

# Dehumidifiers Without Water

**ECOR** **PRO**

Models DH800, DH1200  
DH2500 & DH3500

Using Ecor Pro  
Technology



# **The One Question to Learn For Success**

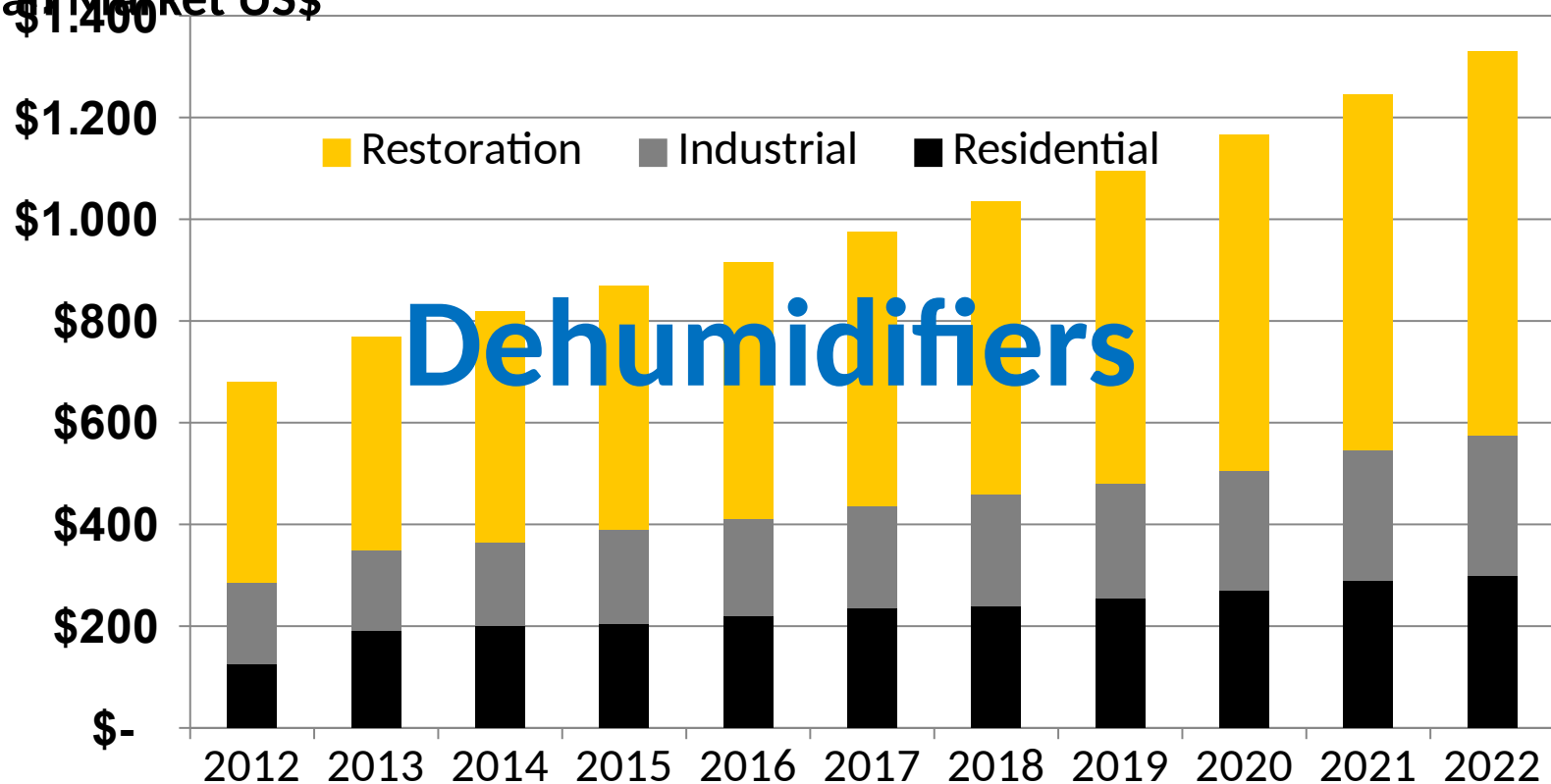
**Q: “Does the Dehumidifier Have to  
Run  
All Day Every Day Unattended?”**

