

# **Elite** Steam Humidifiers



Elegant Styling designed to deliver precise humidification comfort.

#### **Humidity For Comfort**

Research has shown that 40% to 60% relative humidity is ideal for today's homes.

Outside this range, bacteria, fungi, viruses and mites thrive. Proper relative humidity provides a comfortable environment for your woodwork, your furniture, your plants, your pets and most importantly for you and your family.

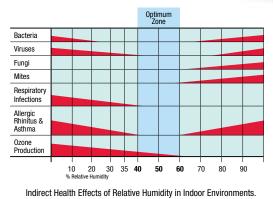
#### Dry Air is like a Sponge

It soaks up moisture from where ever it can find it.

#### GeneralAire Elite Steam Humidifier - an investment that pays dividends everyday

We all have an investment in our health, our homes and their furnishings. Protecting your investments from the dry air may not seem like an important task, but the effects of dry air are astounding:

- · Dry nose and throat
- · Itchy, dry skin
- · Cracking of expensive woodwork and floors
- Damage to household furnishings
- Static electricity shocks that can damage computers, DVD Players and other electronic equipment
- Dry air pulls moisture from delicate membranes in your nose, throat and lungs - which causes food not to taste as good
- Sleeping becomes difficult and your mental concentration is affected



Environmental Health Perspectives, Vol. 65, p358. Sterling, etal. 1986

## How much Humidity is right?

Calculate the Humidity Load

- Total Square Footage
- X Average Ceiling Height
- X Factor from Table
- X 1.05 for each Fireplace
  - Humidity Load in Ibs./hour
- X 2.88 convert to gallons/day

Gallons per Day Humidity Load

#### Pounds of Moisture per Cubic Foot

Indoor Air Temp	Indoor RH%					
۴	35%	40%	45%	50%		
68	0.00015	0.00018	0.00021	0.00024		
70	0.00017	0.00020	0.00023	0.00026		
72	0.00019	0.00022	0.00025	0.00028		
*Deced on C air changes nor hour						

\*Based on .5 air changes per hour



### **Specifications**

Power Supply		Steam Output	Gallons	Dimensions		
Model	(single phase)	(lbs/hr)	per Day	Width	Height	Depth
DS15P	120Vac 50/60Hz	5.5	15.8	13 1/8	23 3/4	8 1/4
RS15P	120Vac 50/60Hz	5.5	15.8	13 1/8	23 3/4	8 1/4
DS25 *(LC)	230Vac 50/60Hz	9-12	25-35	13 1/8	23 3/4	8 1/4
RS25 *(LC)	230Vac 50/60Hz	9-12	25-35	13 1/8	23 3/4	8 1/4

\*LC designates model with low conductivity cylinder



# DS25/ DS25LC / DS15P Models

- DS25(LC) 9-12 lb/hr (25-35 gpd) capacity
- DS15P 5.5 lb/hr (15 gpd) capacity



# DS Models Require Kit Selection for Installation

#### DMNKIT Duct Mount Kit for DS25, DS25LC & DS15P

Includes:

8 ft Steam Hose, Nozzle, GFX3 Humidistat, Code Valve, Water Fill Connector, Condensate Hose Water supply Tubing, Air Proving Pressure Switch.

#### EDMK4 Economy Kit for DS25, DS25LC & DS15P

Includes:

Steam nozzle, 4ft. steam hose, 5ft. condensate hose, fill connector, hose clamps and air pressure switch.

#### **RMB15 Remote Blower Kit for DS15P**

Includes:

12 ft Steam Hose, GFX3 Humidistat, Code Valve, Condensate Hose, Water Fill Connector, Water Supply Tubing, and Thru-the-Wall Sleeve with 120V Blower & Grille Pkg.

#### RMB35 Remote Blower Kit for DS25 & DS25LC

#### Includes:

12 ft Steam Hose, GFX3 Humidistat, Code Valve, Condensate Hose, Water Fill Connector, Water Supply Tubing, and Thru-the-Wall Sleeve with 230V Blower & Grille Pkg.

