

World leaders in dehumidification.



DST Dehumidifiers – From portable devices to industrial systems



1985

Founded in Sweden

32

Patents



COMPANY PROFILE

Founded in 1985 in Stockholm, Sweden, Seibu Giken DST has become a well-deserved industry leader in the field of rotor dehumidification.

With four decades of innovation and expertise, our sales network covers over fifty countries around the world, serving customers to help them solve humidity problems.

In 2009, Seibu Giken DST has set up Seibu Giken DST (Changshu) Co., Ltd. in China. Now DST China includes two advanced factories covering 15,000 m² and five regional sales offices.

As experts in this field, we provide dehumidifiers tailored to suit individual requirements for clients from many fields such as medicine, lithium battery, electronics, food, chemical industry, bridge, scientific research, papermaking, rubber, steel, tobacco, etc.

As we continue to lead the industry, we are committed to shaping the future of dehumidification and driving our customers' success globally.

GLOBAL PRESENCE

Headquarters

- **HQ:** Stockholm, Sweden

Subsidiaries

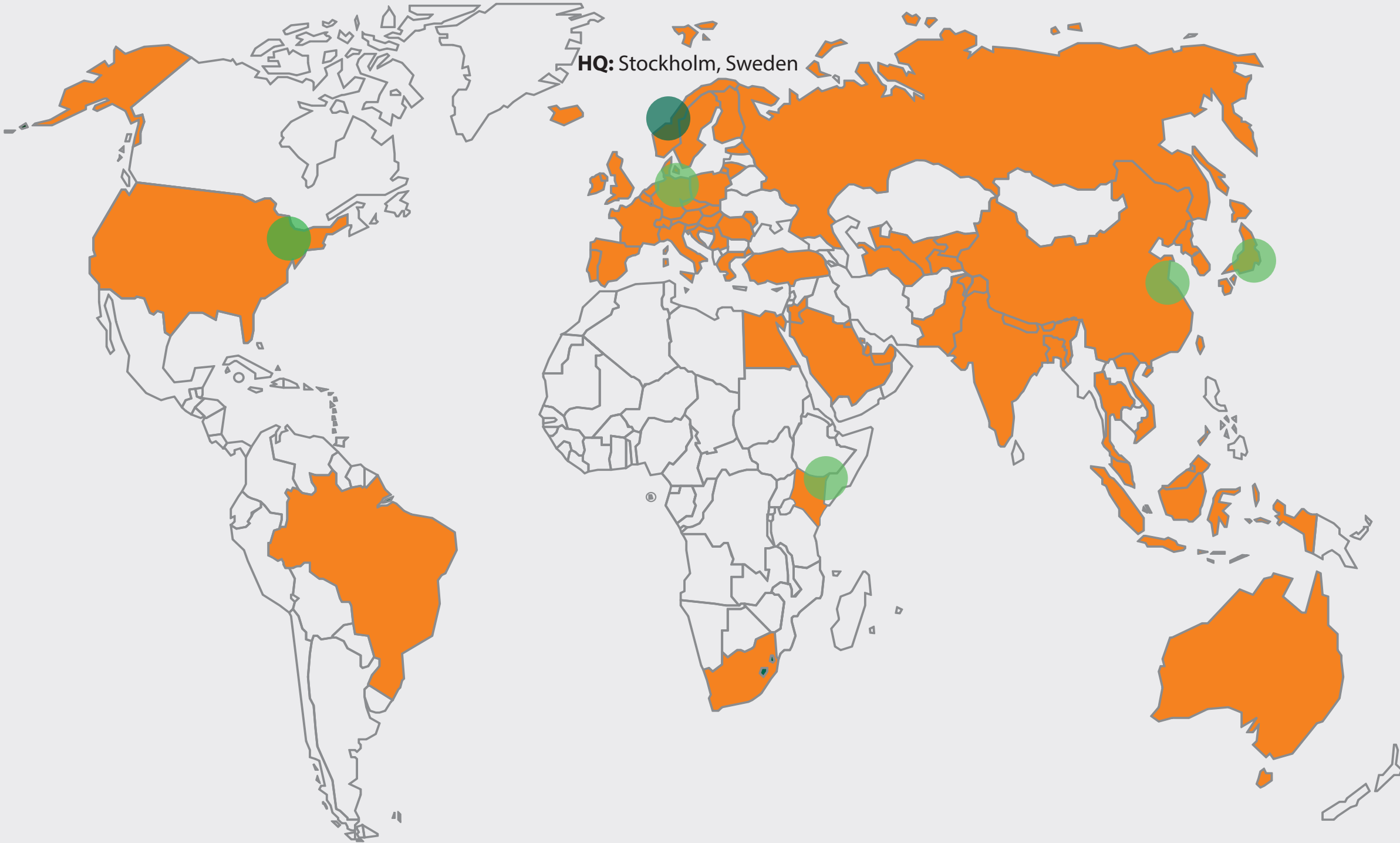
- **Europe:** Poland
- **Asia:** China
- **Americas:** USA
- **Africa:** Kenya

Representatives

- 55+ all around the world

References

- Hong Kong-Zhuhai-Macao Bridge
- 2022 Beijing Olympic Winter Games
- 2006 Turin Winter Olympics
- Tesla Gigafactories



TECHNOLOGY AND INNOVATION

In 1984, Seibu Giken, our mother company from Japan, patented the very first active silicagel desiccant rotor in the world, known as the "SSCR". Thereafter, the SSCR-M was developed, improving its capacity by adding metal silicates.

In 2012, Seibu Giken developed the new rotor "D-MAX". Compared to SSCR®, D-MAX® offers superior capacity, which achieves good performance through changes in surface treatment and desiccant mixture. Additionally, D-MAX® is made from an inorganic structure and active silica gel, providing excellent durability and ensuring a safe working environment for humans.

