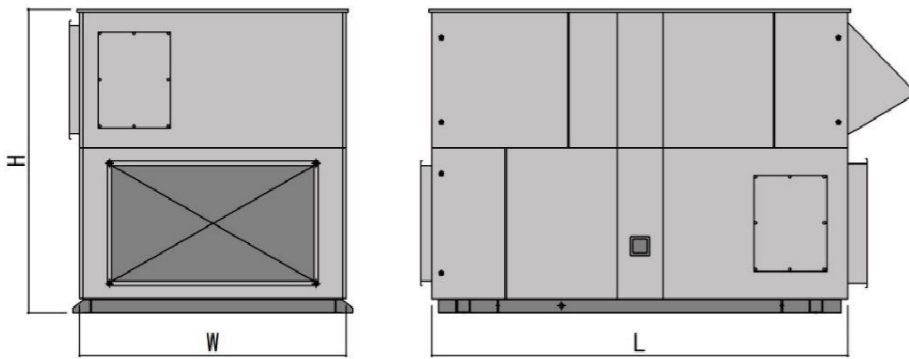
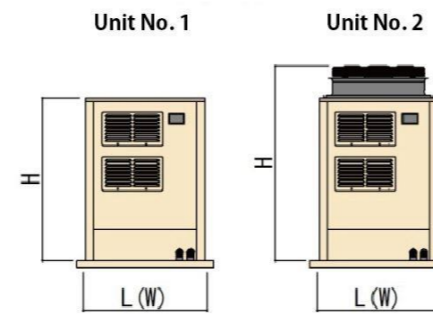


Desiccant Air Conditioner Unit



Freezer Unit (outdoor installation)



“Energy-Saving Air Conditioning System” for Food Supermarkets

# Earthclean® Air Conditioning Units

Model type utilizing exhaust heat, and supports all-electric

## Heating Pump and Desiccant

Standard Specification List of the Heating Pump and Desiccant Air Conditioning Units

Model Type	Flow Rate (m3/h)	Motor (kW)		Dehumidification Capacity (kW)	Heating Capacity (kW)	External Dimensions (mm)	Weight (kg)	Refrigerator (for outdoor installment)		
		Process-Side	Recycle-Side					Model Type	External Dimensions (mm)	Weight (kg)
ECO-DC-40EHP	4,000	3.7	3.7	14.7	13.7	2,300 × 1,290 × 1,578	1,070	ECU-CMD055-IV	868 × 868 × 1,193	190
ECO-DC-60EHP	6,000	3.7	3.7	27.0	20.2	2,502 × 1,289 × 1,800	1,400	ECU-CMD055-IV	868 × 868 × 1,193	190
ECO-DC-75EHP	7,500	5.5	3.7	39.0	50.9	2,800 × 1,560 × 1,983	1,700	ECU-CMD055-IV ECU-CUD055-IV	868 × 868 × 1,193 868 × 868 × 1,420	190 260
ECO-DC-90EHP	9,000	5.5	3.7	47.8	60.6	2,950 × 1,878 × 2,048	1,900	ECU-CMD055-IV ECU-CUD055-IV	868 × 868 × 1,193 868 × 868 × 1,420	190 260
ECO-DC-105EHP	10,500	7.5	5.5	55.9	71.4	3,000 × 1,938 × 2,142	2,200	ECU-CMD055-IV ECU-CUD055-IV	868 × 868 × 1,193 868 × 868 × 1,420	190 260
ECO-DC-120EHP	12,000	7.5	5.5	63.5	73.5	3,000 × 1,938 × 2,142	2,400	ECU-CMD055-IV ECU-CUD055-IV	868 × 868 × 1,193 868 × 868 × 1,420	190 260

