

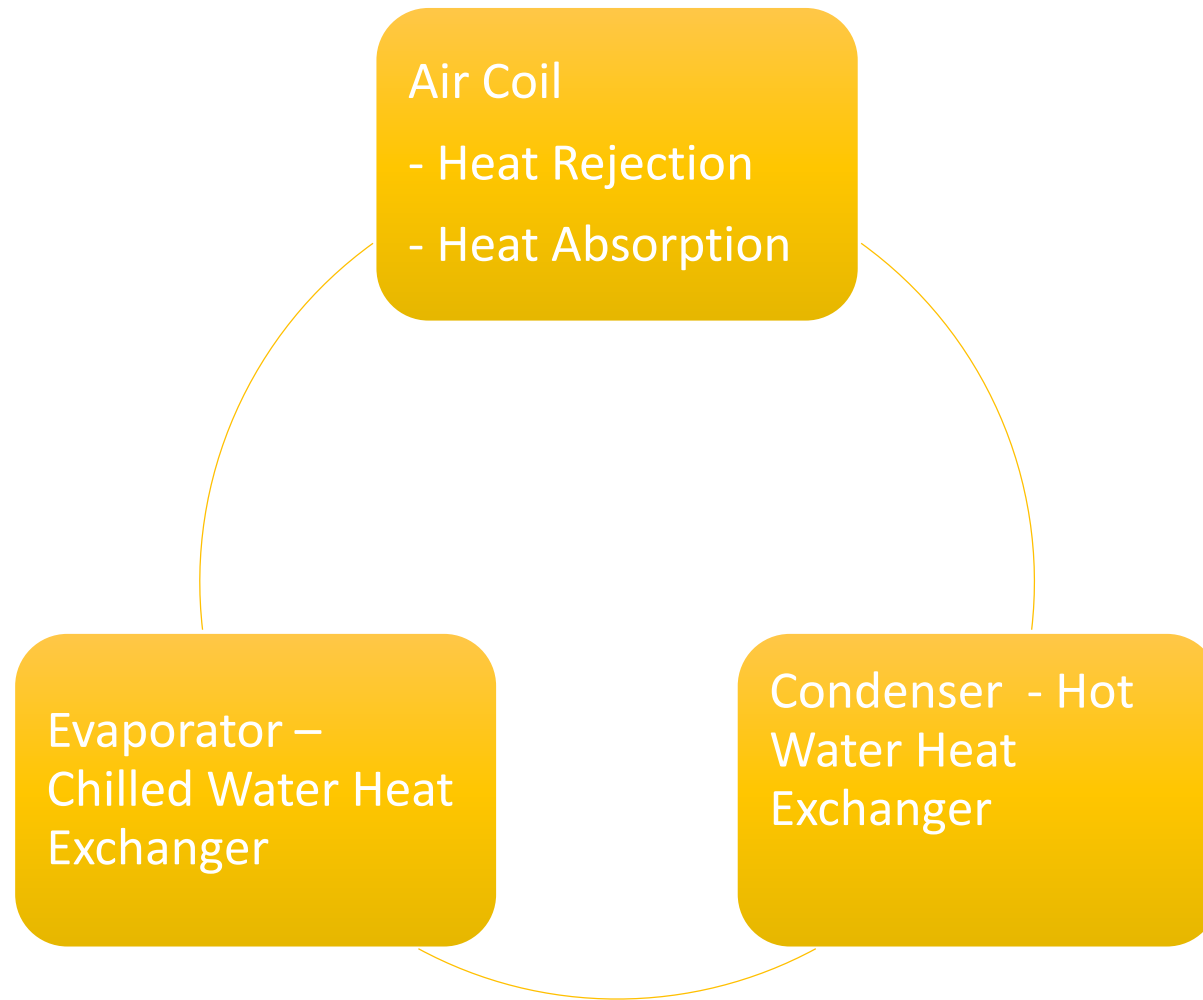
**Sustainable Energy
Limited**

Innovative Technology Day

29 June 2018



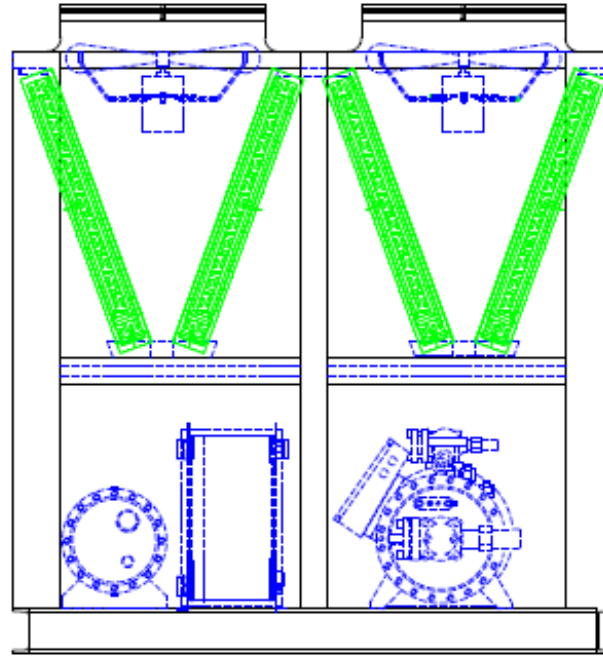
SustainE



Total Energy Heat Pump



Hot Water System



Chilled Water System
(PAU/AHU)

Total Energy Heat Pump

Total Energy Heat Pump

Combine Air Source Heat Pump and Water Source Heat Pump

- Fully utilize space
- Easy installation
- Built-in control
- Low initial investment cost



