



# REHOBOTH ENVIRO SYSTEMS

Total Solutions for humidity Control & Energy Recovery



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[www.rehobothsystems.net](http://www.rehobothsystems.net)

## Features

- Available in size from 100 CMH to 50,000 CMH
- Standard products include fully functional units with necessary safeties and electric relay based controls or optional PLC based controller
- Desiccant rotor technology removes water directly from the air.
- Designed for industrial process, including low dew point applications
- Available with integrated pre and post cooling systems
- Fast, simple access to all electrical and mechanical components through hinged doors or removable access panels
- Desiccant cassette can be removed for cleaning to extend rotor life and efficiency
- Choice of Gas, Steam and Electric Reactivation
- Standard Features include easy access inlet filters, self adjusting/tensioning rotor drive components and easy seal adjustment
- Robust industrial duty structural frame and panel design
- Highly compact design-lowest foot print area
- Fully factory assembled, reduced installation time on site and lesser costs

## Operating Principle

- **REHOBOTH** dehumidifiers operate on the principle of adsorption of water vapor from the air. The desiccant used is silica gel, which is formed on an inorganic substance.
- The desiccant and substrate are arranged in a wheel-shaped rotor matrix having thousands of small parallel air passages extending through its thickness.
- The desiccant rotor is housed in a cabinet that is separated into process and reactivation sections. In the process section, moist air passes through the rotor, and the silica gel adsorbs the moisture.
- To drive the absorbed moisture out of the desiccant, the rotor slowly rotates into the reactivation section, where a second heated air stream passes through the rotor. The hot air heats the desiccant, driving the water out of it. The moisture-laden reactivation air is usually exhausted outside. The reactivated desiccant rotor rotates back into the process section to provide continuous drying of the process air.
- In many applications, the process air is cooled before entering the desiccant rotor to enable the system to produce dry air.
- The reactivation air stream may be heated by electricity, steam, hot water, or natural gas depending on the application and available utilities.

## Our Standard & System Solutions



### Standard Product Range

- Available in 13 models, 100-10000 CMH supply air, 4 kg/hr to 64 kg/hr moisture removal
- Utilize highly efficient solid desiccant fluted wheel
- Maximized dehumidified air flow capacities with very high and consistent performance levels
- PLC or electric relay based control choice
- G4 grade filters on both air streams
- Robust industrial duty structural frame and panel design
- Highly compact design-lowest foot print area
- Fully factory assembled, reduced installation time on site and costs
- Up-rated supply air flow capacity or higher available static pressure
- Supply fan with frequency control
- Stainless steel sheet metal casing (optional)

### System Solutions

#### .....Your one-stop source for total climate control

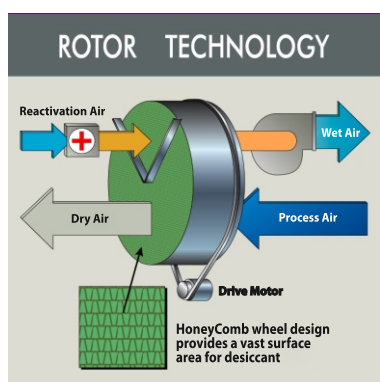
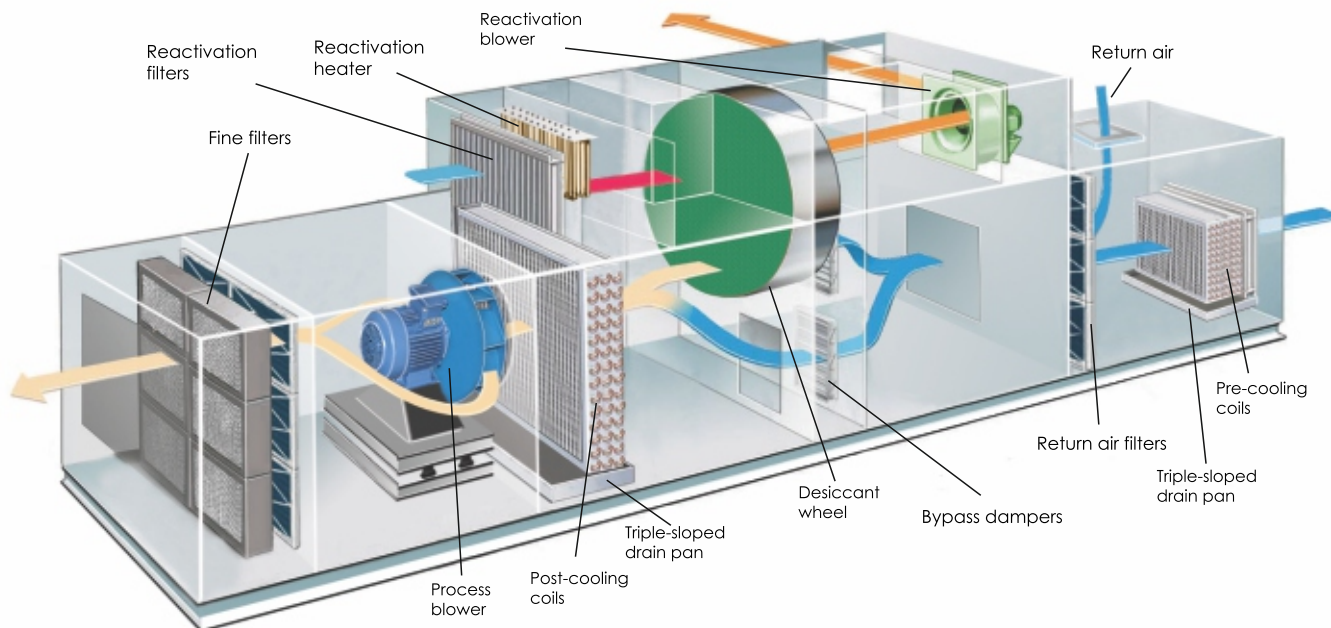
Our Dehumidifiers are available as standard units as well as packaged with pre-cooling, after-cooling, heating, heat recovery etc. for the most cost efficient environment control in various industrial applications.

