## GENERAL FILTERS

## **Duct Steam Humidifiers**

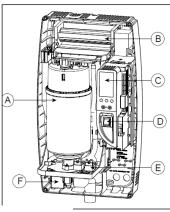
Residential Whole-House (GFI #5528, 5524, & 5527)

GeneralAire<sup>®</sup> Elite Steam

Humidifiers

## **Spec Sheet**

Duct Steam Models			
Elite Steam Humidifiers Model	DS15P (GFI #5528), 25 (GFI #5524) & 25LC (GFI #5527)		
Туре	Self contained immersed electrode; drain pump design; integral room steam blower		
GPD	DS15P: 15.8 DS25 & 25LC: 25-35		
Capacity / VAC / kW	DS15P: 5.5 Lbs / Hr (2.5kg/h) / 110VAC 1-phase 50-60Hz / 1.86 kW DS25, 25LC: 12 Lbs / Hr (5.4kg/h) / 230VAC 1-phase 50-60Hz / 4.05 kW		
Power	DS15P: 120V DS25 & DS25LC: 230V		
Electrode Power Cables	12 AWG		
Power Relays	2 - 30 Amp On Board		
Ground Connection	Screw		
Warranty	5 Years (Parts Only - Units sold after January 1, 2016)		
Unit Size (Inches)	23.75 H x 13 1/8 W x 8.25 D		
Weight (Pounds) / Pallet Size	20 / 16		
Replacement Steam Cylinder:	5-14 (GFI #7523); RS25 = 35-14 (GFI #7524), 25LC = 35-15 (GFI #7543)		
Controls	GFX3 - Included With DMNKit / Remote Blower(Option: GFX50)		
Conductivity Range	125 to1250 µs/cm / Low Conductivity Model (Test water for conductivity prior to selection)		
Water Fill Connection	1/4" O.D. Compression; Adapter to 3/4" FPS		
Water Fill - Instant Flow	0.09 - 0.16 gpm (0.35 - 0.60 l/min)		
Input Water Type	Potable water (no demineralized or softened water)		
Drain Connection	.75" to air break into 1.25" O.D. (32 mm)		
Drain Water Temperature	< 140° (< 60° C)		
Drain Flow	<i>Initial</i> Max Drain Rate = 7 gpm (26.2 l/min) (with full cylinder for the first 10-15 seconds of drain cycle. <i>Average</i> Drain Rate = 3.1 gpm (11.7 l/min) (measured over a 1-minute period starting with full cylinder)		
Embedded Fan Flow	71 cfm (120 m³/hr)		
Serial Communication	RS485		
In The Box	Steam Humidifier, Warranty Card, Installation Manual, Drilling Template, Installation/Mounting Screws, Power Wire Clamps, Steam Adapter Fitting (Duct Units Only)		





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# A Steam Generator Cylinder B Room Blower/Manifold (Optional) C User Interface D ON / OFF Buttons E Fill & Tempering Valves

Drain Pump

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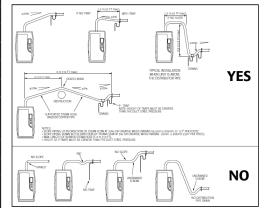
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#### 90% of All Operational Problems are Due to Improper Steam Piping



- Avoid kinks, sharp elbows or low spots that could collect or restrict the flow of steam to the distributor pipe; or the flow of condensate back to the humidifier.
- Support the hose adequately to avoid sags.

1	1 Water Fill Valve		Electrode
2	Water Tube	8 Steam Output	
3	Fill Cup Dam	9	Water Level Probe
4	Flow Restrictor	10 Tempering Valve	
5	Water Reser- voire	11	Drain Pump
6	Water Tube	12	Strainer



**Duct Steam Humidifiers** 

**Residential Whole-House (GFI #5528, 5524, & 5527)** 

**GeneralAire® Elite Steam Humidifiers** 

**GENERAL FILTERS** 

**INCORPORATED** 

## **Spec Sheet**

#### **Model Options**

Model No.	Power Supply (Single Phase)	Steam Output (Ibs/hr)	Steam Output (kg/h)	Power (kW)	Current (A)	External Power Wires	External Fuse (A) or Breaker
DS15P	110Vac 50/60Hz	5.5	2.5	1.80	16.40	AWG10	25
DS25	230Vac 50/60Hz	9-12	5.4	3.89	16.95	AWG10	25
DS25LC	230Vac 50/60Hz	9-12	5.4	3.89	16.95	AWG10	25
RS15P	110Vac 50/60Hz	5.5	2.5	1.80	16.40	AWG10	25
RS25	230Vac 50/60Hz	9-12	5.4	3.89	16.95	AWG10	25
RS25LC	230Vac 50/60Hz	9-12	5.4	3.89	16.95	AWG10	25