Features



➤ Outlet temperature: 90°C

➤ Refrigerant: R134a

➤ Double skin hot water heat exchanger

➤ Reverse cycle operations

➤ Sophisticated control system

➤ Total COP > 5*

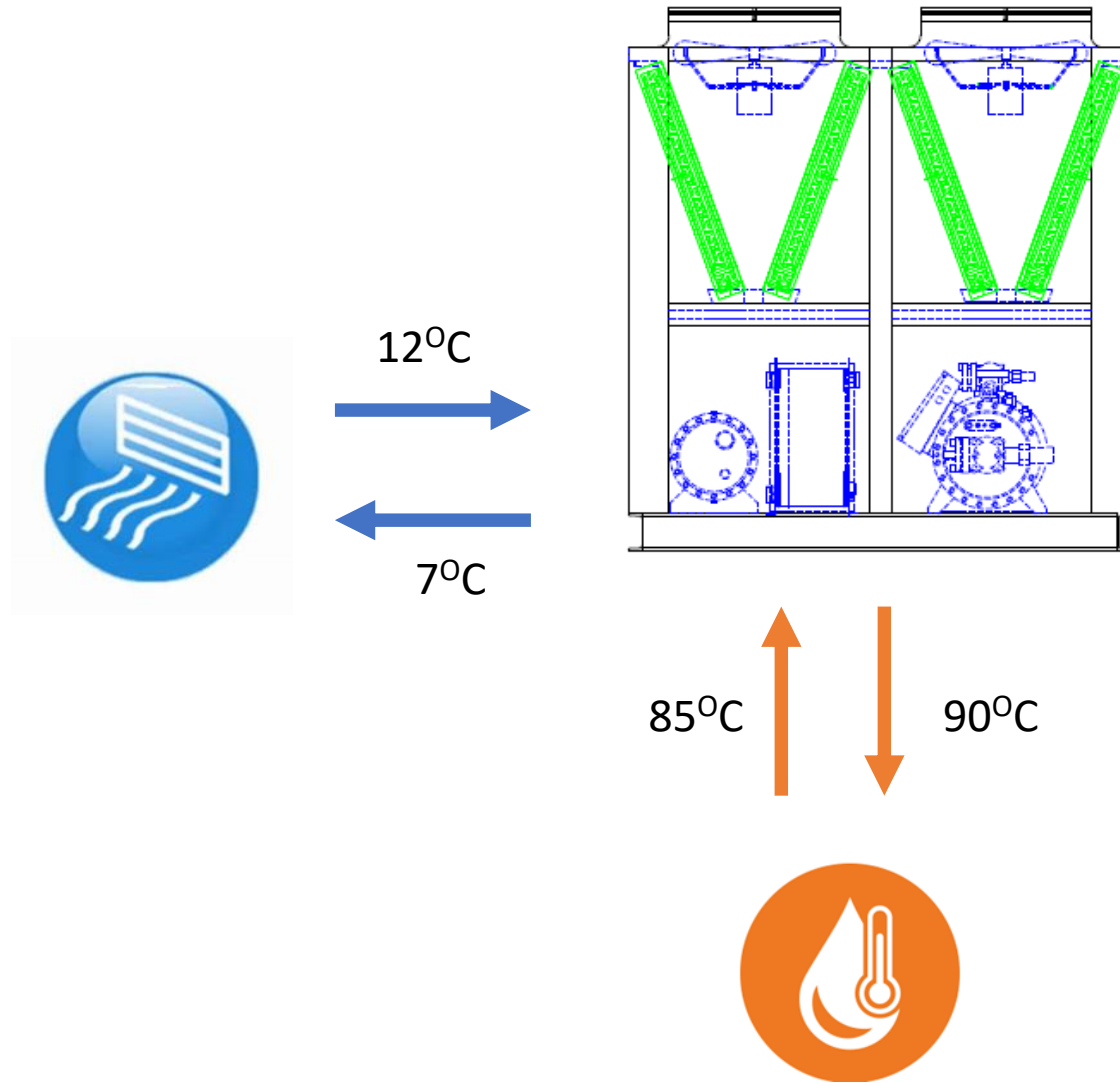
*Heating COP = 3 ; Cooling COP = 2



Benefits

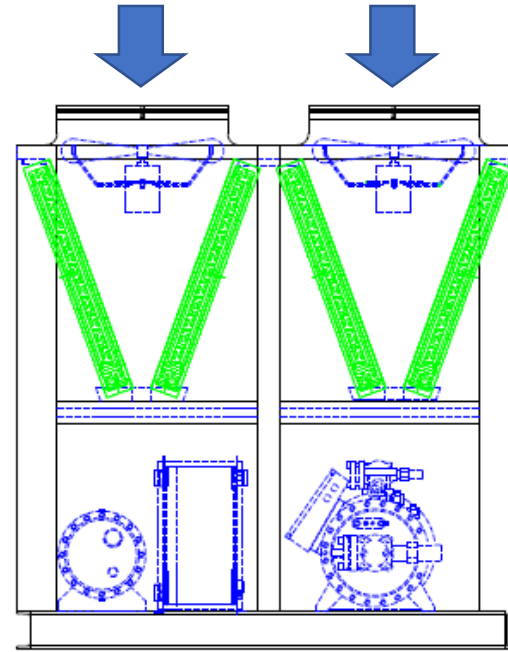
- High outlet temperature completely kills Legionnaires
- Heat pump to replace boiler
 - No exhaust gas
 - No gas pipe
- Double wall heat exchanger prevent contamination by refrigerant oil

