



Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for HONEYWELL HE420A1009. You'll find the answers to all your questions on the HONEYWELL HE420A1009 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual HONEYWELL HE420A1009
User guide HONEYWELL HE420A1009
Operating instructions HONEYWELL HE420A1009
Instructions for use HONEYWELL HE420A1009
Instruction manual HONEYWELL HE420A1009

Bel-Aire
ElectronicaAirCleaners.com

Honeywell

HE420A,B and HE460A,B Steam Power Humidifiers

PRODUCT DATA



FEATURES

- Humidifies the air without a call for heat from the thermostat so relative humidity fluctuates less, optimizing homeowner comfort.
- Ideal for homes with extensive woodwork, hardwood floors, antiques, oil paintings, leather furniture, pianos, and fine collectibles.
- Capable of humidifying a large area.
- Compact size allows easy installation.
- Minimal amount of water needed for energy efficient operation.
- Low water cut-off switch and built-in overflow protection are integral safety features.
- Automatic Flushing Timer reduces frequency of maintenance in a hard water installation.
- Includes a easy-to-use humidity control that mounts on the wall or duct for more installation flexibility.
- Perfect Climate Comfort Center™ control can be installed to replace both the thermostat and humidity control for improved aesthetics and convenience.

APPLICATION

The HE420A,B and HE460A,B Steam Power Humidifiers use a thermal fan interlock control to provide humidification for the whole house. The steam power humidifier is designed to work with high efficiency furnaces, heat pumps and set back thermostats. The humidifiers work with virtually any Honeywell humidity control, but use the Honeywell Perfect Climate Comfort Center™ control for optimal performance.

Contents

Application	1
Features	1
Specifications	2
Ordering Information	2
Installation	3
Wiring	5
Plumbing Humidifier	6
Set Water Level	6
Finish Mounting and Plumbing Humidifier	7
Installing HCA4 Automatic Flushing Timer	7
Checking the Installation	8
Operating the Humidifier	8
Operation	9
Maintenance	9
Checkout Procedures	10
Troubleshooting	10
Replacement parts	11

Incoloy® is a Registered Trademark of Chromalloy® Wiegand, division of Emerson Electric Co.
Copyright © 1998 Honeywell Inc. • All Rights Reserved



69-0192-2



[You're reading an excerpt. Click here to read official HONEYWELL HE420A1009 user guide](http://yourpdfguides.com/dref/3237976)
<http://yourpdfguides.com/dref/3237976>

Manual abstract:

Compact size allows easy installation. @@@@ - Automatic Flushing Timer reduces frequency of maintenance in a hard water installation. Includes easy-to-use humidity control that mounts on the wall or duct for more installation flexibility. APPLICATION The HE420A,B and HE460A,B Steam Power Humidifiers use a thermal fan interlock control to provide humidification for the whole house. The steam power humidifier is designed to work with high efficiency furnaces, heat pumps and set back thermostats. The humidifiers work with virtually any Honeywell humidity control, but use the Honeywell Perfect Climate Comfort Center™ control for optimal performance. Perfect Climate Comfort Center™ control can be installed to replace both the thermostat and humidity control for improved aesthetics and convenience. Contents Application ...

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

. Features

.....

.....

.....

.....

.....

.....

.....

.....

..... Specifications .

.....

.....

.....

.....

.....

.....

.....

.....

.....

.... Ordering Information .

.....

.....

.....

.....

.....

.....

.....

... Installation ..

.....

.....

.....

.....

.....

.....

.....

.....

.....

... Wiring

.....
.....
.....

.....
.....
.....
.....

.....
.....

..... Plumbing Humidifier

.....
.....
.....
.....

.....
.....
.....

.... Set Water Level

.....
.....
.....
.....

.....
.....
.....
.....

Finish Mounting and Plumbing Humidifier

.....
.....

..... Installing HC40 Automatic Flushing Timer

.....
.....
.....

Checking the Installation

.....
.....
.....
.....

.. Operating the Humidifier ...

.....
.....

.....
.....
.....
.....

.... Operation

.....
.....
.....
.....
.....

.....
.....
.....
.....
.....

