

# Sentinel<sup>®</sup>

## SCHOOL UNIT VENTILATOR



The Sentinel unit ventilator is the perfect solution for schools that have to improve the indoor air quality of their classrooms. It operates in conjunction with a school's central chiller/boiler plant and is available in five models: Chilled Water, Hot Water, Steam or a combination of both Chilled and Hot Water, (two-pipe and four-pipe configurations). Airedale specifically designed and engineered the Sentinel to provide the proper amount of fresh air ventilation, and to enable schools to minimize their energy consumption.

### Energy Efficient, Year Round Comfort

A built-in programmable microprocessor controller automatically controls the classroom temperature and outside air economizer to assure the students a comfortable and healthy environment. The microprocessor controller is designed to operate the Sentinel in its most energy efficient mode using pre-engineered control strategies.

### Excellent Indoor Air Quality

To ensure good air circulation the Sentinel supplies conditioned air through a high level top mounted plenum or a ducted ceiling distribution system. An adjustable minimum outside air damper position assures compliance with ASHRAE standard 62-89 for indoor air quality.

### Low Installed Cost And Easy Maintenance

The Sentinel can be installed anywhere in the classroom against an outside wall. Piping connections can be made through the top or bottom of the unit. For ease of maintenance all components are accessible through the lockable, hinged front door, no side access is necessary.

### Vertical Design Provides Many Advantages

- High level plenum or ducted ceiling distribution system assures superior air circulation.
- Units avoid abuses associated with under-the-window units such as students sitting on the units or objects being dropped into the unit.
- Small footprint, only occupies about 1% of the classroom floor space.
- Units can be positioned anywhere in the classroom against an outside wall.

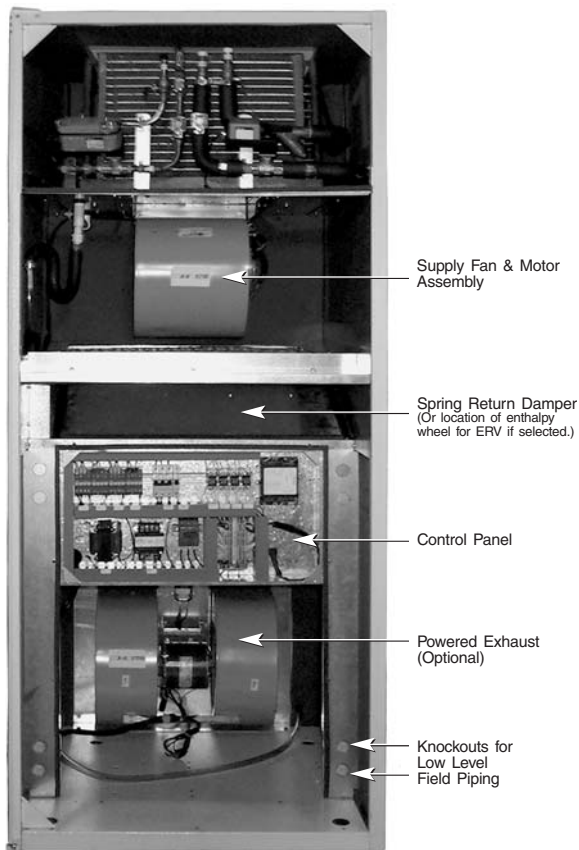
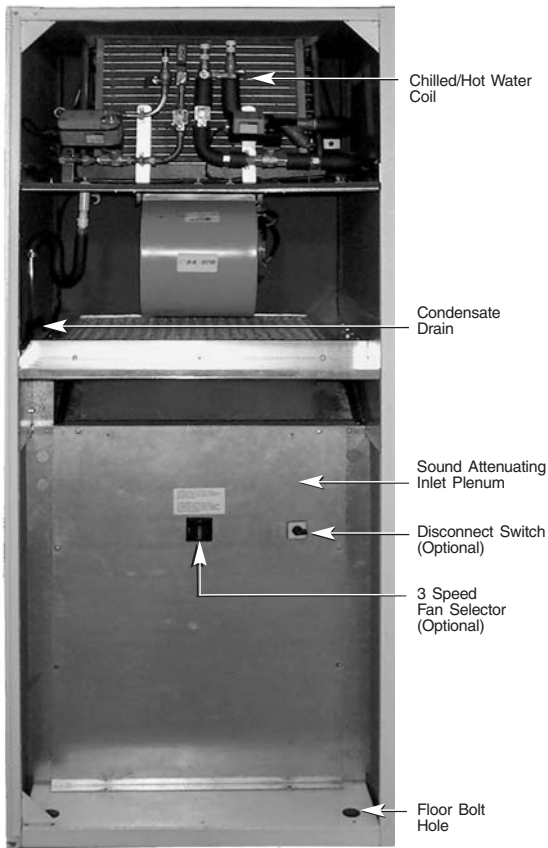
### Available Options