Since then, Seibu Giken has recently developed the DXR rotor, optimized for low dew point environments. This lets you meet your dehumidification needs while cutting energy costs.

THE CORE OF DST DEHUMIDIFIERS

- **Long Lifetime**

After 10 years of operation the Seibu Giken rotor retains more than 90% of its original capacity.

- **Silica Gel Structure**

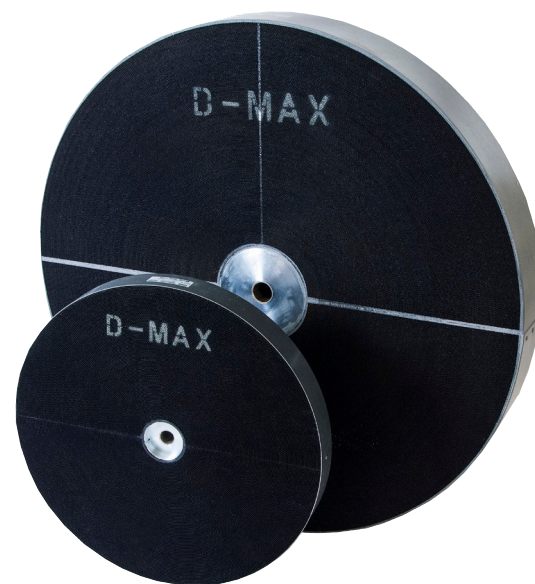
Unique silica gel structure helps no desiccant carry-over in the air, resistant to high temperatures and capable of withstanding greater pressure.

- **Easy to Clean**

The Seibu Giken rotor is water-washable and features rollers for easy pulling and handling.

- **Energy Efficient**

The honeycomb channels provide a larger moisture absorption area and enhanced efficiency.



FIVE DIFFERENT ROTORS WITH UNIQUE QUALITIES

D-MAX
EFFICIENCY BY DESIGN

D-MAX

Standard rotor for most DST units, and is suitable for most applications. It has a long lifetime thanks to silica gel that is fixed on the carrying material.

D-MAX H
BACTERICIDAL & HYGENIC

D-MAX H

A hygienic rotor developed for the confectionery, pharmaceutical and food industry. The rotor surface eliminates existing bacteria and prevents the formation of new bacteria.

D-MAX Z
100% SILICON FREE

D-MAX Z

This rotor was developed specifically for the automotive, pharmaceutical and other industries requiring 100% silicon-free air supply. Manufacturing material is guaranteed silicon-free. Common use is in automotive spray painting and some laboratories.

DLR
ZEOLITE ROTOR

DLR

This rotor is made for ultra low dew points. Possible to regenerate with very high temperatures painting and some laboratories.

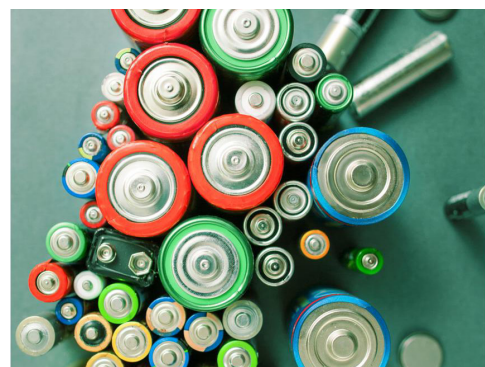
DXR
BEYOND EXTREME

D-Extreme

Similar to DLR rotor, it's ideal for low dew points, e.g. dehumidification of lithium-ion batteries. It works well if a lot of fresh air is needed and has a large Δx .

APPLICATIONS

- WHERE CAN OUR UNITS BE USED



Lithium Batteries

Lithium reacts with water, forming compounds that lower battery efficiency and can even lead to dangerous conditions like swelling or explosion. A dry environment ensures the materials remain stable, resulting in higher quality and safer batteries.



Pharmaceuticals

Many pharmaceutical ingredients are hygroscopic. Controlling humidity helps prevent microbial growth and contamination, ensuring that medicines remain effective and safe for consumption. Precise humidity control is also vital during manufacturing processes like tablet coating, drying, and packaging to meet stringent regulatory standards.



Wind Power

Removing moisture is important to protect turbine components from moisture-induced corrosion and electrical failures. By controlling humidity, it extends the lifespan of equipment, ensures optimal performance, and reduces maintenance costs.



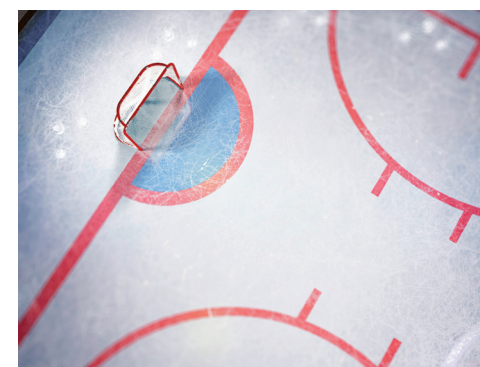
Bridges

Controlling moisture is essential to prevent corrosion in critical steel components such as steel box girder, saddle chamber, anchor chamber. By keeping these parts dry, the risk of rust and structural degradation is minimized, which extends the bridge's lifespan, reduces maintenance costs, and ensures overall safety. This is especially important in coastal or humid areas where moisture levels are high and the risk of corrosion is greater.



Food

Moisture control is key to preserving product quality and safety. Excess moisture can lead to mold growth, spoilage, and a shorter shelf life. Proper moisture control ensures that food remains fresh, safe for consumption, and retains its quality and taste throughout storage and distribution.



Ice Rinks

Too much moisture can make the ice soft and uneven, which can affect skating and lead to more maintenance. By controlling humidity, rinks can ensure the ice stays smooth and firm, making for a better skating experience and reducing the need for frequent repairs.



