Product Brochure
Commercial Package Units | HumidiDry™ Series

TAKING COMFORT TO THE NEXT LEVEL

Ruud HumidiDry™: Delivers maximum humidity control without compromising desired temperature set point for consistent, reliable comfort.

- **Delivers dry, neutral air in reheat mode**
- **Available on Package Gas Electric Units and Package Air Conditioners in 3 to 25 ton models**
- **Variable Frequency Drive (VFD) Technology standard on 7½ ton and above models**
- **Easy installation and service with ClearControl™**

Rely on Ruud.™

ruud.com

MAINTAIN IDEAL HUMIDITY LEVELS FOR MORE COMPLETE COMFORT

The HumidiDry™ Series from Ruud keeps humidity levels constant even when there's little or no demand for air conditioning, giving business owners independent control of temperature and humidity.

HOW HumidiDry WORKS

Cooling Mode

- The HumidiDry Rooftop Unit is controlled by a thermostat and a humidistat. The thermostat takes priority on single-stage systems.
- When the thermostat is activated by temperatures that exceed its set point, HumidiDry operates like a standard rooftop unit. It can operate on first-stage cooling when demand is low or at full capacity when air conditioning load is high. Unlike other rooftop or reheat units, HumidiDry is uniquely designed so the VFD will operate at a low speed, increasing moisture removal during first-stage cooling operation. This provides initial defense for controlling humidity. **Figure 1**.

Dehumidification Mode

- When the temperature is desirable but humidity exceeds the humidistat set point, the HumidiDry Rooftop Unit initiates a dehumidification cycle using a combination of hot gas and subcooling reheat. During this cycle, the HumidiDry Rooftop Unit delivers dry, neutral air. **Figure 2**.
- On the two-stage system, it is possible for both the thermostat and humidistat to register readings above set point. Under this condition, the first-stage system runs in the dehumidification cycle, the second-stage system runs in a cooling cycle and VFD operates on high speed. This provides dry, conditioned air.

Figure 1

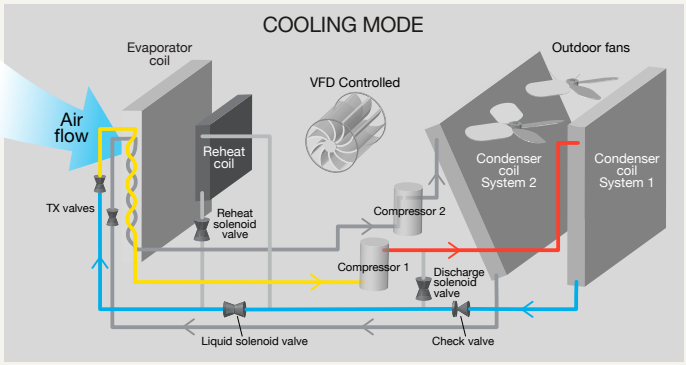
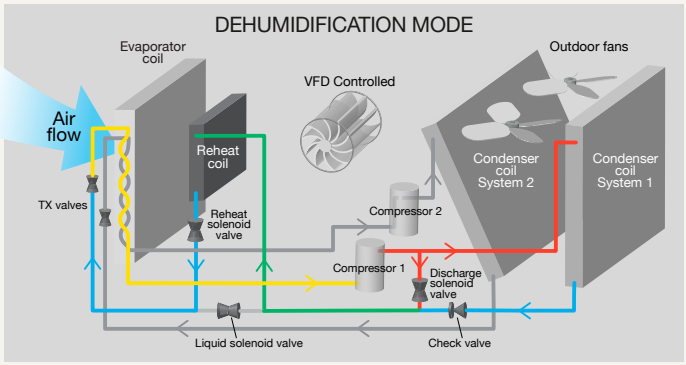


Figure 2



HumidiDry FITS MANY COMMERCIAL APPLICATIONS

Engineered for consistent, reliable comfort, HumidiDry delivers cooling performance with maximum humidity control that is ideal for a variety of commercial environments.

Health Clubs

Schools

Restaurants

HumidiDry FEATURES AND BENEFITS

Advanced Comfort
HumidiDry removes moisture from the air — even when the air conditioner isn't running — for advanced comfort.

Neutral Air
An outdoor fan motor controller modulates condenser fan speed in relation to line temperature to maintain neutral air delivery over a wide range of indoor and outdoor conditions.