**A: “Then you need a DryFan”**

# Over \$1Bn Market Opportunity

European Market US\$

Source Ameri Research Inc



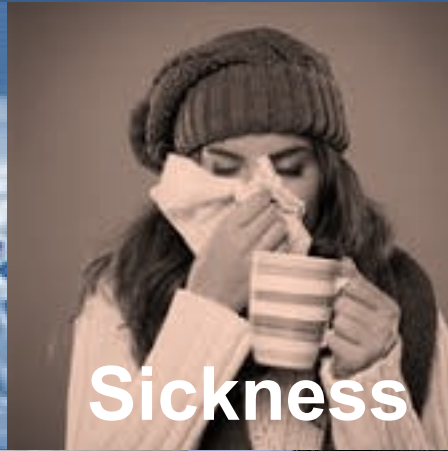
Dehumidifiers

# The Problem of Excess Humidity

Condensation



Sickness



Dampness



Rust



Mould



Smells



Rot



# Understanding Humidity

The lower the humidity level % is, the dryer it is.

Humans feel comfortable at humidity levels around 55-65%.

Rust can form at humidity levels above 55%

At humidity levels of less than 50% humans feel uncomfortable with dry throat & eyes



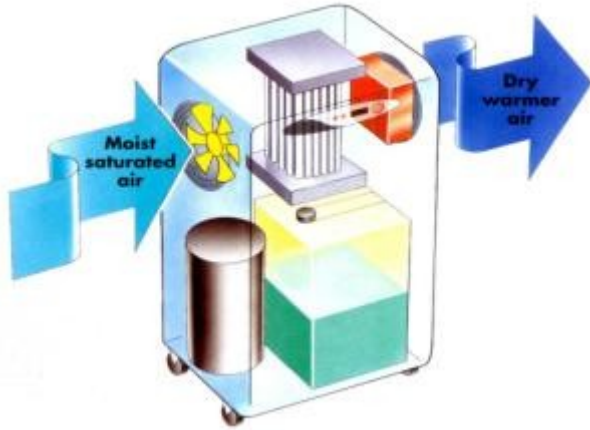
Air holds less water at cold temperatures than it can at warmer temperatures.

After 100% humidity moisture can be seen forming as clouds.

For instance, as warm, humid air rises up a mountain to a cooler temperature it forms clouds



# What is a “Normal” Dehumidifier?



## A “Normal” refrigerant dehumidifier

Room air is drawn into the dehumidifier and over a cooled surface where the water in the air can condense. This condensation is collected. As the air passes through it returns to the room dryer. **150 year old technology.**

- Air holds more water when its warm
- If we cool air it can not hold as much water
- Condensation is warm moist air coming into contact with a cool surface & giving up that moisture
- That moisture can then collected in a water container
- The “Normal” dehumidifier makes a cool surface inside for the air that pass through, condense and be returned to the room dryer.
- This cool surface is made with a refrigeration gas that is driven by a compressor. Therefore, these normal dehumidifiers are often referred to as “Refrigeration” or “Compressor” dehumidifiers.

**Ability to dry is dependant on difference in temperature between the air and the cold surface inside the normal dehumidifier.**

**They work great with warm air but poor in colder conditions**



# The Other Issues To Overcome

Since 2015, 5 million refrigerant dehumidifiers or “Normal” were recalled in North America due to safety issues

In Europe a further 1 million “Normal” dehumidifiers have been recalled in the same period.



A new technology was needed for dehumidifiers that would also address identified problems with “Normal” units

- Too loud
- Take up too much space
- Don't work well in normal room temperatures
- “White Box” always on show
- You have to empty water out
- Can be safely used while unattended

All “Normal” dehumidifiers in the past and many still today carry the warning in the user manual:

**“Must Be Used In Attendance!”**



# So Why are they the Solution?





# DryFan<sup>®</sup> Technology



Humid Air-In

Saturated Wet  
Air to the  
Outside

Internal or  
External  
Controls

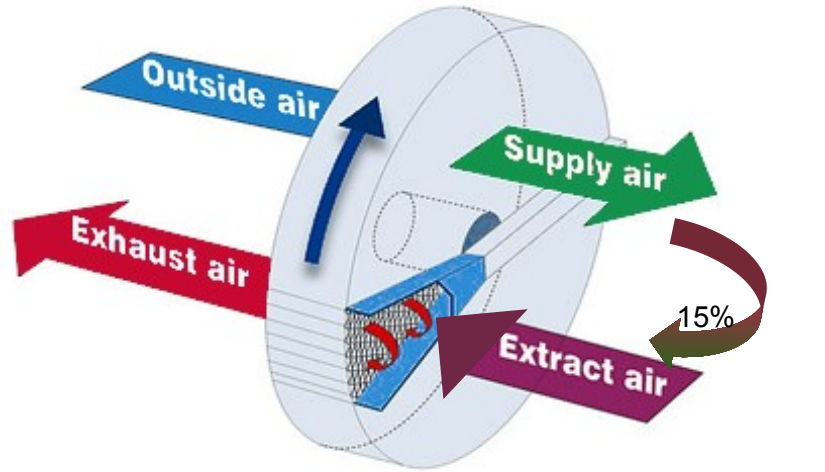
Filtered Dry Air  
Out



***“Clothes Dryer for the Air”***

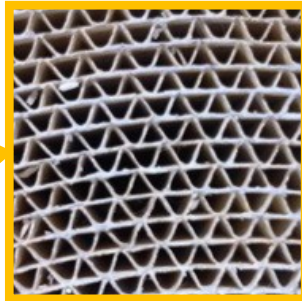
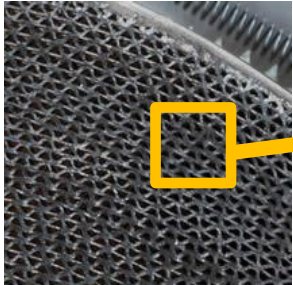


# How It Works



- Inside a wheel rotates around 3 times per minute
- The wheel has flutes like a strip of rolled up card board giving a high surface area which is coated in Zeolite®
- This is commonly used in packaging materials in small sachets for new cameras, shoes, handbags etc,
- Zeolite® absorbs moisture even below freezing but will give up its retained moisture when heat is applied at 150°F (65°C)
- Room air is passed through most of the wheel where it is dried. Part of that dry air (15%) is returned back on itself, heated then passed through a small section. This is the “extract air”.
- This “extract air” is hot and takes away the moisture. Its water saturated air, not condensed water so can be expelled or rather ducted away in any direction.
- There is no water bucket or hose to drain or collect water

*“Like a clothes dryer for the air”*



# How Do I Know its Working?



1. Is there warm air coming out the exhaust?
2. If I look inside behind the filter or in a duct is the wheel inside turning slowly?

**Yep its working!**

**Very Reliable**

No water comes out  
so how do it know its  
working?



# Advantages Over “Normal” Units

- **Tiny** = Typically 1/3 the volume & 1/2 the weight
- **Hidden** = Can be used remotely with ducting air from room to room
- **Echo Sounds** = No deep compressor tones just the sound of the turbo fan
- **Below Freezing** = Works down to -20°C up to 40°C (others stop at 4°C to 6°C)
- **Easy Maintain** = No water contain to clean just clean the air filter as needed
- **Safer** = Less moving parts, top grade materials & metal case makes
- **Transport Safe** = No refrigeration pipes to break during transit
- **One Man Lift** = All models below 52lbs (25kg) so single person lift
- **No Drain** = No drain pipe to block or water pump to fail with secondary flooding
- **Every Way** = Can put on walls, ceilings even upside down & save floor space

## & Water Can Go Upwards...!

The water is being expelled from DryFan® as vapour.  
Vapour can be made to go in any direction even upwards.