Warehousing

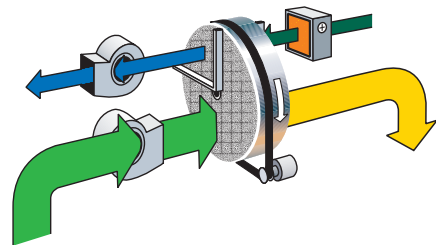
Excess humidity can lead to issues like mold growth, rust, and deterioration of products, especially for sensitive items like electronics, textiles, and food. Proper humidity control helps preserve the quality and longevity of stored goods, ensures a safer storage environment, and reduces the risk of damage and associated costs.

SORPTION DEHUMIDIFICATION

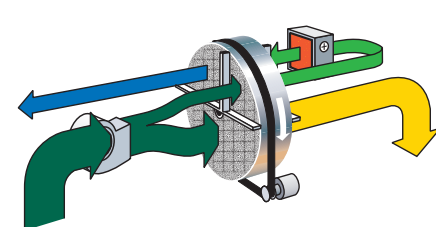
- HOW DOES IT WORK?

In sorption dehumidification, the basic principle is that a rotating rotor in the dehumidifier continuously adsorbs moisture from the process air. Then through a regeneration cycle the moisture is driven out of the rotor and exhausted in different ways, the principle pictures are demonstrating how.

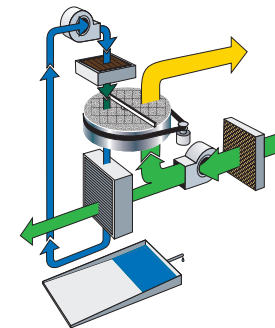
-  Incoming moist air
-  Outgoing dry air
-  Outgoing wet air, either passed or condensed out



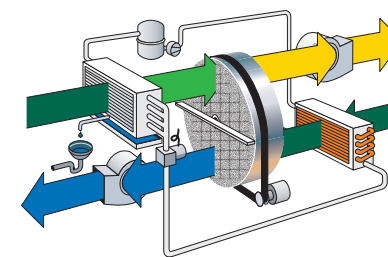
The **Consortb** principle is best used at lower regeneration temperatures, typically where waste heat is available or where the air inlet moisture content is very high. The Consortb principle is also used in balanced 'closed' type systems where the dry process air is recirculated.



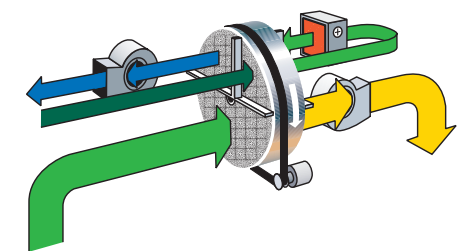
Recusorb DR has an internal heat recovery with one fan that produces both the dry airflow and the wet airflow. Used for introducing dry fresh air into a process or to an 'open' or 'total loss' system where the dehumidified air is ducted into the object. Can be used on both 'open' and 'closed' type systems.



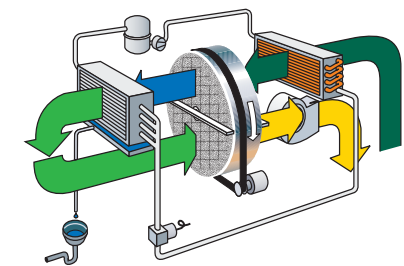
Aquasorb basically functions as a Consortb but moisture in the wet air is condensed through an air cooled condenser. One centrifugal fan is used for both the dry air and the condenser cooling air, so all energy released during the process accumulates in the room. Commonly used where it is impractical to use ducting for the reactivation air system.



Econosorb combines a heat pump with the sorption rotor in a unique way, providing very low energy consumption with a low dry air temperature. It's probably the most energy efficient dehumidifier on the market, with approximately 25% of the total energy consumption of regular sorption dehumidifiers. Econosorb has both condensation and wet air flow.



Recusorb R has an internal heat recovery to improve operating efficiency. Heat transferred to the rotor during regeneration is effectively recovered by the incoming regeneration air, thus reducing the amount of energy required by the regeneration heater. The process air outlet is both cooler and drier when compared to other desiccant dryers.



Frigosorb is used in applications where it is difficult to remove a wet air flow. Thanks to the heat pump function Frigosorb is very energy efficient, using approximately 33% of the total energy consumption of regular sorption dehumidifiers.

STANDARD UNITS



The standard units are designed to meet various operational needs, offering a wide selection of airflow options ranging from 65 m³/h to 100,000 m³/h. This extensive range ensures flexibility and suitability for different environments, providing reliable and efficient performance.

Standard Units

Consorb CSA-5/5L	Consorb DCA-5	Consorb DCA-10	Recusorb R DCA-31 T10, T16	Consorb DCA-50R
				
0,35 0,4 65 90	0,5 120	0,6 190	1,4 2,1 300 490	3,0 550

Recusorb RLA-60R, 60LR	Recusorb RLA-61R, 61LR	Recusorb RLA-71R, 71LR	Recusorb R RLZA-81R, 82R, 101R, 102R, 102LR
			
4 5 850 1000	7,5 11 1300 1800	13 17 2500 3200	19 25 30,5 49,5 57 2900 3500 4600 7000 10000



Consorb, Econosorb, Frigosob, Recusorb Flexisorb	Capacity kg/h (20°C/60%RH)
Larger	Airflow m³/h

