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RENEWAIRE INTRODUCES DOAS WITH INTEGRATED REFRIGERATION TO ITS DN SERIES
FULLY CUSTOMIZABLE, MODULAR DOAS FEATURES INDUSTRY LEADING ISMRE RATING,
BRUSHLESS DC COMPRESSORS FOR PARTIAL LOADS, AND EC MOTORS ON ALL FANS.



RenewAire's DX-based DN Series DOAS with Integrated Refrigeration

WAUNAKEE, WI – RenewAire®, a leading manufacturer of HVAC and IAQ products, has added a dedicated outdoor air system (DOAS) with integrated refrigeration to its DN Series of outdoor air equipment. The DX-based DN Series DOAS with Integrated Refrigeration (IR) is a modular, flexible design that's customizable with thousands of configurations available to design engineers.

The DN Series DOAS with IR's renowned static-plate enthalpy cores feature a near-zero exhaust air transfer ratio (EATR) at balanced airflow that's an ideal outdoor air solution for healthcare, retail, office, education and most commercial building markets. The design is especially beneficial for those applications using chilled beams, VRF/VRV, radiant panels and other technologies lacking adequate latent load management capabilities.

The DN Series DOAS with IR is a compressorized outdoor unit that boasts an industry-pioneering 8.0 ISMRE rating. This efficiency is partly due to its brushless DC compressors, EC motors on both the supply and exhaust fans, and options for a draw-through or a plenum push-through airflow, the latter which provides a better cross-sectional air delivery and up to 95-percent coil coverage.

The three-model series—D-2, D-3 and D-5—ranges from 375 to 5,000-CFM and two to 30-tons of refrigeration. Models with refrigeration capacities above 10-tons, offer the option of two compressors. In this configuration, the brushless DC variable speed compressor is the primary workhorse and efficiently provides minimum cooling operation parallel to partial load needs. On approaching 100-percent, the fixed speed compressor automatically activates and the variable speed compressor shifts to partial loads when additional outdoor air and recirculation conditioning is required.

The compressors, as well as other components, are factory-piped and balanced using calculations based on the climatic outdoor air conditions of their application destination.

The series offers the designer nearly any conceivable configuration to maximize air comfort as well as energy efficiency, such as recirculation and bypass dampers, night setback, economizers, a myriad of heating options and other configurability. Besides a traditional draw-through airflow configuration, engineers also have the option of a plenum fan blow-through that provides a better cross-sectional air delivery and up to 95-percent coil coverage.

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The DN Series DOAS with IR can operate as a stand-alone 100-percent outdoor air HVAC unit, or as a make-up air role in conjunction with an RTU for controlling sensible and latent load management.

The DN-Series' is certified under AHRI-1060 and fulfills requirements of ASHRAE Standard 90.1 and the International Energy Conservation Code (IECC). It can also add to a project's LEED[®] credits as well as qualify for WELL Certified[®] and WELL Compliant[®] standards.

The DN Series DOAS with IR's other features are:

- ◆ Operates down to 49°F (9.4°C) supply air dew point conditions, which facilitates outdoor supply air management of the indoor humidity loads;
- ◆ Cabinets are available in one-inch-thick (25.4-mm) R-6, or two-inch-thick (50.8-mm) R-13 thermal-break foam-insulated double walls constructed of sturdy 20-ga. galvanized steel with optional paint-rated for 2,500-hour salt spray protection;
- ◆ Flexible, modular configurability offering mix-and-match combinations of a variety of cooling coil methods, heating sections and fan strategies;
- ◆ Compatibility with almost any imaginable primary HVAC application, such as direct expansion (DX), chilled water for the cooling coil. Heating section offers electric (SCR), indirect gas furnace (5:1, 10:1 modulation), hot water, steam, or a self-contained, DDC-controlled modulating hot gas reheat option;
- ◆ Negates the need for defrost cycling under normal operating conditions, however a defrost mode is available for extreme combinations of high indoor humidity and low outdoor ambient temperatures;
- ◆ Availability with a factory-supplied curb;
- ◆ AMCA Class 1 (low leakage) isolation dampers, internal enthalpy bypass damper and an optional unoccupied recirculation damper;
- ◆ Standard 2-inch (50.8-mm) MERV 8 filters, however MERV 13, MERV 14 and 4-inch (101.6-mm) filters are optional.

RenewAire's proprietary static plate core is its competitive edge. It operates at a low EATR without requiring energy-intensive purge cycles. With no moving parts, the failsafe static plate dehumidifies more efficiently versus an enthalpy wheel, which requires parasitic power for motorized rotation. While wheel technology inherently suffers maintenance and reliability costs, RenewAire's static plate boasts the HVAC industry's best uptime performance that's backed by a 10-year warranty. Additionally the DN Series also carries a performance warranty that guarantees the original operating specifications for 10 years without any degradation and a two-year warranty on the balance of the unit.

The DN Series' integrated, programmable controller is preset and programmed by factory engineers to the consulting engineer's sequence of operation. The "plug-and-play" unit requires only connection to facility power and the building automation system (BAS), which significantly reduces contractor installation time and eliminates jobsite programming errors. Its BACnet or Modbus platform allows great flexibility in controlling operational effectiveness and user activity indoors through any combination of RenewAire's temperature, humidity, occupancy, static pressure, fire/safety, CO₂ and IAQ sensor accessory options. The onboard controller also offers full programming and BAS override capabilities.

For more information, please visit www.renewaire.com or email: marketing@renewaire.com or call 800-627-4499.

ABOUT RENEWAIRE

For more than 35 years, RenewAire[®] has been a pioneer in improving human health, cognitive function, productivity and wellbeing by enhancing indoor air quality via energy recovery ventilation technologies. This is accomplished energy-efficiently, cost-effectively and sustainably with fifth generation static plate enthalpy core energy recovery ventilators and dedicated outdoor air systems. For more information, visit www.renewaire.com, email: marketing@renewaire.com or call (800) 627-4499.



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