Airedale School System Products

HEATING | VENTILATING | COOLING | MAKE-UP AIR
AIREDALE SCHOOL SYSTEMS
MAKE THE MOST SENSE.

Our school systems are manufactured to meet the needs of today’s facilities.

Serviceability – Convenient modular designs save significant time and money thanks to the accessibility of critical components and controls. Even annual filter replacement and general cleaning are a snap.

Efficiency – Our units utilize the latest technology, including a microchannel evaporator coil, to maximize efficiency and operation. All Airedale SPVU equipment meets or exceeds the Department of Energy requirements for efficiency.

Noise Reduction – Less background noise and fewer distractions mean more successful classrooms. Additional sound attenuating options are available for all of our packaged units.

Size Options – We offer multiple configurations, capacity options and product footprints to handle a wide variety of specifications and CFM demands.

Environmentally Conscious – With the R-410A refrigerant and our expanded line of water/ground source heat pump units, our systems help schools stay in front of the environmental curve.
Table of Contents

- Vertical Unit Ventilators
- Under the Window Unit Ventilators
- DX/Chilled Water Ceiling Cassettes
- Steam/Hot Water Unit Heaters
- Steam/Hot Water Cabinet Unit Heaters
- Steam/Hot Water Fin Tube Heaters
- Steam/Hot Water Convectors
- Natural and Propane Gas Duct Furnaces
- Indoor Indirect Gas-Fired Make-Up Air Units
- Outdoor Indirect Gas-Fired Make-Up Air Units
- Indoor & Outdoor Direct Fired Make-Up Air Units
Vertical Unit Ventilators

NOISE REDUCTION • ULTRA-ENERGY EFFICIENCY • SERVICEABILITY

With convenient modular designs, Airedale Vertical Unit Ventilators are the quietest single-packaged product of its type on the market today. They are engineered for efficiency, noise reduction, and a small footprint to make installations easy in LEED-designed facilities. Available in a variety of classroom solutions and supply air options for assured air circulation throughout the classroom.

<table>
<thead>
<tr>
<th>STANDARD FEATURES</th>
<th>ClassMate®</th>
<th>SchoolMate®</th>
<th>Sentinel®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Featuring the patented CF coil for greater cooling and heating efficiency</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Hermetic two-speed scroll compressor enables part load efficiencies to be increased</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>ECM fan technology balances performance and noise</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Designed and optimized for R-410A refrigerant</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Modulating economizer damper providing 100% free-cooling and minimum fresh air requirements</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Aluminized steel casing with a durable polyester powder coat paint finish</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2” radial pleated disposable cotton and synthetic blend filters. Up to MERV 16 filtration</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Modine Controls System</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPTIONS</th>
<th>ClassMate®</th>
<th>SchoolMate®</th>
<th>Sentinel®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound-reducing compressor acoustic wrap (STUDY Package)</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Factory supplied BACnet or LonWorks compatible controls</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Energy recovery wheel with up to 100% economizer capability</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Electric heating</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Powered exhaust</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hot water or steam heating coil</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Hot gas reheat for dehumidification control</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Hot water valve and piping packages</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Baseboard heat control with Modine Controls (2 - 10 Vdc Modulating, Single-Stage, and Two-Stage)</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Energy recovery wheel</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face and bypass</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three-speed switch</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot water and chilled water valve and piping packages</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACCESSORIES</th>
<th>ClassMate®</th>
<th>SchoolMate®</th>
<th>Sentinel®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall sleeve and rear extension for customized solutions</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Discharge plenums*</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Humidity sensor</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Duct shrouds</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Outdoor louvers</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Side trims</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Vibration mat</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

CLASSMATE® AND SCHOOLMATE® AVAILABLE WITH STUDY PACKAGE

- The highest standard in classroom noise reduction
- Lined with 2” acoustic insulation to minimize noise levels
- Reduces noise by up to 7 dB(A)
- Can be used to meet LEED prerequisites

*Acoustic option available for ClassMate® and SchoolMate®
MODEL CMD/CMP/CMS

ClassMate® Air Conditioning & Heat Pump Unit
• Model sizes 24, 36, 48 and 60 Nominal MBH
• Easy service and installation
• Front access to components
• No plenum required for additional hot gas reheat, hot water, or electric coils
• All models meet or exceed the DOE minimum requirement of 11.0 EER

MODEL SMG/SMW

SchoolMate® Ground Source and Water Source Heat Pump Unit
• Model sizes 24, 30, 36, 42, 48 and 60 Nominal MBH
• Easy service and installation
• Front access to all components
• No plenum required for additional hot gas reheat, hot water or electric coils
• Rated in accordance with AHRI ISO 13256-1

MODEL UVV/UVD

Sentinel® Unit Ventilator
• Model sizes 30, 40, 50, and 60 Nominal MBH
• Five models: Chilled water, hot water, steam, and a combination of chilled and hot water (two-pipe or four-pipe configuration)
• Components are accessible through the lockable, hinged front door
• Engineered to provide the proper amount of fresh air to the classroom while minimizing energy consumption
• Complies with ASHRAE standard 62-89
Under the Window Unit Ventilators

IDEAL FOR SCHOOLS • IMPROVE INDOOR AIR QUALITY • FLEXIBLE, MODULAR DESIGN
KEEPS EXISTING PRODUCTS UP TO DATE

The Varsity® is the perfect solution for both new construction and replacement of existing units in schools that want to improve the indoor air quality of their classrooms. Designed to be tough, dependable, aesthetically pleasing, quiet and easy to install, the Varsity® keeps an established product up-to-date with an impressive list of features and options.