Incloy® is a Registered Trademark of Chromalox® Wiegand, division of Emerson Electric Co.
Copyright © 1998 Honeywell Inc. · All Rights Reserved 68-0192-2 HE420A,B AND HE460A,B STEAM POWER HUMIDIFIERS SPECIFICATIONS
Capacity: HE420A,B: 13 gallons per day (gpd) or 49 liters per day (lpd). HE460A,B: 17 gallons per day (gpd) or 64 liters per day (lpd). Humidified Area:
For precise sizing and product selection, use Honeywell's HumidiCalc™ Humidifier Sizing Software. If unavailable, refer to Table 1. Internal Heating
Source: Incoloy® sheathed element: HE420A,B: 120 Vac, 1.5 kW, 12.5A. HE460A,B: 240 Vac, 2.

0 kW, 8.3A. Duct Opening (Height x Width): 8 in. x 10 1/2 in. (203 mm x 267 mm). Dimensions: Refer to Fig. 1. 11 -7/8 (30 Approvals: Underwriters Laboratories Inc.: Listing 42U8. Canadian Underwriters Laboratories Inc.
: Listing 42U8. Standard: Air Conditioning and Refrigeration Institute Tested: Standard 610 Models: HE420A TRADELINE® and HE460A TRADELINE®
Steam Power Humidifier package includes mounting template and hardware, H908A Humidity Control, HC40 Automatic Flushing Timer with chlorine removal filter. HE420B TRADELINE® and HE460B TRADELINE® Steam Power Humidifier package includes mounting template and hardware, H1008A Automatic Humidity Control, HC40 Automatic Flushing Timer with chlorine removal filter. Accessories: C7089H Outdoor Temperature Sensor. H1008A Automatic Humidity Control with HumidiCalc™ Software (software calculates dewpoint to prevent moisture condensation).
H908A Convertible Humidity Control. HumidiCalc™ Humidifier Sizing Software (software calculates required humidifier capacity for application). PC8900 Perfect Climate Comfort Center™ Control. Table 1. Size Of Area That Can Be Humidified.

2) 12 -5/8 (32 1) HE420 Area (Up To) HU HU MID IF MID IF IE R UR IC AT E HE460 Area (Up To) 6(15 2) House Description Loose Average Air Changes Per Hour Two One One-half Sq. ft 1,415 1,970 3,095 Sq. m Sq. ft 131 183 288 1,845 2,575 4,045 Sq. m 171 239 376 7-5/8 (19 4) 22 9(9) -1/2(31 8) Tight M10534A 12 Fig. 1. Dimensions of HE420A,B/HE460A,B in in. (mm). ORDERING INFORMATION When purchasing replacement and modernization products from your TRADELINE® wholesaler or distributor, refer to the TRADELINE® Catalog or price sheets for complete ordering number. If you have additional questions, need further information, or would like to comment on our products or services, please write or phone: 1.

Your local Home and Building Control Sales Office (check white pages of your phone directory). 2. Home and Building Control Customer Logistics Honeywell Inc., 1885 Douglas Drive North Minneapolis, Minnesota 55422-4386 (612) 951-1000 In Canada--Honeywell Limited/Honeywell Limitée, 155 Gordon Baker Road, North York, Ontario M2H 3N7. International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A. 68-0192--2 2 HE420A,B AND HE460A,B STEAM POWER HUMIDIFIERS INSTALLATION IMPORTANT Read all the installation instructions before installing the humidifier. HU HU MID IFIE IFIC RATE UR MID Select Location and Mount There are three typical ways of mounting the steam humidifier: · horizontally under at least a 10 in.

· @ @ @ @ See Fig. 2 through 4. @ @ @ @ @ @ @ @ 3. @ @ 2. @ @ 4.

· @ @ Can cause death, blindness, water damage to home and heater failure. · Do not cut into any air conditioning or electrical line. @ @ · Wear safety glasses when cutting or drilling. · Reinforce duct as necessary to ensure stability. 1/2 IN.