Heating & Cooling Mode



Heating
Mode

Heat Absorption



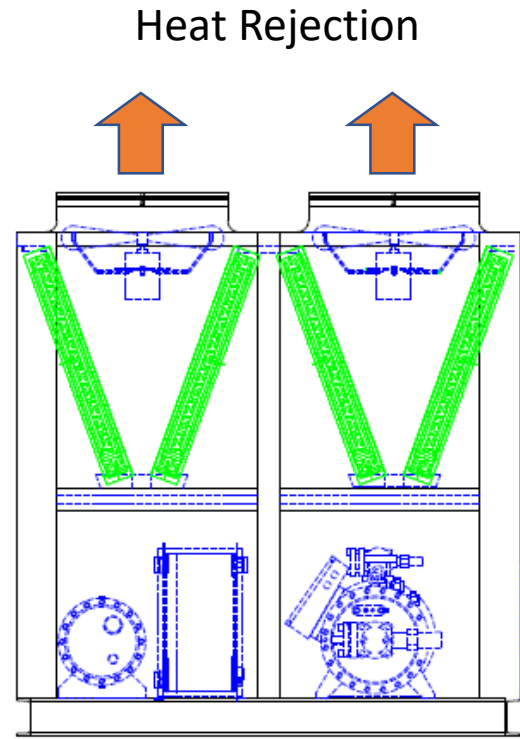
85°C ↑ ↓ 90°C



Cooling
Mode

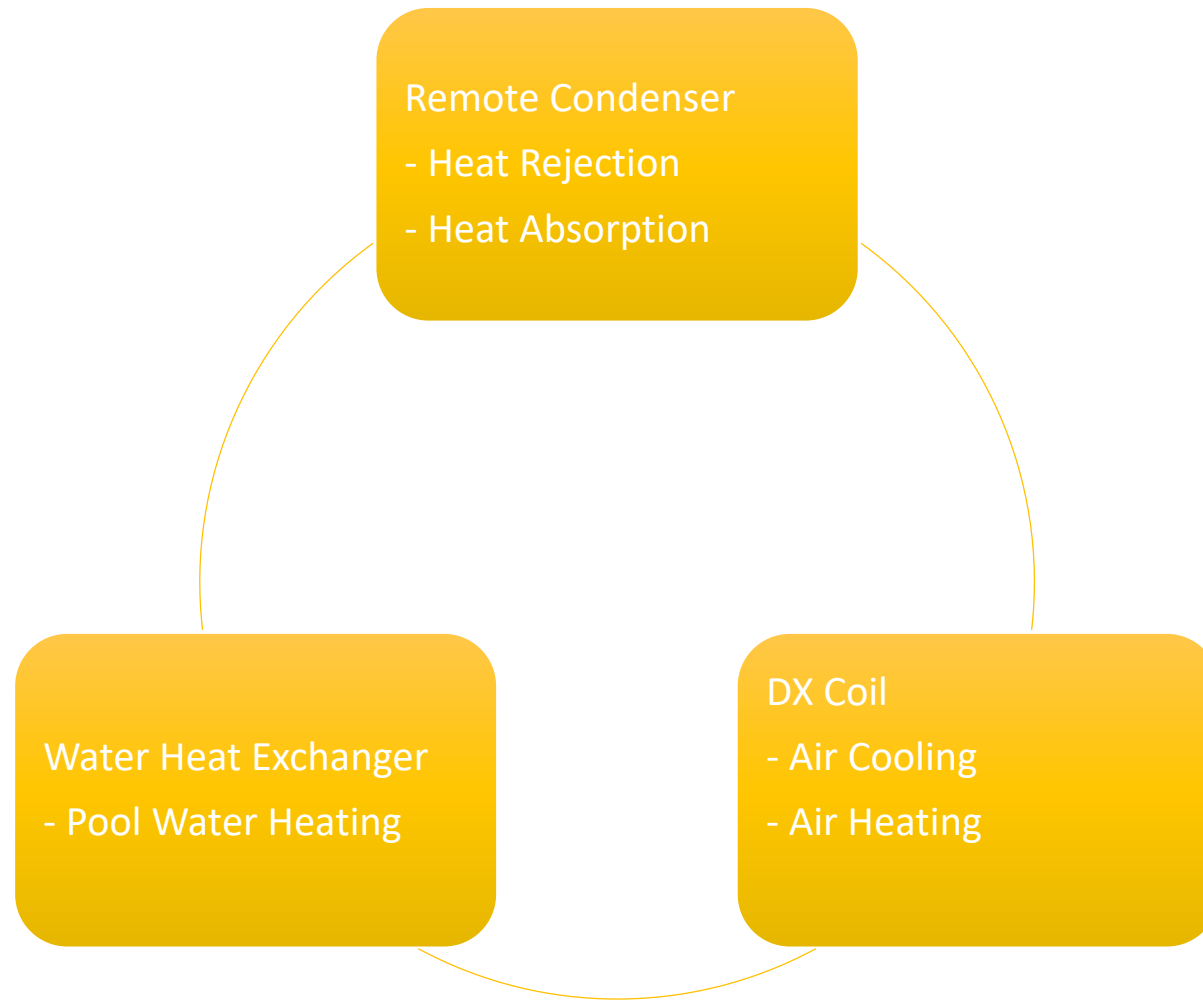


12°C
7°C

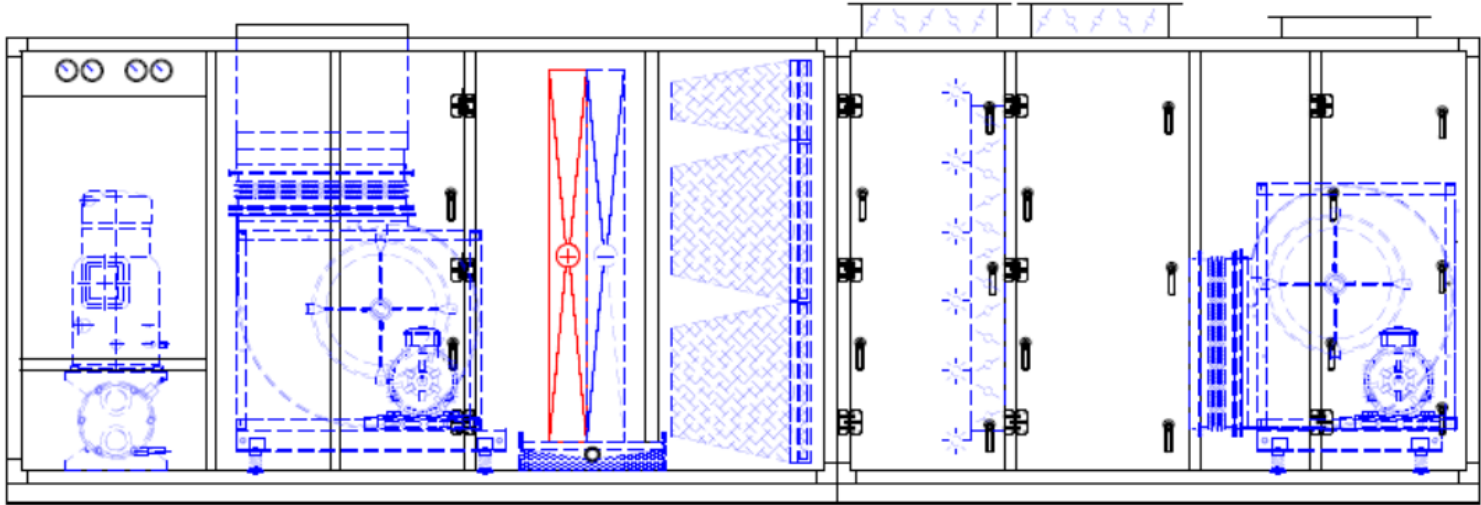
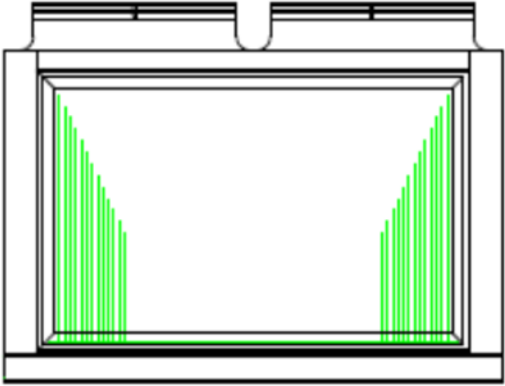




Job Reference: TSW Hotel Cozi



Indoor Swimming Pool Heat Pump



Indoor Swimming Pool
Heat Pump

