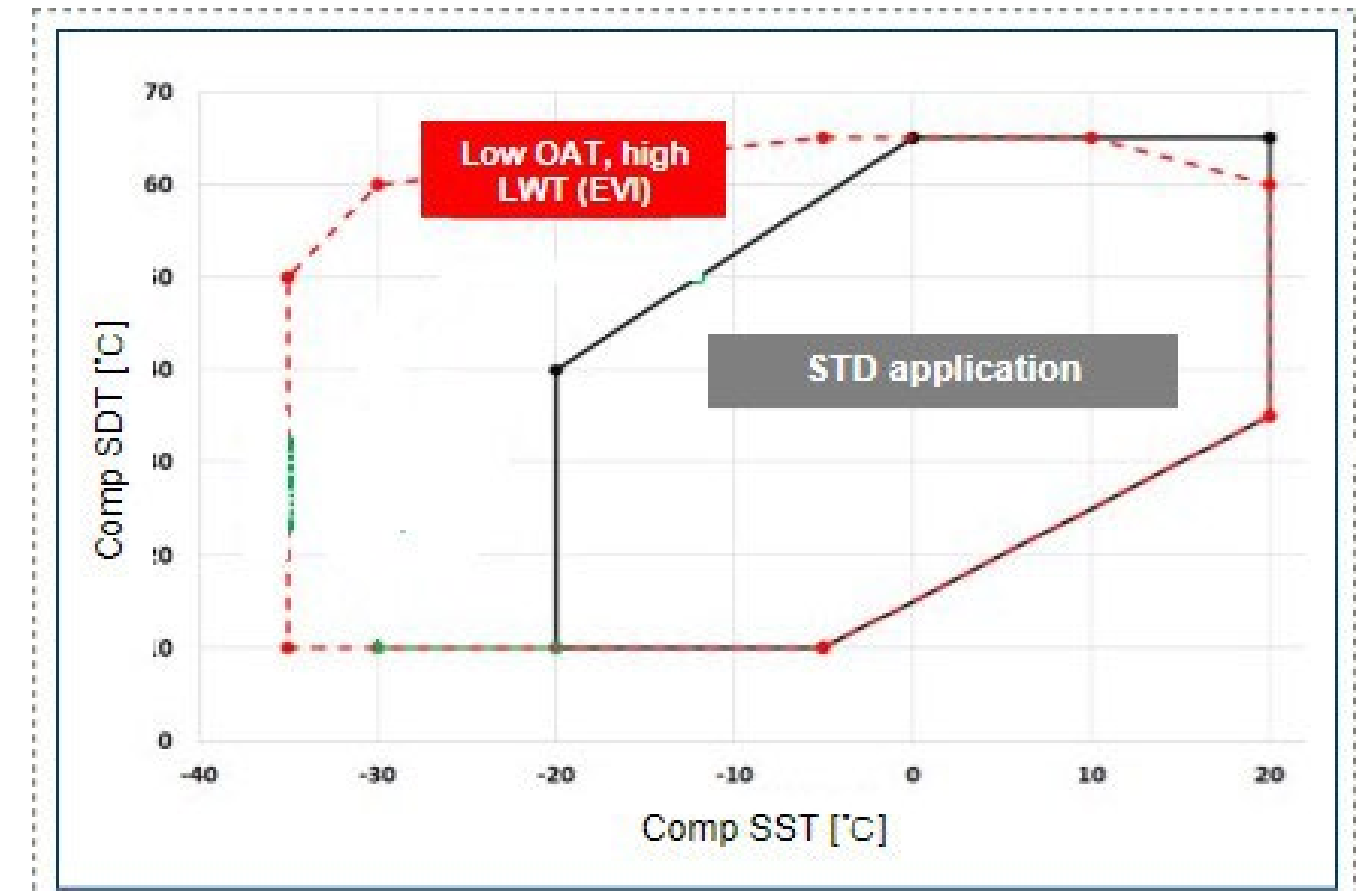
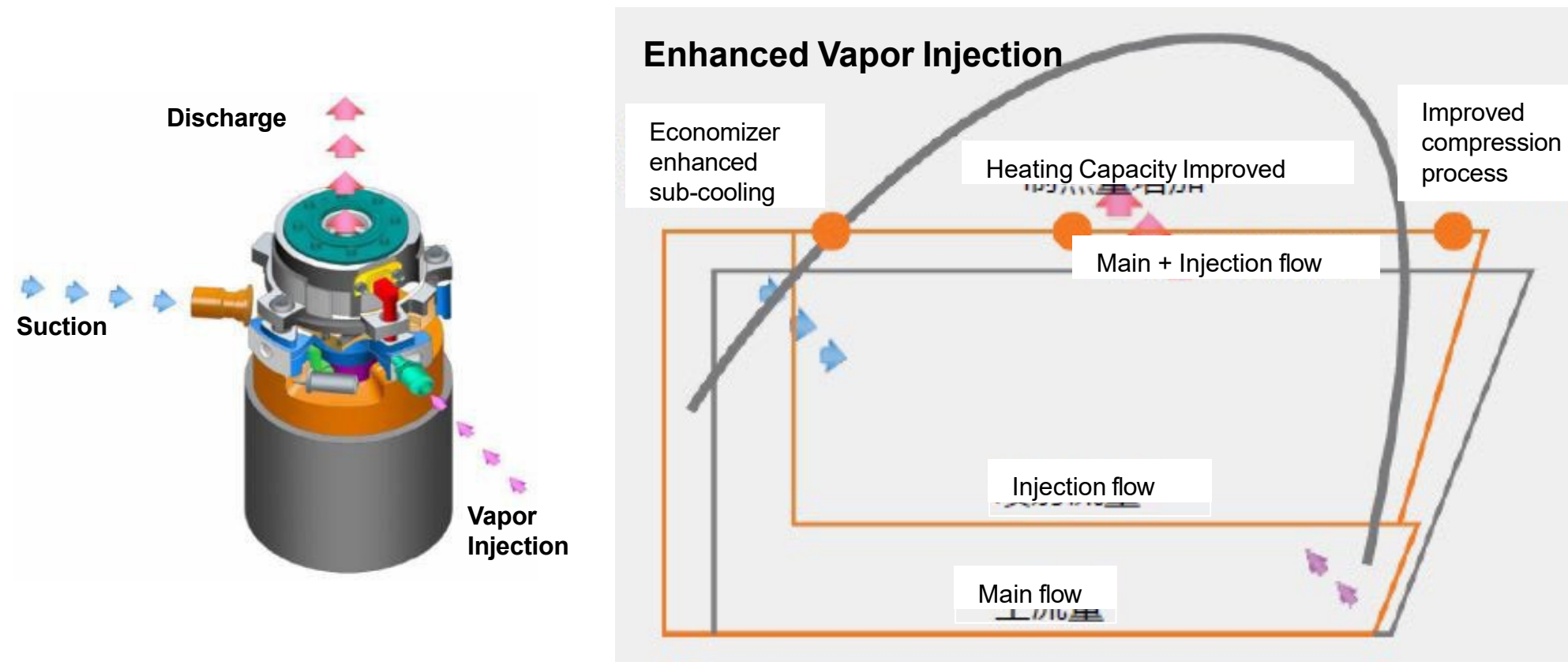
DC Inverter EVI Scroll Compressor

