



**ACD**  
(AHU cum DEHUMIDIFIER)



**ARIDKOOL Series**

*Total solution for Filtration, Temperature and RH control.*





## OPERATING PRINCIPLE

- ▶ REHOBOTH dehumidifiers operate on the principle of adsorption of water vapour from the air. The desiccant used is silica gel, MOC is of an inorganic substance
- ▶ The desiccant and substrate are arranged in a wheel-shaped rotor matrix having multiples 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 remove the moisture absorbed out of the desiccant, the rotor at lower RPM rotates crossing the reactivation zone, where the heated air stream by steam or electrical heaters is blown through the desiccant. The moisture-laden reactivation air is exhausted outside. The reactivated desiccant rotor rotates passing back into the process section to provide continuous drying of the process air and the cycle continues.
- ▶ 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.

## FEATURES

- ▶ Available in size form 600 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.
- ▶ Desiccant cassette can be removed for cleaning, to extend rotor life.
- ▶ Fully factory assembled, reduced installation time with on site and lesser costs.
- ▶ Available with integrated pre and postcooling systems.
- ▶ Fast, simple access to all electrical and mechanical components through hinged doors or removable access panels.
- ▶ Choice of Gas, Steam and Electric Reactivation.
- ▶ Standard features include easy access inlet filters, self-adjusting/tensioning rotor drive components and easy seal adjustment.

## STANDARD PRODUCT RANGE

- ▶ Available in 13 models, 600-50000 CMH supply air, 4 kg/hr to 64 kg/hr moisture removal
- ▶ Utilize highly efficient solid desiccant fluted wheel
- ▶ Maximized dehumidified air flow capacity 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 with 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 with metal casing (optional)



## SYSTEM SOLUTIONS

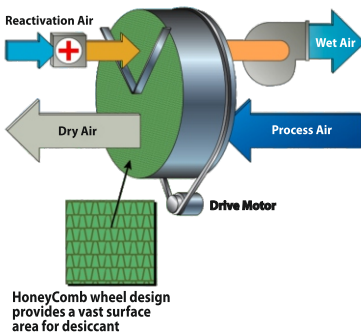
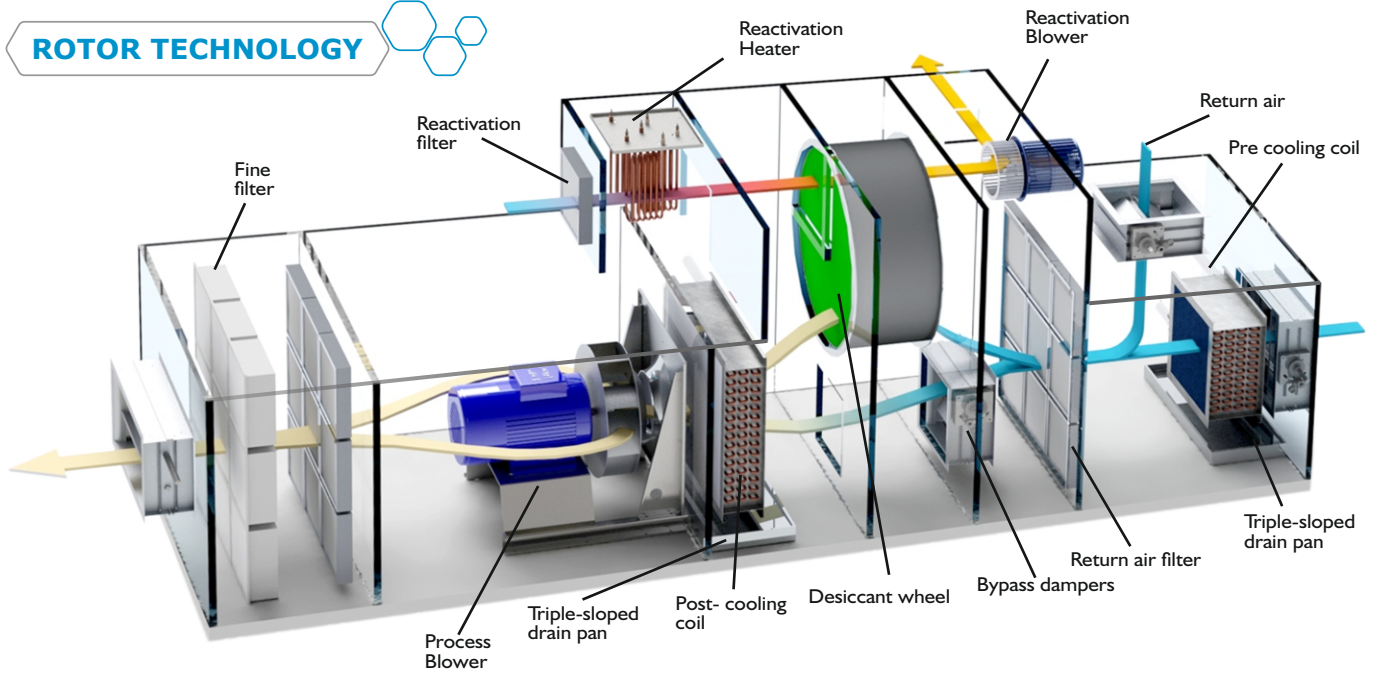
### YOUR ONE-STOP SOURCE FOR TOTAL CLIMATE CONTROL