A variety of ventilation configurations are available that utilize fully modulating outside air and return air dampers allow for any mixture of outside air and return air to be drawn through the unit.

Discharge air temperature is controlled using either a face-and-bypass damper or a modulating control valve. The units may be configured as DDC ready set-up for field installed controls, factory installed field issues or an optional Modine Controls System with Carel® Programmable Microprocessor controller with optional BACnet or LonWorks compatibility. Piping components can be ordered individually or configured as a pre-installed piping package.

### VARSITY® - CHILLED WATER COOLING CAPACITY (Btu/hr)

<table>
<thead>
<tr>
<th>Coil Rows</th>
<th>750 CFM</th>
<th>1,000 CFM</th>
<th>1,250 CFM</th>
<th>1,500 CFM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Sensible</td>
<td>Total</td>
<td>Sensible</td>
</tr>
<tr>
<td>2</td>
<td>12,770</td>
<td>11,926</td>
<td>26,570</td>
<td>22,239</td>
</tr>
<tr>
<td>3</td>
<td>24,248</td>
<td>17,914</td>
<td>34,532</td>
<td>24,829</td>
</tr>
<tr>
<td>4</td>
<td>26,267</td>
<td>18,603</td>
<td>37,404</td>
<td>25,651</td>
</tr>
</tbody>
</table>

① Rated in accordance with ARI Standard 840.
② Water temperature rise is 10°F, with entering water temperature of 45°F.
③ Entering air temperature is 80°F dry bulb, 67°F wet bulb.

### VARSITY® - HOT WATER HEATING CAPACITY (Btu/hr)

<table>
<thead>
<tr>
<th>Coil Rows</th>
<th>750 CFM</th>
<th>1,000 CFM</th>
<th>1,250 CFM</th>
<th>1,500 CFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28,792</td>
<td>46,690</td>
<td>60,158</td>
<td>74,326</td>
</tr>
<tr>
<td>2</td>
<td>50,121</td>
<td>66,799</td>
<td>87,070</td>
<td>107,922</td>
</tr>
<tr>
<td>3</td>
<td>61,369</td>
<td>81,238</td>
<td>102,356</td>
<td>124,104</td>
</tr>
<tr>
<td>4</td>
<td>67,050</td>
<td>93,125</td>
<td>117,537</td>
<td>132,160</td>
</tr>
</tbody>
</table>

① Entering water temperature is 180°F and leaving water temperature is 140°F.
② Entering air temperature is 60°F.
STANDARD FEATURES AND OPTIONS

- Offering a full range of sizes - 750, 1,000, 1,250 and 1,500 CFM
- Available with chilled water or DX cooling and hot water or steam heating
- More efficient coil design for optimal temperature and pressure drops
- Full economizer mode allows you to enjoy free outside air cooling during favorable seasons
- Modine Controls System designed for the Varsity® to maximize efficiency and operation
- Motor is mounted outside the airstream, isolating and reducing drive shaft and bearing vibration noise
- Heavy-duty cabinet design acts as an extra noise damper
- 14-16 gauge cabinet panels make the Varsity® one of the most damage-resistant unit ventilators
- Modular design allows easy access and removal of all critical components
- Cabinet end pockets centralize the location of components
- Chilled water cooling (2-4 rows) available with changeover

OPTIONS

- Wide selection of outdoor louvers designed to blend into façade
- Valve and control utility compartments are available to match unit color and finish
- Hot water heating coils available
- Multiple inlet air arrangements to accommodate various sill and louver heights
- Optional slope top design prevents books and other objects from being set on top of the unit
- Factory assembled valve package
- Available in a variety of one- or two-tone colors, textures and fingerprint-free hammer tone
DX/Chilled Water Ceiling Cassettes

INDEPENDENTLY CONTROL ZONES • REDUCE NOISE LEVELS • MAXIMIZE EFFICIENCY

Designed to effectively create independently-controlled temperature zones, cassettes are ideal for classrooms, offices, laboratories, conference rooms or any environment where space is at a premium and low noise is essential. This versatility eliminates compromising architecture or design, and cost savings are often realized during building updates, as existing piping and/or wiring can frequently be reused.