Dehumidifier Consorb CFA Unit

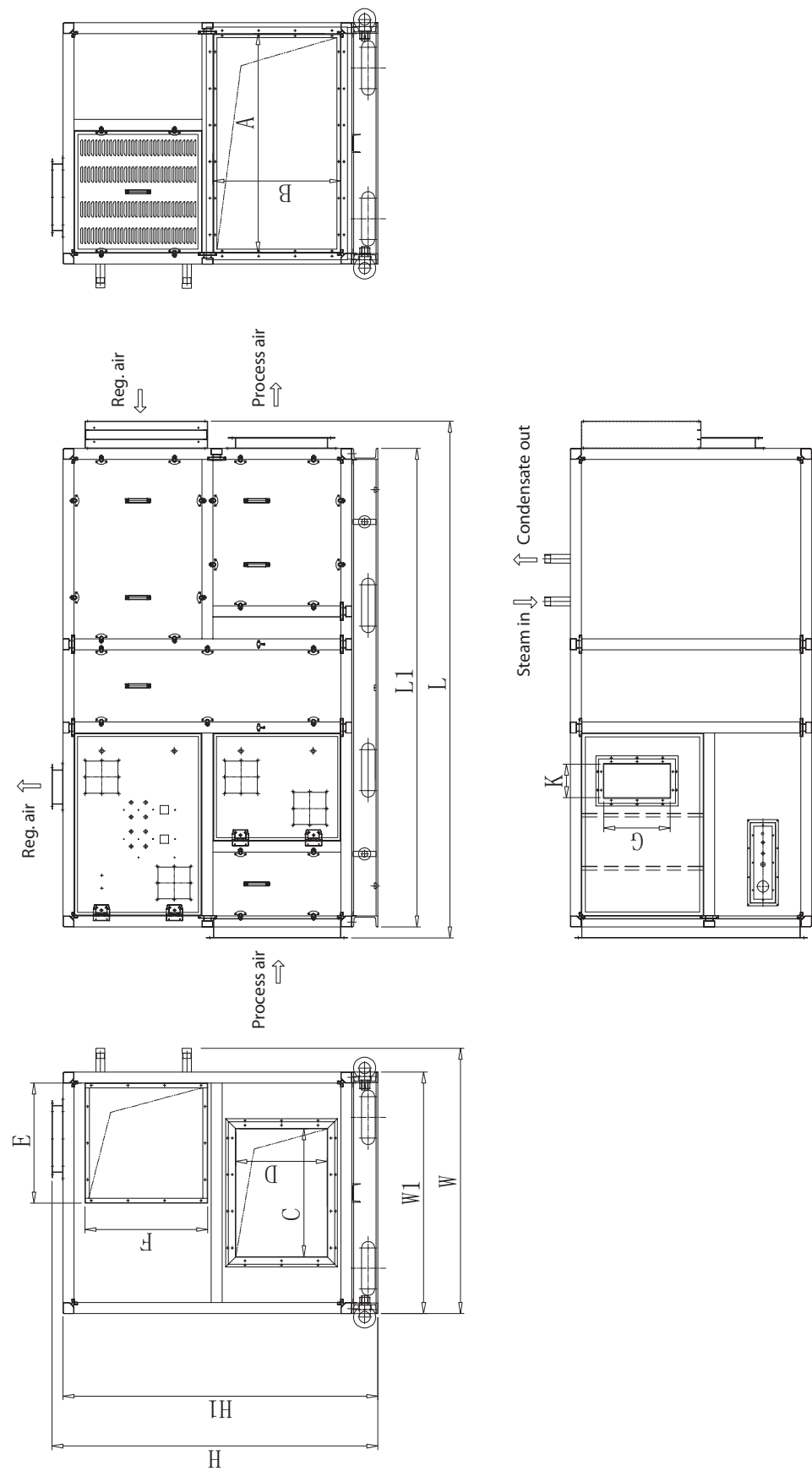


- Rigid yet Lightweight Enclosure Structure**
The CFA unit features rigid polyurethane (PU) foam insulation and 50mm-thick panels, ensuring robust durability while maintaining lightweight construction.
- Smooth Internal Design**
The smooth, streamlined interior design facilitates easy cleaning for optimal hygiene. For outdoor environments, an optional stainless-steel construction is available.
- Suitable for Hot and Humid Environment**
Utilizing the Consorb principle, CFA operates effectively across diverse environments. It is particularly well-suited for hot or humid conditions and excels in low dew point applications.
- Energy-Saving Control System**
The CFA units offer optional energy-efficient controls and support multiple regeneration methods (electric, steam, or gas). This enables precise dew point delivery tailored to varying inlet conditions.
- Available for Custom Specifications**
Renowned for maturity and stability, the CFA units offers modular configuration to meet diverse industrial demands. Backed by Dest's thirty years of industry expertise, it serves critical sectors including electronics, pharmaceuticals, and new energy.

