



# LD-DOAS™

The World's Most Energy-Efficient DOAS

**Blue Frontier LD-DOAS** is the world's first packaged liquid desiccant DOAS (Dedicated Outdoor Air Supply) designed with sustainability in mind. Improving your indoor air quality through increased ventilation with precise dehumidification doesn't have to come with an energy penalty.

**LD-DOAS** offers extreme efficiency, boasting Moisture Removal Efficiency at more than double the proposed ASHRAE standard. We deliver unparalleled sustainability benefits by eliminating the use of high GWP refrigerants, load-shaping with integral energy storage, and slashing electricity use.

**LD-DOAS** delivers precise dehumidification via a more efficient isothermal path ...in other words we don't cool to the dew point! LD-DOAS uses a non-corrosive liquid desiccant to dehumidify and deliver 100% outdoor air at 55 °F dew point and room neutral temperature without reheat.

LD-DOAS delivers pre-conditioned ventilation air directly to packaged rooftop units. Closing ventilation air dampers relieves latent load, improves efficiency, and increases return air cooling capacity.



## ▶ FEATURES

- ✓ 15 ton liquid desiccant DOAS
- ✓ Uniquely designed for increased ventilation air
- ✓ New technology for dehumidification
- ✓ No re-heat required
- ✓ Exceeds proposed ASHRAE ISMRE 2024 energy efficiency standards.
- ✓ Proprietary non-corrosive desiccant
- ✓ Integral load-shaping energy storage capability
- ✓ Intelligent controls
- ✓ Low GWP refrigerant
- ✓ Intelligent, adapts to dynamic and changing climactic conditions from hot/humid through hot/dry
- ✓ Future-proof your building against global warming trends
- ✓ Latent and sensible cooling capacity increases as outdoor temperatures rise.

## ▶ TECHNICAL SPECIFICATIONS

| Model    | Nominal Capacity | Air Flow Range* | MRR            | ISMRE2**   | Dimensions                                  | Weight    |
|----------|------------------|-----------------|----------------|------------|---|-----------|
| LD-DOAS™ | 15 ton           | 2000-3500 CFM   | 60 to 140 lb/h | 9.2 lb/kWh | <b>L:</b> 17' x <b>W:</b> 6' x <b>H:</b> 6' | 6,500 lbs |

\* Unit capable of operating with a wider air flow range.

\*\* The proposed ASHRAE minimum standard for DOAS is 3.8 lb/kWh

Blue Frontier is Rethinking Air. Designing a healthy and comfortable indoor environment with a higher rate of ventilation air for cognitive enhancement and productivity is at odds with sustainability goals to reduce energy and emissions.

**Blue Frontier solves this problem.**

► AWARDS



► HOW OUR TECHNOLOGY WORKS

**1** → **2**

In this example, 95 °F dry bulb, 76 °F wet bulb temperature air enters the conditioner core where a liquid desiccant solution absorbs its humidity, and an indirect evaporative cooler maintains its dry bulb temperature.

**2** → **3**

The dry conditioned air is then cooled to room-neutral conditions by a counterflow, indirect evaporative cooler.

PSYCHROMETRIC CHART