VFD Technology
The Ruud HumidiDry Series is the first system in the dehumidification market to incorporate a VFD that operates at a lower speed on first-stage cooling, when in the reheat mode and when operating in occupied fan mode. This saves energy, enhances performance and increases comfort.

ClearControl™ System Diagnostics
A keypad-driven menu and a two-line, 16-character display provide convenient communication with the system. Also, its BAS-compatible control identifies problems quicker, allowing the unit to operate more efficiently and reducing costs when service is required.

Service Access
The HumidiDry Series is designed for easy maintenance with features that include 1/4-turn service access; slide-out drain pan, blowers and filters; and external gauge ports.

ASHRAE Guidelines
The HumidiDry Series helps achieve ASHRAE 90.1-2010, ASHRAE 62.1 and California Title 24.

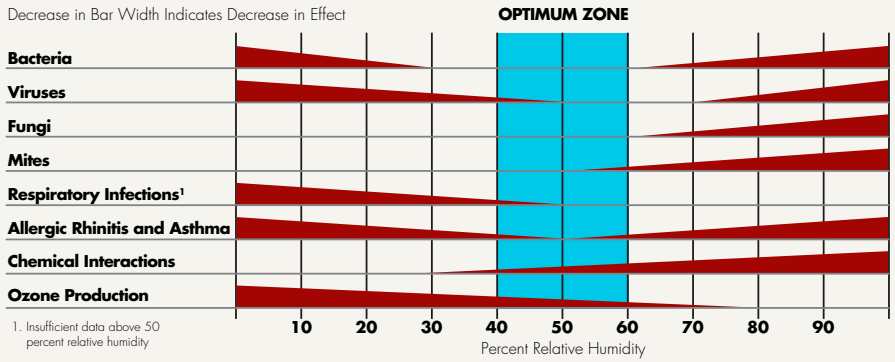
Ruud Quality
Advanced engineering based on established technologies offers a hassle-free comfort solution.

Warranty*
The HumidiDry Series comes equipped with standard warranties of one year on parts, five years on the compressor and 10 years on the heat exchanger.

CUSTOMER BENEFITS

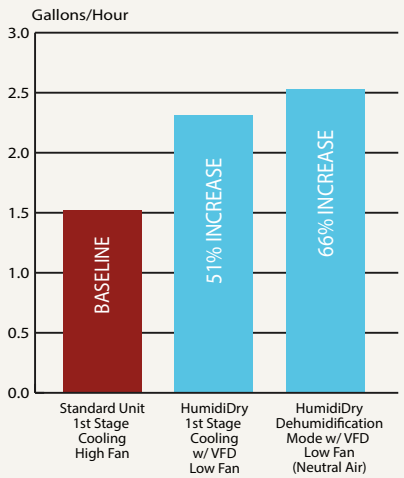
The Ruud HumidiDry Series comes equipped with a host of features designed to address the concerns of specifying engineers, contractors and facility managers. HumidiDry is designed to maintain humidity at an acceptable level, generally between 40%-60% relative humidity, meeting the indoor air quality and performance standards of most businesses. Furthermore, HumidiDry can deliver up to 51% more moisture removal in the first stage of cooling over a standard rooftop unit. In the dehumidification mode, the HumidiDry can deliver up to 66% more moisture removal than a standard rooftop unit, helping contractors, facility managers and specifying engineers provide superior comfort and efficiency to customers — benefits Ruud has delivered for more than 100 years.

IDEAL HUMIDITY



Source: *Environmental Health Perspectives*

MOISTURE REMOVAL COMPARISON



(7½ ton unit operating at 80 RA.DB; 67.6 RA.WB; 82 OA.DB)

COMPARISON BETWEEN HumidiDry AND STANDARD ROOFTOP UNIT

FEATURE	HumidiDry SERIES	STANDARD ROOFTOP UNIT
Dehumidification without a call for cooling	Yes	No
Better dehumidification than temperature-based systems	Yes	No
Full-load dehumidification with part-load cooling	Yes	No
Improved latent capacity over cooling operation	Yes	No