CFA DIMENSIONS

Model	L	L1	W	W1	H	H1	A	B	C	D	E	F	G	K
CFA-3000S	2775	2565	1150	1020	1540	1480	900	600	600	400	505	570	365	190
CFA-3000R	2775	2565	1020	1020	1490	1430	900	600	600	400	505	570	365	190
CFA-4000S	2775	2565	1150	1020	1540	1480	900	600	600	400	505	570	365	190
CFA-4000R	2775	2565	1020	1020	1490	1430	900	600	600	400	505	570	365	190
CFA-4500S	2825	2615	1450	1320	1780	1720	1200	700	700	500	655	670	365	190
CFA-4500R	2825	2615	1320	1320	1780	1720	1200	700	700	500	655	670	365	190
CFA-7000S	2825	2615	1450	1320	1780	1720	1200	700	700	500	655	670	410	210
CFA-7000R	2825	2615	1320	1320	1780	1720	1200	700	700	500	655	670	410	210
CFA-7500S	3085	2875	1450	1320	1870	1870	1200	850	800	600	655	710	410	210
CFA-7500R	3085	2875	1320	1320	1870	1870	1200	850	800	600	655	710	410	210
CFA-10000S	3085	2875	1450	1320	1870	1870	1200	850	800	600	655	710	460	230
CFA-10000R	3085	2875	1320	1320	1870	1870	1200	850	800	600	655	710	460	230
CFA-11000S	3265	3055	1730	1600	2320	2260	1480	1100	1000	700	815	860	460	230
CFA-11000R	3265	3055	1600	1600	2320	2260	1480	1100	1000	700	815	860	460	230
CFA-14000S	3265	3055	1730	1600	2320	2260	1480	1100	1000	700	815	860	510	260
CFA-14000R	3265	3055	1600	1600	2320	2260	1480	1100	1000	700	815	860	510	260
CFA-15000S	3425	3215	2035	1905	2460	2400	1785	1200	1200	800	965	910	510	260
CFA-15000R	3425	3215	1905	1905	2460	2400	1785	1200	1200	800	965	910	510	260
CFA-22000S	3425	3215	2035	1905	2460	2400	1785	1200	1200	800	965	910	570	290
CFA-22000R	3425	3215	1905	1905	2460	2400	1785	1200	1200	800	965	910	570	290
CFA-23000S	3685	3475	2240	2110	2680	2620	1990	1300	1500	1000	1200	1025	570	290
CFA-23000R	3685	3475	2110	2110	2680	2620	1990	1300	1500	1000	1200	1025	570	290
CFA-30000S	3685	3475	2240	2110	2680	2620	1990	1300	1500	1000	1200	1025	570	290
CFA-30000R	3685	3475	2110	2110	2680	2620	1990	1300	1500	1000	1200	1025	570	290
CFA-31000S	3785	3575	2450	2320	2910	2850	2200	1400	1600	1000	1396	1008	569	288
CFA-31000R	3785	3575	2320	2320	2910	2850	2200	1400	1600	1000	1396	1008	569	288
CFA-36000S	3785	3575	2450	2320	2910	2850	2200	1400	1600	1000	1396	1008	801	404
CFA-36000R	3785	3575	2320	2320	2910	2850	2200	1400	1600	1000	1396	1008	801	404

CFA DIMENSIONS



TECHNICAL DATA

CFA UNITS	CFA-1200	CFA-1800	CFA-3000	CFA-4000	CFA-4500	CFA-7000	CFA-7500	CFA-10000
Process Air								
Air flow (m³/h)	1200	1800	3000	4000	4500	7000	7500	10000
Pressure (Pa)	300	300	300	300	300	300	300	300
Fan power (kW)	0.55	0.75	1.5	2.2	2.2	4.0	5.5	7.5
Regen. Air								
Air flow (m³/h)	400	600	900	1300	1500	2200	2500	3300
Pressure (Pa)	200	100	300	200	300	200	200	200
Fan power (kW)	0.37	0.37	0.75	0.75	0.75	1.5	1.5	2.2
Regen. Consumption								
Electric heater (kW)	13.5	18	30	45	50.4	75.6	83.9	111.8
Steam heater (kg/h)	22	33	49	70	81	116	135	174
Maximum Electrical Power								
Electric heater (kW)	14.4	19.1	32.2	47.9	53.3	81.1	90.9	121.5
Steam heater (kW)	0.94	1.14	2.27	2.97	2.97	5.5	7.0	9.7
Weight								
Electric heater (kg)	650	650	840	900	1100	1200	1500	1600
Steam heater (kg)	650	650	900	950	1100	1200	1500	1600

1. 20°C / 60% RH as inlets’ condition, volume flow density 1.2kg/m³.
2. Steam consumption is calculated based on 2065.8KJ/kg and gauge pressure 600KPa.
3. The model name followed by S represents steam heating, followed by R represents electric heating.
4. There are many other models available for review.

TECHNICAL DATA

CFA UNITS	CFA-11000	CFA-14000	CFA-15000	CFA-22000	CFA-23000	CFA-30000	CFA-31000	CFA-36000
Process Air								
Air flow (m³/h)	11000	14000	15000	22000	23000	30000	31000	36000
Pressure (Pa)	300	300	300	300	300	300	300	300
Fan power (kW)	5.5	7.5	7.5	11	11	15	15	18.5
Regen. Air								
Air flow (m3/h)	4000	4600	5000	7000	7700	10000	11000	12000
Pressure (Pa)	200	300	300	300	300	300	300	300
Fan power (kW)	2.2	4.0	4.0	5.5	5.5	11	11	7.5
Regen. Consumption								
Electric heater (kW)	132	158.4	176.4	235	274.8	335	368.4	400.5
Steam heater (kg/h)	216	242	270	370	415	530	593	635
Maximum Electrical Power								
Electric heater (kW)	139.8	170	188	251.6	290.9	361.1	394.6	426.6
Steam heater (kW)	7.8	11.6	11.6	16.6	16.6	26.1	26.1	26.1
Weight								
Electric heater (kg)	2000	2100	2500	2600	3500	3600	4600	4800
Steam heater (kg)	2000	2100	2500	2600	3500	3600	4600	4800

1. 20°C / 60% RH as inlets’ condition, volume flow density 1.2kg/m³.
2. Steam consumption is calculated based on 2065.8KJ/kg and gauge pressure 600KPa.
3. The model name followed by S represents steam heating, followed by R represents electric heating.
4. There are many other models available for review.

FLEXISORB UNITS

The Flexisorb models are far from ordinary. We meticulously customize each unit to meet the specific requirements of any challenge. Whether faced with extreme conditions or demanding environments, these machines are engineered to perform effortlessly, ensuring reliable operation under even the toughest circumstances.



