

# Aurora Plus Refrigerated Air Dryers



**RDV Series**  
15 to 3800 scfm

**AURORA**<sup>®</sup>  
Performance Compressed Air Systems

# Optimal Performance



Aurora's "RDV" series energy saving refrigerated air dryer is equipped with the latest advancements in refrigeration, including variable speed control technology in order to provide low operating costs and years of trouble free performance.



The variable speed control technology monitors the refrigeration system's performance and heat load to automatically adjust to the user's demand especially under varying or no load conditions. This energy saving feature was engineered specifically for use with the patented "X-FLO" heat exchanger to optimize both performance and energy savings.

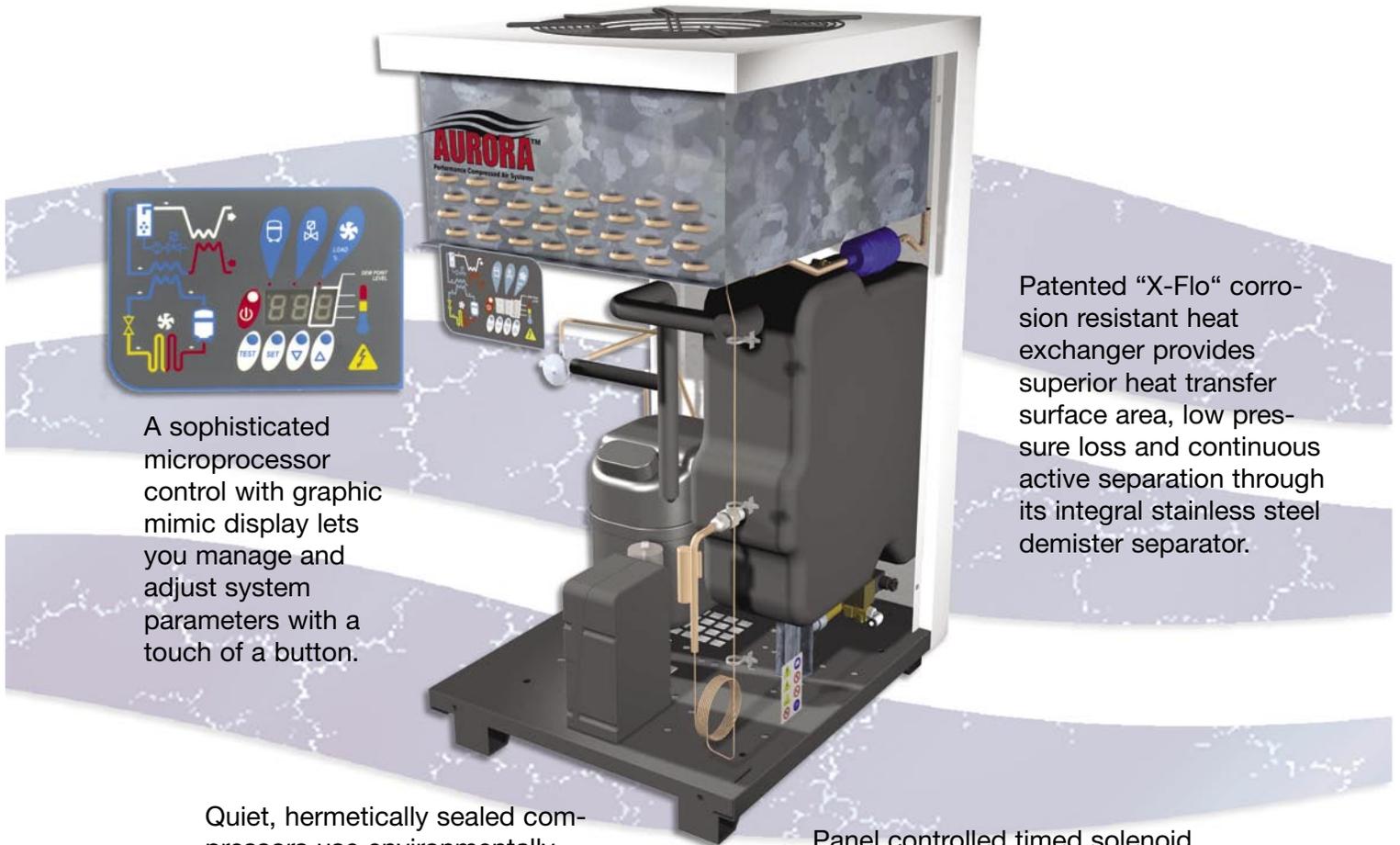
## Standard Features

- *Microprocessor controls with dew point display indication*
- *All-in-one aluminum design heat exchanger*
- *No interconnecting piping*
- *Lowest pressure drop*
- *Demister type moisture separator*
- *Constant pressure dew point*
- *Environmentally friendly refrigerants*
- *Variable speed condenser fans*
- *Extended service life*
- *Automatic internal timed drain solenoid*
- *Wall mount RDV 15-100*



# Through Advanced Technology

Variable speed fan (RDV 0015 - 0250) matches user demand, reduces power consumption and provides additional energy saving while maintaining a constant dew point when operating at less than design conditions.