AVAILABLE IN THREE MODELS – DX COOLING, HEAT PUMP AND CHILLED WATER COOLING:

• Thermostatic control operations to vary conditions for diverse requirements or activities
• Low blower speeds, rigid panel and cabinet construction, and sound-absorbent insulation reduces noise to a minimum

OPTIONAL FACTORY-INSTALLED FEATURES:

• Electric heat or water modules that provide heating
• Fresh air intakes that ventilate and recirculate room air
• Electro-mechanical or microprocessor based controls
• Microprocessor controller includes an infrared transmitter that enables room conditions to be maintained at a user-defined set point
• Modine Controls System with Carel® Programmable controller with optional BACnet or LonWorks compatibility

MODEL CCW/CSD/CSH
### CHILLED WATER COOLING MODELS

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Filter</th>
<th>Total Cooling (Btu/hr)</th>
<th>Hot Water Heat (Btu/hr)</th>
<th>Electric Heat (KW)</th>
<th>Dimensions - H x W x D (inches)</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCW 08</td>
<td>STD.</td>
<td>7,800</td>
<td>17,100</td>
<td>1.5</td>
<td>10 11/16 x 22 1/2 x 22 1/2</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>MERV 10</td>
<td>5,400</td>
<td>13,400</td>
<td></td>
<td>2.5/8 x 25 3/16 x 25 3/16</td>
<td></td>
</tr>
<tr>
<td>CCW 12</td>
<td>STD.</td>
<td>11,200</td>
<td>N/A</td>
<td>1.5</td>
<td>10 11/16 x 22 1/2 x 22 1/2</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>MERV 10</td>
<td>6,800</td>
<td>N/A</td>
<td></td>
<td>2.5/8 x 25 3/16 x 25 3/16</td>
<td></td>
</tr>
<tr>
<td>CCW 18</td>
<td>STD.</td>
<td>18,200</td>
<td>27,300</td>
<td>3.0</td>
<td>9 1/2 x 32 5/16 x 32 3/8</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>MERV 10</td>
<td>16,500</td>
<td>24,800</td>
<td></td>
<td>2.5/8 x 37 x 37</td>
<td></td>
</tr>
<tr>
<td>CCW 20</td>
<td>STD.</td>
<td>18,600</td>
<td>27,900</td>
<td>3.0</td>
<td>9 1/2 x 32 5/16 x 32 3/8</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>MERV 10</td>
<td>16,500</td>
<td>24,800</td>
<td></td>
<td>2.5/8 x 37 x 37</td>
<td></td>
</tr>
<tr>
<td>CCW 33</td>
<td>STD.</td>
<td>31,100</td>
<td>41,200</td>
<td>5.0</td>
<td>11 1/2 x 44 7/16 x 32 3/8</td>
<td>118</td>
</tr>
<tr>
<td></td>
<td>MERV 10</td>
<td>29,700</td>
<td>42,300</td>
<td></td>
<td>2.5/8 x 49 3/16 x 37</td>
<td></td>
</tr>
<tr>
<td>CCW 36</td>
<td>STD.</td>
<td>34,300</td>
<td>45,200</td>
<td>5.0</td>
<td>11 1/2 x 44 7/16 x 32 3/8</td>
<td>118</td>
</tr>
<tr>
<td></td>
<td>MERV 10</td>
<td>29,700</td>
<td>42,300</td>
<td></td>
<td>2.5/8 x 49 3/16 x 37</td>
<td></td>
</tr>
</tbody>
</table>

- Nominal chilled water cooling capacity based on air 80/67°F DB/WB, 45°F inlet / 55°F outlet water temperatures, high fan speed.
- Nominal hot water heating capacity based on air 70°F, 180°F inlet / 160°F outlet water temperatures, high fan speed.

### DIRECT EXPANSION (DX) AIR CONDITIONING AND HEAT PUMP MODELS

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Total Cooling (Btu/hr)</th>
<th>Heat Pump (Btu/hr)</th>
<th>SEER</th>
<th>HSPF</th>
<th>Hot Water Heat (Btu/hr)</th>
<th>Electric Heat (KW)</th>
<th>Dimensions - H x W x D (inches)</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSD/CSH 18</td>
<td>19,200</td>
<td>16,400</td>
<td>14</td>
<td>8.2</td>
<td>38,746</td>
<td>3.0</td>
<td>11 5/8 x 32 5/16 x 32 3/8</td>
<td>84</td>
</tr>
<tr>
<td>CSD/CSH 24</td>
<td>23,000</td>
<td>21,400</td>
<td>14</td>
<td>8.2</td>
<td>41,993</td>
<td>3.0</td>
<td>11 5/8 x 32 5/16 x 32 3/8</td>
<td>84</td>
</tr>
<tr>
<td>CSD/CSH 30</td>
<td>31,400</td>
<td>27,400</td>
<td>14</td>
<td>8.2</td>
<td>56,603</td>
<td>5.0</td>
<td>11 1/2 x 44 7/16 x 32 3/8</td>
<td>118</td>
</tr>
<tr>
<td>CSD/CSH 36</td>
<td>38,200</td>
<td>32,400</td>
<td>14</td>
<td>8.2</td>
<td>59,603</td>
<td>5.0</td>
<td>11 1/2 x 44 7/16 x 32 3/8</td>
<td>118</td>
</tr>
<tr>
<td>CSD/CSH 42</td>
<td>42,500</td>
<td>37,200</td>
<td>14</td>
<td>8.2</td>
<td>64,268</td>
<td>5.0</td>
<td>11 1/2 x 44 7/16 x 32 3/8</td>
<td>118</td>
</tr>
</tbody>
</table>

