

DEHUMIDIFIERS

SEIBU GIKEN DST



About Seibu Giken DST

- Established in 1985, in Sweden
- A leading international supplier of desiccant dehumidifiers
- More than 40 representatives world-wide



Seibu Giken DST has just the dehumidifier for you!

There is moisture everywhere. Damp air in the wrong place can damage products and buildings or reduce the efficiency of a production process. Dehumidifiers from Seibu Giken DST are your best means of avoiding such harmful moisture.

There is a Seibu Giken DST dehumidifier for all applications from small portable units to large dehumidifiers, for e.g. the process industry.

All of DST's units use the unique SSCR rotor from Seibu Giken Co. A guarantee of high dehumidification capacity!

DST's dehumidifiers are characterized by:

- high level of operational reliability
- low energy consumption
- service-friendly design

The desiccant SSCR rotor is at the heart of every DST dehumidifier

Seibu Giken Co, Japan, was the first company to develop a commercially available silica gel rotor. All of DST's desiccant dehumidifiers include the silica gel rotor as standard. The SSCR manufacturing process includes the synthesizing (chemical bonding) of the silica gel to the rotor structure, resulting in a silica gel rotor of superior

quality and exceptional longevity. Following 10 years of continuous operation the SSCR rotor retains more than 90% of its original capacity! The rotor is the most important single component in a desiccant dehumidifier. It is the rotor that determines the capacity, efficiency and lifetime of the equipment.



Desiccant rotor

Section of a dehumidifier rotor from Seibu Giken. The high number of channels means that moisture is adsorbed with extra efficiency!

Contact your nearest DST agent for more information!

There are agents in approximately 40 countries all over the world at your service. DST is now one of the world's leading suppliers of dehumidifiers.



You can find all contact information at www.dst-sg.com

Small dehumidifiers

Stainless steel units. Desiccant dehumidifier range for the flood & water damage professional, temporary humidity control, museums, research laboratories, silo head-space conditioning, pump stations, dry air storage and small production processes.



Mid-range dehumidifiers

R-060BR and **R-51R/-61R** are industrial desiccant dehumidifiers in stainless steel for medium volume dry air stores and sports halls, museums, small clean rooms and manufacturing processes.

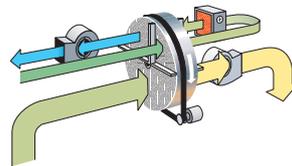
The **RZ and CZ series** consists of four compact units made of aluzinc with fans on the outside. Ideal for large warehouses, cold stores, ice rinks and the process industry. Available with pre- and post cooler.



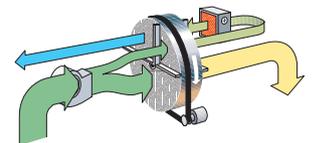
Dehumidification principles

The basic principle of sorption dehumidification is that the rotating rotor continuously adsorbs the moisture. The moisture is discharged via an independent wet air outlet.