#### Kit selection required for DS model installation

# RS25 / RS25LC / RS15P Models

Includes: Integral Room Steam Blower GFX3 Humidistat Water Fill Connector Code Valve Water Supply Tubing Kit

- RS25(LC) 9-12 lb/hr (25-35 gpd) capacity
- RS15P 5.5 lb/hr (15 gpd) capacity



# Home Comfort Features

- · Integrated smart monitoring drain pump assembly
- Multiple Installation Options
  Duct Mount Room Mount Remote Mount
- 120V and 230V options
- · Self contained immersed electrode design
- Disposable steam generating cylinder
- High water level and foam detection monitoring
- Drain Tempering
- · Capacities from 5.5 lbs/hr to 12 lbs/hr
- 20% adjustable capacity from rated max output
- Integrated AHU fan relay for on demand humidification
- · LCD display with numerical and icon driven menu
- · Constant control monitoring and diagnostics
- · Pure sterile steam delivering premium indoor air quality
- GFX3 Digital Automatic Humidistat



# Technology You Can Depend Onl





# How the Elite Steam Humidifier Works

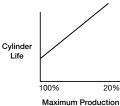
Elite Steam is an electrode humidifier. It produces steam for humidification by passing electric current through the water between metal electrodes in the plastic steam generator cylinder. There are no heating elements. Steam output is directly proportional to the conductivity of the water, and the amount of electrode immersed in the water.

The Steam Cylinder is the engine of the humidifier. As the humidifier operates and water is evaporated and minerals are left behind. Much of these minerals are removed through the cylinder drain. Some are deposited on the walls of the cylinder and the cylinder electrodes. When a lower section of the electrodes develop a thick coating, the water level is raised to expose clean electrode surface. Eventually minerals cover the electrodes' entire length with a thick coating and little electrical current can pass between them resulting in poor steam output. The humidifier can sense the low amperage and will display the E6 Cylinder Exhausted error code. There are several factors that influence cylinder life.

# Humidity Load and Cylinder Life

Humidity load demands have an effect on cylinder life. Normal installations where humidity capacity is properly sized require only intermittent periods where full humidifier capacity is required. This allows the water level in the cylinder to be increased only as electrode segments become insulated. This tends to maximize cylinder life.

Extraordinary installations that require constant operation at full capacity reduce cylinder life. The water level in the cylinder is, on average, much higher, and the electrodes become completely insulated more quickly. Installations like this may result in cylinder life of less than 1000 hours.



# **Maximum Steam Production**

Another factor affecting cylinder life is the maximum production setting. A higher production rate will result in a shorter cylinder life. For this reason DS-25 and RS-25 units are preset from the factory at 70%. Further reductions in Maximum Steam Production will extend cylinder life.

# **Check Water Quality**

Steam cylinders must be matched to the local water conductivity. If not familiar with local water conductivity, check using an instrument (35662-30 EZTestr11 Conductivity Tester). Change cylinder before startup if not correct. If conductivity is outside these ranges, contact the factory **before installation**.

ELITE STEAM models	Conductivity uS/cm	Steam Cylinder
DS25, RS25	300-1250	35-14
DS25LC, RS25LC	125-500	35-15
DS15, RS15	125-1250	15-14

If water conditions are outside the parameters shown above or those shown in the Installation Manual, do not install the unit. Contact the factory for technical support.

#### The following water types are not acceptable:

1. Softened water as this will lead to foam, electrode corrosion and greatly shortened cylinder life.

2. Water containing disinfectants or corrosion inhibitors, as these are potential irritants.

- 3. Industrial water, boiler water or water from cooling circuits.
- 4. Any potential chemically or bacteriologically contaminated water.
- 5. Heated water.
- 6. Water with silica deposits.

See Installation Manual for more details as required.

# Diagnostic Instruments Available

35662-30 EZTestr11 Conductivity Tester

# Structures Under Construction

In high end construction projects, humidification is often required while the structure is being finished. Humidification is necessary to protect and stabilize wood floors, trim and decoration. Humidification load, however, in an unfinished structure may be five to eight times higher than when finished. Elite Steam humidifiers may be operated while construction is underway but, reduced cylinder life is to be expected and budgeted for. Good practice dictates that the steam cylinders also be replaced once the project is complete.



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