- **Enhanced vapor injection (EVI)** significantly extends compressor operating map and increases efficiency
- **DC Inverter Technology** delivers stepless capacity control, allowing precise capacity match to building load and saving power
- **New Design Wrap:** optimized compression cycle for heat pump application
- **Intermediate Discharge Valve** adapts to off-design conditions, saving energy year-round
- **Non-Contact Oil Film Seal** eliminates primary wear component to deliver long service life



Key Technologies

DC Inverter EVI Scroll Compressor



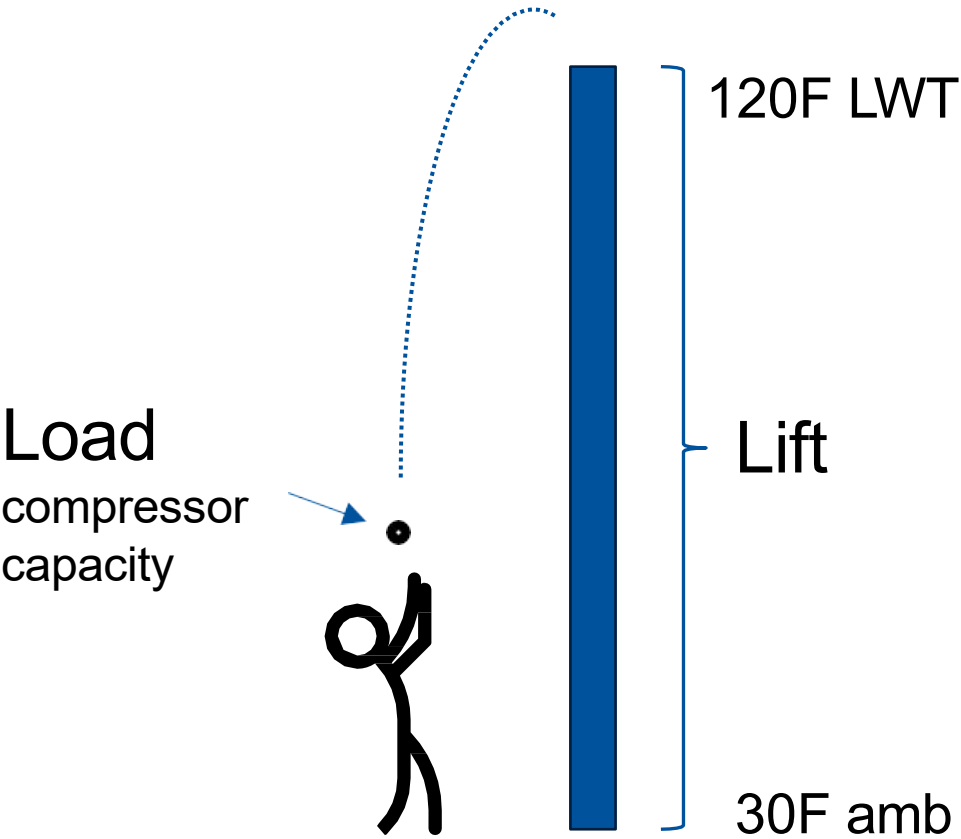
EVI benefit:

- Performance improved with extra subcooling and higher refrigerant flow rate
- Operation range extended for low ambient heating
- Heating capacity improved by 10~20% at low ambient operation

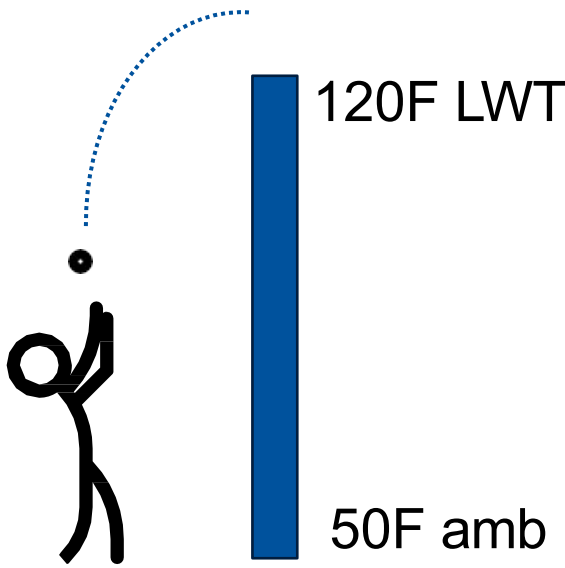
Key Technologies

Compressor Intermediate Discharge Valve

Design Load and Lift
30F ambient, 120F LWT



Off design
Less lift required



Primary Discharge Port

Intermediate Discharge Valve (IDV)



