



## IAQ 100% Outdoor Air Dehumidifiers



dia

designer indoor air®

# IAQ 100% Outdoor Air Dehumidifiers with Heat Pump Option

# DRY-O-TRON®

- Treats 100% outdoor air entering as high as 80°F wet bulb
- Supplies treated outdoor air required by IAQ ventilation codes
- Can be added to existing HVAC systems without complex tie-ins
- Dehumidifies even when space cooling not required (off-peak)
- Heat pump models available
- Rooftop and Indoor models
- Energy recovery



*RK Series  
(Packaged Rooftop unit)*

## **DK/RK SERIES** **(Indoor/Rooftop Installation)**

ASHRAE Standard 62-1989 "Ventilation for Acceptable Indoor Air Quality" calls for increased outdoor air ventilation rates and quality of indoor air that will be acceptable to human occupants. In warmer, humid climates the introduction of this outdoor air presents a staggering latent heat load. Standard air conditioning units are not equipped to handle this heavy dehumidification requirement. On rainy off-peak days the outdoor air still needs dehumidification, and a standard air conditioner will overcool the air, bringing on space heating.

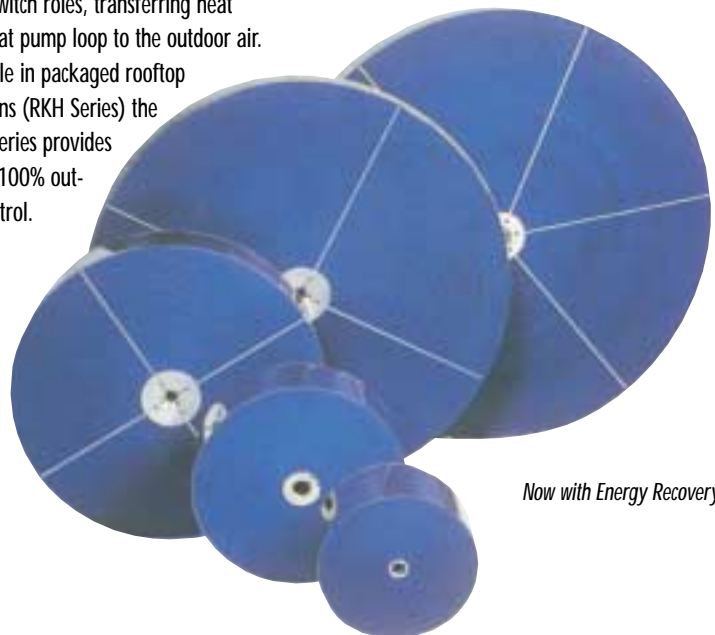
DK/RK Series units have been engineered to handle the heavy duty dehumidification requirements for outdoor air. During off-peak days the DK/RK Series uses free reheat from the compressor hot gas to bring the air temperature back up to the design room temperature. DK/RK Series can be equipped with optional gas, hot water, steam or electric heaters for heating season use. DK Series have been designed for indoor installation, and can be fluid cooled or split-system design which uses an outdoor air-cooled condenser. The RK Series have been designed for rooftop installation and are packaged units.

## **DKH/RKH SERIES** **(Reverse Cycle Heat Pump)**

During the heating season, outdoor air needs to be heated in order to deliver ventilation air to the space at a neutral condition. In order to take full advantage of installations with heat pump loops the DRY-O-TRON® DKH Series has been specially engineered. When heating is required, the DKH unit enters a reverse cycle mode, and the evaporator and condenser switch roles, transferring heat from the heat pump loop to the outdoor air. Also available in packaged rooftop configurations (RKH Series) the DKH/RKH Series provides year-round 100% outdoor air control.

## **Packaged Exhaust Energy Recovery Systems**

The DK/RK and DKH/RKH Series can also be configured with integral exhaust and built-in heat recovery using heat pipes and/or enthalpy wheels. With these configurations energy requirements for heating and cooling can be reduced. Contact the factory for a full application evaluation to see what configuration best suits your needs.



*Now with Energy Recovery*

**QUALITY FEATURES INCLUDE:**

- 6 row minimum evaporator coils for maximum moisture removal and efficiency
- Uses scroll compressor technology for reliability and energy savings
- Reduces running time of main air conditioning system, saving energy and maintenance costs
- Helps provides a comfortably dry indoor environment
- Compressors out of the airstream
- Washable intake filters (RK/RKH Series)
- Hot gas reheat to bring air to neutral conditions
- Hot gas bypass to ensure smooth operation at all entering air conditions
- Voltages available:  
208/230 single phase 60Hz  
208/230, 460, 575 three phase 60Hz

**DRY-O-TRON®**



*DK Series (Indoor Split requires outdoor air-cooled condenser)*

**OPERATING RANGE\***

Air on temperature 55 thru 80°F wet bulb  
 Air on temperature 100°F dry bulb maximum  
 Supply Air dewpoint 50 thru 65°F  
 40 thru 49°F consult factory

*\* For conditions outside this range, consult your DRY-O-TRON® representative or the factory for assistance.*



**OPTIONS AVAILABLE INCLUDE:**

- Water-cooled and fluid-cooled condensers
- Precision controlled supply air dew points for laboratory applications
- Electric heater with staged or SCR control
- Gas boiler and glycol coil
- Hot water coil with control valve
- Steam coil with face and bypass dampers
- Microprocessor control, Metasys® compatibility
- Return air mixing box
- Intake or discharge air dampers
- Double skin enclosure with 2 inch insulation
- Custom filter section
- Plug fan or BI airfoil bladed blowers
- Remote monitoring panel
- Roof curb
- Extended warranty plans
- 50 Hz operation

