

GeneralAire®

Elite Steam Humidifier

Models DS50/50LC

Spec Sheet

Specifications

- Model:** DS50 & DS50LC Elit Steam Humidifiers (GFI #5530 & 5535)
- Type:** Self contained immersed electrode; drain pump design
- GPD:** 50-58
- Capacity / VAC / kW:** 20 Lbs/Hr (9kg/h) / 230VAC 1-phase 50-60Hz / 6.9 kW
- Power:** 230V
- Electrode Power Cables:** 8 AWG
- Power Contactor:** 63 Amp
- Ground Connection:** Terminal Block
- Outlet Pressure Limits:** 5.4 in WC / 1350 Pa
- IP Class:** IP20
- Warranty:** 2-Years (Parts Only)
- Unit Size:** 31" H x 18" W x 14" D
- Weight:** 46 LBS
- Pallet Size:** 4
- LC=Low Conductivity Model** (Test water for conductivity prior to selection)
- Controls:** GFX 50
- Conductivity Range:** DS50 = 300 to 1250 $\mu\text{s}/\text{cm}$; DS50LC = 125 to 500 $\mu\text{s}/\text{cm}$
- Replacement Steam Cylinder:** DS50 = 50-14 (GFI #7624); DS50LC = 50-15 (GFI #7635)
- Features:** Constant control and monitoring diagnostics
- Water Fill Connection:** 1/4" O.D. Compression
- Water Fill - Instant Flow:** 0.22 - 0.3 gpm (0.825 - 1.1 l/min)
- Input Water Type:** Potable water (no demin. or softened water)
- Drain Connection:** .75" to air break into 1.25" O.D. (32 mm)
- Drain Water Temperature:** < 140° (< 60° C)
- Drain Flow:** Max 7 gpm (Max 21 l/min)
- Serial Communication:** RS485
- In The Box:** Steam Hose, Stainless Steel Steam Manifold, GFX50, GCV Code Valve, Water Supply Tubing, Condensate Hose, Water Fill Connector, Air Pressure Proving Switch

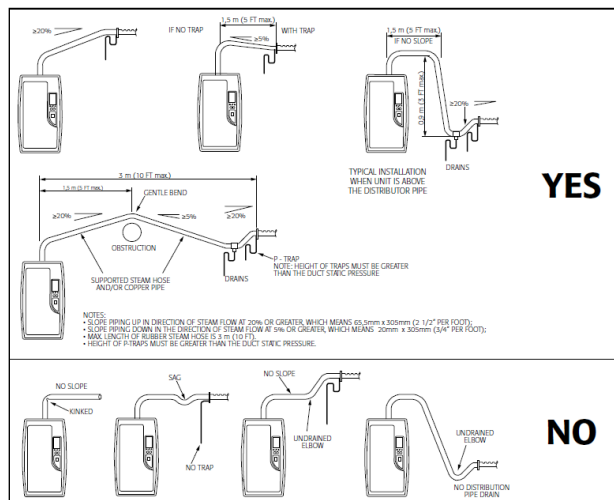


Installation Kit Included



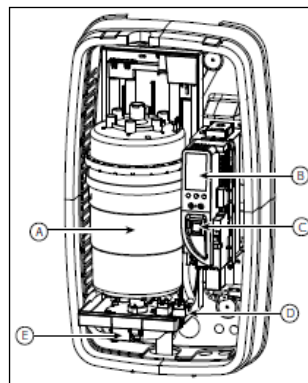
Humidistat
GFX50 (Included)
GFI #7519

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

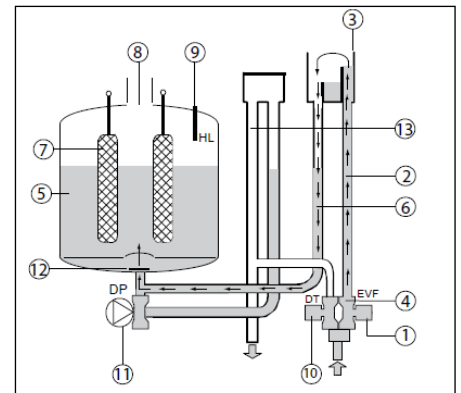


- Avoid kinks, sharp elbows or low spots that could collect or restrict the flow of steam to the distributor pipe; or the flow of condensate back to the humidifier.
- Support the hose adequately to avoid sags.