JCH Scroll Compressor Discharge Casing

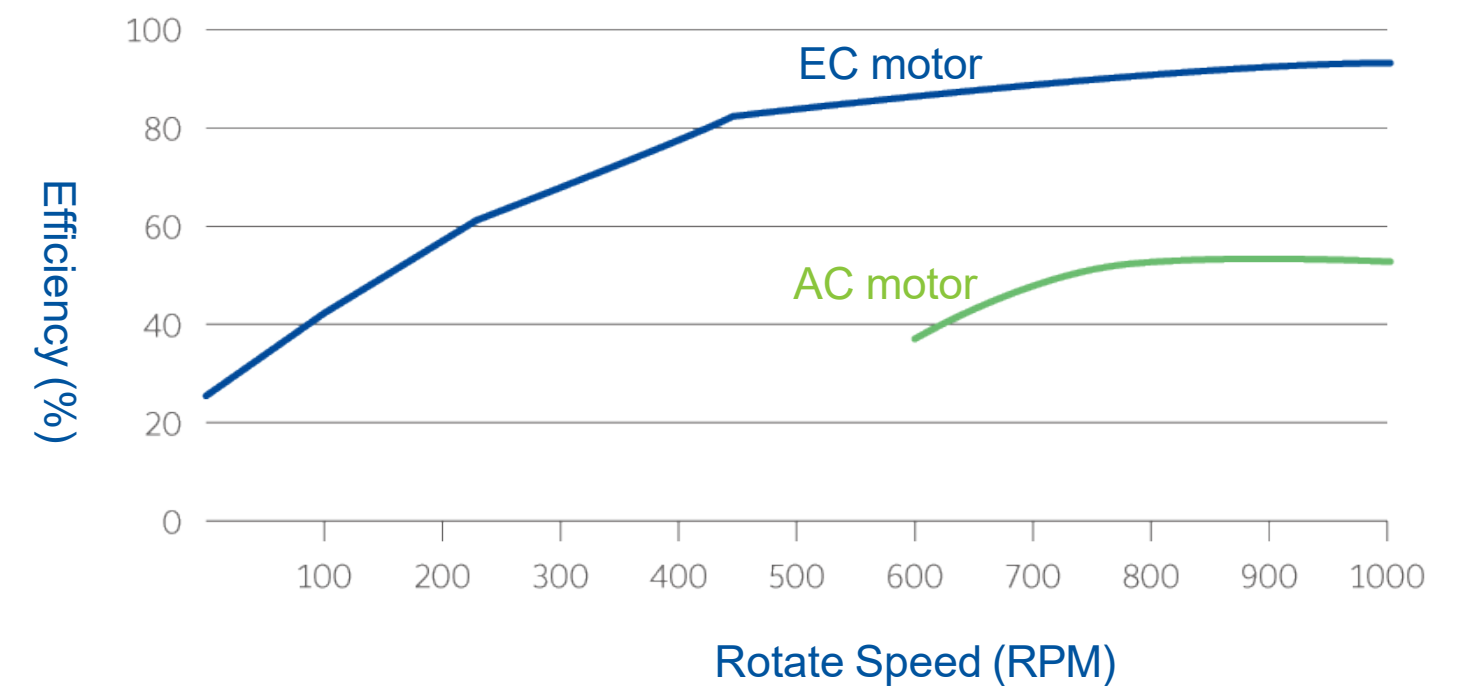
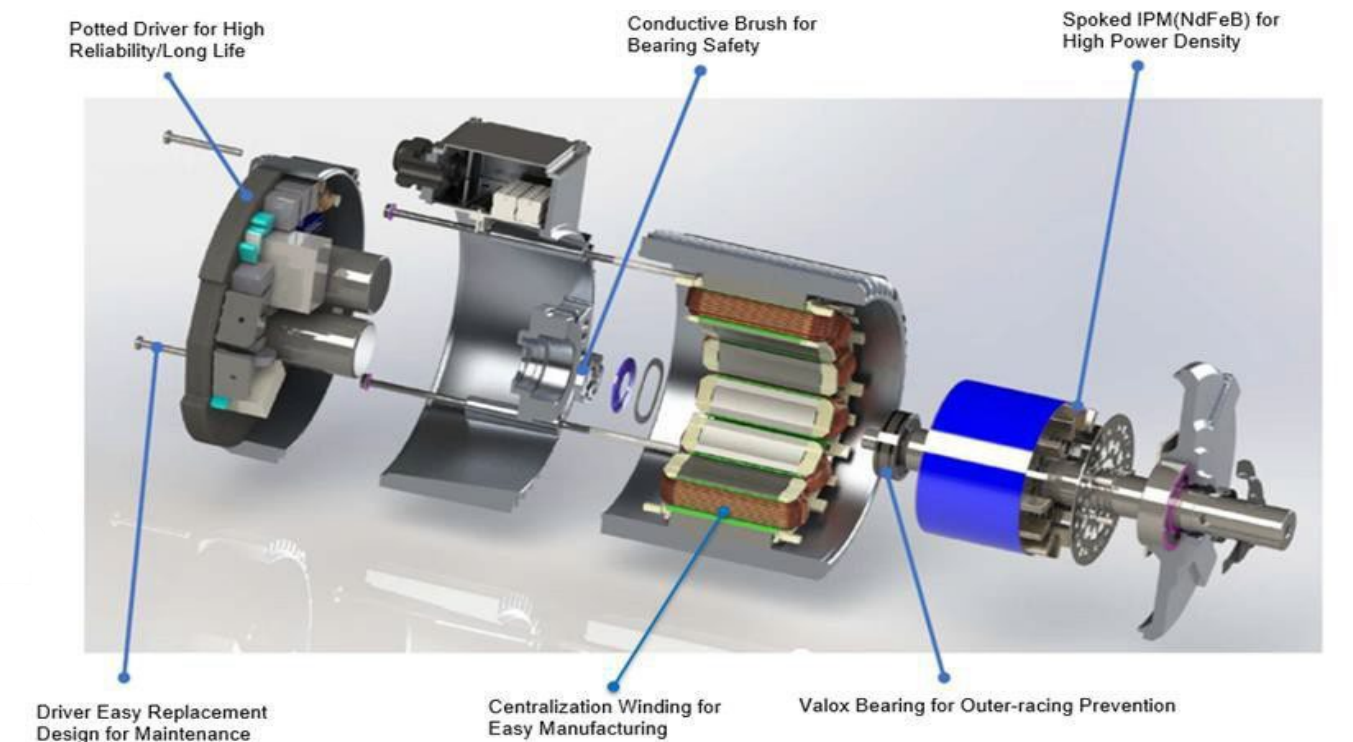
Discharge Valve benefits:

- Reduce power consumption off-design
- Reduce sound off-design
- Automatic function driven by pressure, self regulating without external controls