- Cooling capacities based on 80/67°F DB/WB indoor, 95/75°F DB/WB outdoor ambient, high fan speed.
- Heating capacities based on 70/60°F DB/WB indoor, 47/43°F DB/WB outdoor ambient, high fan speed.
- Nominal hot water heating capacity based on air 70°F, 180°F inlet / 160°F outlet water temperatures, high fan speed.
Airedale Horizontal Unit Heaters are ideal for heating buildings with large open areas and low ceilings. Unit heaters are used to counter heat loss along outside building walls, especially where windows are present.

**WIDE PRODUCT SELECTION**

- Ratings as low as 11,300 Btu/hr for hot water to as high as 952,000 Btu/hr for steam, based on standard conditions
- Horizontal, Vertical and Power-Throw™ (high-velocity horizontal air delivery) models offer maximum application flexibility

**APPLICATION FLEXIBILITY**

- Horizontal and Power-Throw™ units are furnished with louvers for directional control of heated air where as vertical units are available with various louver, truncone and cone-jet deflector options
- Power-Throw™ units are available with 90/10 copper-nickel for high pressure/temperature applications up to 250 PSI or 400°F
- Design assures the correct relationship between air temperature, velocity and air volume for greater heat throw; air is delivered to the floor at maximum mounting height, increasing comfort and reducing fuel costs
EASE OF INSTALLATION/MAINTENANCE = RELIABILITY

- Units are compact and lightweight
- All units include an electrical junction box, either integral to the motor or mounted on the unit casing
- All units are component tested for proper motor function and the coils are leak tested under pressure to ensure proper function when the unit arrives at the job site
- Fins on all units are vertical to the limit build-up of foreign particles, prolonging periods between cleanings; fins on Vertical and Power-Throw™ units are exposed for easy cleaning

BLEND WITH THE ENVIRONMENT

- Quiet operation is assured through the use of carefully selected motors, fans and scientifically designed venturi fan shrouds
- Casings are treated for corrosion resistance and finished with a neutral gray-green baked-on, electrostatically applied polyester powder coat paint finish
Airedale Power-Throw™ Horizontal Unit Heaters are ideal for heating large buildings where a number of smaller units can be replaced by a few larger Power-Throw™ units. Their high-velocity air delivery results in the greatest heat throw available with a more economical installation. Vertical Unit Heaters are ideal for heating buildings with high ceilings or areas that require the heater to be mounted above obstructions such as crane ways.

**MODEL WTC/WSC** Horizontal Unit Heater
- 13 model sizes from 18,000 to 340,000 Btu/hr
- Recommended for use in buildings where ceilings are low with few obstructions
- Copper tubes with mechanically bonded aluminum fins for maximum heat transfer performance
- Motors are totally enclosed with thermal overload protection

**MODEL WSH/LODRONIC™** Horizontal Unit Heater
- 6 model sizes from 22,000 to 195,000 Btu/hr
- Specifically recommended for use with high-efficiency boilers
- Copper tubes with mechanically bonded aluminum fins for maximum heat transfer performance
- Motors completely enclosed with thermal overload protection
- UL1995 certified
**MODEL WPC/WPN** Power-Throw™ High-Velocity Horizontal Unit Heater

- 6 model sizes from 279,000 to 952,000 Btu/hr
- Recommended where there is a requirement for greater heat throw and hard to heat areas such as docks and large warehouses
- Powerful, high-velocity air delivery distributes heat over a wide area
- WPC models have copper tubes while VPN models have copper/nickel tubes for high temperature and/or pressure
- Low outlet temperature models for higher steam pressures or dirty atmospheres

**MODEL WVC/WVN** Vertical Unit Heater

- 15 model sizes from 42,000 to 952,000 Btu/hr
- Recommended for areas where ceilings are high or where obstructions do not permit good horizontal movement of air
- WVC models have copper tubes while WVN models have copper/nickel tubes for higher temperature and/or pressure
- Low outlet temperature models for higher steam pressures or dirty atmospheres
- Optional cone-jet, truncone, or louver air deflectors for a variety of heat patterns
Airedale cabinet unit heaters effectively make each area served an independent heating zone. Cabinet unit heaters are ideal for offices, classrooms, retail stores, laboratories or any place where space is at a premium and low noise is essential. Important cost savings are often realized during building modernizations, as existing piping and/or wiring can frequently be reused.

Noise levels are reduced to an absolute minimum in every cabinet using techniques such as: low blower speeds, rigid panel and cabinet construction, and sound-absorbent cabinet insulation.