Indoor Swimming Pool Heat Pump

Functions

- Dehumidification
- Air cooling
- Air heating (recovery heat)
- Pool water heating (recovery heat)

Options

- Enthalpy control system
- Demand control for fresh air intake
- Auxiliary cooling/heating coils

Features



- Refrigerant: R407c/R410a
- Double skin hot water heat exchanger
- Reverse cycle operations
- Sophisticated control system
- Energy efficiency*

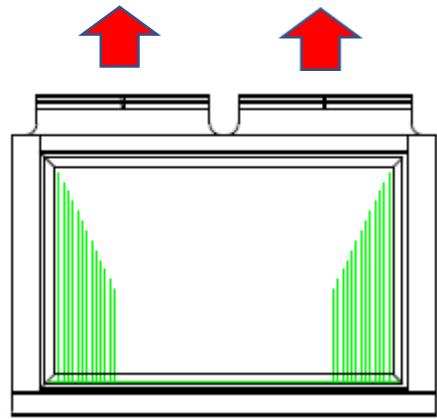
*Recovery Heat; Cooling COP = 4



Benefits

- Remote condenser serves as air source heat pump
 - Fully utilize all components
 - Reduce space demand
 - Replace electric heaters
- Energy saving by utilizing recovery heat
- Complete control logic
- Prevent mould & fungi growth on pool hall
- Easy installation