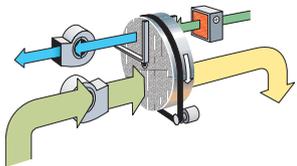
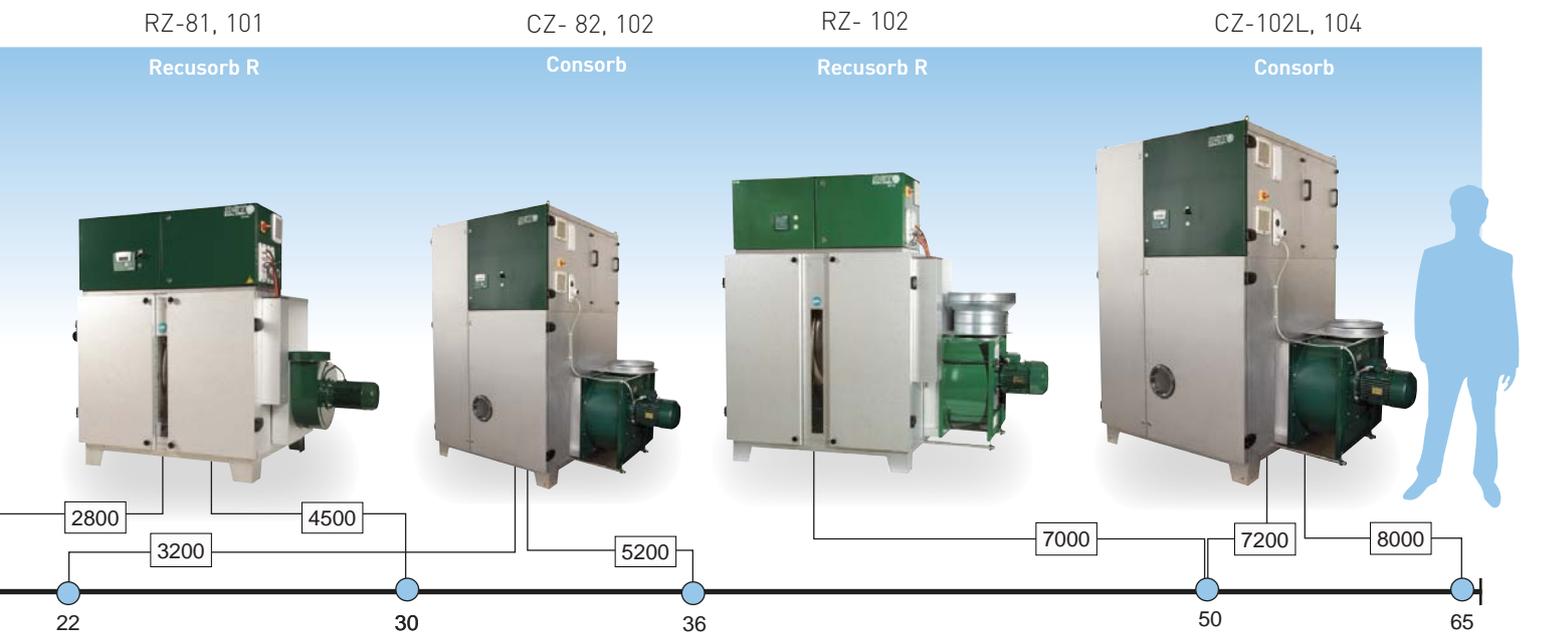
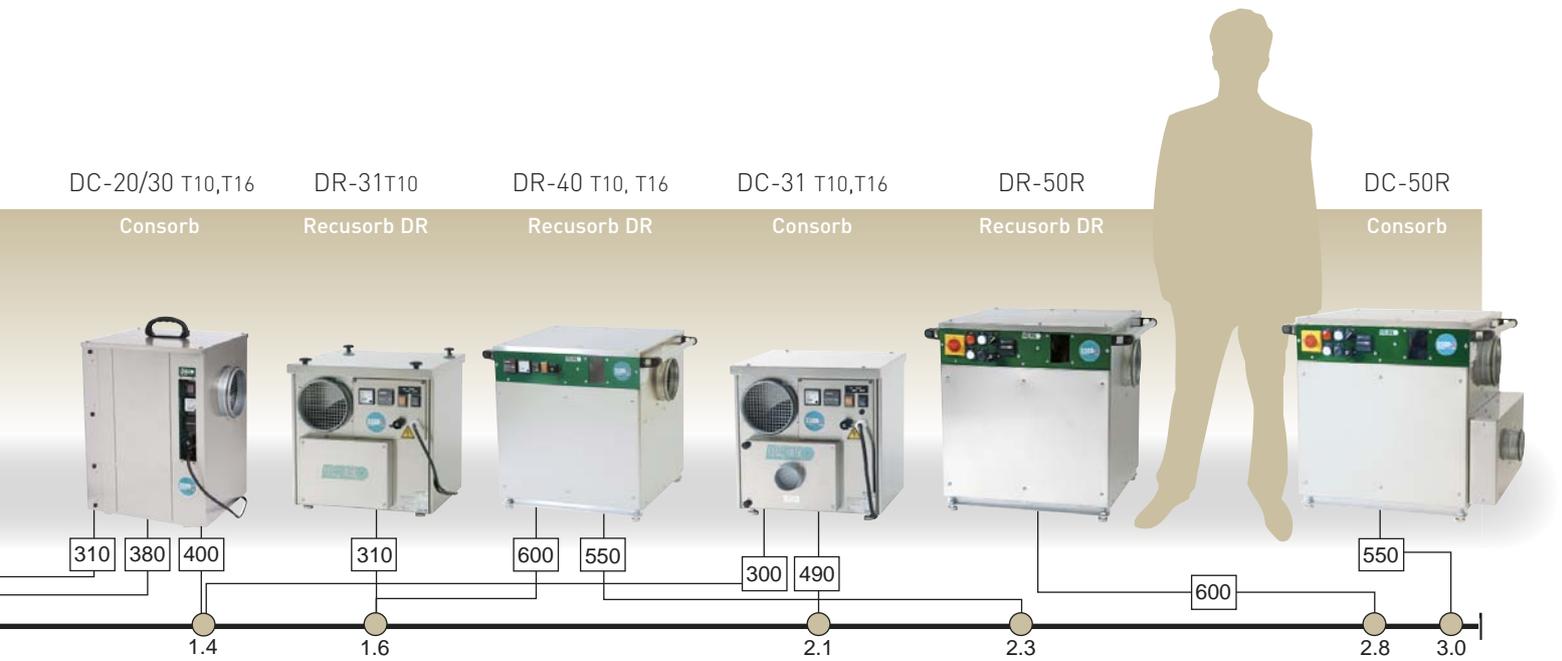
-  Incoming air.
-  Outgoing dry air.
-  Outgoing wet air, condensed in certain cases.