**PERFORMANCE DATA**

Model	Moisture Removal <sup>1</sup>	Air Volume <sup>2</sup>	Total Energy Consumption <sup>1</sup>	Total Capacity <sup>1</sup>	External Static Pressure <sup>3</sup>
DK/RK DKH/RKH	lb/h	cfm	kW	Btu/h	in WC
010	21.0	480 - 1,100	5.2	59,000	0.5
015	29.0	600 - 1,500	6.9	82,130	0.5
020	48.0	1,020 - 2,500	11.0	134,640	0.5
030	57.0	1,200 - 3,000	11.6	161,260	0.5
040	80.0	1,680 - 4,200	18.2	226,890	0.5
050	92.0	1,920 - 4,800	18.4	250,540	1.0
060	114.0	2,400 - 5,330	24.5	305,630	1.0
080	136.0	2,800 - 6,300	30.2	365,290	1.0
100	183.0	4,000 - 10,000	37.8	515,070	1.0
120	224.0	5,200 - 12,500	51.0	648,300	1.0
150	275.0	6,000 - 15,000	64.2	790,950	1.0
200	340.0	8,000 - 20,000	75.4	1,303,140	1.0
240	448.0	10,400 - 25,000	100.6	1,296,600	1.0
300	550.0	12,000 - 30,000	128.3	1,581,900	1.0

1. At air on 95°F dry bulb and 78°F wet bulb  
 2. Higher air volumes available, please contact factory.

3. Higher external static pressures available, please contact factory



## OTHER INNOVATIVE DRY-O-TRON® PRODUCTS...

### INDOOR POOL & WHIRLPOOL APPLICATIONS



DSV Series



RS Series

**DS/DSV Series**  
(Indoor Pool/Whirlpool Light Commercial and Residential Dehumidifiers)

- 5 Models from 1 thru 46.2 lb/h moisture removal and 1,000 thru 3,800 cfm
- Horizontal and vertical configurations, indoor installation
- Heats pool water with recycled energy, patented features

- Pool corrosion resistant construction including HyPoxy® coated coils
- Optional A/C for year-round comfort control
- Advanced Microprocessor control
- Gas auxiliary air and water heating available

**DS/RS DB/RB Series** (Indoor Pool/Whirlpool Commercial and Institutional Dehumidifiers)

- 12 Models from 45.5 thru 680 lb/h moisture removal and 3,300 thru 50,000 cfm
- Horizontal and vertical (Models 040 thru 100) configurations
- Outdoor rooftop and indoor installation
- Purge Mode, Econosaver, Economizer and Smart Saver Heat Recovery configurations

- Heats pool water with recycled energy, patented features
- Pool Guard corrosion resistant construction including HyPoxy® coated coils
- Optional A/C for year-round comfort control
- Advanced Microprocessor control
- Gas auxiliary air and water heating available

### 100% OUTDOOR AIR APPLICATIONS



RK Series

**DK/RK Series** (IAQ 100% Outdoor Air Dehumidifiers)

**DKH/RKH Series**  
(IAQ 100% Outdoor Air Dehumidifiers with Heat Pump)



- 14 Models from 21.0 thru 550.0 lb/h moisture removal and 480 thru 30,000 cfm
- Treat 100% outdoor air entering as high as 80°F wet bulb
- Supply treated air as per ASHRAE 62-1989
- Dehumidifies even when space cooling is not required (off-peak)

- Outdoor rooftop and indoor installation
- Gas auxiliary air heating available
- Available with exhaust energy recovery using enthalpy wheels or heat pipes
- Also in Heat Pump configuration

### GENERAL PURPOSE APPLICATIONS



MAM Series



RB5 Series

**MAM Series**  
(Residential and Light Commercial Dehumidifiers)

- 7 Models from 4.1 thru 25.8 lb/h moisture removal and 400 thru 1230 cfm
- Replaces small commercial and residential air conditioners
- Full cooling mode, controls both humidity and temperature

- Air-cooled, packaged water cooled available
- Year-round dehumidification without overcooling the space

**DA5/DV5/RA5 DB5/RB5**  
(General Purpose Commercial and Industrial Dehumidifiers)

- 17 Models from 11.0 thru 680.0 lb/h moisture removal and 1,000 thru 50,000 cfm
- Controls humidity
- Outdoor rooftop and indoor installation
- Economizer models

- Horizontal and vertical (Models 010 thru 100) configurations
- Optional A/C for year-round comfort
- Heat recovery available
- Gas auxiliary air heating available
- Advanced microprocessor control

### LOW TEMPERATURE APPLICATIONS



DA2 Series

**DA2 Series** (Ice Rink and Curling Rink Dehumidifiers)

**DA4 Series**  
(Low Temperature Dehumidifiers)

**DA6 Series**  
(Water Treatment Plant and Pumping Station Dehumidifiers)

- 6 Models from 7.0 thru 46.4 lb/h moisture removal and 1,000 thru 10,400 cfm
- Built-in automatic reverse cycle defrost

- Unit mounted or remote controls
- Packaged unit, remote condenser not required



**DRY-O-TRON®**

**USA**  
10935 Crabapple Road,  
Suite 202-B, Roswell,  
Georgia 30075  
Tel.: (770) 649-0102  
1 800 676 2566  
Fax: (770) 649-0243

**CANADA**  
3999 Cote Vertu  
Montreal, Quebec  
Canada H4R 1R2  
Tel.: (514) 336-3330  
Fax: (514) 337-3336

**1 888 DECTRON**  
[www.dectron.com](http://www.dectron.com)