Cooling & Dehumidification



Heat Rejection

Air Cooling & Dehumidification



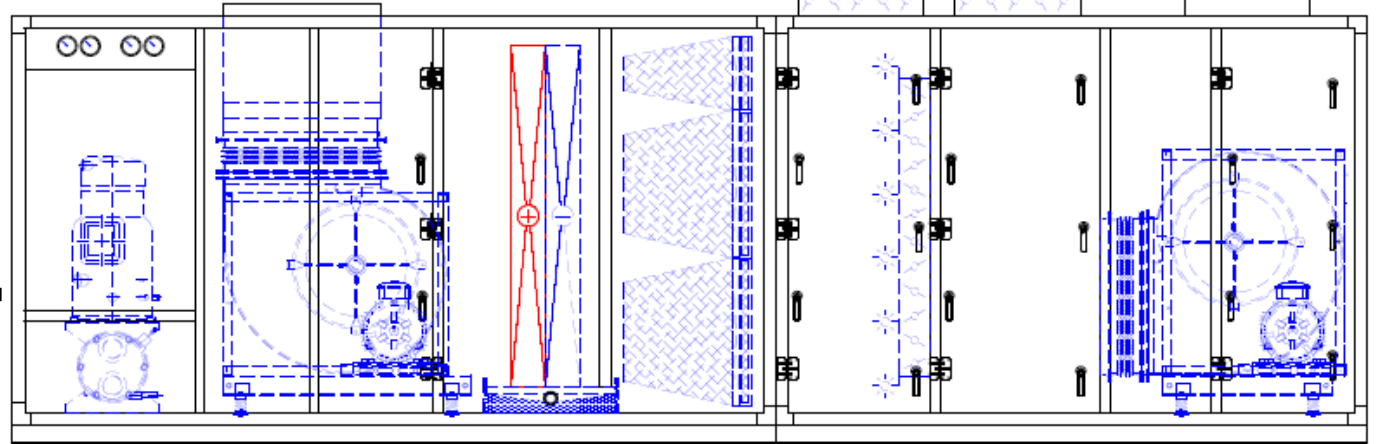
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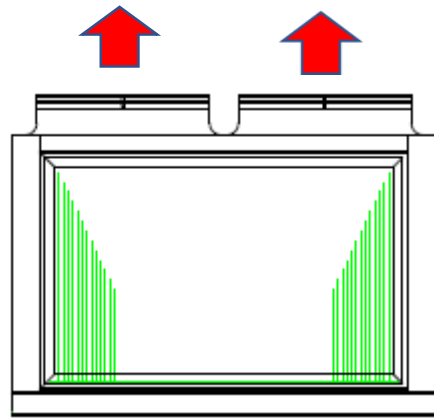
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RA