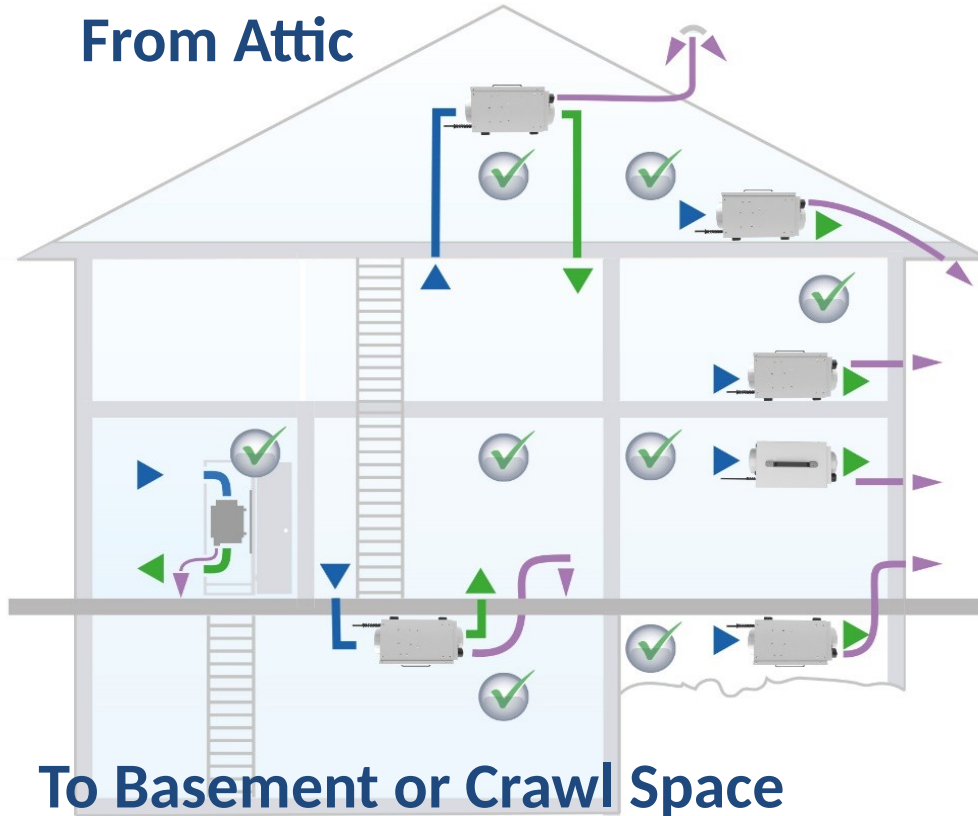


# So Where Can We Use Them?

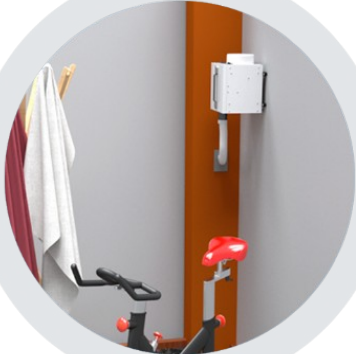
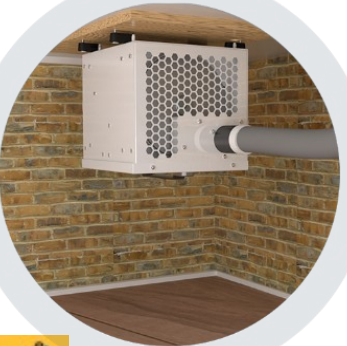


# All Around the Home!

From Attic



To Basement or Crawl Space





# Perfect For Multi Family Dwellings



**Cupboard**



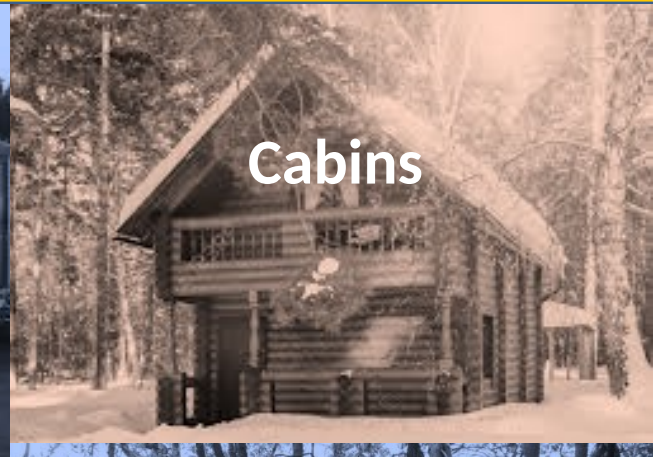
**Basement  
or  
Attic**

**Landlords protect their property with the DryFan dehumidifier & keep it away from any tenant who may want to turn it off or even sell it**