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, bye-pass, pre filter, after filter for complete air handling and environment control needs.



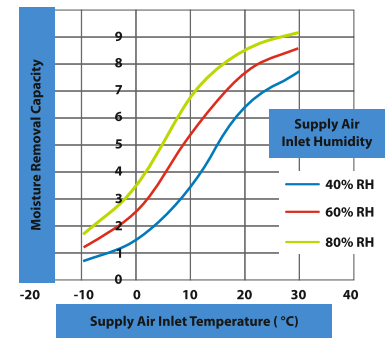


## ROTOR TECHNOLOGY



## POWER SUPPLY & REGENERATION

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



## TECHNICAL DATA - AHU CUM DEHUMIDIFIER (ACD)

MODEL	Process air			Reactivation air			
	Air Flow (CMH)	ESP (PA)	Motor (H.P.)	Air Flow (CMH)	ESP (PA)	Motor (H.P.)	Heater K.W.)
RDS-60	600	300	0.5	200	240	0.5	6
RDS-100	1000	300	1	300	240	1	12
RDS-150	1500	310	1	500	240	1	15
RDS-200	2000	310	1.5	650	240	1	24
RDS-250	2500	310	1.5	830	240	1	27
RDS-300	3000	310	1.5	1000	240	1	30
RDS-420	4200	310	2	1400	240	1.5	42
RDS-500	5000	310	5	1600	240	2	51
RDS-600	6000	310	5	2000	240	2	60
RDS-720	7200	310	5	2400	240	2	75
RDS-800	8000	300	7.5	2700	240	3	90
RDS-900	9000	300	10	3000	240	3	90
RDS-1000	10200	300	10	3400	240	3	105



# REHOBOTH

Dehumidifiers

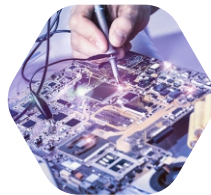


## Some of the Industrial Applications



### FOOD:

- Production & packing of Biscuit, Cookies, Chocolate
- Tea/herbs drying
- Cold Rooms
- Frozen food processing areas
- Loading docks
- Dried fruit/vegetables
- Seed drying & storage



### ELECTRICALS & ELECTRONICS:

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



### PHARMACEUTICALS:

- Soft gelatin capsule drying
- Manufacturing and packing areas of Effervescent
- Hygroscopic salts/powders
- Vitamins, Tablet coating



### CORROSION PREVENTION :

- Storage of military equipment's
- Leather, Precision components
- Power plant lay up
- Water and sewage treatment plants



### PAPER & PRINTING:

- Libraries
- Archives Storage
- Paper pre-conditioning
- Gravure printing
- Currency printing
- Paper fibre molding



### MOULD & FUNGUS PREVENTION:

- Schools
- Theatres
- Restaurants
- Hospitals
- Cargo protection
- Hotels



### AUTOMOTIVE:

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



### CONDENSATION PREVENTION:

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

and many more...

## SOME OF OUR VALUED CLIENTS



# REHOBOTH ENVIRO SYSTEMS PVT. LTD.

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An ISO 9001:2015, 14001:2015, 45001:2018 Certified Company