



**BLUE  
FRONTIER™**

**RETHINKING**AIR™

DISCOVER THE  
**WORLD'S  
MOST  
EFFICIENT  
DOAS!**



## ► WHY CHOOSE BLUE FRONTIER?

Blue Frontier has commercialized the world's first packaged **Liquid Desiccant-Enhanced Dedicated Outdoor Air System (LD-DOAS™)** designed with sustainability in mind. LD-DOAS is packed full of valuable features and offers unparalleled moisture removal efficiency, energy storage, and digital twin reliability in a single packaged product.

## ► LD-DOAS™ FEATURES

### ✓ Humidity and Temperature Control

LD-DOAS saves energy, improves comfort, prevents condensation, and increases health and well-being. Blue Frontier's patented liquid desiccant-enhanced, two-stage conditioner core provides independent control of humidity and temperature. In DOAS applications, the supply of 100% fresh ventilation air is conditioned to the desired dew point, typically 55°F. The method of dehumidification is a low-flow of non-corrosive, non-toxic liquid desiccant. In stage two, a sensible-only cooler drops the temperature to room neutral conditions.

### ✓ High Turndown Ratio — No Reheat

Blue Frontier's patents include SMART adaptive and independent setpoint control of both humidity and temperature. Our proprietary non-corrosive liquid desiccant literally sucks moisture directly out of the air, then our novel sensible-only cooler delivers room neutral supply air temperature. No reheat, no refrigerant, unparalleled and sustained efficiency.



**BLUE  
FRONTIER™**

# LD-DOAS™

The World's Most Energy-Efficient DOAS

## ✓ 3X Moisture Removal Efficiency

Blue Frontier is the world's most efficient DOAS. Dedicated outdoor air systems are exposed to a wide range of outdoor temperature and humidity conditions. 100% of Blue Frontier's cooling-related electricity consumption is associated with latent cooling and liquid desiccant regeneration. Our patented liquid desiccant regenerator's capacity and efficiency both increase as ambient temperature and humidity rise. ISMRE2 = 9.2 lb/kWh

## ✓ Perfectly-Quiet Condenser

Oh, didn't we tell you that Blue Frontier's liquid desiccant-enhanced cooling and dehumidification technology isn't based on the vapor compression cycle? So you don't have to worry about the condenser fans! Perfectly-Quiet, zero failures, standard feature!

## ✓ Energy Storage Eliminates Peak Demand

Flexible Efficiency for max sustainability credit. Blue Frontier's embedded storage delivers rated sensible and latent cooling capacity for up to 6 hours. The only electricity you need is for supply fans plus a few hundred watts for home aquarium sized pumps, sensors, and controls! Energy storage charging and discharging is dispatchable and is easily optimized to take advantage of off peak electricity prices, avoid on-peak demand charges or for use with grid or local renewable clean energy generation.

Save more! Qualifies for valuable Thermal Energy Storage Investment tax credits!

## Learn more

Contact your Blue Frontier Representative to learn more about Blue Frontier's valuable sustainable and lifecycle performance features.

Visit [bluefrontierac.com](http://bluefrontierac.com) for more information about our products and application support.

## ✓ Stay Cool-Heat Waves & High Humidity

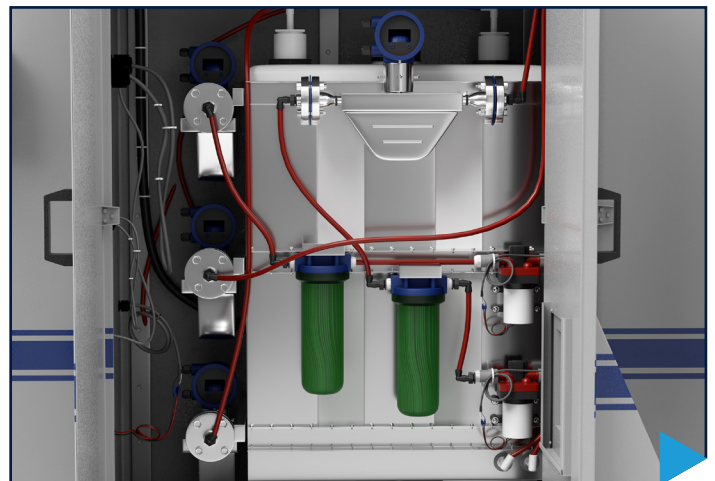
Choose Blue Frontier to future-proof your building! YOU have been paying the price for oversized equipment, which is sized to meet extreme design day conditions; a sustainability burden that increases lifecycle electricity consumption. Blue Frontier LD-DOAS cooling capacity and energy efficiency INCREASE as temperature and humidity rise. We make heat waves go away, and that's a plus for grid reliability.

## ✓ Robust Cabinet Construction

1", double wall, injected foam cabinets, and fully hinged doors with latching mechanisms create strength and thermal break construction between treated and untreated air. High quality paint adds to the longevity and appearance of the unit. Blue Frontier's structural steel channels are designed to last for decades with reliable components like fully modulating dampers and ECM motor-driven variable speed fans.

## ✓ Full PLC Controls and Monitoring

Blue Frontier's factory mounted controls include a full-featured PLC with standard BMS communication protocols. A web user interface provides valuable operating data. Your maintenance team will appreciate our Digital Twin lifecycle performance and predictive maintenance services.



*Embedded Energy Storage Capacity Up to 6 Hours*



**BLUE  
FRONTIER™**

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