**MODEL NUMBER IDENTIFICATION**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCWB 3 - 17 A K</td>
<td>Installation Kit&lt;br&gt;Installation Kit Furnished (Canada only)</td>
</tr>
<tr>
<td>Unit Type</td>
<td>HCWB = Healthy Climate By-Pass Humidifier</td>
</tr>
<tr>
<td>Series</td>
<td></td>
</tr>
<tr>
<td>Nominal Capacity</td>
<td>12 = 12 US Gallons per day&lt;br&gt;17 = 17 US Gallons per day</td>
</tr>
<tr>
<td>Controls</td>
<td>(blank) = Manual Humidistat&lt;br&gt;A = Automatic Humidifier Control</td>
</tr>
</tbody>
</table>

**Manual Humidistat**<br> (furnished with standard Models)

**Automatic Humidifier Control**<br> (furnished with “A” Models)
APPROVALS AND WARRANTY

APPROVALS
• UL listed per ANSI/UL 998 and CSA C22.2 No.104-01

WARRANTY
• All covered components:
  • Limited five years warranty in residential applications
  • Limited one-year in non-residential applications

NOTE - Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

FEATURES

APPLICATIONS
• Applicable to most forced air installations
• Installs on the supply air plenum with a by-pass duct from the return plenum in upflow and horizontal applications
• Installs on the return air plenum with a by-pass duct from the supply plenum in downflow applications
• See Typical Applications
• Provides additional humidity to the home during the heating season to increase comfort level
• Do not install where freezing may occur
• Humidifier, saddle valve and manual or automatic humidifier control (depending on model) shipped in one package

SEQUENCE OF OPERATION
• Humidifier will only operate when indoor blower is operating
• When the level of moisture in the return air or living space area drops below the set point of the humidifier control, the water solenoid valve opens
• Water flows into distribution tray and weeps down through the evaporator pad
• By-pass air flows over the evaporator pad, increasing the humidity of the air, and then back into the return air stream
• When the humidifier control is satisfied the water solenoid valve closes

CABINET
• Rugged, corrosion resistant molded plastic
• Shipped for left-hand by-pass duct connection
• For right-hand by-pass duct connection, rotate humidifier cabinet 180° top for bottom and relocate drain spud
• See Installation Instructions for additional details
• Built-in damper included to close off bypass duct during summer cooling operation

CONTROLS

Manual Humidistat - HCWB3-12 and HCWB3-17
• Can be horizontally mounted on wall or duct
• Provides manual control of room relative humidity
• Wired in series with the humidifier water solenoid valve
• Adjustable setting

Automatic Humidifier Control - HCWB3-12A and HCWB3-17A
• Duct mount only
• Automatic or manual mode control
• Manual Mode label (with resistor to bypass outdoor temperature sensor) are furnished to indicate when humidistat is installed in Manual Mode
• Senses duct air relative humidity and outdoor temperature
• Includes outdoor temperature sensor for use with automatic control option and resistor for manual control setting
• Adjusts humidity setpoint to provide optimum humidity levels within the space
• Adjustable setting
WATER SUPPLY
• Consists of supply tubing, orifice, distribution tray, cleanable/replaceable internal strainer and 24 volt brass water solenoid valve with stainless steel seat

Drain
• 1/2 in. drain fitting at bottom of cabinet

NOTE - 1/2 in. ID plastic tubing must be field provided.
• Unused water from the evaporator pad is drained from the unit to help remove mineral deposits left from the evaporative process

Distribution Tray
• Reservoir and unique polyester liner provides even water distribution across the evaporator media pad for optimal performance
• Tray and support frame removable for cleaning or replacement

Evaporator Media Pad
• Provides large evaporation capacity
• Pad and support frame removable for cleaning or replacement

NOTE - Annual pad replacement recommended.

Saddle Valve
• All necessary fittings furnished as standard equipment
• Field installs in the water supply line

Optional Accessories

Healthy Climate® Digital Automatic Humidistat
• Basic humidity control (on/off or proportional) and temperature display
• Control Buttons:
  • Power button
  • °F/°C display
  • Set button for changing humidity setpoints
  • SLEEP button for changing day/night modes
  • PRG button for programming timed settings and setting the clock
  • Up/Down buttons to change humidity setpoint and time
  • Built-in humidity sensor
  • Outdoor temperature sensor furnished
  • 24VAC powered directly by the humidifier
• LCD with alphanumeric characters and icon graphics:
  • Humidity and Temperature (indoor/outdoor)
  • Humidity Mode
  • Sleep Mode
  • Auto Mode
  • Lock Mode
  • Program Timer On

• Large LCD display shows humidity (or temperature) setpoint while the small display shows temperature (or time) setpoint
• Built-in clock (with backup) for automatic humidity control
• Two time settings per day
• Error code display
• Lock mode indicates a parameter has been set
• Dimension (H x W x D): 3-3/8 x 5-1/2 x 1-3/8 in.

