

SPECIFICATION

DUO-AIRE COMBINATION ROOFTOP PACKAGE WITH HEATED SUPPLY AIR

1. FAN BASE

The fan base shall be a single integrated base for both exhaust fan and supply air unit. It shall be constructed with a solid fan base for single penetration of U.L. Listed concentric supply and exhaust duct, and shall be of sufficient height to insure compliance with code requirements for duct discharge, exhaust fan discharge and supply air intake.

2. EXHAUST FAN

The exhaust fan shall be up blast type U.L. 762 listed as power ventilator for restaurant exhaust appliances. The exhaust fan shall be sized to allow for design CFM at total static pressure. Total static pressure calculation to include hood, filter and duct entry loss, and fan system loss shall be scheduled on submittal drawings, along with exhaust fan curve.

3. MAKE-UP AIR UNIT

The Duo-Aire roof mounted make-up air unit, including all components, shall be fully factory built and assembled by Duo-Aire and wired in accordance with NEC #70. The system shall include:

A. Complete housing constructed of 18 gauge aluminized steel painted with weatherproof production enamel over a primed surface.

B. Centrifugal supply fan with forward curved blades and adjustable belt drive.

C. Motor, pulleys and belts.

D. Master Control Panel

A factory wired control panel to the voltage specified, mounted in weatherproof box, shall contain in addition to terminals and wiring for the above, magnetic starters with three leg overload and disconnect switches for supply and exhaust fans and control transformer. All electrical work shall be by Duo-Aire in accordance with system design and in strict adherence to NEC #70 and other applicable codes. Master disconnect switch and wiring to the master electrical panel is a standard part of the Duo-Aire system.

E. Filter section for supply air with bird screen. Cleanable, 20" x 25" x 1" aluminum mesh filters shall be provided in an easy access housing and slip frame.

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F. Motorized inlet air dampers shall be provided with all operating controls installed when specified.

G. Preheat section with all operating controls, when specified shall include:

1. Direct Fired Gas Preheat (CAA/LPB or CAA/CC)

A direct fired gas heating unit as built by Duo-Aire and furnished as an integral part of the make-up air unit is provided. The heating unit will be factory fired, pretested and adjusted. A pre-wired heater control panel with all necessary control elements shall be an integral part of the make-up air unit. Heating unit will conform to Duo-Aire specifications and shall be ETL certified. (See specification). Burner controls will include stainless steel burner with capability of 30:1 turndown ratio, gas modulating valve, flame safeguards and proper safety valves.

OR

2. Indirect Fired Gas Preheat (CAA/IND)

Each unit shall have a stainless steel heat exchanger with aluminized steel burners. The unit will be equipped with stainless steel port protectors and approved weather caps. Control valves shall be inside the casing with access through the side panel.

Heaters shall be approved for use on natural or LP gases. When arranged for natural or gas, each furnace shall be equipped with a non-100% shutoff automatic electric pilot gas ignition system. For LP gas use, each unit shall have a 100% shutoff automatic electric pilot system and shall be equipped with an induced power operated draft fan, where propane is specified. Unit shall be approved for outdoor use, AGA certified heat exchanger.

Gas and electric components include: Main gas valve, main gas pressure regulator, pilot gas valve, main solenoid gas valve, pilot relighter spark ignition system, thermocouple actuated intermittent safety pilot, high limit control and 115/24 volt control transformer.

OR

3. Electric Heater (CAAE)

Electric heating unit shall be an open coil duct heater, U.L. Listed for zero clearance and meet all the applicable requirements of the National Electrical Code. All heater frames and control boxes shall be constructed of a minimum 18 to 24 gauge, hot dipped galvanized steel. The open coils shall be formed of high grade nickel chromium alloy wire and insulated by ceramic insulators. A disc type automatic protection, fusible links shall be furnished of sufficient quantity, as required, to de-energize the circuits.

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