Key Technologies

High Efficiency EC fan

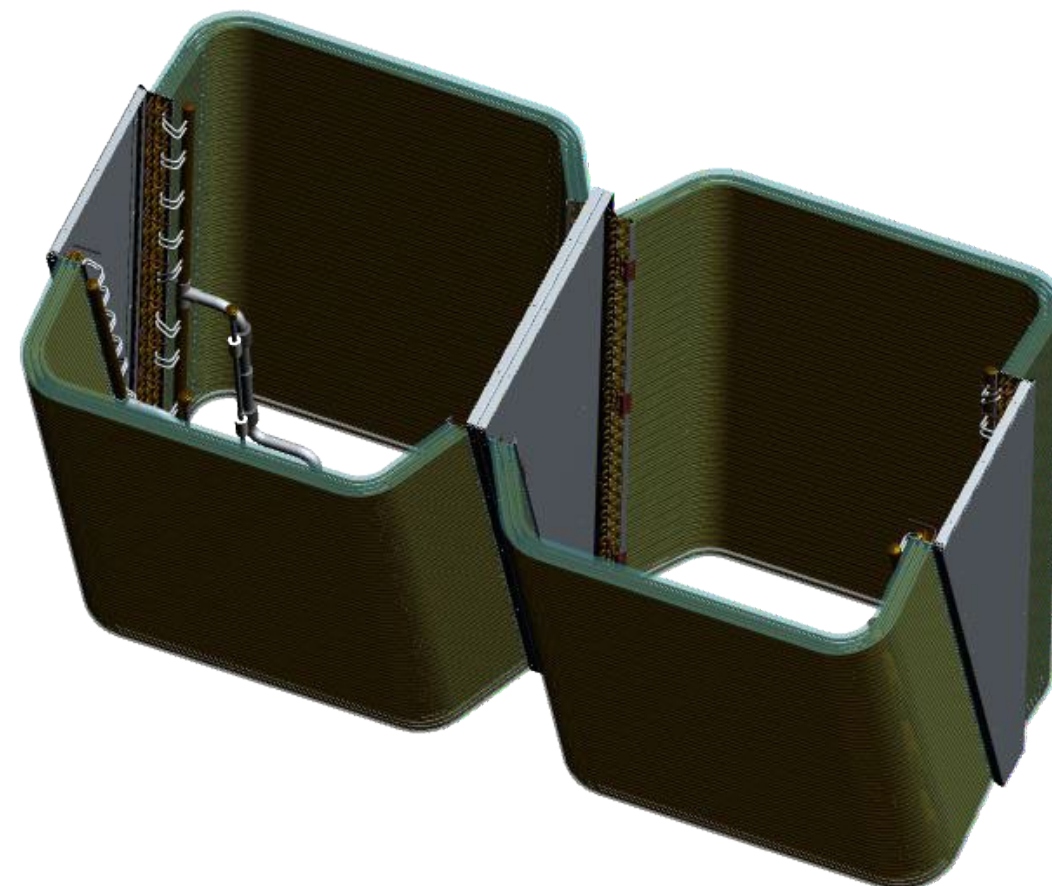
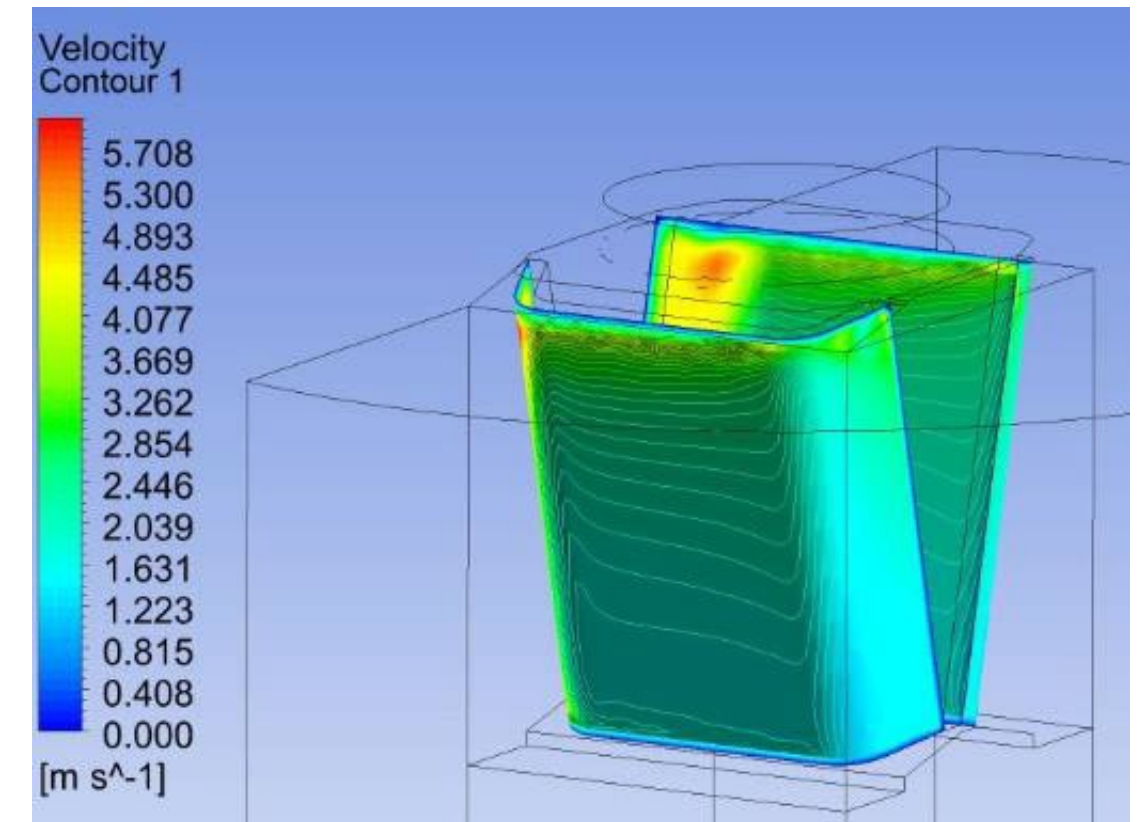
- Optimized fan blade aerodynamics
- Highest efficiency motor
 - electronically commutated permanent magnet
 - IE5 certified – "ultra premium efficiency"
- Lower sound level than induction motor axial fan
 - 2 dB(A) lower at full load
- Outstanding control across all operating modes and conditions!



Key Technologies

Air-side Heat Exchanger

- JCI designed and manufactured
- Aluminum fin, copper tube
- Maximum heat transfer surface area U-shape design
- Consistent airflow velocity for optimized ice build
- Standard hydrophobic coils (Blue Fin)
- 3 row design
- Optimized circuit to balance both cooling and heating conditions.



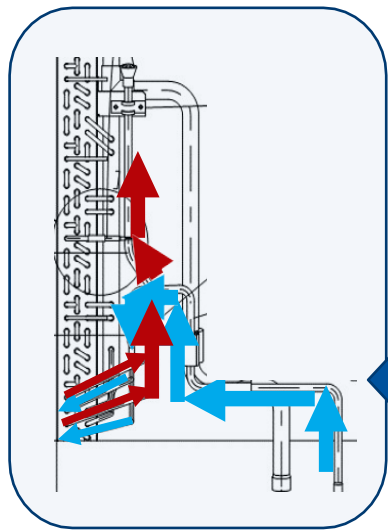
Each refrigerant circuit is served by two coils on one fan

Coil 1

Coil 2

Key Technologies

Advanced Defrost



Pre-defrost tech

- Optimized airflow builds ice evenly
- Coil circuiting keeps bottom row ice-free, for shorter defrost cycle