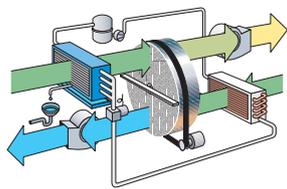
Recusorb R Complete with internal heat recovery to improve efficiency. Heat gained by the rotor during regeneration is transferred to the incoming regeneration air. The process air outlet is therefore both cooler and drier than with other desiccant dryers.



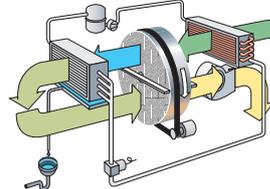
With internal heat recovery, **Recusorb DR** is similar to the Recusorb R. For simplicity, both the process and reactivation airflows are provided by one pushing fan. Used for introducing dry fresh air into a process or to an open type system when the dehumidified air is ducted into the object.



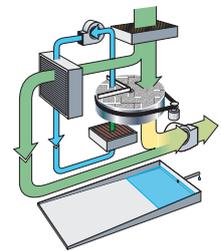
The **Consorb** principle is normally used at low regeneration temperatures, e.g. if you have surplus heat or when dehumidifying very damp air.



Econosorb combines the best of heat pump and desiccant technologies to produce the most energy-efficient dehumidifier available. Energy consumption is around 25% of a standard desiccant dehumidifier. Econosorb has both condensation and wet air.



Frigosorb is a principle patented by DST. This system is used where it is impractical to duct out the wet air. Utilising heat pump principles, energy consumption is around 35% of a standard desiccant dehumidifier.



Aquasorb basically functions as a Consorb 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 dry air outlet. Commonly used where it is impractical to use ducting for the reactivation air system.