**STANDARD FEATURES**
- Attractive one-piece cabinet top and sides for rigorous conditions
- All welded construction
- Cabinet pretreated for prevention of corrosion and painted with a baked-on enamel finish
- Quick change permanent filters
- Sound dampening insulation
- Copper tube, aluminum fin coils
- Removable blower and motor
- Solid state speed control with off position

**OPTIONS**
- 2, 3, & 4 row, high-capacity hot water coil
- Right hand piping, left hand electrical
- Energy efficient permanent split capacitor motors or high static motors
- Disconnect switch
- Tamper proof hardware with key locks
- Motorized outside/return air dampers
- Leveling legs

**ACCESSORIES**
- Room thermostats
- Aquastats
- 2 or 3 position electric valves
- Modulating non-electric valves
- Perma-Lap® frames and wall gasketing
MODEL FC
Exposed Floor Mounted Unit

MODEL WCC
Exposed Wall or Ceiling Mounted Unit

MODEL WCC
Recessed (Full or Partial) Wall or Ceiling Mounted Unit
Shown with Optional Perma-Lap® Frame

For complete technical information and specifications reference catalog AIR11-160
Airedale Fin Tube Heaters are designed with a variety of enclosure styles to meet most applications or architectural styles. Heating elements are copper tubes with aluminum fins that are mechanically bonded to the copper tube to provide maximum heat transfer. A choice of fin spacings permits the selection of elements to meet your design requirements.

- Supplied in 2- to 8-foot lengths
- Enclosures fasten together with a slip joint
- Knob or tamper proof dampers available
- Available in a variety of colors to match most decors
- Accessories to match enclosure styles provide flexibility in design and installation

**Steam/Hot Water Fin Tube Heaters**

- **MODEL PS**
  - Slope Top Security
- **MODEL P**
  - Pedestal Mounted
- **MODEL PA**
  - Pedestal Mounted
  - Aluminum Grille
- **MODEL FT**
  - Flat Top Protective
  - Metal Cover
- **MODEL EM**
  - Expanded Metal
- Copper Tube with
  - Aluminum Fin
  - Heating Element
MODEL SP
Trimfin®

MODEL S
Slope Top

MODEL R
Front and Top Outlet

MODEL SF
Slope Top Floor Mounted

MODEL TA
Top Outlet with Aluminum Grille

MODEL F
Front Outlet

MODEL RF
Front and Top Outlet Floor Mounted

MODEL T
Top Outlet
Steam/Hot Water Convectors

MAXIMUM INSTALLATION FLEXIBILITY • EASY INSTALLATION • USE FOR HOT WATER OR STEAM

Airedale convectors provide maximum installation flexibility for a variety of heating applications. Tubes are mechanically expanded into aluminum fins to form a durable bond for maximum heat transfer.

Airedale offers convectors in 24-64 inch lengths and four different heights, ranging from 18-32 inches depending on model. A complete line of options and accessories provides flexibility in design and installation.

**STANDARD FEATURES**

- Ratings from 1,000 to 27,000 Btu/hr
- 20 gauge liner, 18 gauge front
- Heating elements available in three nominal depths: 4” (2-tube), 6” (3-tube), or 8” (4-tube)
- Pretreated for corrosion and finished with a polyester-epoxy powder coating
- Mechanically bonded aluminum fins with integral collars for uniform spacing and maximum heat transfer

**OPTIONS/ACCESSORIES**

- Louvered, security perforated or aluminum bar grille inlet/outlet front covers
- 18, 16, and 14 gauge liner and/or cover options
- Access door
- Tamperproof hardware
- 1/2” thick fiberglass insulation
- Right- and/or left-hand end pockets
- Outlet dampers assembly, knob or tamperproof operator
- Wall gas jet seal
MODEL SL
Slope Top Wall Mounted

MODEL FL
Flat Top Floor Mounted

MODEL SF
Slope Top Floor Mounted

MODEL PL
Fully-Recessed Wall Mounted
## Natural and Propane Gas Duct Furnaces

**Designed for Heating and/or Make-up Air • Low Initial Cost • Low Maintenance • Easy to Service**

Airedale duct furnaces are an economical choice for superior quality and dependability in most applications. Offering three types of indoor and one type of outdoor indirect gas-fired duct furnaces that cover a wide range of applications in building heating and make-up air systems.

- Available in 11 model sizes from 75,000 to 400,000 Btu/hr
- All models feature 81% minimal thermal efficiency for fuel savings
- Aluminized steel heat exchanger (409 stainless steel optional)
- Natural or propane gas (select indoor units field convertible from natural to propane gas)
- Certified for upstream or downstream placement from cooling coils; Indoor units include a drain pan that allows connection to a condensate drain line, outdoor units drain to the roof
- Certified to 3.0” W.C. external static pressure for high static applications
- Wide range of controls, options, and accessories for unit customization