**They don't even have to see it locked in a cupboard or attic.**



# Areas Outside the Home



# 247 Commercial Use



**Military**



**Archives**



**Warehouses**



**Stores**



**Animal  
Care**



**Food Prep**



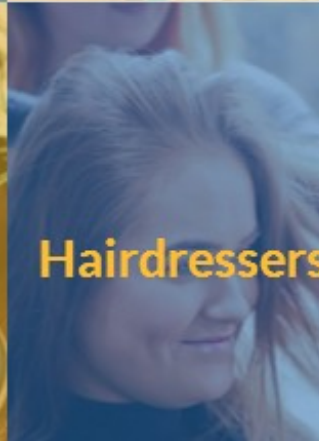
**Offices**



**Museums**



**Restaurants**



**Hairdressers**



**Substations**



**Farms**

**Q: “Does the Dehumidifier Have to Run  
All Day Every Day Unattended?”**

**A: “Then you need a DryFan”**

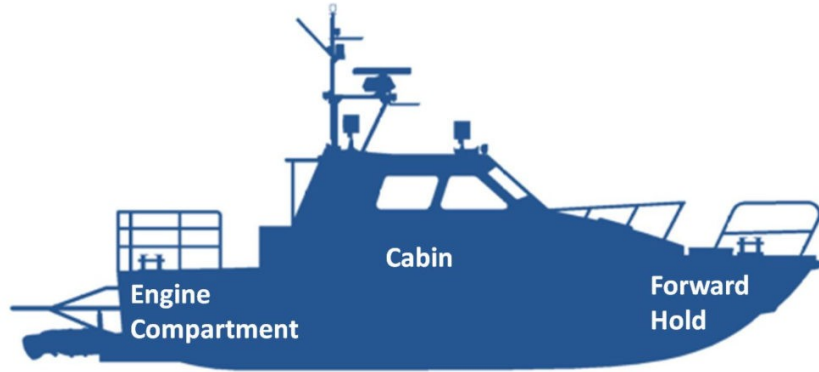


# Other Unique Applications?





# The Best Boat Dehumidifier



**Yachting World**  
INTERNET EDITION

**The DryBoat  
by Ecor Pro**  
★★★★★

It's rare that we rate something this highly but the DryBoat 12 has proven to be a superb marine dehumidifier that has delivered exceptional results all summer in tough environments such as Svalbard and Norway. **II**  
[www.ecorproducts.com](http://www.ecorproducts.com)



*“Practical Boat Owner Magazine recommended as the safest dehumidifier for a boat & Yachting World voted as best Boat Dehumidifier”*

- In the engine room humidity can not only cause trouble with the engine starting but also cause more long term humidity problems
- Forward sail lockers can also protect. A sail must be dried each time it is used to prolong its life.
- The cabins have furnishings and beddings that need to be kept dry. Not only to feel fresh but also to prevent mould.
- Sailing clothes also can be kept dry. Use the unit in a clothing cupboard onboard to keep clothes ready for the next day.
- The internal structure of a boat can rot & decay with excess humidity. Much of the time this is unseen.
- The “Pro” models DH800 INOX, EPD00 INOX, DH2500 INOX & DH3500 INOX are made with 316 Stainless Steel inside & out. Marine grade steel. Not only needed for boats but also used in the food industry applications

# Dealing with Damp Inside the Boat



Condensation Can Ravage Cabins



**Always a place to vent**

**Often used in port after sailing using the land power supply rather than when on the water sailing**



# Key Commercial Opportunities



- The rooms are kept dry by air conditioning often. When there is no occupant the room air conditioning is off.
- There is often a damp smell when the guest opens the door for the first time. Sometime hotels avoid this by using air treatment products to help the air smell better
- In extreme cases the hotel will shut parts of the hotel out of season. Then the hotel must keep furnishings getting mould
- The cost of having to replace furniture for a hotel is far more expensive than purchasing a DryFan®

*“Hotels & Motels”*



# More Commercial Opportunities



- Food in freezers can be attached by frost which lessens the lifetime of the produce and is a cost for any hospitality venue. An Ecor Pro DH3500 can reduce damaging frost and also stop the floor from getting as icy in doorways of walk-in freezers. This is of course a health hazard.
- Reducing moisture in cold room also reduces the load on the refrigeration coils. It therefore costs less money to maintain temperatures & less servicing to defrost
- Retail premises and food lockers kept dry help to keep smells away food fresher & healthier