· @ @ Can cause failure of fan or limit control or result in water damage to home. · Do not install the humidifier where the sidewalls of the return air duct are constructed of wood (i.e., floor joist). · Do not install the humidifier where the temperature is lower than 32°F (0°C) or higher than 200°F (93°C). Fig. 5. Position template. M10876 Mount Horizontally Using Mounting Bracket (Preferred Mounting Method) IMPORTANT The duct must be at least 10 in. (254 mm) wide to use this mounting method.

The duct is the strongest when using the bracket mounting method because the least amount of duct reinforcement is required because of the bracket location. However, reinforcement may still be necessary to help support the weight of the humidifier and keep it level. 1. Tape the template 1/2 in. (13 mm) from the edge of the duct and trace around the template. See Fig. 5. 2. Drill a 3/8 in. (10 mm) hole within the center portion of the template. 3. Use tin snips to cut around the outline of the template. 7. Cut a 10-1/2 in. (267 mm) piece of S-cleat.

8. Place the 10-1/2 in. (267 mm) piece of S-cleat on the long side of the rectangular opening closest to the center of the duct so the opening (slot) shows below the duct. 9. Use two 8-32 screws and nuts (provided) to attach the mounting bracket (L shaped with six holes) to the top/front surface of the humidifier. The humidifier is now ready for mounting. NOTE: Position the humidifier so the upward protrusion of the U is on the side toward the reservoir. IMPORTANT Do not mount the humidifier until the water level is adjusted. See Set The Water Level section. 10. Slide the humidifier tabs into the installed S-cleat. Be sure the back tab engages completely with the S-cleat and the mounting bracket touches the side of the duct. 11. Using the mounting bracket as a guide, drill three 7/64 in. (3 mm) holes through the duct.

12. Secure the humidifier to the duct with three of the no. 8 sheet metal screws (provided). IMPORTANT Follow the dotted line carefully. 4. Remove the template and sheet metal. 5. Cut two 8 in. (203 mm) pieces of the S-cleat (provided).



[You're reading an excerpt. Click here to read official HONEYWELL HE420A1009 user guide](http://yourpdfguides.com/dref/3237976)
<http://yourpdfguides.com/dref/3237976>

6.

Place the S-cleat pieces on the narrow sides of the rectangular opening so the opening (slot) protrudes down and out of the duct. 68-0192--2 4 HE420A,B AND HE460A,B STEAM POWER HUMIDIFIERS Mount Horizontally on Reinforced Duct This horizontal mounting method usually requires duct reinforcement to support the weight of the humidifier and keep it level. See Fig. 3. The mounting bracket is not used.

1. Tape the template to the bottom of the duct in the desired location. 2. Drill a 3/8 in. hole (10 mm) within the center portion of the shaded area. 3. Use tin snips to cut around the outline of the template. Air Mover Applications CAUTION Moisture Condensation and Wiring Hazard. Moisture can destroy furnace electronic controls and miswiring can burn out electrical components. Do not alter any of the heating and cooling system functions. Be sure to wire only the system fan. Refer to the wiring diagrams in Fig. 6 through 8 for typical air mover applications. IMPORTANT Follow the dotted line carefully. 4.

Remove the template and sheet metal. 5. Cut two 8 in. (203 mm) pieces of the S-cleat (provided). 6. Place the S-cleat pieces on the narrow sides of the rectangular opening so the opening (slot) protrudes down and out of the duct. 7. Cut a 10-1/2 in. piece of S-cleat. 8. Place the 10-1/2 in. (267 mm) piece of S-cleat on the long side of the rectangular opening, opposite the two holes previously drilled. Position so the opening (slot) protrudes down and out of the duct. FAN LIMIT CONTROL BLACK L1 (HOT) AIR MOVER/ EQUIPMENT BLOWER 2 BLACK TO TRANSFORMER (NOT SUPPLIED) 1 WHITE L2 STEAM HUMIDIFIER FAN WIRING THERMAL TO SWITCH HUMIDISTAT 3 1 2 24V WIRING. EXTERNAL RELAY NOT SUPPLIED.

