

# X-DRY ac Series

Precision Engineered Makeup Air Systems

**annexAir**

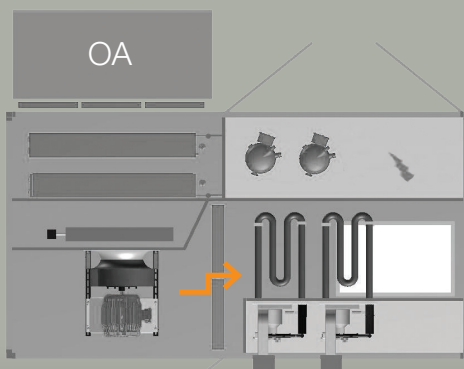


For projects where return airflow is not possible and your only design option is a makeup air system, Annexair has the solution: the X-DRY ac Series. With its substantial refrigeration system modulating capacity and turndown ratio of up to 12:1, this new generation of makeup air system easily outperforms the competition.

## The Most Advanced Energy Efficient Air Cooled Makeup Air Packaged Systems

The X-DRY ac Series, a packaged system for 100% outside air dehumidification, is available in seven capacity sizes. Each model comes standard with direct expansion cooling and hot gas reheat coils, with the choice of either gas, electric, hot water, or steam coil heating.

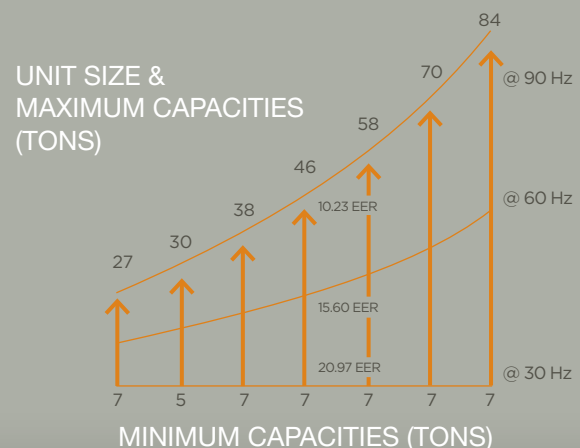
- 100% Outside Air
- 22 to 84 tons of cooling with modulating V3 technology
- Accurate dehumidification with modulating Hot Gas Reheat
- R-410A
- 7 capacity sizes
- 1800 to 13400 CFM
- Choice of heat: gas, electric, hot water, or steam coil
- Micro channel condenser coils
- Optional bottom or end discharge
- Variety of filter efficiencies, up to MERV 15



## V3 Technology Innovative Energy Friendly Engineering

Annexair has capitalized on advancements in compressor technology to create its revolutionary V3 technology, a concept that surpasses all other multi-stage techniques.

It's no secret that 100% makeup air systems are the most costly to operate. Continuous setpoint satisfaction is the reason why these systems require greater amounts of energy. We designed our V3 technology to radically reduce energy requirements and even eliminate all peak loads at unit start-up, helped by our soft-start compressors and their 30 to 90 Hz modulating capability. For example, a 22 ton unit will modulate from 7 to 22 tons and a 30 ton unit will modulate from 5 to 30 tons. The figure below demonstrates the modulating capacities of each casing size, from the minimum to maximum capacities including EER value for 30, 60, and 90 Hz operation.



# Engineered to Minimize Energy Costs

In the face of constantly increasing energy costs, Annexair is responding by creating smart, energy-conscious designs. The traditional multi-stage compressor approach tries to improve comfort and generate savings—but without modulation, the opposite occurs. After analyzing many different cooling control techniques, the Annexair design team concluded that variable speed compressors are the best choice for the new X-DRY ac Series. Our makeup air line uses minimum amounts of energy without compromising on comfort.

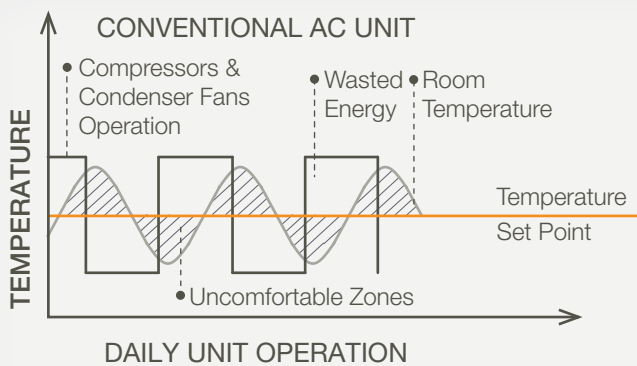


Figure 1 shows how conventional AC units continuously cycle on and off, wasting energy and affecting comfort levels.