A sophisticated microprocessor control with graphic mimic display lets you manage and adjust system parameters with a touch of a button.

Patented "X-Flo" corrosion resistant heat exchanger provides superior heat transfer surface area, low pressure loss and continuous active separation through its integral stainless steel demister separator.

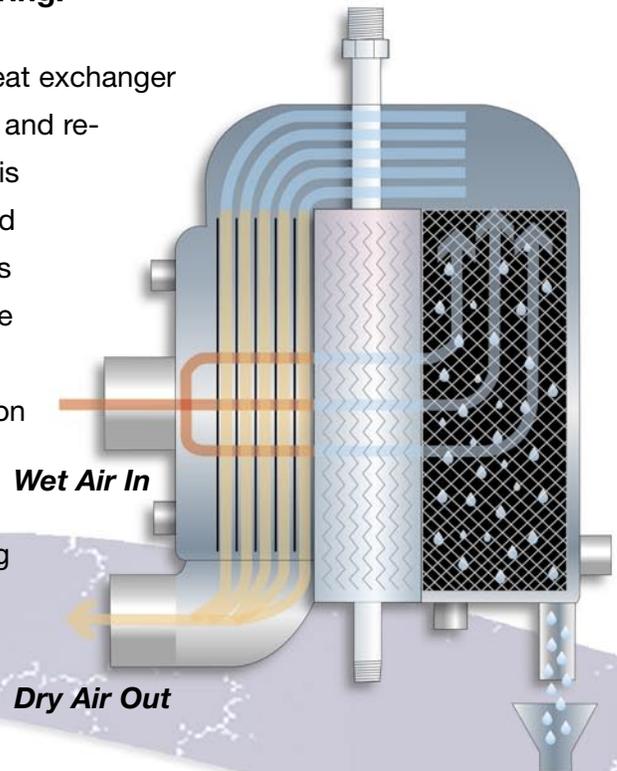
Quiet, hermetically sealed compressors use environmentally friendly refrigerants R-134a and R-507 on RDV 0400 and larger.

Panel controlled timed solenoid drains are standard on all RDV models and are installed with a "Y" strainer isolation valve.

**5**Year  
Heat Exchanger  
**2**Year  
Bumper to Bumper  
WARRANTY

## Proven Performance . . . Exceptional Engineering.

The “RDV” dryer’s advanced “X-FLO” all aluminum heat exchanger module bundles the pre-cooler, evaporator, separator and re-heater all in one hermetically sealed compact unit. This reduces the size, weight and pressure drop associated with conventional type heat exchangers and optimizes the overall performance and reliability of the dryer. The “X-FLO” heat exchanger with integral demister type moisture separator provides continual active separation which, unlike centrifugal separators, ensures greater than 99.9% efficiency in the removal of condensed liquids from 0 to 100% of rated airflow while providing a 38° F pressure dew point.

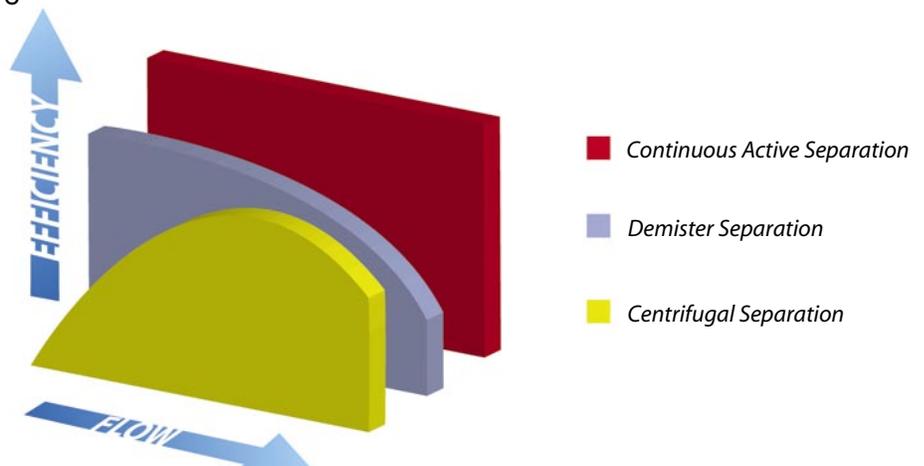


### Continuous Active Separation

#### *The key to excellent dewpoint performance*

The cross sectional matrix of the ‘X-FLO’ 4 in 1 heat exchanger with extremely low air velocities, enables a substantially lower resistance to air flow and provides amplified energy savings.