*“Catering Restaurants, Reatilers  
& Hotels”*



# Simple Operation



# Great For Restoration



# How Do I Know its Working?



In a flooded home there are many places the exhaust duct is put

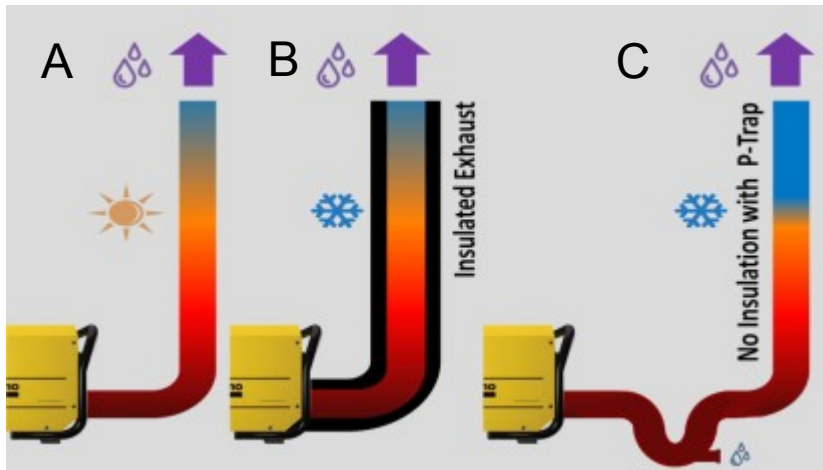
1. **Open window**  
Ingress of air usually has little negative effect!
2. **Air vent or air brick**
3. **Emptied toilet into soil pipe**
4. **Kitchen extractor**
5. **Letter box**
6. **Extractor fan grill**

Where do I put the exhaust duct?



*Example has put a wooden sheet in window area*

# Moisture is Ducted not Drained



## Make Sure No Condensation

As the air is exhausted it cools along the exhaust pipe. If it cools too much then condensation can form in the exhaust that could run back into the DryFan

- A. In normal circumstances air will be warm enough for any ducting of standard length to cause no problems with condensation inside the exhaust
- B. If the ambient environment is cool or indeed icy then the exhaust can be simply lagged with insulation
- C. If condensations is still a concern a P-Trap can be added to the exhaust The can catch any condensation In the exhaust and that can be collected. Depending on the severity of the condensation a water container or drain can be used

**Exhausted air is around max 150°F**  
**This Temperature Will Not Affect**  
**Human Skin When in Contact**





# List of Applications is Endless



# Comparing DH2500 & DH3500

DH2500



DH3500



Model	DH2500	DH3500	DH2500 INOX	DH3500 INOX
Power Consumption	900W / 220V 50Hz / 3.5A	1500W / 220V 50Hz / 6.5A	900W / 220V 50Hz / 3.5A	1500W / 220V 50Hz / 6.5A
Maximum Extraction / 20°C 60% RH	35 Litres / 25 Litres	45 Litres / 35 Litres	35 Litres / 25 Litres	45 Litres / 35 Litres
Sound Pressure	56dB	58dB	56dB	58dB
Airflow m <sup>3</sup> /Hr	380 process / 75 Exhaust	400 process / 125 Exhaust	380 process / 75 Exhaust	400 process / 125 Exhaust

110V  
Option

DH2511  
& DH3511





# Comparing DH800 & DH1200

**DH800**



**DH1200**



Model	DH800	DH1200	DH800 INOX	DH1200 INOX
Power Consumption	350W / 220V 50Hz / 1.5A	500W / 220V 50Hz / 2.2A	350W / 220V 50Hz / 1.5A	500W / 220V 50Hz / 2.2A
Maximum Extraction / 20°C 60% RH	8 Litres / 6 Litres	12 Litres / 10 Litres	8 Litres / 6 Litres	12 Litres / 10 Litres
Sound Pressure	49dB	52dB	49dB	52dB
Airflow m <sup>3</sup> /Hr	90 process / 14 Exhaust	124 process / 20 Exhaust	90 process / 14 Exhaust	124 process / 20 Exhaust

**110V  
Option**

**DH811  
& DH1211**



DH800 “30 Pint”