**Please refer to the Commercial Warranty Certificate for more details.*

HumidiDry™ SPECIFICATIONS

PACKAGE GAS ELECTRIC UNIT

COOLING DATA							HEAT INPUT		PHYSICAL DATA	
MODEL	NOMINAL TONNAGE	GROSS CAPACITY (BTUH)	AHRI RATED NET CAPACITY (BTUH)	NOMINAL CFM/ARI RATED (CFM)	EER	SEER/ IEER	STANDARD: (BTUH)	HIGH: (BTUH)	DIMENSIONS H X W X L (INCHES)	SHIPPING WEIGHT (LBS)
RKNL-G036	3.0	36,800	35,400	1200/1200	11.40	13.00/-	80,000	120,000	35 x 48 1/16 x 76 1/4	594-606
RKNL-G048	4.0	50,000	48,000	1600/1600	11.45	13.00/-	80,000	135,000	35 x 48 1/16 x 76 1/4	631-648
RKNL-G060	5.0	61,000	59,000	2000/1900	11.10	13.00/-	100,000	135,000	35 x 48 1/16 x 76 1/4	641-648
RKNL-G090	7.5	93,000	90,000	3000/2775	11.20	-/14.0	75,000/150,000	112,500/225,000	44 x 58 3/4 x 93 11/16	1104-1140
RKNL-G120	10.0	123,000	118,000	4000/3750	11.20	-/13.8	75,000/150,000	112,500/225,000	44 x 58 3/4 x 93 11/16	1199-1235
RKNL-G151	12.5	148,000	140,000	5000/4250	11.00	-/14.0	75,000/150,000	112,500/225,000	44 x 58 3/4 x 93 11/16	1278-1319
RKNL-G180	15.0	188,000	182,000	6000/5900	11.10	-/14.8	125,000/250,000	175,000/350,000	57 x 85 29/32 x 152 1/16	2164-2206
RKNL-G240	20.0	244,000	234,000	8000/7725	11.10	-/14.0	150,000/300,000	200,000/400,000	57 x 85 29/32 x 152 1/16	2495-2547
RKNL-G300	25.0	304,000	288,000	10,000/9475	10.00	-/14.1	150,000/300,000	200,000/400,000	57 x 85 29/32 x 152 1/16	2594-2619

PACKAGE AIR CONDITIONER

COOLING DATA							kW RANGE		PHYSICAL DATA	
MODEL	NOMINAL TONNAGE	GROSS CAPACITY (BTUH)	AHRI RATED NET CAPACITY (BTUH)	NOMINAL CFM/ARI RATED (CFM)	EER	SEER/ IEER	LOW	HIGH	DIMENSIONS H X W X L (INCHES)	SHIPPING WEIGHT (LBS)
RLNL-G036	3.0	36,800	35,400	1200/1200	11.40	13.00/-	10	20	35 x 48 1/16 x 76 1/4	558
RLNL-G048	4.0	50,000	48,000	1600/1600	11.45	13.00/-	10	20	35 x 48 1/16 x 76 1/4	595
RLNL-G060	5.0	61,000	59,000	2000/1900	11.10	13.00/-	10	20	35 x 48 1/16 x 76 1/4	605
RLNL-G090	7.5	93,000	90,000	3000/2775	11.20	-/14.0	10	50	44 x 58 ¾ x 93 11/16	1086-1094
RLNL-G120	10.0	123,000	118,000	4000/3750	11.20	-/13.8	10	50	44 x 58 ¾ x 93 11/16	1181-1189
RLNL-G151	12.5	148,000	140,000	5000/4800	11.00	-/14.0	10	50	44 x 58 ¾ x 93 11/16	1303-1267
RLNL-G180	15.0	188,000	182,000	6000/5900	11.10	-/14.8	20	75	57 x 85 29/32 x 152 1/16	2032-2061
RLNL-G240	20.0	244,000	234,000	8000/7725	11.10	-/14.0	20	75	57 x 85 29/32 x 152 1/16	2357-2395
RLNL-G300	25.0	304,000	288,000	10,000/9475	10.00	-/14.1	20	75	57 x 85 29/32 x 152 1/16	2356-2467

Ruud USA • P.O. Box 17010
Fort Smith, Arkansas 72917

Ruud Canada • 125 Edgeware Road, Unit 1
Brampton, Ontario L6Y 0P5

RUUD.COM
Printed in the U.S.A. 03/13 QG Form No. M22-1642 Rev. 1