Dew point performance is further enhanced and maintained as a result of Continuous Active Separation which is non-velocity dependent. The moisture latent compressed air immediately begins separation as it enters the generously sized air channels in the pre-cooler section and continues separation through the evaporator as it enters the stainless steel demister moisture separator. In the final stage of continuous active separation, remaining liquid water and water vapor are removed through the beneficial effects of “Cold Coalescing” as moisture coalesces, impinges and is drained out of the system by integrated condensate drains. The combination of these effects produces a constant dew point over a wider range of air flows than standard demister and centrifugal type separators alone.



## Product Selection & Technical Data



### Technical Data

Maximum ambient temperature Models RDV 0015 - RDV 3800 113°F (55°C)  
 Minimum ambient temperature Models RDV 0015 - RDV 3800 41°F (5°C)

Maximum inlet temperature Models RDV 0015 - RDV 3800 131°F (45°C)

Maximum inlet pressure Models RDV 0015 - RDV 0100 232 psig (16 Bar)  
 Models RDV 0125 - RDV 0400 203 psig (14 Bar)  
 Models RDV 0500 - RDV 3800 174 psig (12 Bar)

Model	Nominal Capacity	Air Connection	Dimensions (inches)			Weight	Primary Voltages	Full Load Kw
	SCFM	NPT	Length	Width	Height	Lbs.		
RDV0015	15	1/2	14	12	16	25	115-1-60	.197
RDV0030	30	1/2	17	15	17	66	115-1-60	.310
RDV0040	40	1/2	17	15	17	104	115-1-60	.49
RDV0055	55	3/4	21	17	22	110	115-1-60	.49
RDV0075	75	3/4	21	17	22	110	115-1-60	.79
RDV0100	100	1	21	17	22	132	115-1-60	.88
RDV0125	125	1 1/2	24	20	39	187	230-1-60	1.35
RDV0175	175	1 1/2	24	20	39	203	230-1-60	1.35
RDV0200	200	1 1/2	24	20	39	203	230-1-60	1.78
RDV0250	250	1 1/2	24	20	39	220	230 & 460-3-60	1.93
RDV0400	400	2	29	30	56	265	430-3-60	2.15
RDV0500	500	2	29	30	56	287	430-3-60	3.31
RDV0600	600	2	29	30	56	331	430-3-60	3.68
RDV0800	800	3	52	32	63	573	430-3-60	5.73
RDV1100	1100	3	52	32	63	595	430-3-60	6.62
RDV1400	1400	3	52	32	63	661	430-3-60	7.63
RDV1600	1600	4Flg	52	36	63	728	430-3-60	7.63
RDV2000	2000	6Flg	60	59	62	925	430-3-60	9.25
RDV2400	2400	6Flg	60	59	62	1150	430-3-60	13.88
RDV3000	3000	6Flg	60	59	62	1375	430-3-60	15.83
RDV3600	3600	6Flg	60	59	62	1590	430-3-60	15.83
RDV3800	3800	6Flg	60	59	62	1650	430-3-60	15.83

### Correction Factors

Capacity correction factors to be used when the operating conditions differ from design conditions. To obtain the dryer's available capacity at new conditions, multiply the nominal capacity by the correction factors below.  
*(nominal capacity x C1 x C2 x C3 = dryers new capacity)*

#### Ambient Temperature (C1)

°F	80	90	100	110	113
°C	27	32	38	43	45
Correction Factor	1.14	1.05	1.00	0.94	0.89

#### Inlet Air Temperature (C2)

°F	90	95	100	110	120	131
°C	32	35	38	43	49	55
Correction Factor	1.22	1.12	1.00	0.81	0.69	0.56

#### Working Pressure (C3)

PSIG	60	80	90	100	125	150	175	230
BAR	4.1	5.5	6.2	6.9	8.6	10.3	12.1	15.9
Correction Factor	0.83	0.93	0.97	1.00	1.07	1.12	1.19	1.26

Dryer capacities are based on 100°F (38°C) ambient air temperatures, 100°F (38°C) inlet air temperature and 100 psig (7 bar) inlet air pressure to achieve a 38°F (3°C) pressure dew point.



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