### PERFORMANCE DATA ①②③

<table>
<thead>
<tr>
<th>Model Size</th>
<th>Btu/hr Input</th>
<th>Btu/hr Output</th>
<th>Low Air Temp Rise Range without Air Baffle</th>
<th>High Air Temp Rise Range with Air Baffle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Temp Rise Range (°F)</td>
<td>Airflow (CFM)</td>
</tr>
<tr>
<td>75</td>
<td>75,000</td>
<td>60,750</td>
<td>20 - 60</td>
<td>938 - 2,813</td>
</tr>
<tr>
<td>100</td>
<td>100,000</td>
<td>81,000</td>
<td>20 - 60</td>
<td>1,250 - 3,750</td>
</tr>
<tr>
<td>125</td>
<td>125,000</td>
<td>101,250</td>
<td>20 - 60</td>
<td>1,563 - 4,688</td>
</tr>
<tr>
<td>150</td>
<td>150,000</td>
<td>121,500</td>
<td>20 - 60</td>
<td>1,875 - 5,625</td>
</tr>
<tr>
<td>175</td>
<td>175,000</td>
<td>141,750</td>
<td>20 - 60</td>
<td>2,188 - 6,563</td>
</tr>
<tr>
<td>200</td>
<td>200,000</td>
<td>162,000</td>
<td>20 - 60</td>
<td>2,500 - 7,500</td>
</tr>
<tr>
<td>225</td>
<td>225,000</td>
<td>182,250</td>
<td>20 - 60</td>
<td>2,813 - 8,438</td>
</tr>
<tr>
<td>250</td>
<td>250,000</td>
<td>202,500</td>
<td>20 - 60</td>
<td>3,125 - 9,375</td>
</tr>
<tr>
<td>300</td>
<td>300,000</td>
<td>243,000</td>
<td>20 - 60</td>
<td>3,750 - 11,250</td>
</tr>
<tr>
<td>350</td>
<td>350,000</td>
<td>283,500</td>
<td>20 - 60</td>
<td>4,375 - 13,125</td>
</tr>
<tr>
<td>400</td>
<td>400,000</td>
<td>324,000</td>
<td>20 - 60</td>
<td>5,000 - 15,000</td>
</tr>
</tbody>
</table>

① Ratings are shown for elevations up to 2,000 feet.
② For IFG or IFP models in high CFM applications, the air distribution baffle may be removed to reduce the pressure drop through the duct furnace.
③ IF5 and OFP units are ordered specifically designed for either low or high air temperature rise.
④ IFP, IFS, and OFP are approved for use in California by CEC.

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Do Not Locate ANY Gas-Fired Unit in Areas with Chlorinated, Halogenated or Acidic Vapors in Atmosphere.
MODEL IFG  Indoor Gravity Vented

- Relies on a natural draft to vent properly
  Note: Power vented units should be considered if the vent system is horizontal or if the space the unit is located is generally under a negative pressure

MODEL IFP  Indoor Power Vented

Similar to Model IFG, with the addition of an integral power exhauster for:

- Vertical or horizontal venting with the smallest diameter vent pipe possible
- The ability to overcome reasonable negative pressures seen in buildings with inadequate make-up air
- Reduction of off-cycle vent losses improves building efficiency

MODEL IFS  Indoor Separated Combustion

- Specifically designed for hostile environments, such as dirty or high-humidity applications
- Separate electrical and gas control access with fully gasketed doors to seal components from the environment
- Combustion air is drawn from outside to ensure the unit has plenty of fresh, clean air
- Off-cycle vent losses are essentially eliminated, further improving building efficiency
- Horizontal or vertical two-pipe or concentric venting options

MODEL OFP  Outdoor Power Vented

- For outdoor installations only
- Integral power exhauster maintains a low cabinet profile with excellent resistance to outdoor wind disturbance
- 18 gauge aluminized steel exterior cabinet with baked-on polyester powder paint finish
LOW-COST INSTALLATION • DESIGNED FOR EASY SERVICEABILITY • NATURAL OR PROPANE GAS

The Airedale indoor duct furnace with blower and/or cooling sections was designed for use with a building’s heating, heating/ventilating/cooling and make-up air systems. The separated combustion units are specifically designed for buildings with hostile atmospheric conditions, such as high humidity or negative pressures.

- Available in 17 model sizes from 75,000 to 1,200,000 Btu/hr
- Airflow range 556 to 14,500 CFM
- Large selection of blower fan/drive and motor combinations available
- Variable frequency drive for variable air volume applications
- 18 gauge insulated aluminized steel blower cabinet with a baked-on polyester powder paint finish on exterior casing parts
- Blower performance up to 3.0” W.C.