Intelligent defrost

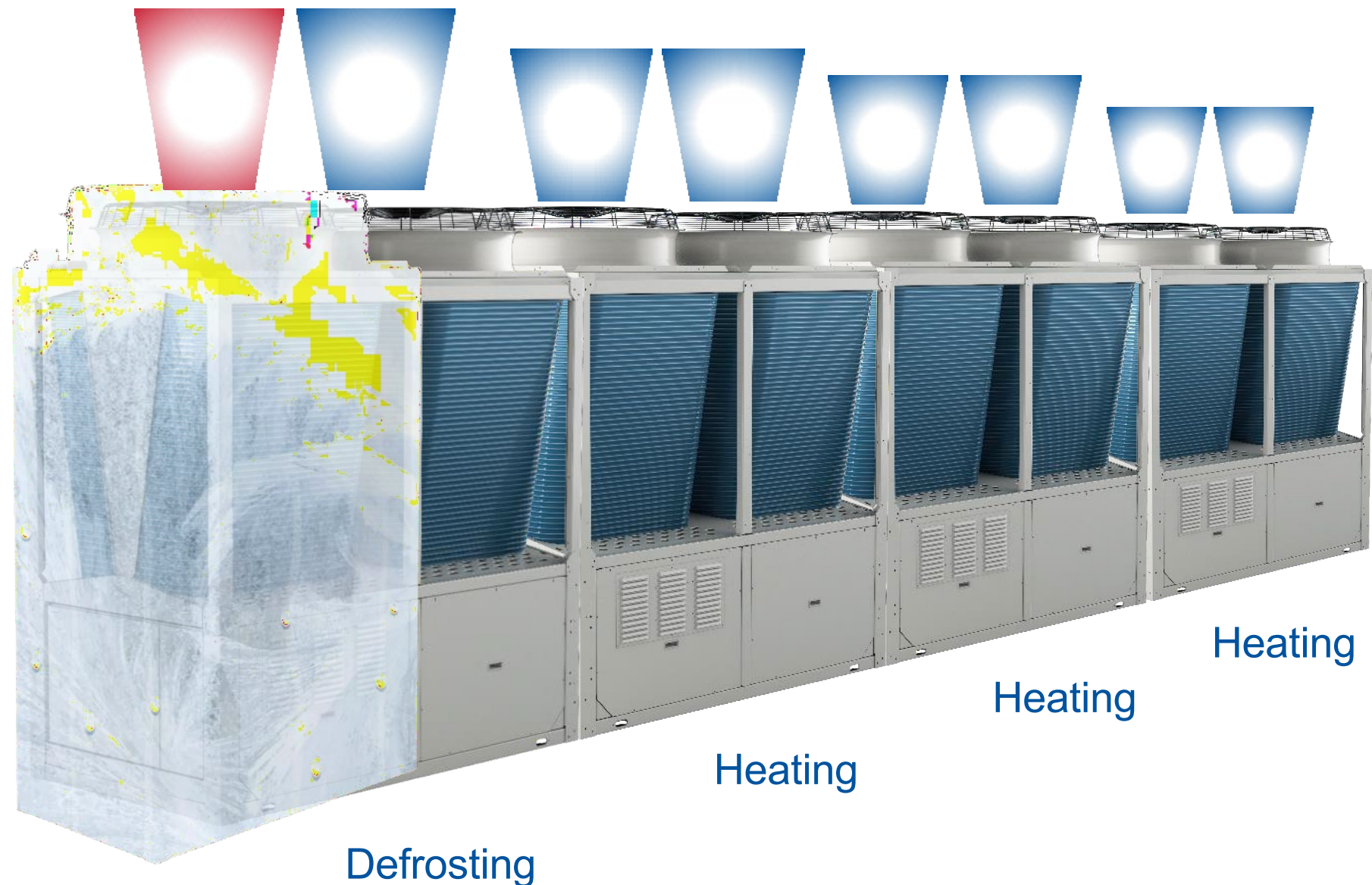
- Pressure and temperature approaches measured
- Defrost only when necessary
- One circuit defrosts the other – no heat removed from water loop

Manual defrost

- Command locally, or via BMS, to defrost when convenient

Key Technologies

Advanced Defrost



Optimized Defrost Sequence

- One circuit defrosts the other, within one module
- No heat removed from the building water loop
- Better system stability and more capacity through defrost

System benefit of the optimized defrost:

Example 4-module array:

- 400 MBH per module
- 1600 MBH heating capacity when not in defrost
- **1200 MBH heating capacity while in defrost**

Competitors deliver only 800 MBH during defrost with one full module in defrost, cancelling out entire second module

Defrost Example

Video of JCI unit defrosting

- Watch for:
 - Bottom row remains warm
 - Total defrost takes only 3 minutes!

 **YORK**



Proven
reliability



Proven reliability

Highly Accelerated Lifecycle Testing Lab (HALT)

YORK tests all heating solutions in the HALT lab.

The YMAE Series has been tested in the HALT lab in order to simulate the extremely harsh weather conditions our units will encounter. The climatic conditions units will face over the course of a year are replicated during a 2-4 weeks test to guarantee our solutions operate reliably in the field.