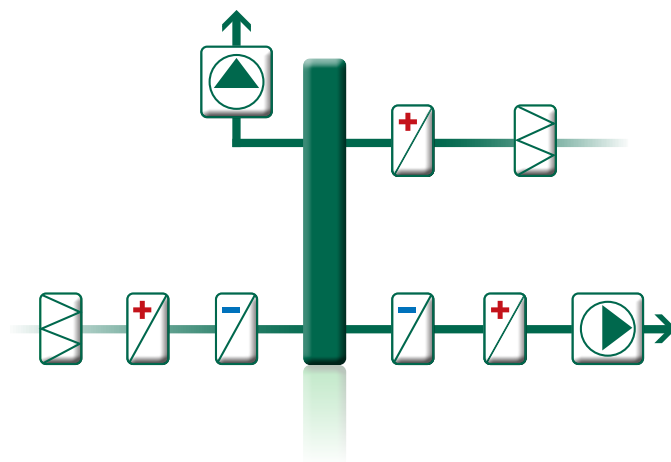
Dehumidifier Consorb CFA UNIT

CFA, The Most Flexible Dehumidifier

- Industry-wide compatibility
- High-Efficiency Rotor
- Durable Construction
- Integrated CPU control
- Easy operation
- Low energy consumption
- Convenient maintenance
- Long lifetime
- Customized options



- Rotor
- Heater
- Cooler
- Filter
- Fan

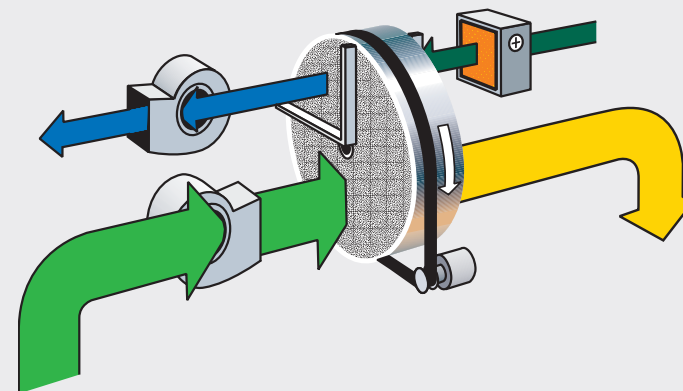


Example of configuration for a Flexisorb

PRODUCT FEATURES

- Meets diverse industrial needs with a dew point as low as -60°C .
- The enclosure features a polyurethane (PU) insulation layer with an aluminum-zinc alloy coated steel structure.
- Seamless interior, combined with externally locked hatches, ensures easy cleaning and operation.
- Standard D-MAX rotor from Seibu Giken, with a pull-out design for easy maintenance; additional rotor options available.
- Operates with electric, steam, gas, or hot water heaters.
- Direct-driven backward curved plug fan with frequency converter for efficient, adjustable air volume.
- Standard G4 class bag filters and high-temperature panel filters with a user-friendly drawout design.
- Basic on/off controls, optional PLC controls, energy-saving schemes, and a built-in PLC C4 graphic touch display.

PRINCIPLE



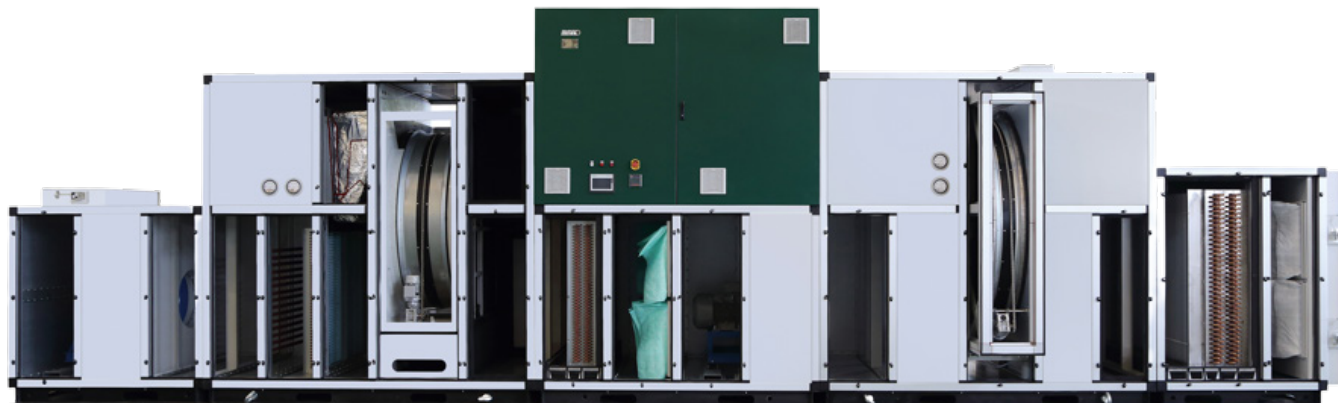
Dehumidifier Recusorb

RFA UNIT

RFA, Compact And Energy-Efficient Dehumidifier

- Ideal for low dew points
- Low energy consumption
- Special sealing structure
- High-Efficiency Rotor
- Integrated CPU control
- Easy operation
- Convenient maintenance
- Long lifetime
- Customized options

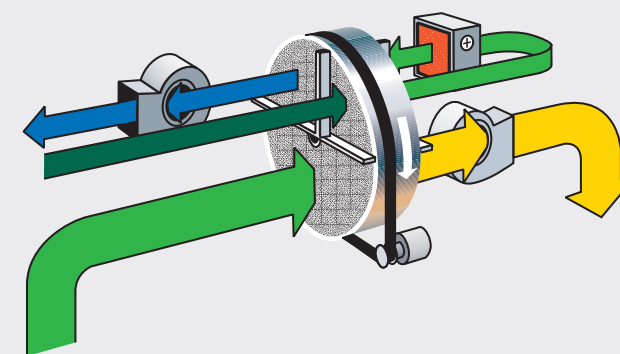
RFA units can supply air as dry as -90°C dew point.



PRODUCT FEATURES

- The enclosure features a polyurethane (PU) insulation layer with an aluminum-zinc alloy coated steel structure. Optional stainless steel panels for demanding environments.
- Standard D-MAX rotor with high capacity, long service life, washability, and non-flammability; removable rotor cassette for easy maintenance.
- Choose from electricity, steam, or gas for rotor regeneration
- Internal heat recovery system enhances efficiency by reducing energy needed for regeneration, delivering cooler, drier process air.
- Multiple energy-saving systems, HD screen for easy monitoring, and remote online data recording.
- Standard G4 panel filter, optional F6 to F9 non-woven bag filters, and additional pre- and post-filters for demanding environments.
- Integral plug fans with insulation and frequency inverters for low noise and energy-efficient operation.

