

# RL SERIES

*Dehumidifier System*



## *RL Series:*

- *Variable-speed*
- *Energy efficient*
- *Powerful circulation helps remove moisture from the air efficiently*
- *Flexible Installation*
- *Comprehensive control with a BACnet humidistat or the D77 controller*

# SUSTAINED QUALITY AND DEPENDABILITY

## RL SERIES DEHUMIDIFIERS

The DriSteem dehumidifiers are designed to dehumidify the air coming into the unit by passing the incoming air over an evaporator coil to drop the air temperature below the dew point of the air. Moisture is removed from the air and drained out of the unit to a common floor or waste drain. The air is then reheated in the condenser coil and exits the unit. Dehumidification occurs until the set point is reached, then shuts off until the control determines a need for operation.

## WHY CHOOSE THE COMMERCIAL DEHUMIDIFICATION SYSTEM

### Why dehumidify?

- Condensation and frost protection
- Moisture regain control
- Mold, mildew, fungus protection
- Preservation - storage, equipment, etc.
- Process control

### Flexible

- The most water removal for your investment with 0.03 or 0.06 gallons per minute.
- Perfect for manufacturing, food processing, breweries, storage, etc. applications.
- Capacity from 70 pints/day (3 lb/h) to 710 pints/day (31 lb/h) @ 80°F, 60% RH
- Can be suspended or installed on ground level
- Ducting allows you to separate the unit from the environment, saving space and increasing ease of access

### Easy to maintain

- The RL-31 Series features a variable speed compressor that can modulate the number of BTUs supplied to the refrigeration system. The variable-speed, low grain refrigerant gives the RL-31 dehumidifiers a gas pedal as opposed to an on/off switch.
- DriSteem dehumidifiers incorporate a more sophisticated refrigeration system logic that gives us the ability to monitor the temperature of the coil via suction line temp and regulate the BTU output of the compressor. This helps significantly delay going into defrost and allows the unit to continue removing moisture for as long as possible.
- The self-sealing, MERV 11 air filter protects the unit's vital components, plus it's easy to replace.



### Humidistat controllers

- Digital display of humidity and setpoint.
- Mount to wall or standard junction box.
- One universal input for a remote humidity sensor or use the on-board humidity sensor for control
- Input voltage of either 24VAC or 24VDC.
- One digital output for on/off control
- Basic BACnet® communications

Learn More



## COMPREHENSIVE CONTROL WITH THE D77 CONTROLLER

The D77 control allows the user to set and adjust the humidity setting and turn dehumidification on or off from a convenient location. In this application, the RL Series uses an onboard sensor to monitor the relative humidity (%RH) in the space in which it is located and displays the measured relative humidity on the digital display.

- Control range: 35% – 80% RH
- Accuracy: +/-5% RH



**Table 3-1:  
RL Series Specifications**

	Model RL-3	Model RL-4	Model RL-6	Model RL-9	Model RL-14		Model RL-31	
Capacity <sup>(1)</sup>	70 pints/day (3 lb/hour)	100 pints/day (4 lb/hour)	130 pints/day (6 lb/hour)	210 pints/day (9 lb/hour)	320 pints/day (14 lb/hour)	340 pints/day (15 lb/hour)	710 pints/day (31 lb/hour)	
Voltage	120 VAC, 1 Phase, 60 HZ	120 VAC, 1 Phase, 60 HZ	120 VAC, 1 Phase, 60 HZ	208-240 VAC, 1 Phase, 60 HZ	208-240 VAC, 1 Phase, 60 HZ	277 VAC, 1 Phase, 60 HZ	208-240 VAC, 1 Phase, 60 HZ	277 VAC, 1 Phase, 60 HZ
Operating Current <sup>(1)</sup>	5.8A 115 VAC	6.9A 115 VAC	8.3A 115 VAC	8.6A 240 VAC	11.1A 240 VAC	9.2A 277 VAC	19.6A 240 VAC	17.4A 277 VAC
Rated Current	-	-	-	-	20 amp breaker		24A (install on dedicated 30A circuit)	
Efficiency <sup>(1)</sup>	2.1 L/kWh (4.4 pints/kWh)	2.6 L/kWh (5.5 pints/kWh)	2.8 L/kWh (5.9 pints/kWh)	2.9 L/kWh (6.1 pints/kWh)	2.9 L/kWh (6.1 pints/kWh)	2.5 L/kWh (5.3 pints/kWh)	3.0 L/kWh (6.3 pints/kWh)	
Recommended Breaker Size	15A	15A	15A	15A	20A	20A	30A	30A
Recommended Wire Gauge	14 AWG, Copper	14 AWG, Copper	14 AWG, Copper	14 AWG, Copper	12 AWG, Copper	12 AWG, Copper	10 AWG, Copper	10 AWG, Copper
Maximum Fuse or Breaker Size (MOC)	-	-	-	19A	30A or lower	25A or lower	40A at 208V 35A at 240V	30A
Minimum Circuit Ampacity (MCA)	-	-	-	11A	21.9A at 208V	18.5A	28A at 208V 25A at 240V	21A
Operating Temperature Range	50°F to 104°F (10°C to 40°C), 60°F/40% RH to 85°F/80% RH (15.6°C/40% RH to 25.9°C/80% RH) (ideal conditions for unit to not go into defrost or shut down due to high pressure)							
Operating Dew Point Lower Limit	40°F (4°C)						36°F (2°C)	
Operating Weight	56 lbs (25 kg)	64 lbs (29 kg)	98 lbs (45 kg)	85 lbs (39 kg)	180 lbs (82 kg)		360 lbs (163 kg)	
Shipping Weight	84 lbs (38 kg)	87 lbs (40 kg)	129 lbs (59 kg)	118 lbs (54 kg)	214 lbs (97 kg)		385 lbs (175 kg)	
Drain Size	3/4" FNPT							
Filter (MERV 11)	8" x 11.75" x 1"	11.88" x 13.5" x 1"	14" x 19" x 1"	14" x 18" x 2"	20"x22"x2"		30" x 32" x 2"	
Airflow @0.0" ESP	200 CFM (340 m³/h)	280 CFM (476 m³/h)	310 CFM (527 m³/h)	525 CFM (892 m³/h)	830 CFM (1410 m³/h)		1760 CFM (2990 m³/h)	
Power cord	Units shipped with 8' (2.43 m) power cord			Units shipped with 10' (3.05 m) power cord or can be hard wired.				
Dehumidifier control	50°F and 104°F (10°C to 40°C) cut off							
External control	On/off dry contact							
<sup>(1)</sup> Rated capacity and energy factor test done and current draw measured in accordance with AHAM DH-1 2008 at 80°F (26.7°C), 60% RH inlet air at 0.0 ESP.								



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a subsidiary of Research Products Corporation  
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**Expect quality from the industry leader**

Since 1965, DriSteem has been leading the industry with creative and reliable humidification solutions. Our focus on ease of ownership is evident in the construction of DriSteem products. DriSteem leads the industry with a Two-year Limited Warranty and optional extended warranty.

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