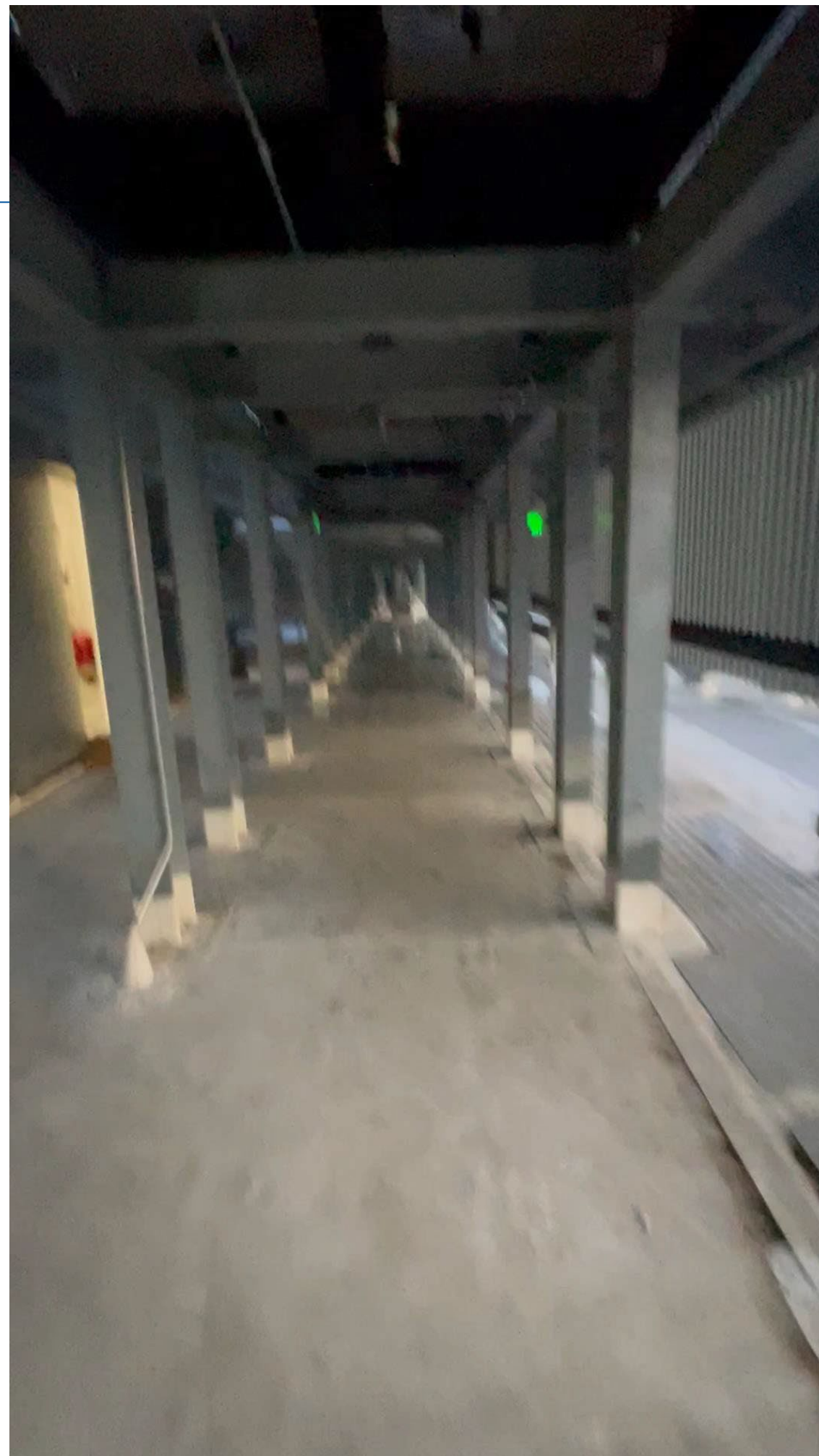
Strong Reliability Verified by Robust Testing

Defrost examples

Two examples of defrost condensate challenges from “Gen 1”

No condensate management results in:

- Ice build up around units
- Pitting, cracking on concrete
- Water and ice damage to components, especially as equipment ages and seals become porous





Flexible
Scalable
Complete

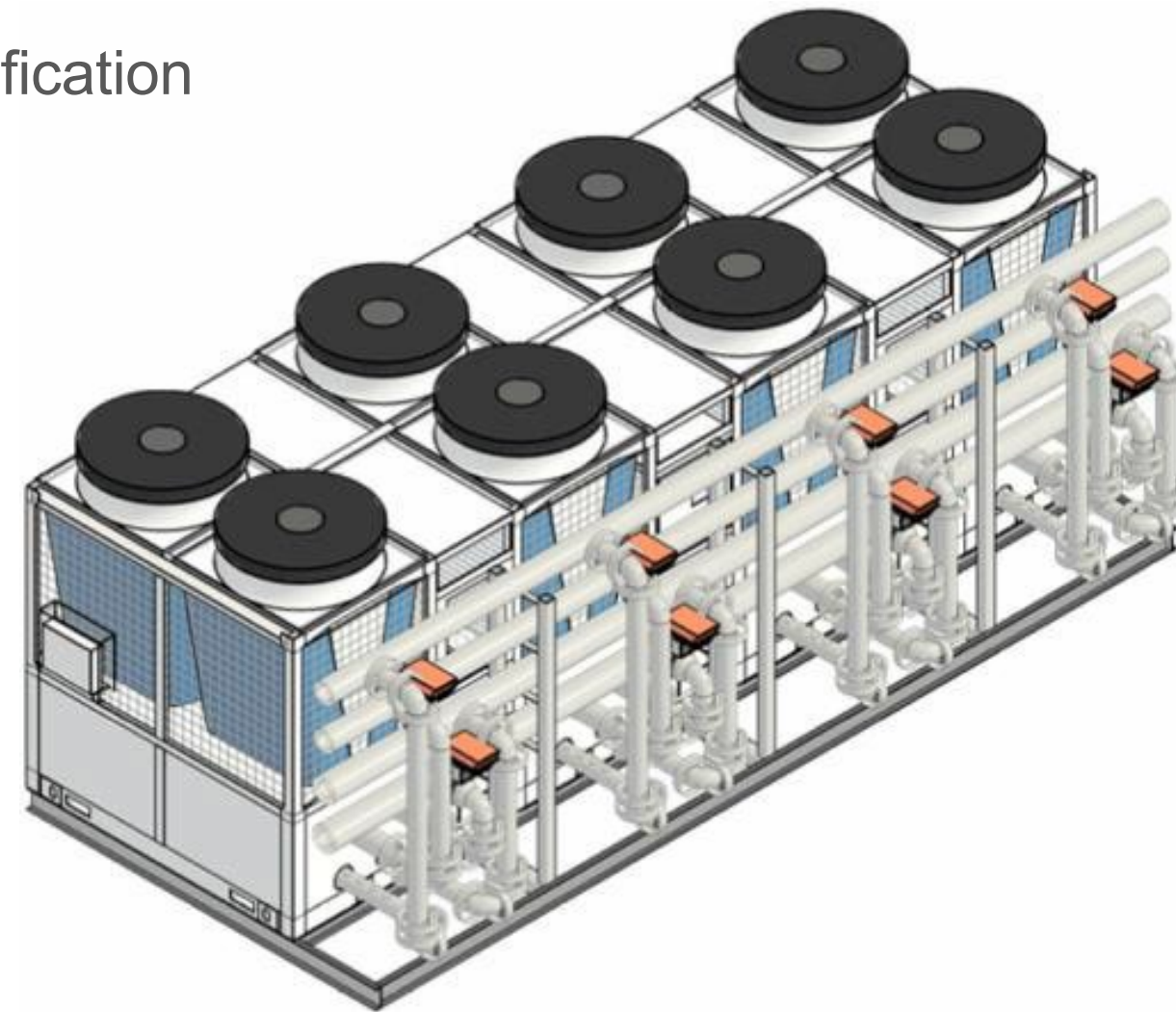
Air Treatment Package Solution

Air Treatment Package Solution

- System-ready solution fabricated in California
- Larger capacity single power & rigging (210 TR)
- Customized to project requirements including OSP certification
- JCI Array qualifies for Buy American Act (BAA)



JCI modular array (2 modules shown)
Sheet metal base with grill panels between units.



ATC modular array (4 modules shown)
Welded steel base with piping headers and control valves mounted. No sheet metal between modules.