FOLLOW THE INSTALLATION INSTRUCTIONS INCLUDED WITH THE HUMIDISTAT. 1 WHITE IMPORTANT Do not mount the humidifier until the water level is adjusted. See the Set The Water Level section. 9. Slide the humidifier tabs into the installed S-cleat. Be sure the back tab engages completely with the S-cleat. 10. Secure the humidifier to the duct with two no. 10 screws. See Fig. 4. Create and install the duct extension. Typical wiring diagram for humidifier in singlespeed air mover applications without air conditioning (switching through external relay). STEAM HUMIDIFIER HUMIDISTAT TERMINALS FAN WIRING WHITE 3 1 TO HUMIDISTAT TO TRANSFORMER (NOT SUPPLIED) BLACK 1 Y CONTACTOR arm during adjustment. TO RAISE WATER LEVEL PUSH DOWN PLUMBING HUMIDIFIER TO LOWER WATER LEVEL CAUTION Chemical Hazard.

Can cause damage to environment or air conditioning system. Do not use any refrigerant line connected to an air conditioner. Adjust water level. 4. Route the tubing to the humidifier float valve. 3. 4. 5.

NOTE: A 5/8 in. 7. Support the drain line at several locations to prevent kinks. Be sure to provide support near any heat source. 8. Use a male 1-1/2 in. 10. Remove the timer cover. 2. Use screws to attach the timer to the mounting surface.

3. Replace the timer cover. 4. Improper location of drain tubing can cause water damage to home. Drain tubing must not kink or contact sharp edges or hot surfaces. 5. 6. 7. 8. Plug the timer into the electrical outlet.

9. Turn the plastic indicator clockwise very slowly. See Fig. 11. Improper location of drain tubing can HE420A and HE460A Humidifiers are controlled by the Convertible Humidity Control that is installed either on the interior wall in the living area or on the return air duct. Choose the humidity control setting using the combination relative humidity/outdoor H908A M13155 Table 2. Recommended Convertible Humidity Control Settings. Recommended Frost Factor Settings. As dry air and vapor mix, the relative humidity of the air rises.

12. Location of humidifier parts. 4. Disconnect water feed tubing at the float valve. 5.

Disconnect the overflow at the humidifier. IMPORTANT Allow water to cool before continuing. 6. Use an appropriate coin and very slowly turn the automatic flushing timer indicator clockwise. See Fig.

13. Allow the humidifier to drain completely. SLOT FOR COIN MAINTENANCE A regular maintenance program prolongs the life of the humidifier and provides a more comfortable environment. Frequency of cleanings depends on water conditions. Either hard or soft water can be used in the humidifier, but hard water mineral deposits are more difficult to clean. CAUTION Voltage Hazard. Can cause electrical shock and equipment damage. Disconnect power supply before installing or servicing. COIN TURN CLOCKWISE VERY SLOWLY M10552 IMPORTANT Never oil any part of the humidifier. Fig.

13. Turn automatic flushing timer indicator clockwise. 7. Remove the humidifier from the mounting. 8. Use running tap water to flush loose minerals from the reservoir. 9. Carefully rub off minerals from the float, heater and safety float switch. NOTE: Steel wool or other scouring pads can be used on the reservoir walls and other parts. 10.

Remove the valve arm by pulling out the center pin attachment. Inspect the arm for mineral buildup and deterioration. Every 1 to 4 Months (Depending on Water Quality) Use the following procedure and refer to Fig. 12 to clean the humidifier: 1. Unplug the humidifier and fan control.

2. Disconnect the humidity control wires from the external screw terminals on the humidifier. 3. The float valve should shut off the water at 2-3/8 in. (60 mm).

11. Support the float arm during adjustment. a. b. Set the humidifier reservoir on a level surface. Attach the water feed line and allow the unit to fill until the float valve shuts off the incoming flow of water. The water level should be between 2-1/4 in. (57 mm) and 2-1/2 in. (64 mm) deep. If water level is correct, go to step d.

Adjust the water level in small increments. Raise the water level by pushing down on the center of the float arm. Lower the water level by pressing the float down with one hand and pulling up on the center of the float arm with the other hand. See Fig. 9. Verify the water level by removing enough water to allow the float valve to automatically fill and shut off the water. CHECKOUT PROCEDURES After winter start-up or maintenance, use the following procedure to check humidifier operation: 1. Turn on the humidifier water supply. 2. Be sure the humidifier has power and plug in the humidifier.