**[Notes]**

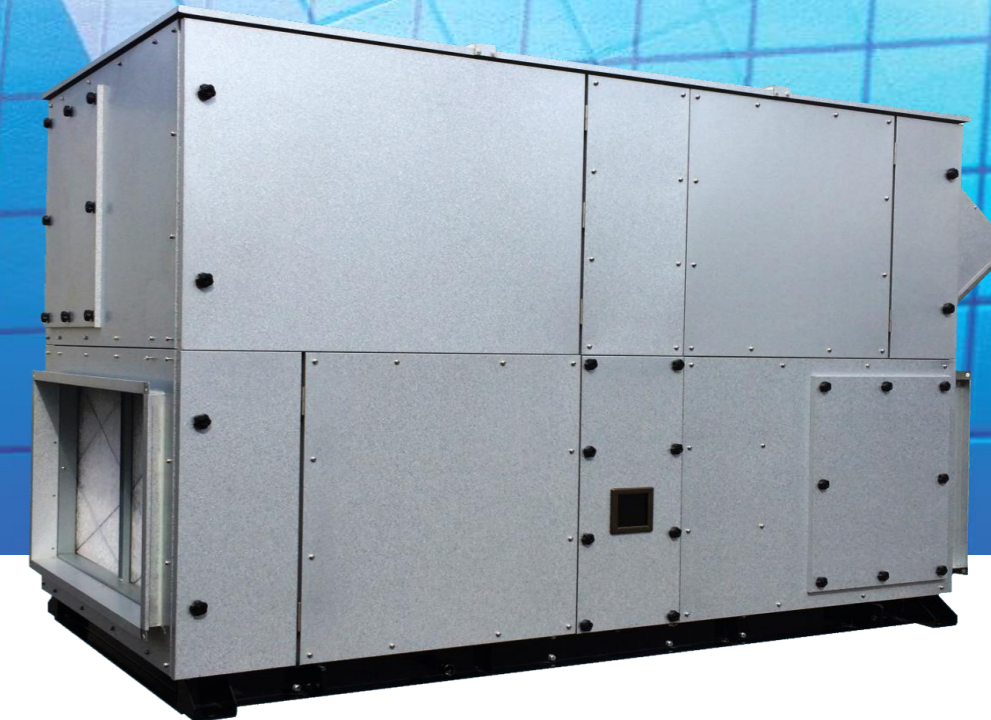
- 1, The dehumidification capacity is 95° F · 19g/kg' for outdoor conditions, 78.8° F · 10.5g/kg' for return air conditions, and 70% for outer air ratio.
- 2, The heating capability is 41° F for outdoor conditions, 68° F for return air conditions, and 70% for outer air ratio.
- 3, The external static pressure is 500Pa at the process-side, and 200Pa at the recycling side

**[Options]**

- 1, Low temperature and humidity type models
- 2, Cogeneration electric generator type model (through utilizing exhaust heat)
- 3, Custom Order Support Possible (under 4,000m3/h, or over 12,000m3/h)

\*Above specifications are subject to change for improvement without notice.

### Dehumidification Results and Optimal Environment



Desiccant Air Conditioning Equipment Supplier

For Inquiries \_\_\_\_\_

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Earth Clean Tohoku CO., LTD



# Establish a comfortable environment and an energy saving for display cases and air conditioning

The ultra low temperature recycling dehumidification rotor makes it possible to utilize the condenser exhaust heat of the compressor.

Traditional desiccant air conditioning units used the heating source from electric heat, steam, direct gas combustion, hot water boiler, etc. in order for desorption (recycling) of the moisture attached to the dehumidification rotor.