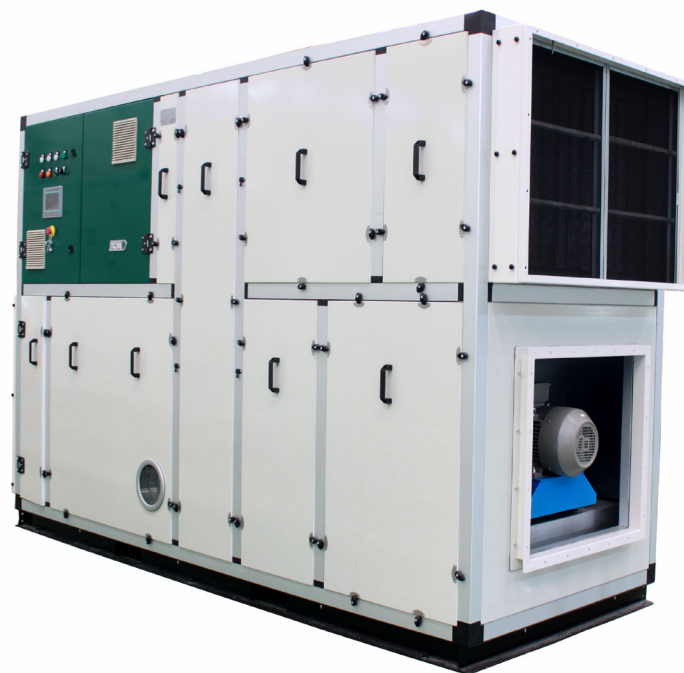
PRINCIPLE



Dehumidifier Econosorb EFA UNIT

EFA, The Most Energy Efficient Dehumidifier

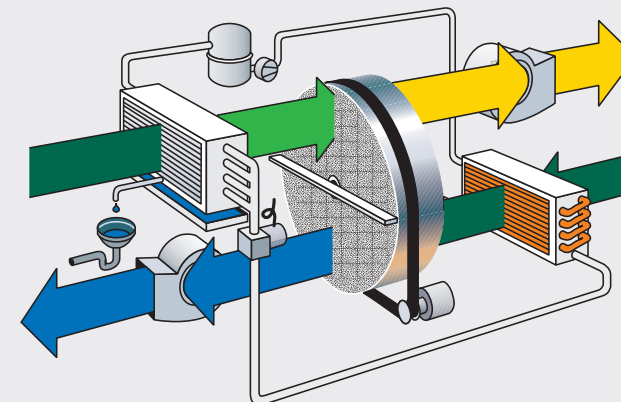
- Ultra energy-efficient
- Cost saving
- Ideal for humid climates
- High-Efficiency Rotor
- Durable Construction
- Integrated CPU control
- Easy operation
- Convenient maintenance
- Long lifetime
- Customized options



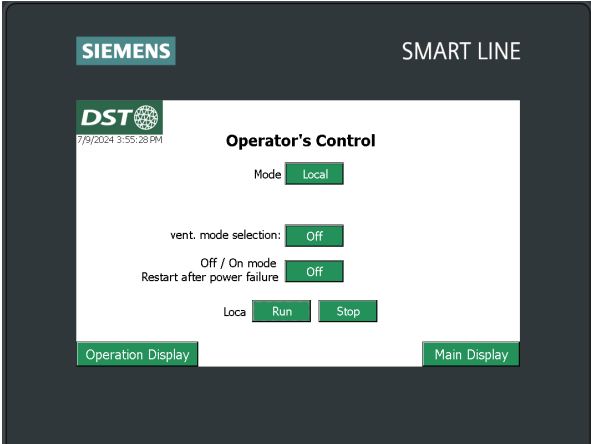
PRODUCT FEATURES

- Combine a heat pump with a sorption rotor, providing extremely low energy consumption and low dry air temperature. Uses around 25% of the energy of standard sorption dehumidifiers.
- Automatically adjust to maintain constant air conditions, with optional graphic display and online monitoring.
- Deliver fully fresh outdoor air or compensates for exhaust air, drying the air to below 5°C dew point and achieving 30% relative humidity at 23°C.
- Highly cost-effective in humid environments by managing latent loads and over-drying outdoor air to prevent moisture buildup.
- Winter Heating Option function as an air heat pump during winter with an optional reverse cycle.
- Reduce the need for large ducting and oversized cooling plants by offering a more efficient DOAS solution.

PRINCIPLE



HUMIDITY AND TEMPERATURE CONTROL



PLC C4 with 5.7" graphic touch display.
Advanced PLC control with large expansion options

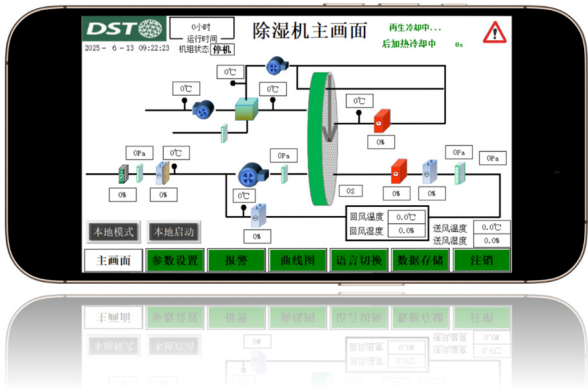


Humidistat and controller EH3 T2



Humidistat EH4B

DST units come standard with an intelligent temperature and humidity controller. The HD touchscreen displays real-time operational data throughout the entire process. Custom remote monitoring solutions are available, enabling 24/7 oversight via dedicated apps.



