











# Sentinel WHD 100/120 Whole-house Dehumidifier

## Features

### Fresh Air Damper:

In the powered-on state, press the "Menu" button to enter the function selection. Cycle through to select the fresh air icon , then press the "Set" button to confirm activation. The icon will change from  to . If no operation is performed within 3 seconds, the icon will revert from  to , and the house icon in the central display will open, showing . Once the fresh air function is activated, the fresh air valve will operate in conjunction with the dehumidifier, turning on or off as needed. When the fresh air function is active and the air valve is open, the  will display dynamically; when the valve is closed, the  will display statically. To deactivate the fresh air function, perform the same steps, and the corresponding icons will change back.



### Control:

Wired Controller; A3-A4 Terminal Strip (HVAC Central Control cMode)



A1-A9 Terminal Strip and Remote Controller Port

## A1-A9 Function Description

Item	Function Description	Remark
A1/A2	Dehumidifier Status Feedback: when the dehumidifier is on (standby), A1/A2 is active. If the dehumidifier is in a shutdown (fault) state, A1/A2 is disconnected.	Switch status output
A3/A4	If A3/A4 receives 24 V AC, the dehumidifier will automatically switch to central air conditioning control mode. The display will show "CC," and the dehumidifier will operate continuously. When A3/A4 is powered off, the dehumidifier enters shutdown mode, and the display shows "--". If the display shows "--", press the device power button to return to normal mode and turn the device back on. Once A3/A4 is powered on again, the dehumidifier will re-enter CC mode.	On/off control logic of central air conditioning mode
A5/A6	Normally Open: When connected, this indicates the external water level is full, triggering an E4 error code.	External water level: not connected.
A8/A9	Normally Closed: When disconnected, this also indicates the external water level is full, triggering an E4 error code.	External water level: short circuit.

## Installation Options

### 1. Air inlet and outlet modes

Adjust the direction of the air outlet as needed. Each air outlet can be connected to an air duct.



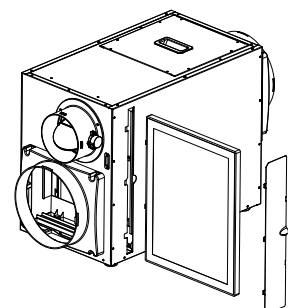
Wind in from front  
Wind out from back

Wind in from front  
Wind out from top

### 2. Hanging



### 3. Filter Replacement



# Whole-house Dehumidifier 100-120 PPD

## Specifications

### Whole house dehumidifier 100 PPD - MERV-10 filter test data

Working conditions	DOE (22.78 °C/60% RH)	AHAM (26.7 °C/60% RH)	30 °C/80% RH
Dehumidification Capacity	70 PPD	92 PPD	150 PPD
Efficiency	2.2 L/kWh (Certification standards 2.09 L/kWh)	2.6	3.5
Efficiency	4.6 Pints/kWh	5.5 Pints/kWh	7.4 Pints/kWh

### Whole house dehumidifier 120 PPD - MERV-10 filter test data

Working conditions	DOE (22.78°C/60%RH)	AHAM (26.7°C/60%RH)	30°C/80%RH
Dehumidification Capacity	85 PPD	104 PPD	160 PPD
Efficiency	2.4 L/kWh (Certification standards 2.09 L/kWh)	2.6 L/kWh	3.1 L/kWh
Efficiency	5.0 Pints/kWh	5.5 Pints/kWh	6.5 Pints/kWh

### Performance standards for Energy Star Certified residential dehumidifiers

Product Volume (ft³)	Comprehensive energy factor under test conditions (L/kWh)
≤8	2.09
>8	3.3

Excluded Products: Dehumidifiers with product capacities greater than 155 U.S. pints/day(73.34 liters/day) are not eligible for ENERGY STAR.

### Noise in Constant Air Volume and Low Noise Mode

In 0 Pa static pressure, air volume value and noise value.