Healthy Climate® Water Conductivity Test Kit
• A conductivity meter is recommended for testing the water
• Measures total dissolved solids (TDS) and temperature
• Automatic Temperature Compensation (ATC)
• Water-resistant housing
• Measurement Range: 0-5000 ppm
• Digital Calibration (Push button)
• Auto-off function, data-hold function and low-battery indicator
• Display - Large and easy-to-read LCD screen includes simultaneous temperature reading
• Factory-calibrated with a 342 ppm NaCl solution
• The meter can be recalibrated with digital calibration using the Push buttons, rather than a screwdriver
• Includes cap and CR2032 battery

Bypass Humidifier Installation Kit
Note - Furnished as standard with “K” models for Canada Only.
• Kit contains: 3 ft. of flexible bypass duct (6 in. dia.), bypass duct collar (6 in. dia.), 15 ft. of drain tubing (1/2 in. I.D.), 10 ft. of poly water supply tubing (1/4 in. O.D.) rated for water supply line, 10 ft. 24V low voltage wire, hose clamps (2), brass tubes (2) and ferrule plastic tubes (2)

MAINTENANCE SUPPLIES

Replacement Media
• Recommended annual replacement of media pad
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model No.</th>
<th>With Manual Humidistat Control</th>
<th>HCWB3-12</th>
<th>HCWB3-17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>With Automatic Humidifier Control</td>
<td>HCWB3-12A</td>
<td>HCWB3-17A</td>
</tr>
<tr>
<td>(^1) With Manual Humidistat Control and Installation Kit (Canada)</td>
<td>HCWB3-12K</td>
<td>HCWB3-17K</td>
<td></td>
</tr>
<tr>
<td>(^1) With Automatic Humidifier Control and Installation Kit (Canada)</td>
<td>HCWB3-12AK</td>
<td>HCWB3-17AK</td>
<td></td>
</tr>
</tbody>
</table>

| Capacity - 120°F plenum temperature, 0.20 in. w.c. static pressure drop | 12 US gallons per day | 17 US gallons per day |
| Water Feed Rate (gallons per hour @ 50 PSI water pressure) | 3 | 3 |
| Evaporator pad size - H x W x D - in. | 9-1/2 x 9-5/8 x 1-11/16 | 13 x 10 x 1-11/16 |
| Connections | Plenum H x W - in. | 9-1/2 x 9-1/2 | 12-3/4 x 10 |
| By-Pass Duct - in. | 6 round | 6 round |
| Water supply | 1/4 in. compression | 1/4 in. compression |
| Drain | 1/2 in. I.D. | 1/2 in. I.D. |
| Electrical characteristics | 24V-60Hz, 0.5 amp | 24V-60Hz, 0.5 amp |
| Shipping Data - lbs. (1 package) | 8 | 9 |

### MAINTENANCE SUPPLIES - MUST BE ORDERED EXTRA

| Replacement Media | X2660 | X2661 |

### OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA

| Healthy Climate® Digital Automatic Humidistat | Y3760 | Y3760 |
| Healthy Climate® Water Conductivity Test Kit | Y3480 | Y3480 |
| Bypass Humidifier Installation Kit (Not available in Canada) | Y2960 | Y2960 |

\(^1\) Canada only.

### HUMIDIFIER SIZING INFORMATION

#### (BASED ON VOLUME OF HOME)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Type of Home</th>
<th>8 Foot Ceiling</th>
<th>9 Foot Ceiling</th>
<th>10 Foot Ceiling</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Home Area (sq. ft.)</td>
<td>Home Area (sq. ft.)</td>
<td>Home Area (sq. ft.)</td>
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<tr>
<td>HCWB3-12(A)(K)</td>
<td>Loose</td>
<td>750</td>
<td>666</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1500</td>
<td>1350</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>Tight</td>
<td>3000</td>
<td>2700</td>
<td>2400</td>
</tr>
<tr>
<td>HCWB3-17(A)(K)</td>
<td>Loose</td>
<td>1000</td>
<td>888</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>2000</td>
<td>1800</td>
<td>1600</td>
</tr>
<tr>
<td></td>
<td>Tight</td>
<td>4000</td>
<td>3600</td>
<td>3200</td>
</tr>
</tbody>
</table>

**NOTES:**

Loose Home = Two Air Change Rates per hour: Typically, loose in construction and is over 20 years old. Not very well insulated and may have single pane windows, etc.

Average Home = One Air Change Rate per hour: Average in construction, 15 to 20 years old on average.

Tight Home = One-Half Air Change Rate per hour: Newer home with tight construction.

Also see Healthy Climate Power Humidifier HCWP3 Product Specifications for additional sizing conditions if needed.
**DIMENSIONS**

**NOTES:**
- By-pass duct air flow direction is dependent on application.
- For upflow/horizontal applications air flow is from the humidifier to return air duct.
- For downflow applications, air-flow is to the humidifier from the supply air duct.

1 Left hand air inlet/outlet shown. For right-hand inlet/outlet, rotate humidifier cabinet 180° top for bottom and relocate drain to alternate location on cabinet. See Installation Instructions for additional details.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
</tr>
<tr>
<td>HCWB3-12(A)(K)</td>
<td>12-7/8</td>
<td>327</td>
<td>9-1/2</td>
</tr>
<tr>
<td>HCWB3-17(A)(K)</td>
<td>15-7/8</td>
<td>403</td>
<td>12-3/4</td>
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</tbody>
</table>

**TYPICAL APPLICATIONS**

![Up-Flow Unit Diagram](up_flow_diagram)

![Down-Flow Unit Diagram](down_flow_diagram)
## REVISIONS

<table>
<thead>
<tr>
<th>Sections</th>
<th>Description of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Accessories</td>
<td>Added Healthy Climate® Digital Automatic Humidistat and Healthy Climate® Water Conductivity Test Kit.</td>
</tr>
</tbody>
</table>