Flexisorb dehumidifiers for industrial applications



Flexisorb means flexibility. The Flexisorb range has been developed by DST to satisfy the varying requirements of industry. Flexisorb units are modular in their design, and have tremendous potential to be adapted according to the specific requirements of each application.



Flexisorb uses the Recusorb, Consorb, Econosorb or Frigosorb dehumidification principles.

➤ **Recusorb** – embraces internal heat recovery whilst being highly energy efficient.

Dry air flow: 900–61 100 m³/h

Energy consumption: **1.4 kWh/kg***

➤ **Consort** – suitable where there is a wide temperature difference between the process air and regeneration air.

Dry air flow: 1 000–61 100 m³/h

Energy consumption: **1.7 kWh/kg***

➤ **Econosorb** – the most energy efficient unit in the DST range. No high temperature gain across the process sector.

Dry air flow: 1 400–18 700 m³/h

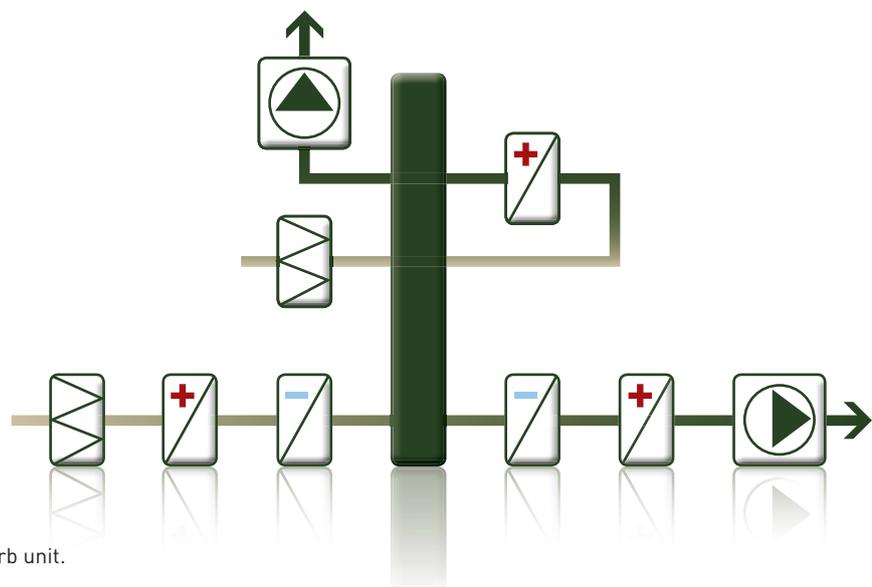
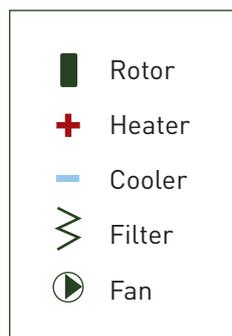
Energy consumption: **0.4 kWh/kg***

➤ **Frigosorb** – an energy efficient dehumidifier with built in condenser.