Pump skids and buffer tanks can be installed on the array end
Up to 6 modules can be combined to one array

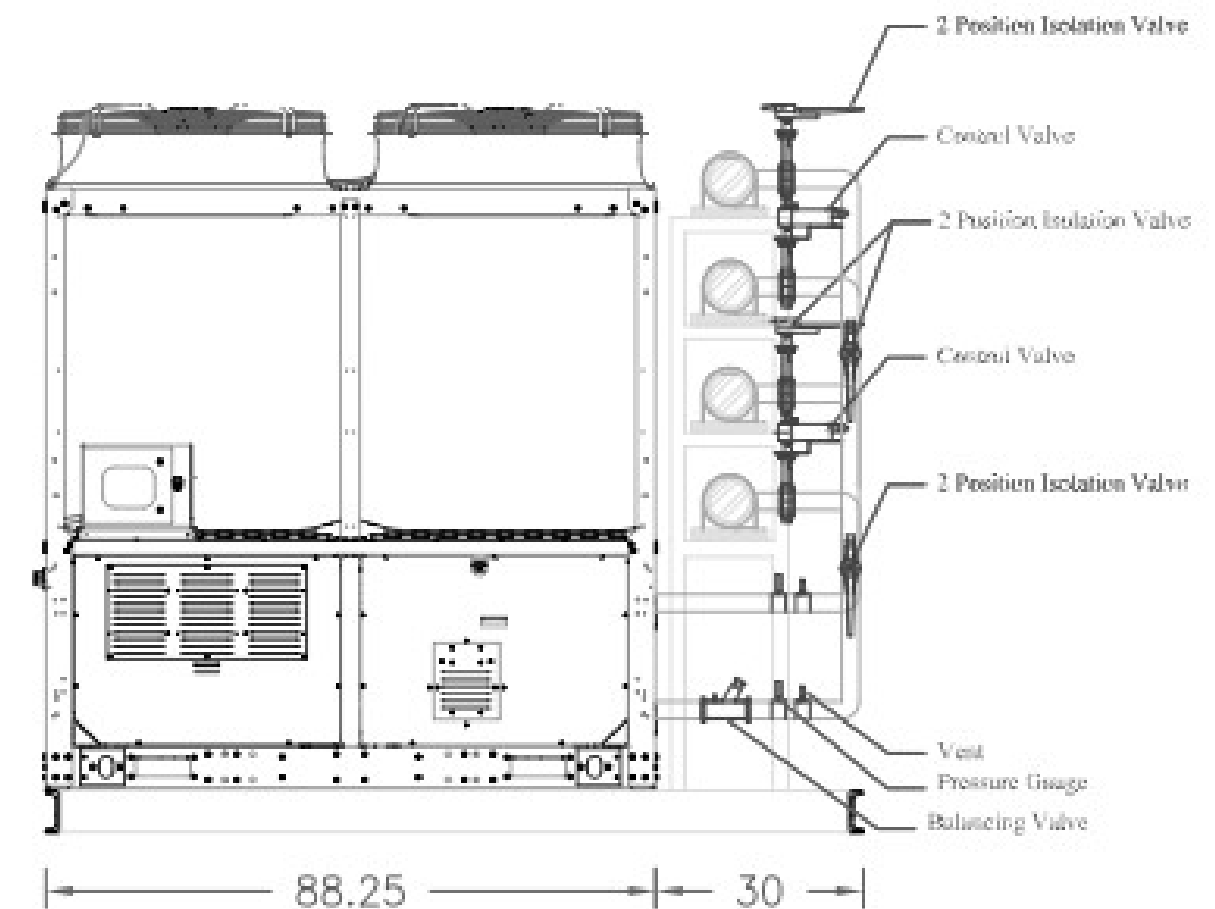
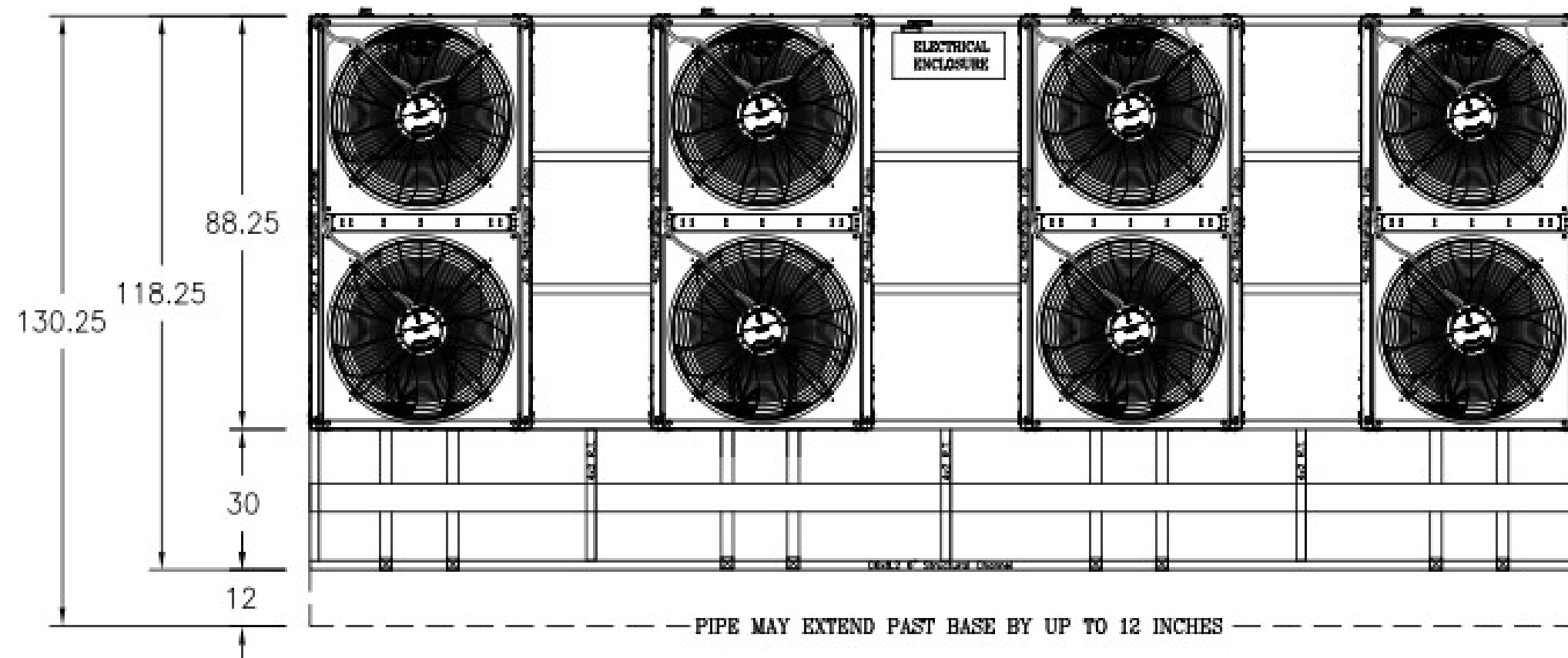