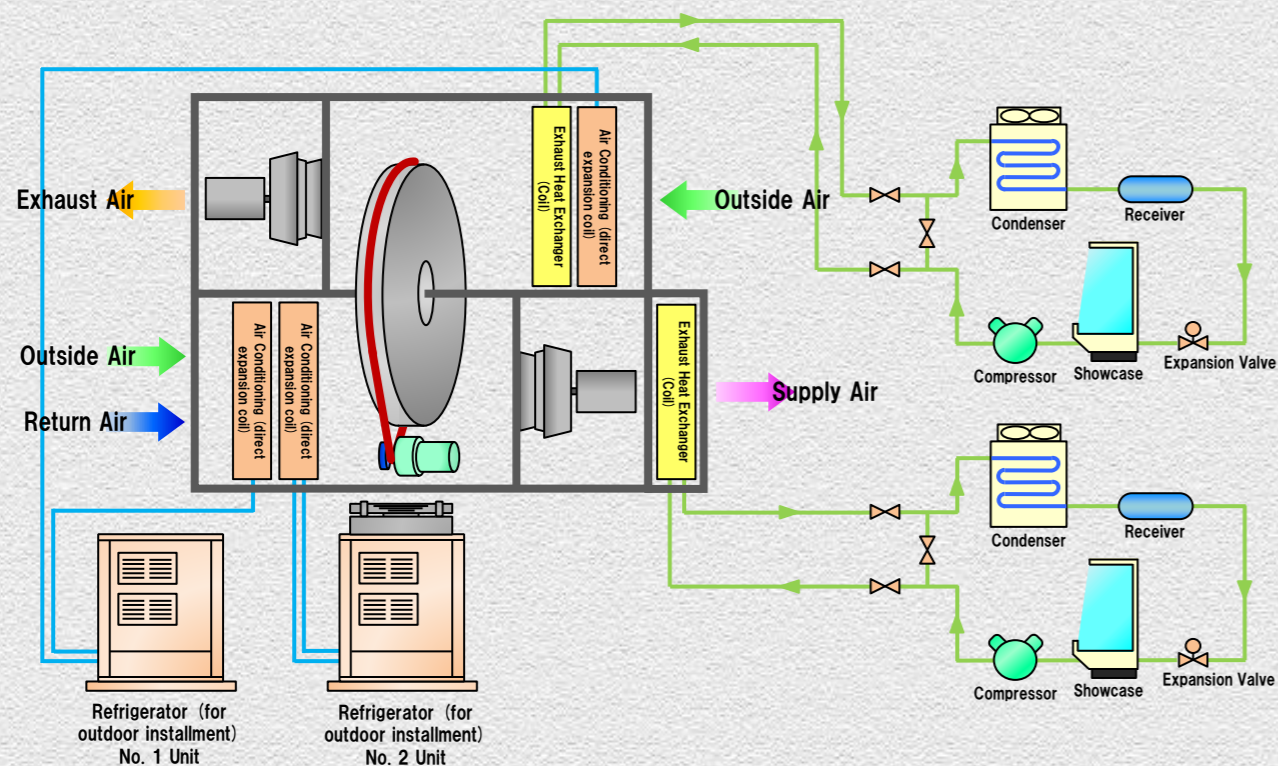
The heating pump and desiccant air conditioning units that our company have developed utilizes the ultra low temperature recycling dehumidification rotor that have been newly developed at our company. This ultra low temperature recycling dehumidification rotor is possible to recycle at 113°F of warm air. That is how the condenser exhaust heat (condensed exhaust heat) of the compressor is able to be recycled and used.

Since food supermarkets utilize refrigerator units for display cases, the exhaust heat from this refrigerator unit can be effectively used, and greatly lower the running costs.

## Features of the Heating Pump and Desiccant Air Conditioning Units

- (1) Optimal for stores with all-electric equipment.**
- (2) The new ultra low temperature recycling dehumidification rotor is possible to recycle at 113°F of warm air.**
- (3) Can be utilized for dehumidification and heating in all-seasons due to using the heating pump (most other manufacturers offer dehumidification-only models)**
- (4) Exhibits incredible energy-saving results at a food supermarket, since the exhaust heat from the refrigerator (for display cases) can be effectively used for dehumidification and heating.**
- (5) Can also utilize the low temperature and humidity for food production factories.**

Standard System Structure Diagram of the Heating Pump and Desiccant Air Conditioning Units



## <Merits of Introduction> Heating Pump and Desiccant Air Conditioning System at a Supermarket

### Comfortable Environment

#### (1) Resolve Cold Aisle Issue

- Resolve the issue of the frigidness near the front of the display cases (cold aisle)

### Realize 100% outside air processing

#### (2) Improve the Indoor Environment of Store

- With dehumidified air, contribute to improving freshness of food by preventing condensation to the display cases and drastic reduction of defrosting
- Implement positive pressurization in the store to prevent the invasion of outside (load and powder dust) air, and transfer of odors from the back yard
- Prevent condensation and molding around the display cases and the ceiling

### Contribute to Global Environmental Conservation

#### (3) Reduce CO2 Emissions

- Possible to reduce up to 15 to 20% compared to traditional air conditioning methods by reducing the air conditioning facility and the load of display cases

### Energy-Saving Air Conditioning

#### (4) Reducing Running Costs of Air Conditioner

- Reduce the annual running costs by utilizing the exhaust heat from the display cases and compressor
- Possible to reduce the operation rate of air conditioners by 20 to 30% compared to conventional systems

### Energy-Saving Display Cases

#### (5) Reducing Running Costs of Display Case

- Possible to lower the running costs by reducing load, the preventing condensation and the lowering the operation load of the defrost heater and dew protection heater

### Supports all-electric

#### (6) Desiccant Air Conditioning Units for All-Electric Stores

- Additionally reduce electricity bill by going all-electric

## Desiccant Air Conditioning System for Eco-Friendly Stores

