SPECIFICATION SHEET
DEHUMIDIFIER
MODEL 1850 SERIES

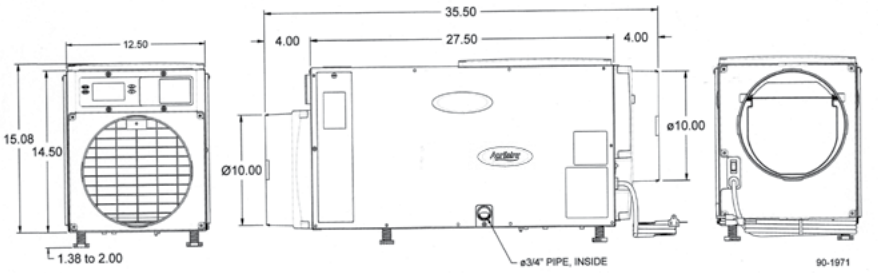
PRODUCT SPECIFICATIONS		
Model	1850 (W) (ducted)	1850F (freestanding)
Capacity[1] pints/day	95 ppd	
Energy Factor [1]	2.2 L/kW-h	
Airflow @ various external static pressure - dry coil		
0.0" w.c.	265 CFM	245 CFM @ 0.0" w.c
0.2" w.c.	230 CFM	
0.4" w.c.	200 CFM	
Voltage, Phase, Frequency	120VAC, 1, 60 Hz	
Current draw [1]	8.0 Amps	
Sound Level	54 dBA ducted	60 dBA
Dimensions - cabinet only [2]		
Width:	12.5"	12.5"
Height:	14.5" [2]	14.5" cabinet / 17" with casters
Length:	27.5"	27.5"
Weight	75 lbs	70 lbs
Inlet Air Operating Conditions	50°F - 104°F, 40°F dew point min.	
Ambient/Ventilation	40°F - 104°F, 40°F dew point min.	

[1] Rated capacity and Energy Factor test done and current draw measured in accordance with AHAM DH-1 2008 at 80°F/60%RH inlet air at 0.0 ESP.

[2] Height does not include adjustable feet. The width excludes the filter doors, and length excludes the duct collars.

Model 1850F

Model 1850



PRODUCT FEATURES		
Control	Built-in digital control with display [1]	
Control Mounting option	Field interchangeable from Top to Front	Top only
Cabinet Insulation	1/2" EPS	
Air Discharge Orientation	Top or End Air Discharge	End Air Discharge
Inlet/Outlet Duct Collars	10" Round	N/A
Back damper at Outlet	Included	N/A
Air Filter	Washable MERV 8	
Refrigeration	R-410A	
Coil Corrosion resistance	E-coated Coil	
8' Power Cord Type	1850 Plug Type/ 1850W Hard wired [2]	Plug Type
Discharge Air Temperature Rise	10°F - 30°F	
Drain Connection	3/4" PVC adapters[3]	
Warranty	5 Years	

[1] Built-in automatic control capable to be set up for dehumidification, and ventilation or zoning. Also capable to be wired to the Model 76 wall mounted control, or with the 8620 or 8910 (available as an optional accessory).

[2] Model 1850W is a hardwired unit and doesn't ship with a power cord. The Model 1850W has a 4 week leed time.

[3] Thread adapter and barbed fitting for clear drain tubing included. 1850F includes 5' of clear drain tubing.

PRINCIPLE OF OPERATION

The Aprilaire Model 1850 Series is designed to dehumidify the air coming into the unit by passing the incoming air over an evaporator coil to drop the air temperature below the dew point of the air. Moisture is removed from the air and drained out of the unit to a common floor or waste drain. The air is then reheated in the condenser coil and exits the unit.

Dehumidification occurs until the set point is reached, then shuts off until periodic sampling determines a need for operation.

APPLICATION

The Aprilaire Model 1850 series dehumidifiers are the perfect product for whole-home dehumidification, basements, crawlspaces and sealed attics.

VENTILATION

The Model 1850 and 1850W have the ability to bring in fresh air. Fresh air will dilute stale air and pollutants and will reduce humidity in the winter months. The fresh air is brought in through a 6" round duct and 6" round normally closed damper. The dehumidifier has built in controls to adjust the amount of fresh air that is brought in.