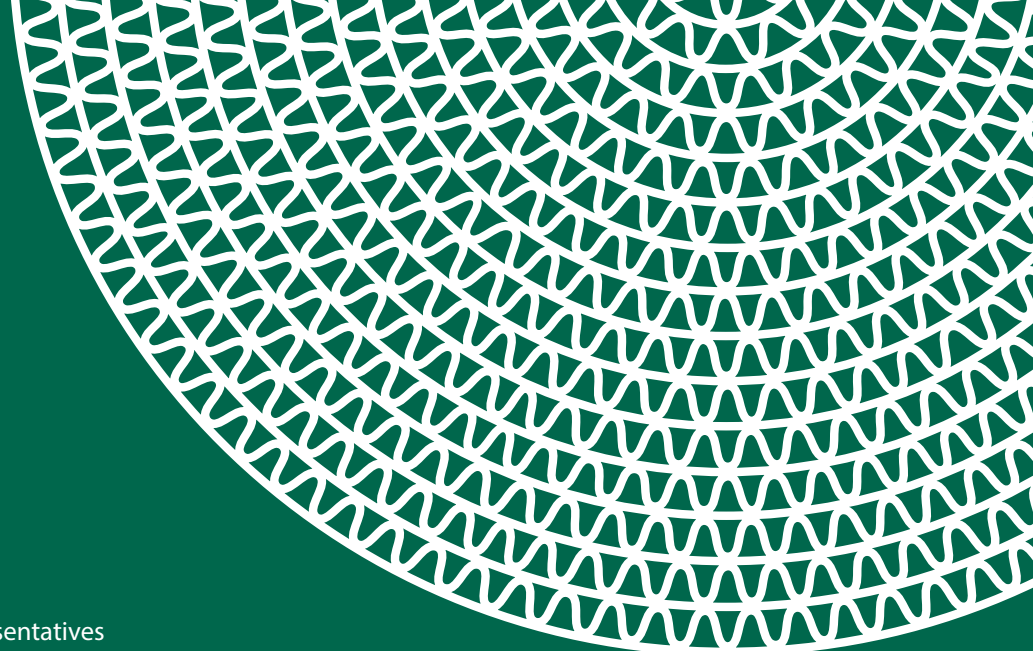
Wherever you are, precisely monitor unit status, remotely adjust parameters, and access energy efficiency reports – keeping industrial environment control at your fingertips.

PRODUCT FEATURES

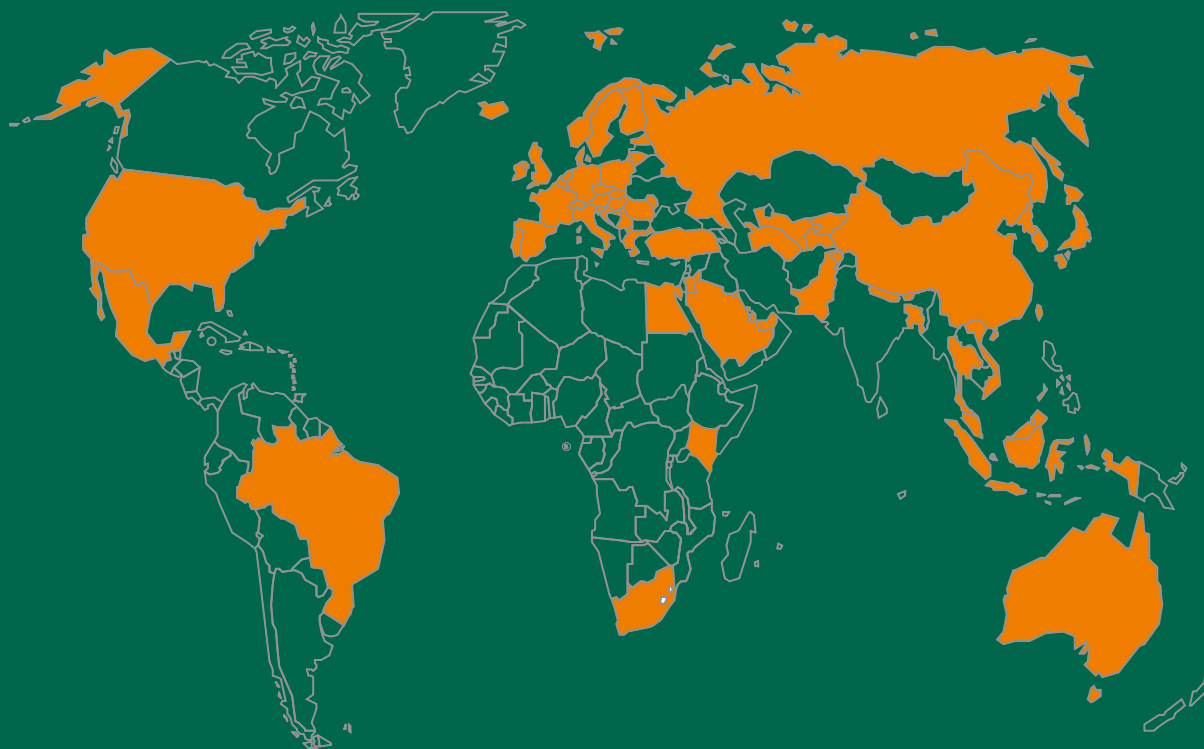
- Complete humidity and temperature control system.
- Integrated control for reduced energy consumption.
- Optimized controls for dehumidification and temperature regulation.
- PLC C4 for advanced control of larger dehumidifiers.
- Customizable control settings to fit customer requirements.
- Modbus communication for integration with higher-level systems.
- Remote control panel mirroring via supplied software for easy access and data management.

OPTIONS

- **EH3 T2 Controller:** Linear or on/off control for humidity, dew point, temperature, with Modbus support
- **EH4B Humidistat Controller:** Simple RH set-point control for dehumidification applications



Seibu Giken DST AB has representatives
in more than 50 countries worldwide.



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Seibu Giken DST is certified
according to ISO 9001

Updated 20.06

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