DH1200 “50 Pint”



DH2500 “150 Pint”



DH3500 “200 Pint”

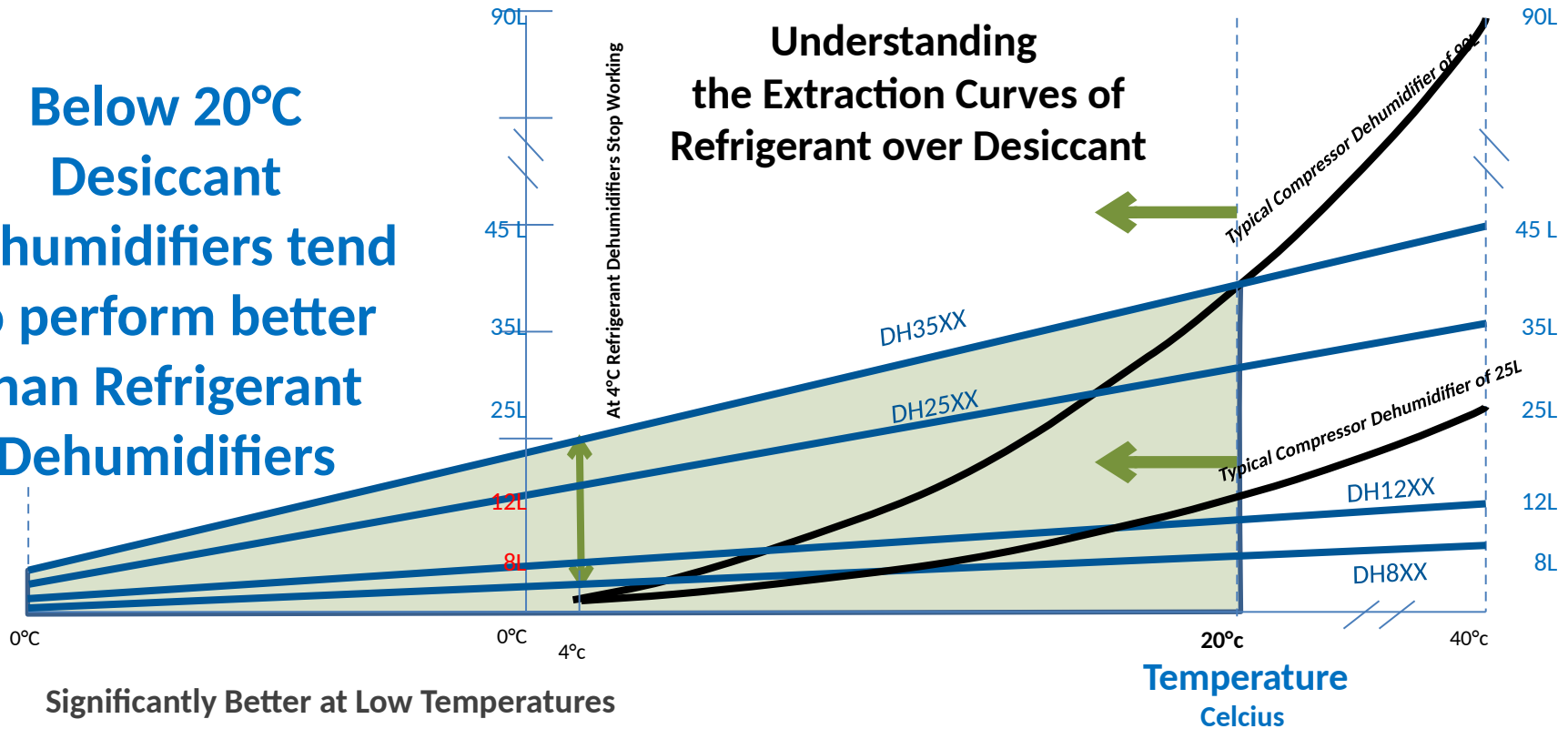


**Why Say Comparable to Larger Compressor Dehumidifier?**

**If You Understand the Drying Curve You Understand  
Why You Need A Dryfan**

# DH8XX & DH12XX, DH25XX & DH35XX

**Below 20°C  
Desiccant  
Dehumidifiers tend  
to perform better  
than Refrigerant  
Dehumidifiers**



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