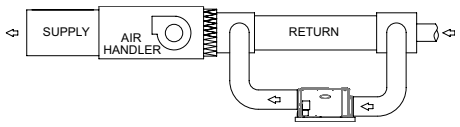
Installation options for the Aprilaire 1850 Series Dehumidifiers

Shown in horizontal applications, can be installed in vertical applications as well.

APPLICATIONS

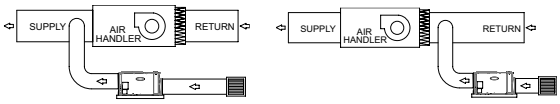
Main Return to Main Return - RECOMMENDED

- This application can be used when a supply duct is not available
- Air is pulled from the return duct, dehumidified, and returned to the return duct
- Assures that the dehumidified air is mixed with rest of the air in the duct before it re-enters the house
- This application is used in basements, attics, crawl spaces, etc.



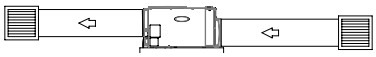
Dedicated Return to Main Supply or Dedicated Return to A/C Return

- This application can be used when a return or supply duct is not available
- Air is pulled through a dedicated return grille, dehumidified, and returned to the supply plenum or return



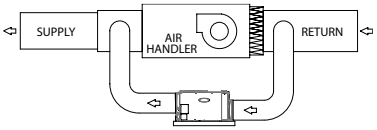
Inlet and Outlet ducted to dedicated grilles

- For homes without duct work
- Dries a specific area that has a moisture issue (basements, crawlspaces, sealed attics, etc.)
- Dehumidifier can be located in a closet, mechanical room or unfinished area and ducted into a finished room



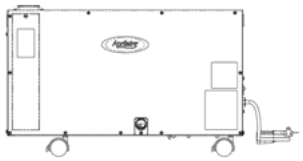
Main Return to Main Supply

- Air is pulled from the return duct, dehumidified, and returned to the supply plenum
- This application is used in basements, attics, equipment closets, etc.



Freestanding (Model 1850F)

- Air is pulled into the dehumidifier directly from the space, dehumidified, and returned back to the space
- This application is used in basements, crawlspaces, sealed attics, etc.



Optional Wall Mount Controls:

Model 8620 Universal Programmable Thermostat

- On/Off buttons
- Wall mounted living space control
- Displays RH and controls to an RH value
- Remote control for crawlspace applications and sealed attics
- Outdoor temperature sensor included

8910 Module Universal Programmable Thermostat

- Large touch screen display
- 3H/3C conventional or 4H/2C heat pump
- Two part control — 3 wire design
- Notifies when ventilation is active
- Built in RH sensor
- Outdoor temperature sensor included
- Designed to meet ASHRAE 62.2 ventilation guidelines
- Optional high or low outdoor temperature lockout
- Capable to control humidification, dehumidification, ventilation and air cleaning

Model 76 Wall Mount Dehumidier Control

- On/Off buttons
- Wall mounted living space control
- Displays RH and controls to an RH value
- Remote control for crawlspace applications and sealed attics

MODEL 76 SPECIFICATIONS		
ELECTRICAL	EXTERNAL	REMOTE
Input Voltage and Current	Voltage: 24VAC +/20% Current: 25mA (nominal), 50mA (max.) at 24VAC	Voltage: 35VDC (supplied by dehumidifier control board)
Output	Dry Contact, Normally Open	Communication (RS485)

CONTROL	EXTERNAL	REMOTE
Control Range	40% - 80% RH	1 (less dry) - 7 (more dry) 65°F - 40°F Dew Point
Accuracy	+/-5% RH	See Dehumidifier Specifications
Differential	3% RH	
Low Limit	40°F Dew Point	50°F Dry Bulb, 40°F Dew Point Minimum
High Limit	99°F Dry Bulb	105°F Dry Bulb

MADE IN U.S.A.

Aprilaire®

www.aprilairepartners.com

Form No. 888 #256190 05.14

P.O. Box 1467
Madison, WI 53701-1467
Phone: 800.334.6011 • Fax: 608.257.4357