OPTIONAL FEATURES:

- Cooling coil section with factory installed DX or chilled water cooling coil
- Double wall construction for blower and/or cooling cabinet
- Dead-front disconnect switches
- Two position, modulating, building pressure sensing, three position, building management (0 - 10 Vdc or 4 - 20 mA input) damper actuators
- Variable frequency drive for variable air volume applications
- Modine Controls System with Carel® Programmable Microprocessor controller with optional BACnet or LonWorks compatibility
- Right- or left-hand control access
## PERFORMANCE DATA ① ② ③

<table>
<thead>
<tr>
<th>Model</th>
<th>Model Size</th>
<th>Btu/hr Input</th>
<th>Btu/hr Output</th>
<th>Temperature Rise Range (°F)</th>
<th>CFM Range</th>
<th>Total Static Pressure (* W.C.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBP/ICP, IBS/ICS</td>
<td>75</td>
<td>75,000</td>
<td>60,750</td>
<td>20 - 100</td>
<td>563 - 2,813</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100,000</td>
<td>81,000</td>
<td>20 - 100</td>
<td>750 - 3,750</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>125</td>
<td>125,000</td>
<td>101,250</td>
<td>20 - 100</td>
<td>938 - 4,688</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>150</td>
<td>150,000</td>
<td>121,500</td>
<td>20 - 100</td>
<td>1,125 - 5,625</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>175</td>
<td>175,000</td>
<td>141,750</td>
<td>23 - 100</td>
<td>1,313 - 6,563</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>200,000</td>
<td>162,000</td>
<td>23 - 100</td>
<td>1,500 - 7,500</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>225</td>
<td>225,000</td>
<td>182,250</td>
<td>26 - 100</td>
<td>1,688 - 8,438</td>
<td>0 - 3.0</td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>250,000</td>
<td>202,500</td>
<td>20 - 100</td>
<td>1,875 - 9,375</td>
<td>-</td>
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<tr>
<td></td>
<td>300</td>
<td>300,000</td>
<td>243,000</td>
<td>20 - 100</td>
<td>2,250 - 11,250</td>
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<tr>
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<td>350</td>
<td>350,000</td>
<td>283,500</td>
<td>22 - 100</td>
<td>2,625 - 13,125</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>400</td>
<td>400,000</td>
<td>324,000</td>
<td>25 - 100</td>
<td>3,000 - 15,000</td>
<td>-</td>
</tr>
<tr>
<td>IBP/IBS</td>
<td>500</td>
<td>500,000</td>
<td>405,000</td>
<td>40 - 120</td>
<td>3,125 - 9,375</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>600</td>
<td>600,000</td>
<td>486,000</td>
<td>40 - 120</td>
<td>3,750 - 11,250</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>700</td>
<td>700,000</td>
<td>567,000</td>
<td>40 - 120</td>
<td>4,375 - 13,000</td>
<td>-</td>
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<tr>
<td></td>
<td>800</td>
<td>800,000</td>
<td>648,000</td>
<td>41 - 120</td>
<td>5,000 - 14,500</td>
<td>-</td>
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<tr>
<td></td>
<td>840</td>
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<td>850,500</td>
<td>60 - 120</td>
<td>6,563 - 13,000</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>960</td>
<td>1,200,000</td>
<td>972,000</td>
<td>63 - 120</td>
<td>7,500 - 14,500</td>
<td>-</td>
</tr>
</tbody>
</table>

① Ratings are shown for elevations up to 2,000 feet.
② Power vented and separated combustion units approved for use in California by CEC.
③ CFM reduced for ICP and ICS models. Refer to page 25.

For complete technical information and specifications reference catalog AIR 5-173
WEATHERPROOF • NATURAL OR PROPANE GAS

Designed for use with a building's heating, heating/venting/cooling and make-up air systems, the Airedale weatherproof duct furnace features a blower, cooling and/or downturn plenum sections to deliver superior performance.

- Available in 17 power vented model sizes from 75,000 to 1,200,000 Btu/hr
- Airflow range 563 to 14,500 CFM
- 18 gauge insulated aluminized steel cabinet with a baked-on polyester powder paint finish on exterior casing parts
- Blower performance up to 3.0" W.C. external static pressure
- Blower and motor vibration isolation
- Side or bottom (through a roof curb) gas and electrical connection access

OPTIONAL FACTORY-INSTALLED FEATURES:

- Cooling coil section with factory installed DX or chilled water cooling coil
- Double wall construction for blower, cooling cabinet, and/or downturn plenum sections
- Dead-front disconnect switches
- Two position, modulating, building pressure sensing, three position, building management (0 - 10 Vdc or 4 - 20 mA input) damper actuators
- Variable frequency drive for variable air volume applications
- Modine Controls System with Carel® Programmable Microprocessor controller with optional BACnet or LonWorks compatibility
- Right- or left-hand control access
## COOLING COIL AND EVAPORATIVE COOLING PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Model Size</th>
<th>Cooling Coil (ICP, ICS, OCP, OPP)</th>
<th>Evaporative Cooling (&quot;O&quot; series only)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max. CFM</td>
<td>Max. CFM</td>
</tr>
<tr>
<td></td>
<td>DX Coil (°)</td>
<td>Chilled Water Coil (°)</td>
</tr>
<tr>
<td>Max. Tons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max.</td>
<td>Min.</td>
<td>Max.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>1,891</td>
<td>9.38</td>
</tr>
<tr>
<td>100/125</td>
<td>2,206</td>
<td>11.43</td>
</tr>
<tr>
<td>150/175</td>
<td>2,521</td>
<td>13.42</td>
</tr>
<tr>
<td>200/225</td>
<td>3,352</td>
<td>18.12</td>
</tr>
<tr>
<td>250/300</td>
<td>3,724</td>
<td>20.24</td>
</tr>
<tr>
<td>350/400</td>
<td>5,214</td>
<td>27.26</td>
</tr>
</tbody>
</table>

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1. 1 Ton = 12,000 Btu/hr
2. Based on 95°F entering dry bulb, 75°F entering wet bulb
The QDB/QRB direct fired make-up air units are designed to provide an economical and efficient means of supplying tempered make-up air to a space or building.

