

# Configured Packaged Rooftop Solutions

Specializing in Dedicated Outdoor Air Systems (DOAS) Capacities from 6 to 40 Tons





### Features & Benefits

### Flexible Yet Affordable Design Platform

Allows numerous applications such as Air Cooled Cooling, Air Cooled Heat Pump, Water Source Heat Pump, Geothermal Heat Pump. Provides near infinite "Green" solutions for filtration, heat recovery, exhaust and return air, supply air, heating, make-up air and controls.

## Specializing in Dedicated Outdoor Air Systems (DOAS)

Optimized refrigerant management, DX coil ensures ideal dehumidification at all ambient conditions. Designed for compliance with ASHRAE 62.1 standards. For mold prevention, systems and controls designed to limit space relative humidity to 60% or less during all load conditions.

### **Lower Utility Costs**

Ultimate efficiency, exceeding ASHRAE 90.1 standards, obtained through high efficiency scroll compressors, optimized heat transfer, variable speed condenser fans with EC motors and modulating control. Energy saving 2" double wall cabinet with injected polyurethane foam provides R-13 insulation value.

#### **Reduce Service & Maintenance Costs**

Innovative and simplistic design with hinged access doors to generously sized control and access compartments. Quality components include IAQ double sloped stainless steel drain pan, variable speed EC condenser fans with integral head pressure control, direct drive backward curved plenum supply fans with VFD or EC controls and 2" MERV 8 pleated filter as standard features.



### **Application Flexibility**

- Air Cooled
- Air Cooled Heat Pump
- Water Cooled
- Water Source Heat Pump

### **Endless Control Strategies**

Fully integrated DDC controls provide open protocol for BACnet and Modbus.



### Potential LEED® Credits:

## Construction IAQ Management Plan – During Construction

Filtration media with minimum efficiency reporting value (MERV) of 8.

### **Increased Ventilation**

Heat-recovery ventilation and/or economizer strategies to improve indoor air quality promoting occupancy comfort, well-being and productivity.

### **Optimized Energy Performance**

Exceeds ASHRAE 90.1 minimum efficiency standards.

### **Outdoor Air Delivery Monitoring**

Supply and exhaust airflow monitoring controls for precise airflow verification.

## Thermal Comfort – Controllability of Systems, Design & Verification

Controllability of systems for precise required heating and cooling to ensure highest comfort for building occupants. Equipment designed specifically for 100% outdoor air application.

#### **Retrofit Ready**

NEW Compact DOAS systems aren't just the right fit for new installations. They're designed to fit most standard DOAS curbs, ensuring a seamless—and more affordable upgrade when it's time to replace an existing system.

### The Ultimate Rooftop Solution

### Reliability

- Dual R-410A scroll compressors and independent refrigeration circuits for superior efficiency, proven reliability and quiet operation.
- Standard ambient operating range of 0-115°F.
- DX coil for superior latent heat removal at all operating conditions.
- High efficiency, variable speed EC condenser fans with integral head pressure control, acoustical design providing low operating noise levels.



2" double wall construction with injected polyurethane foam insulated panels for all doors,roof, walls and floor.

**Cabinet Construction** 

R-13 insulation with thermal break minimizes heat transfer through the cabinet and provides moisture barrier and improved indoor air quality.



- Heavy gauge G90 galvanized steel with 3 mil powder coat paint finish.
- Sloped roof to eliminate standing water.
- Access doors with friction hinges and quarter turn handles with roller cam for easy access and serviceability.
- Continuous bulb gasket around access doors.
- NEW Compact cabinet designed to fit industry standard curb for seamless retrofits.



### **Filtration**

- Standard 2" MERV 8 pleated filters, per ANSI/ ASHRAE Standard 52.2.
- Optional MERV 13, 14 pleated filters.
- 2" MERV 8 combinable with 4" MERV 8, 13, 14.



### **Control Options**

- Integrated DDC controls provide advance algorithms for maintaining precise temperature and comfort control.
- BAS interface with BACnet®, Modbus®, and communications.







Engineered rooftop solutions with industry leading energy efficiency, design flexibility, serviceability and treating outside air.

### **Verifiable Airflow Performance**

- AMCA certified direct drive blower motor and plenum supply fan assembly with factory installed isolation to reduce resonance within operating range.
- Quiet airfoil wheel eliminates additional cost for acoustical attenuation.
- Optional factory provided integral Digital Scroll compressor offering flexible operating points in response to changes in pressure, flow or other external data.
- Outdoor air inlet hood with mist eliminator filter.
- Optional built in airflow measurement device.
- High performance, variable-position motorized outdoor air damper.
- Designed specifically for 100% outside air applications.



### **Options for Every Application**

### **Energy Conservation Wheel (ECW)**

- Hard core desiccant with galvanized steel frame.
- Slide out conveyor system for ease of maintenance.
- Improves Indoor Air Quality (IAQ).
- Provides maximum energy efficiency and minimizes operating costs.
- Transfers latent and sensible energy.
- Pulsing defrost control with optional bypass dampers.
- Certified performance per AHRI 1060.

### **Refrigeration & De-Humidification**

- Variable capacity scroll compressors.
- Hot gas bypass.
- Modulating hot gas reheat coils.
- Factory installed refrigerant to air energy recovery device.

### **Electrical**

- 115 V convenience outlet field or factory wired.
- Optional firestat and smoke detector terminal.
- Main disconnect.
- Available in 208, 230, 460 and 575 volts.
   \*575V not currently available on new compact series

### **Fully Modulating Heat**

- Gas Heat Stainless steel 409 full heat modulation for precise temperature control. Oversized furnaces available to handle up to 80° or 90°F design temperature rise.
- Fully modulating open coil electric heat.

### Miscellaneous

Harsh environment condenser coil coating.



- Harsh environment evaporator coil coating with stainless steel coil casing.
- Outdoor coil hail guard.
- Roof curbs 14" or 24".



### **Common Market Applications**







Education Healthcare Athletic Facility



Treasure on the Bay | North Bay Village, FL



Norcross Cluster Elementary | Norcross, GA



Hofbrauhaus | Cleveland, OH



Briarwood Elementary | Moore, OK



### Air Cooled & Water Cooled Data

Air/Water Cooled, Air/Water Source Heat Pumps and Geothermal Standard Cabinet								
2 Series		4 Series			B Cabinet			
Chassis	Nom. Cap (Ton)	Nominal Airflow (CFM)	Chassis	Nom.Cap (Ton)	Nominal Airflow (CFM)	Chassis	Nom.Cap (Ton)	Nominal Airflow (CFM)
106" L x 100" W x 65" H	6 7.5 10 12.5 15 17.5 20	750 - 8,000	140" L x	15 - 20	1.500	88" L x 100" W x 69" H	11 13 15 20	1,375 - 6,000
			100" W x 90" H		1,500 - 13,500			

Including Energy Conservation Wheel & Powered Exhaust								
2 Series		4 Series			B Cabinet			
Chassis	Nom. Cap (Ton)	Nominal Airflow (CFM)	Chassis	Nom.Cap (Ton)	Nominal Airflow (CFM)	Chassis	Nom.Cap (Ton)	Nominal Airflow (CFM)
171" L x 100" W x	6 7.5 10 12.5	1,000 - 8,000					11	
65" H	15 17.5 20		212" L x	15 - 20	3 500	128" L x 100" W x 69" H	13	1,375 - 6,000
			100" W x 90" H	25 30 35 40	3,500 - 13,500			

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