Units are designed with custom configurations of standard components to meet unique project requirements. Total system integration is also available including heating, cooling, by-pass, pre filter, after filter for complete air handling and environment control needs.

The tailor made systems are delivered in:

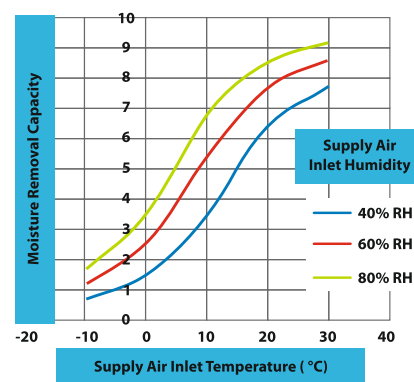
- High Quality
- Hygienic Design
- Easy to Assemble on Site
- Commissioning by our Skilled Service Engineers





### POWER SUPPLY & REGENERATION

Standard system supply for all units is 415 VAC, 3 Ph+N+G, 50 Hz. Optional choice of other syetem supply can be 200V, 380V, 400V, 440V and 500V, 3 Ph. 50 or 60 Hz. AC. Standard choice of desiccant regeneration is Electric with options of Steam, Gas, Hot oil, Hot water or a combination thereof.



Model	Process			Reactivation				Dimensions l x w x h	Approx Weight (Kg)
	Air Flow (CMH)	ESP (Pa)	Motor (H.P.)	Air Flow (CMH)	ESP (Pa)	Motor (H.P.)	Heater (KW)		
RDS-30	300	200	0.25	100	240	0.25	3.5	1700 x 450 x 940	150
RDS-60	600	200	0.5	200	240	0.5	7	1700 x 550 x 1040	150
RDS-100	1000	200	1	300	240	1	12	1700 x 740 x 1200	180
RDS-150	1500	310	2	500	240	1	18	1800 x 740 x 1200	200
RDS-200	2000	310	2	700	240	1	24	1800 x 740 x 1200	225
RDS-300	3000	310	3	1000	240	1.5	30	2200 x 1000 x 1450	325
RDS-420	4200	310	3	1400	240	1.5	42	2200 x 1200 x 1550	400
RDS-500	5000	310	3	1600	240	2	50	2200 x 1200 x 1550	470
RDS-600	6000	310	5	2000	240	2	60	2500 x 1300 x 1550	540
RDS-720	7200	310	5	2400	240	2	72	2500 x 1400 x 1700	610
RDS-800	8000	300	5	2700	240	3	81	2500 x 1400 x 1700	700
RDS-900	9000	300	5	3000	240	3	90	2500 x 1550 x 1800	730
RDS-1000	10200	300	5	3400	240	3	102	2500 x 1550 x 1800	810



## Some of the Industrial Applications-

### Food:

Production & packing of Biscuit, Cookies, Candies, Chocolate, Chewing gums, Chips, Conveying of dried Milk, Coffee, cereals, sugar, dried energy/health drinks, Tea/herbs drying, Brewery, Cold Rooms, Frozen food processing areas, Loading docks, Dried fruit/vegetables, Seed drying & storage, Yeast making

### Pharmaceuticals:

Soft gelatine capsule drying, manufacturing and packing areas of Effervescent, Hygroscopic salts/powders, Vitamins, Tablet coating, Aseptic manufacturing and packing areas

### Paper & Printing:

Libraries, Archives storage, Paper pre-conditioning, Gravure printing, Currency printing, Paper fibre moulding

### Electricals & Electronics:

HT Transformer and Capacitor manufacturing HV cable wrapping, Clean spaces for Semiconductor manufacturing, PCB assembly, Lithium batteries

### Automotive:

Glass lamination, Radial tyre creel room, Engineering plastic components, Engine test room

### Corrosion Prevention:

Storage of military equipments, Leather, Precision components, Power plant lay up, Water and sewage treatment plants

### Mould & Fungus Prevention:

Schools, Assembly areas, Theatres, Restaurants, Hotels, Hospitals, Cargo protection

### Condensation Prevention:

Injection and blow moulding, Ice skating rinks, Surface preparation & coating



- Pharmaceuticals
- Chocolate Candies
- Dry Cold Seed Stores
- Operation Theatres
- Sugar Coating Pans
- Rotogravure Printing
- Long Term Storage
- Injection Moulding

## Some of our Customers/Projects :



# REHOBOTH ENVIRO SYSTEMS

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