Internal Views



A	Steam Generator Cylinder
B	User Interface/Display
C	On/Off; SET Buttons
D	Fill & Tempering Valves
E	Drain Pump



1	Water Fill Valve	7	Electrode
2	Water Tube	8	Steam Output
3	Fill Cup Dam	9	Water Level Probe
4	Flow Restrictor	10	Tempering Valve
5	Water Reservoir	11	Drain Pump
6	Water Tube	12	Strainer

GeneralAire®

Elite Steam Humidifier

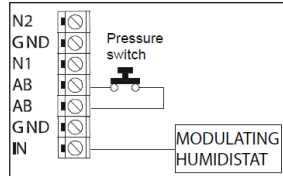
Models DS50/50LC

Spec Sheet

Model Options

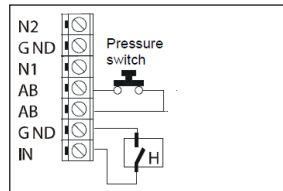
Model No.	Power Supply (Single Phase)	Steam Output (lbs/hr)	Steam Output (kg/h)	Power (kW)	Current (A)	External Power Wires	External Fuse (A) or Breaker
DS50	230Vac 50/60Hz	20-58	9	6.9	30	AWG8	40 A / Fast Blow
DS50LC	230Vac 50/60Hz	20-58	9	6.9	30	AWG8	40 A / Fast Blow
RS15P	110Vac 50/60Hz	5.5	2.5	1.80	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
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

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

Wiring Connections

Terminals	Functions	Electrical Specifications
L1-L2 GROUND	Power supply and ground connections	Power supply 230 VAC 1-phase 50-60 Hz 6.9 kW
KEY	Programming Port	Connecting to programming port or supervisor
N1-GND-N2	NTC air proving sensor	Connection to NTC 2K and 10K to 20°C
AB-AB	Remote enabling input	Imposes an external NO contact; Rmax = 300 Ohm; Vmax=33 Vdc; Imax = 6mA dc; humidifier enabled = contact closed
IN GND	Control signal input	If programmed 0...10V; Input impedance 10 KOhm
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
K	Contact	
TAM	Amperometric transformer	Setting TAM 500 with pin strip

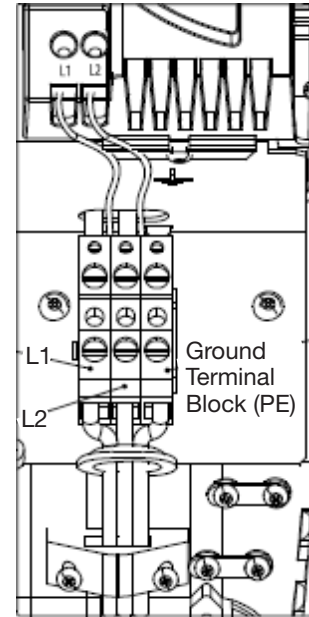
Unacceptable Water Types

- 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

General Filters, Inc.
43800 Grand River Avenue
Novi, MI 48375
Toll Free: (866) 476-5101

www.generalaire.com

Power Wiring



- Check that the power supply voltage to be connected matches the value indicated on the rating plate inside the electrical panel.
- Power cables should be kept separate from any control wiring.
- Tolerance allowed on main voltage = -15% to +10%.

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 Air Temp	Indoor RH %			
	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-center/humidification-calculator for assistance in selecting a humidifier for a home.



Water Conductivity Meter
(GFI#7065)