Air Treatment Package Solution



Array configuration

- Single point power, including 24V for control valves
- All piping, valves and components mounted and wired
- Reverse Return or Parallel Return configuration (Balancing Valves Option)
- Pump Per Module Installed on Skid

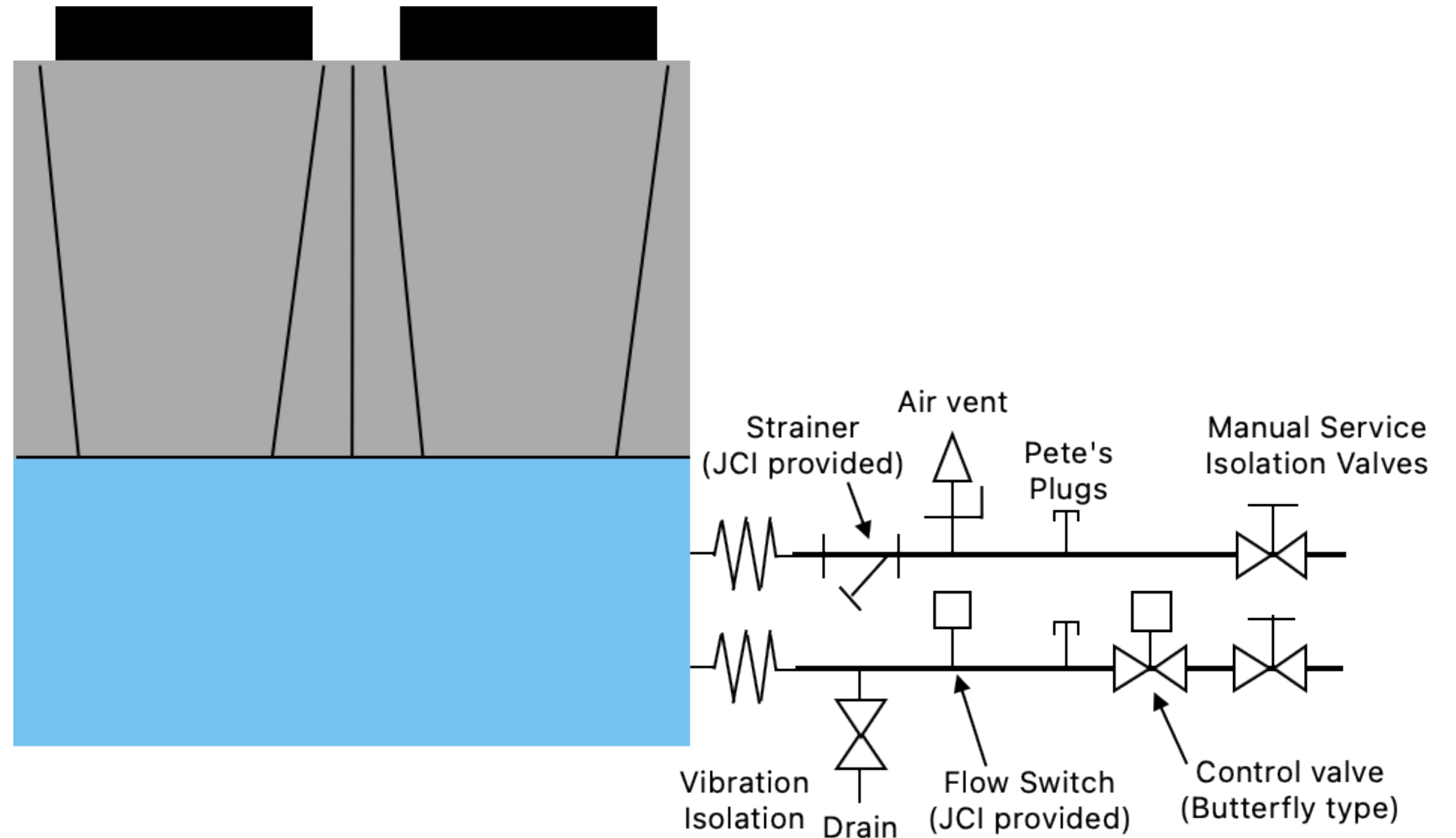


Air Treatment Package Solution



Module level components

- Strainer
- Vibration isolators
- Drain Pan Under Each Module
- Pump per Module Option
- Air vent, drain
- Pete's Plugs
- Flow switch
- Manual isolation valves
- Control valve (wired and powered)

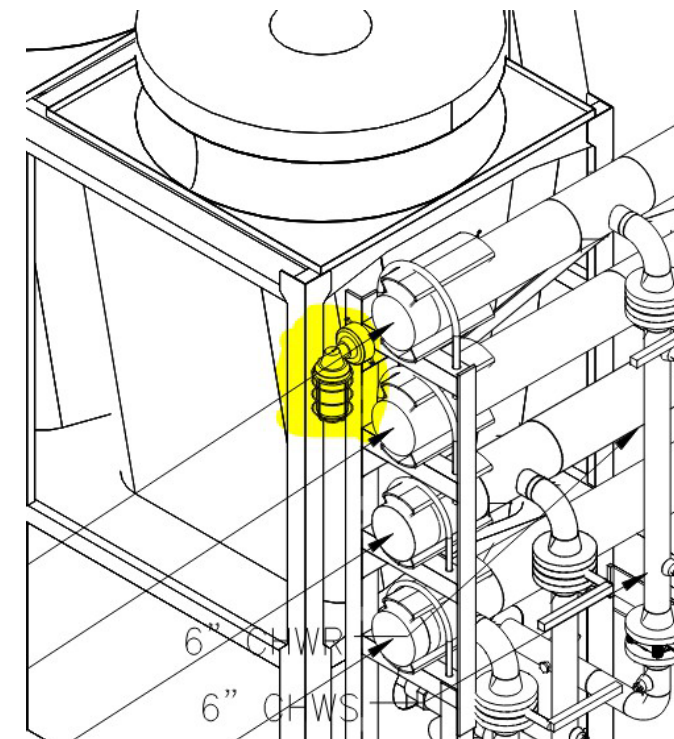


Air Treatment Package Solution



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- Control valve (wired and powered)



Drain Pans are recommended

Recent defrost photo

Mid-40 temperatures

No drain pans below unit

Note separate circuits in different stages of defrost cycling!





Questions...

TIRMAA



Thank you....