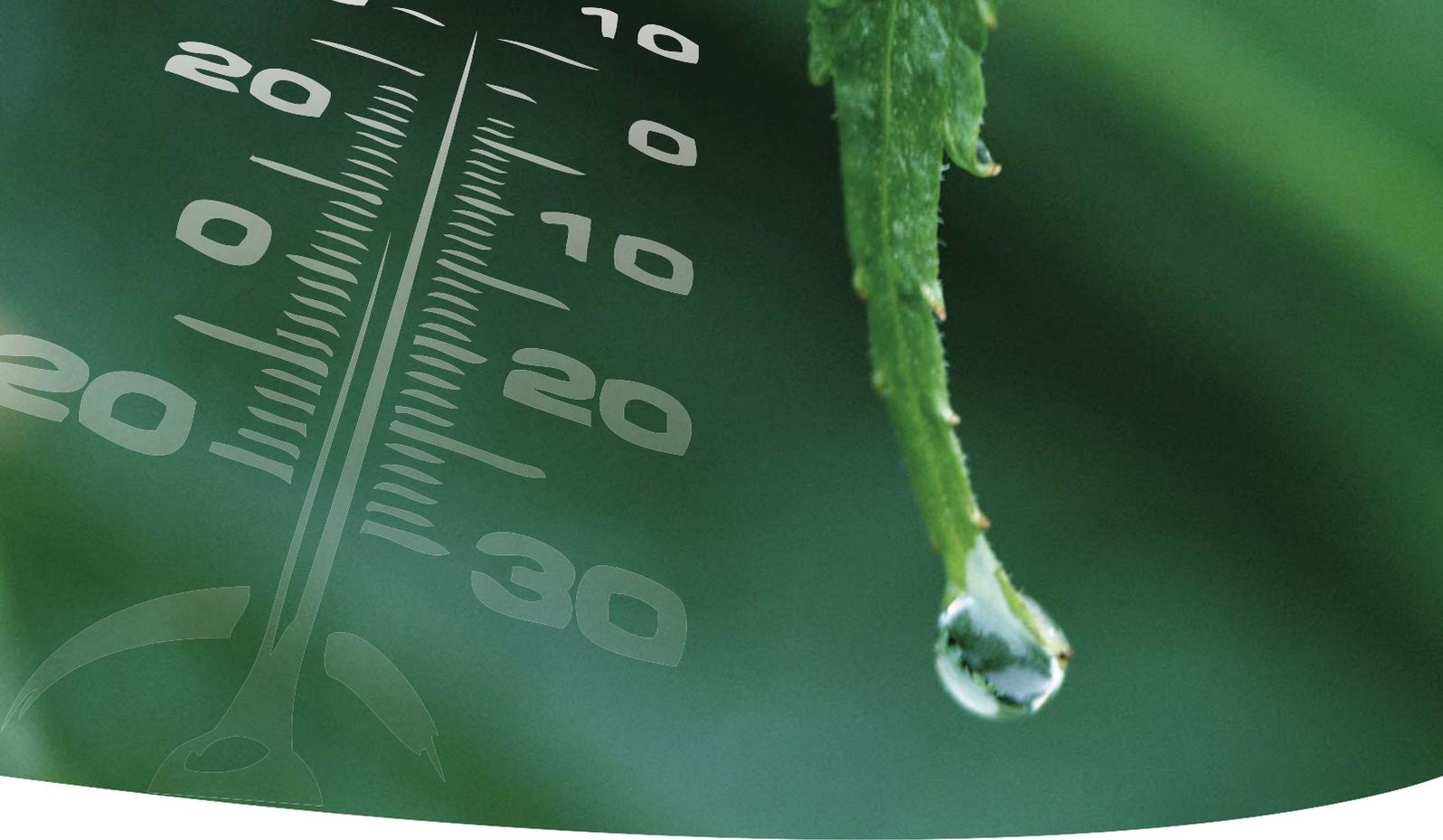
Dry air flow: 3 700–33 700 m³/h

Energy consumption: **0.6 kWh/kg***

* Energy consumption / kg dehumidified water (at 20° C, 60 % RH)



Exampel of configuration for Flexisorb unit.



Control equipment

A good control system for dehumidification installations will usually have a very short payback period. DST offers a number of tried and tested controls to meet the needs of various applications with regard to energy-saving, climate control and monitoring. See DST's separate brochure for further information.

Rotor cassettes

Choose between four different rotors from Seibu Giken, all with unique qualities.

- ✎ **SSCR-U** – rotor for standard applications
- ✎ **SSCR-H** – a bactericidal silica gel rotor
- ✎ **SSCR-CI** – 100% silicon free
- ✎ **SZCR** – zeolite rotor for very low dew points

You can find out more in DST's brochure about rotors from Seibu Giken.



Seibu Giken DST AB, with representatives in over 40 countries.



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