### Wiring Connections

Terminals	Functions	Electrical Specifications	
L1-L2 GROUND	Power supply and ground connections	Power supply 110 VAC 1-phase 50-60 Hz 1.8 kW or 230 VAC 1-phase 50-60 Hz 4.05kW	
KEY	Programming Port	Connecting to programming port or supervisor	
AB-AB	Remote enabling input	Imposes an external NO contact; Rmax = 300 Ohm: Vmax=33 Vdc; Imax = 6mAdc; humidifier enabled = contact closed	
		If programmed 010V; Input impedance 10 KOhm	
IN-GND	Control signal input	lf programmed On-Off: Vmax 33Vdc; Imax = 5mA; Rmax = 300 Ohm	
NC-C-NO	NC alarm contact; Common alarm contact; NO alarm contact	250V; 8Amp max with resistive load; 4Amp max with inductive load	
NO-C	External fan relay	250V; 8Amp max with resistive load; 4Amp max with inductive load	
24GND	Power for external humidistat	Power supply for external humidistat 24 Vac; 2 Watt	

### Water Requirements

- Pressure: Between 20psi and 110 psi or 0.1 and 0.8 MPa (1 & 8 Bar)
- Temperature: Between 33°F and 104°F (1°C and 40°C)
- Flow Rate: minimum 0.45 L/min or 0.21 gpm
- Hardness: No greater than 40°fH (equal to 400 ppm<sup>3</sup> of CaCO)
- Absence of organic compounds
  - Conductivity: Between 125 to 1250 µs/cm 125 to 400 Low Conductivity 400 to 1250 Regular Conductivity



Water Conductivity Meter (GFI#7065)

#### **Unacceptable Water Types**

- Softened water
- Water containing disinfectants or corrosion inhibitors
- Industrial water, boiler water or water from cooling circuits
- Any potentially chemically or bacteriologically contaminated water
- Heated water



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#### **Remote Blower Kits**

Connector, Air Pressure Proving Switch.

**Duct Mount Kits** 

RMB15 (GFI #7545) DS15P 120V Includes: 12' Steam Hose, 13' Condensate se. Water Fill Connector 6" Thru-the-Wall Sleeve with 120V Blower & Grille Pkg, GFX3 Humidistat, Code Valve and Water Supply Tubing Kit

RMB35 (GFI #7540) DS25, DS25LC 230V Includes: 12' Steam Hose, 13' Condensate Hose, Water Fill Connecto 6" Thru-the-Wall Sleeve with 120V Blower & Grille Pkg, GFX3 Humidistat, Code Valve and Water Supply Tubing Kit .



**Installation Kit Required** 

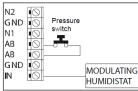


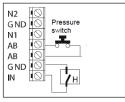
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#### **Recommended Settings:**

At Outside Temperature		Recommended Setting
-20°F	-29°C	15%
-10°F	-23°C	20%
0°F	-18°C	25%
10°F	-12°C	30%
20°F	-7°C	35%
30°F	-1°C	40%

#### **Control Wiring**





Operation by the GFX50

- Connect the GFX50 Humidistat for modulating operation.
- Connect Elite Steam terminals 24V & GND to GFX50 terminals GO5 & GO6 respectively.
- Do not reverse connections. Connect GFX50 terminal A • out 6 to steam terminal N.

Operation by mechanical humidistat or control contact & pressure switch

### **Calculating Humidity Load**

Step 1: Calculate the Total Cubic Feet of Home Total Home Square Footage X Average Ceiling Height (Include the basement)

Step 2: Calculate the Load (lbs/hr)

Total Cubic Feet X Desired Condition Factor (Table Below) X 1.05 / Ea. Fireplace

Step 3: Calculate Gallons Per Day (GPD) Gallons Per Day = Load (lbs/hr) X 2.88

#### Table 1.2 Pounds of Moisture / Hour / Cubic Foot\*

Indoor	Indoor RH %				
Air Temp	35%	40%	45%	50%	
68°F	0.00015	0.00018	0.00021	0.00024	
70°F	0.00017	0.00020	0.00023	0.00026	
72°F	0.00019	0.00022	0.00025	0.00028	

Based on .5 Air Changes Per Hour (ACH)

Go to: www.generalaire.com/support/humidification calculator for assistance in selecting a humidifier for a home.

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Download online at: www.generalfilters.com/literature/spec/submittal. All information subject to change without notice.