- Energy Recovery Wheel
- Powered Exhaust
- Factory Installed Control Valve & Valve Packages
- 3-Speed Fan Switch
- Three Way Discharge Plenum
- Outside Air Louver & Wall Sleeve



**AIREDALE**

Creating a Healthier & Safer Environment for our Children



### UV-C, UV-CH & UV-CHW

			3	4	5	6
<b>Nominal Cooling Capacity<sup>(1)</sup></b>						
UV-C, UV-CH & UV-CHW	3 row coil	Mbh	31.05	35.91	39.58	42.75
UV-C, UV-CH & UV-CHW	4 row coil	Mbh	47.87	50.04	57.05	63.02
<b>Nominal Heating Capacity<sup>(2)</sup></b>						
UV-CH	3 row coil	Mbh	83.42	102.85	118.27	130.70
UV-CH	4 row coil	Mbh	87.44	110.37	135.08	152.98
UV-CHW	1 row coil	Mbh	58.48	67.30	74.02	79.40

### Fan/Airflow

Nominal Airflow	High	CFM	750	1000	1250	1500
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### Dimensions & Weight

Height	in	84	84	84	84
Depth	in	33-5/8	33-5/8	33-5/8	33-5/8
Width	in	36	36	36	36
Weight	lb	340	340	340	345

### Powered Exhaust (Optional)

Airflow	CFM	750	1000	1250	1500
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### Energy Recovery Wheel (Optional)

Total Capacity Recovered (Cooling) <sup>(3)</sup>	Mbh	18.65			
Total Capacity Recovered (Heating) <sup>(4)</sup>	Mbh	18.63			

### NOTES:

- (1) Cooling capacity based on Air On 80/67°F Dry/Wet Bulb, 45°F Entering Water and 9 Gpm, High Fan Speed.
- (2) Heating capacity based on Air On 70/58.5°F Dry/Wet Bulb, 180°F Entering Water and 6 Gpm, High Fan Speed.
- (3) Cooling capacity based on 450 CFM, Room 75/63°F Dry/Wet Bulb, Ambient 95/78°F Dry/Wet Bulb
- (4) Heating capacity based on 450 CFM, Room 70/58.5°F Dry/Wet Bulb, Ambient 35/33°F Dry/Wet Bulb

### UV-H & UV-S

			3	4	5	6
<b>Nominal Heating Capacity</b>						
UV-H	1 row slab coil	Mbh	59.44	68.45	75.36	80.86
UV-H	2 row slab coil	Mbh	73.29	87.45	98.61	107.58
UV-S	1 row slab coil	Mbh	99.60	117.96	132.12	143.45

### Fan/Airflow

Nominal Airflow	High	CFM	750	1000	1250	1500
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### Dimensions & Weight

Height	in	84	84	84	84
Depth	in	33-5/8	33-5/8	33-5/8	33-5/8
Width	in	36	36	36	36
Weight	lb	320	320	320	325

### Powered Exhaust (Optional)

Airflow	CFM	750	1000	1250	1500
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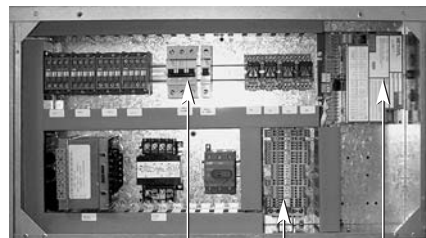
### Energy Recovery Wheel (Optional)

Total Capacity Recovered (Cooling) <sup>(3)</sup>	Mbh	18.65			
Total Capacity Recovered (Heating) <sup>(4)</sup>	Mbh	18.63			

### NOTES:

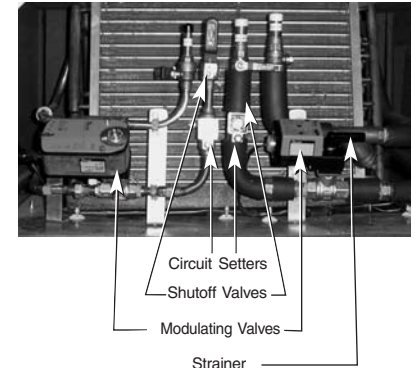
- (1) Heating capacity based on Air On 70/58.5°F Dry/Wet Bulb, 180°F Entering Water and 6 Gpm, High Fan Speed.
- (2) Steam capacity based on Air On 70/58.5°F Dry/Wet Bulb, Steam at 5 Psig, High Fan Speed.
- (3) Cooling capacity based on 450 CFM, Room 75/63°F Dry/Wet Bulb, Ambient 95/78°F Dry/Wet Bulb
- (4) Heating capacity based on 450 CFM, Room 70/58.5°F Dry/Wet Bulb, Ambient 35/33°F Dry/Wet Bulb

### Control Panel



Circuit Breakers Terminal Block Microprocessor Controller

### Piping Package (Optional)



Circuit Setters Shutoff Valves Modulating Valves Strainer

# AIREDALE

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