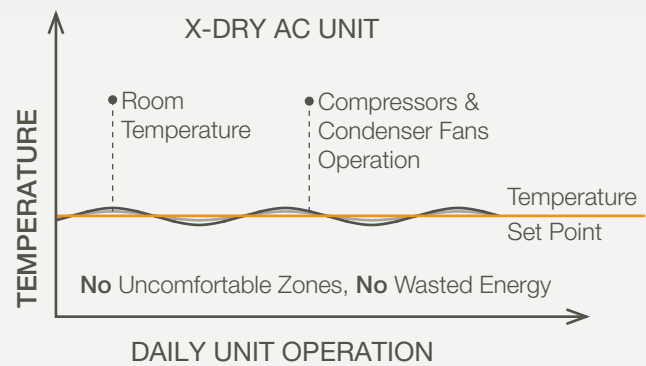


Figure 2 illustrates how the X-DRY ac units require less power to maintain comfort levels and how it eliminates ON/OFF cycling. Supply temperature can be held to  $\pm 0.2^\circ\text{F}$  of desired set points. As a result, annual unit operating costs can be 15 to 30% less than conventional systems, depending on location.

## Designed for Maximum Comfort

Designing an affordable refrigeration system that delivers increased comfort and savings is a challenge. But every X-DRY Annexair model does just that. By using only variable speed compressors and variable speed condenser fans in unison, we have created the perfect sequence to maintain comfort levels and avoid wasting energy.



# Innovative Construction Features

Our engineering team thoughtfully designed the X-DRY ac Series to deliver performance, reliability, quietness, and ease of servicing. Compare our X-DRY ac construction features to those of the competition:

## X-DRY ac Series

- Integrated electrical panel
- Distanced compressors from supply opening
- Weatherproof compressor compartment
- Minimum 12" space between DX and HGRC
- Pre-filters mounted on OA intake entrance
- Higher filtration efficiencies (MERV 15)

## The competition

- External electrical panel
- Compressors located near/above opening
- Open-air compressor installation
- Minimal space—just inches—between both coils
- Pre-filters mounted further within the unit
- Lower filtration efficiencies

## Capacity Range

X-DRY Model	CFM	Minimum Tons 30 Hz	Medium Tons 60 Hz	Maximum Tons 90 Hz	Turndown ratio (cooling)	Gas Heat Capacity (MBH) min-max
<b>22</b>	1,800 – 5,200	7	14	22	3:1	200 – 700
<b>30</b>	2,400 – 7,600	5	17	30	6:1	250 – 1050
<b>38</b>	3,200 – 9,600	7	22	38	5:1	300 – 1200
<b>46</b>	4,000 – 10,000	7	27	46	7:1	300 – 1200
<b>58</b>	4,800 – 12,000	7	36	58	8:1	350 – 1600
<b>70</b>	6,000 – 12,000	7	42	70	10:1	500 – 1600
<b>84</b>	7,200 – 13,400	7	49	84	12:1	500 – 1600
	<b>EER</b>	<b>20.97</b>	<b>15.60</b>	<b>10.23</b>		

EER values shown are for compressor EER, Based on ARI conditions.



# X-DRY ac Standard Features



1 Bottom or side discharge opening option 2 Unit base with crossbeams made from lightweight, rust-resistant rigid aluminum tubing 3 Low velocity intake hood with tool-free hinged louver for filter access 4 Multiple choice of OA filters 5 Centralized service compartment

1 High efficiency & low sound variable speed condensing fans 2 Protective nylon screen for condenser coil 3 Direct drive supply fan and motor 4 Large hinged access doors 5 Gas furnace compartment (can be electric, hot water, or steam coil) 6 100% waterproof, white reflective PVC membrane to reduce solar heat gain 7 Optional PVC GFI outlet 8 Lockable non-fused main disconnect 9 Double wall G90 foam panel with low VOC polyurethane paint finish



For more information, please contact your local representative or the Annexair Sales Office.

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