- Up to 7,425,000 Btu/hr
- Airflow range from 1,600 to 60,000 CFM
- Factory assembled natural or propane gas manifolds
- 100% thermal efficiency (92% sensible) results in lower fuel bills
- Factory-wired electrical panel with numbered terminals significantly reduces start-up delays
- 100% factory flame-testing eliminates field start-up problems caused by defective controls
- Weatherproof roof with drip ledge provides protection from water being drawn into the unit
- 18-gauge galvanized steel casing provides high corrosion protection for long life
- Adjustable motor sheaves through 10 HP simplify air balancing
- Four access doors provide maximum access for easy adjustments
- High firing rate turndown for optimum temperature control
- Model QDB, 100% outside air single speed and variable frequency drive
- Model QRB fresh and return air

**OPTIONAL FACTORY-INSTALLED FEATURES:**

- V-bank filter section
- Inlet hood
- Inlet damper
- Discharge damper
- Evaporative cooling
- IRI and FM manifold arrangements
- Discharge air temperature control, space temperature control, or building management (0 - 10 Vdc or 4 - 20 mA input) control
- High and low gas pressure switches
- Internal blower and motor vibration isolation
- Painted casing
### PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Model No.</th>
<th>CFM Range</th>
<th>Maximum Output (Btu/hr)</th>
<th>Natural Gas Maximum Temperature Rise (F)</th>
<th>Total Static Pressure Range (&quot; W.C.)</th>
<th>Horsepower Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>QDB/QRB110</td>
<td>1,600-3,300</td>
<td>432,400</td>
<td>115</td>
<td>0-2.8&quot;</td>
<td>3/4-3</td>
</tr>
<tr>
<td>QDB/QRB112</td>
<td>2,000-4,700</td>
<td>615,800</td>
<td>115</td>
<td>0-3.0&quot;</td>
<td>3/4-5</td>
</tr>
<tr>
<td>QDB/QRB115</td>
<td>3,000-6,500</td>
<td>851,700</td>
<td>115</td>
<td>0-2.6&quot;</td>
<td>1-5</td>
</tr>
<tr>
<td>QDB/QRB118</td>
<td>3,500-10,000</td>
<td>1,310,300</td>
<td>115</td>
<td>0-3.0&quot;</td>
<td>1 1/2-10</td>
</tr>
<tr>
<td>QDB/QRB120</td>
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<td>1,769,000</td>
<td>115</td>
<td>0-3.0&quot;</td>
<td>2-15</td>
</tr>
<tr>
<td>QDB/QRB122</td>
<td>8,000-16,500</td>
<td>2,162,100</td>
<td>115</td>
<td>0-3.0&quot;</td>
<td>3-20</td>
</tr>
<tr>
<td>QDB124 &amp; QRB124</td>
<td>10,000-21,500</td>
<td>2,200,000</td>
<td>115</td>
<td>0-3.0&quot;</td>
<td>3-20</td>
</tr>
<tr>
<td>QDB/QRB125</td>
<td>10,000-21,500</td>
<td>2,817,300</td>
<td>115</td>
<td>0-3.0&quot;</td>
<td>3-20</td>
</tr>
<tr>
<td>QDB/QRB130</td>
<td>14,000-30,000</td>
<td>3,931,100</td>
<td>115</td>
<td>0-2.7&quot;</td>
<td>5-25</td>
</tr>
<tr>
<td>QDB/QRB220</td>
<td>18,000-27,000</td>
<td>3,538,000</td>
<td>115</td>
<td>0-3.0&quot;</td>
<td>7 1/2-25</td>
</tr>
<tr>
<td>QDB/QRB222</td>
<td>25,000-33,000</td>
<td>4,324,200</td>
<td>115</td>
<td>0-3.0&quot;</td>
<td>15-30</td>
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<td>QDB/QRB225</td>
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<td>115</td>
<td>0-3.0&quot;</td>
<td>15-40</td>
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<tr>
<td>QDB/QRB230</td>
<td>44,000-60,000</td>
<td>7,425,000</td>
<td>115</td>
<td>0-2.7&quot;</td>
<td>20-50</td>
</tr>
</tbody>
</table>

① CFM, Btu/hr capacities & Temperature Rise vary depending on unit configuration and certification. The Maximum Temperature Rise for propane gas is 100°F.
② Model Size 124 is available only as Model QDB for 100% outside air applications.

For complete technical information and specifications reference catalog AIR 7-150

Model QDB units are ETL Certified for use in the U.S. and Canada.
Model QRB units are ETL Certified for use in the U.S. only.