Heating & Dehumidification



Air Heating & Dehumidification

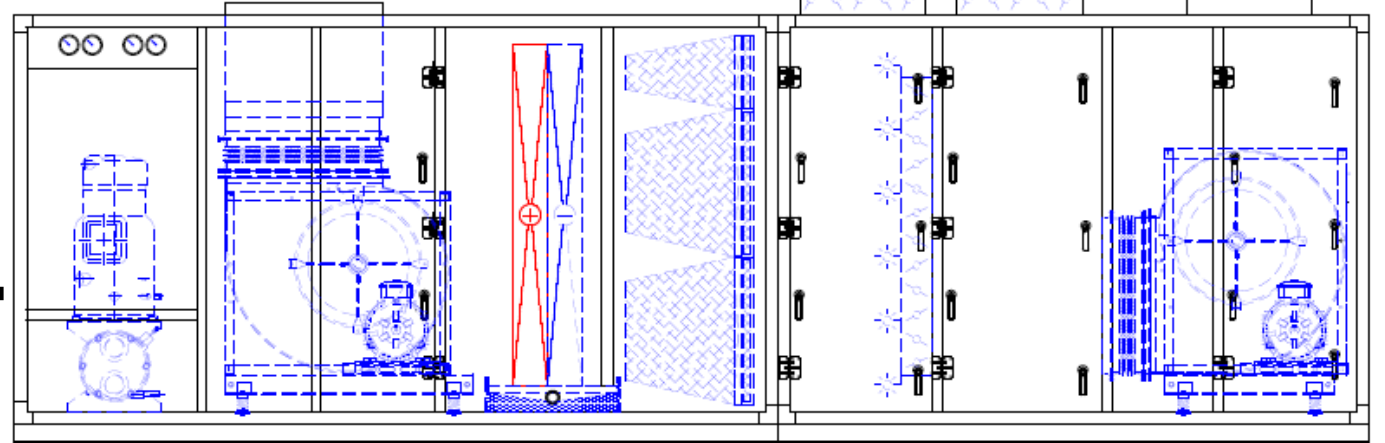
Heat Rejection



FA

EA

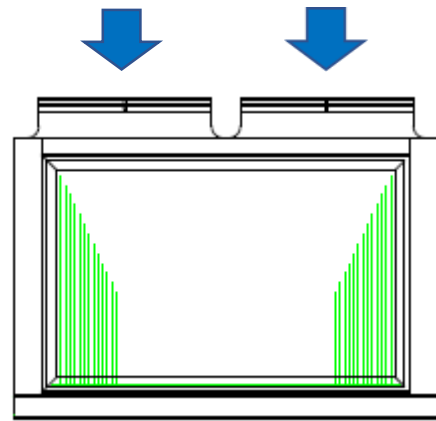
RA



Pool Water Heating



Reverse Cycle Operations



Heat Absorption

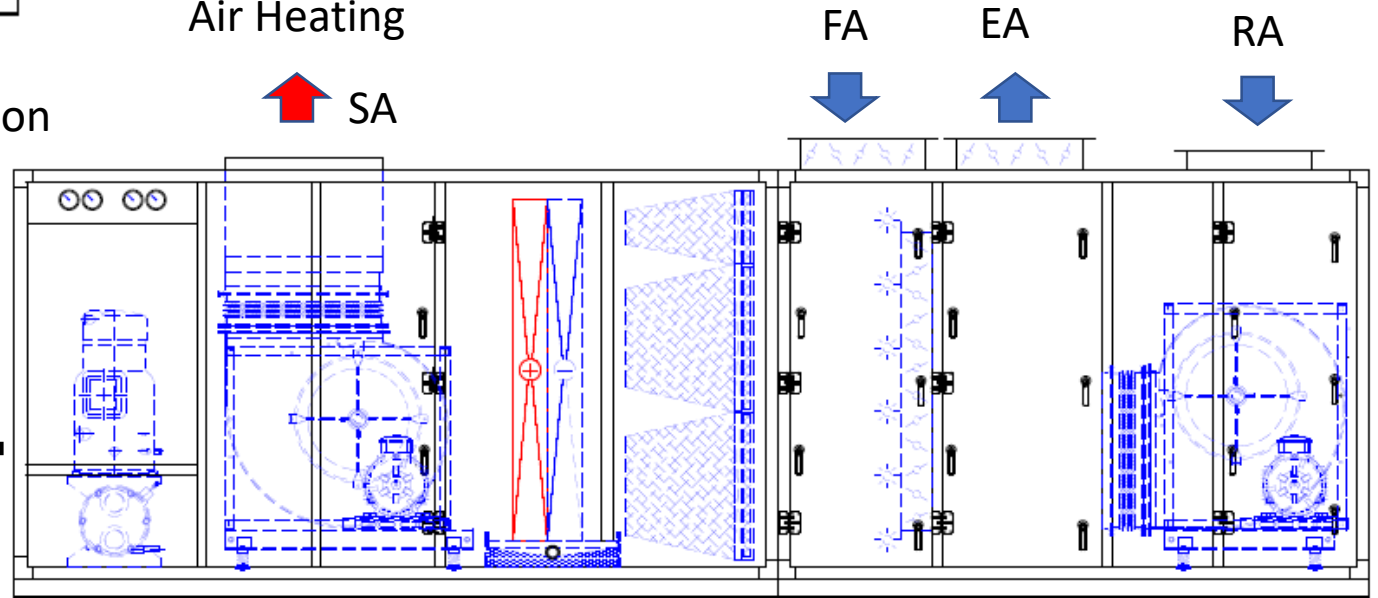
Air Heating



FA

EA

RA



Pool Water Heating





Job reference: Kwun Tong Public Swimming Pool





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