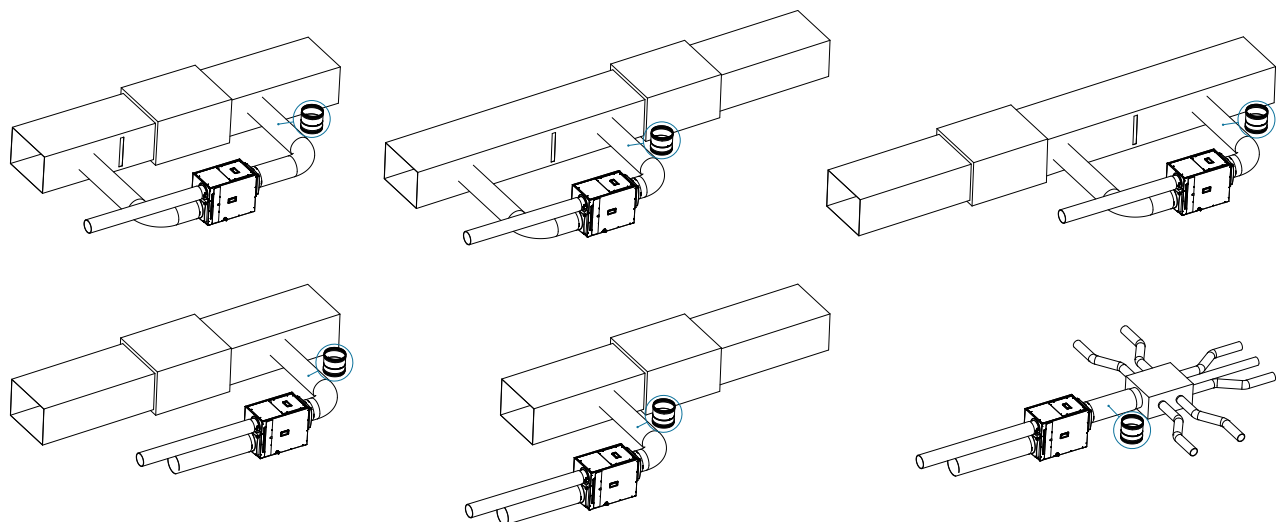
Mode	100	120	150	200
Constant Air Volume (m³/h)	525	525	650	700
Min. Noise	44dB	48dB	52dB	53dB
Max. Noise	55dB	62dB	64dB	65dB

## Application

### Agricultural application scenarios



## Check Valve And Pipe Connection Diagram



 Check valve inside.

# Whole-house Dehumidifier 100-120 PPD

## Whole-home Specifications Summary

Unit	100 PPD	120 PPD	150 PPD	200 PPD
<b>Performance</b>				
AHAM Capacity	92	104	140	165
AHAM Efficiency	2.6	2.6	3.7	3.3
DOE Capacity	70	85	115	140
DOE Efficiency	2.2	2.4	3.4	3.2
<b>Blower CFM</b>				
Low Noise Mode	390 m <sup>3</sup> /h	390 m <sup>3</sup> /h	525 m <sup>3</sup> /h	525 m <sup>3</sup> /h
0" WG	525 m <sup>3</sup> /h	525 m <sup>3</sup> /h	650 m <sup>3</sup> /h	700 m <sup>3</sup> /h
Recommended Sizing (Building Size sq ft/volume)	2300	3000	3500	4500
<b>Electrical</b>				
AHAM Power (Watts)	685 W	785 W	745 W	975 W
Supply Voltage	115/1/60	115/1/60	115/1/60	115/1/60
Current Draw	5.9 A	6.8 A	6.5 A	8.5 A
Power Cord (Length and Plug Type)	5.4m (US std.)	5.4m (US std.)	5.4m (US std.)	5.4m (US std.)
Circuit Requirement (Amperage)	15 A	15 A	15 A	15 A
<b>Duct Connections (Dimensions)</b>				
Inlet	10"	10"	10"	10"
Outlet	10"	10"	10"	10"
Fresh Air	6"	6"	6"	6"
<b>Drain Connection (Size)</b>				
	φ 14 mm / 3/4" Threaded Female NPT	φ 14 mm / 3/4" Threaded Female NPT	φ 14 mm / 3/4" Threaded Female NPT	φ 14 mm / 3/4" Threaded Female NPT
<b>Refrigerant (Type and Weight)</b>				
	R32 (425g)	R32 (520g)	R32 (610g)	R32 (650g)
<b>Unit Dimensions</b>				
	22.64×14.65×19.88"	22.64×14.65×19.88"	37.3×23.4×24.3"	37.3×23.4×24.3"
<b>Unit Weight</b>				
	89.07 lbs	89.07 lbs	181.4 lbs	187.4 lbs
<b>Shipping Dimensions</b>				
	35.43×17.72×23.03"	35.43×17.72×23.03"	48.03×27.56×31.5"	48.03×27.56×31.5"
<b>Shipping Weight</b>				
	101.4 lbs	101.4 lbs	230.4 lbs	235.9 lbs
<b>Loading Quantity</b>				
	20": 120 Sets, 40": 268 Sets, 40"HQ: 268 Sets	20": 120 Sets, 40": 268 Sets, 40"HQ: 268 Sets	20": 36 Sets, 40": 84 Sets, 40"HQ: 84 Sets	20": 36 Sets, 40": 84 Sets, 40"HQ: 84 Sets
<b>Check Valve Loading Quantity</b>				
	20": 490 Sets, 40": 1064 Sets, 40"HQ: 1216 Sets			
<b>Control Options</b>				
Wired Controller	OPT	OPT	OPT	OPT
Thermostat by Others	OPT	OPT	OPT	OPT
<b>Dampers</b>				
Fresh Air	√	√	√	√
Supply Backflow	√	√	√	√
Outdoor Air Backflow	√	√	√	√
<b>Flexible Ducting Positions</b>				
	x	x	x	x
<b>Sound Level (dBA)</b>				
	44 Min. / 55 Max.	48 Min. / 62 Max.	52 Min. / 64 Max.	53 Min. / 65 Max.
<b>Filtration Type</b>				
	MERV-10	MERV-10	MERV-1 / MERV-10	MERV-1 / MERV-10

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