3. Turn the Convertible Humidity Control to the highest setting, or the H1008 Automatic Humidity Control to the Test position. NOTE: The H1008A Automatic Humidity control stays in the test mode for thirty minutes. After thirty minutes, the control automatically resets to the maximum frost factor setting. If system checkout was not completed in thirty minutes, extend the test mode by turning the dial back to one of the dial settings and then returning it to the test mode.

c. d. 12. 13. 14.

15. Remount the humidifier. Reconnect all plumbing connections. Reconnect all electrical connections. Check that the furnace blower turns on to circulate the moist air.



[You're reading an excerpt. Click here to read official HONEYWELL
HE420A1009 user guide
http://yourpdfguides.com/dref/3237976](http://yourpdfguides.com/dref/3237976)

The blower may take as long as fifteen minutes to turn on. 5. @@Table. 4. Troubleshooting Procedures.

Problem Low humidity What To Look For Furnace blower not operating. What To Do · Reset circuit breaker or check for blown fuse. · Check that the furnace power is on. · Check all external wiring connections. · Check the humidity control setting. · Call a professional heating contractor. . . . Keep doors and windows closed. Close fireplace damper when not in use. Keep exhaust fan running time to a minimum. Seal around doors and windows.

Rapid air changes. Drafts (cold air is dry and is an added load for the humidifier). High humidity Condensation on walls. @@ · Turn humidity control down low enough to eliminate condensation caused by moisture from bathing, mopping, cooking, etc. If moisture persists, more ventilation is needed.

68-0192--2 10 HE420A,B AND HE460A,B STEAM POWER HUMIDIFIERS REPLACEMENT PARTS Refer to Fig. 14 and Table 5 when ordering replacement parts. 3 4 1 5 2 8 9 10 11 6 12 13 7 0 46 l HE de Mo ly ier dif e On Watts mi l Us 00 Hu rn. ol tia ell , 15 en d bu co yw Hz sid ne k an ter 60 oc wa r Re e, sh let . Fo as ic d Ph ctrly ananing , l lts e elepp cle ibl su or 0 Vo ss ical g cin : Po ctr rvi er ele se ng ct e Daonne for be Disc U8 42 ted Lis 2 99 2-3 42 55 U8 MN 42 lis, ted po Lis ea nn .

Mi . , IncDrive ell yw las ne ug Ho85 Do 18 Ho 24 R R 14 15 16 17 M12238B Fig. 14. Exploded view of humidifier parts. Table 5. List of Replacement Parts for HE420A,B, HE460A,B Humidifiers. Exploded View Number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 -- Safety float switch Float for water fill valve Water fill valve Water pan assembly Electrical enclosure cover Transformer, 24 Vac Control relay, dpst, 24 Vac Fan wiring assembly Humidistat control terminal block Indicator light Thermal fan switch Power distribution block Power supply cord with strain relief Saddle valve assembly Convertible Humidity Control Automatic Humidity Control Automatic Fushing Timer Description Incoloy® sheathed heating element HE420 Part Number 32000164-001 32000149-001 32000166-001 32000167-001 32000152-001 32000169-001 AT120B1010 R8222C1008 32000156-001 32000157-001 32000158-001 32000159-001 32000160-001 32000177-001 32001616-001 H908A1003 H1008A1008 HC40A1009 HE460 Part Number 32000148-001 32000149-001 32000166-001 32000167-001 32000152-001 32000153-001 AT120B1069 R8222C1008 32000156-001 32000157-001 32000158-001 32000159-001 32000160-001 32000161-001 32001616-001 H908A1003 H1008A1008 HC40A1009 11 68-0192--2 Home and Building Control Honeywell Inc. Honeywell Plaza P.O. Box 524 Minneapolis MN 55408-0524 Honeywell Latin American Region 480 Sawgrass Corporate Parkway Suite 200 Sunrise FL 33325 Home and Building Control Honeywell Limited-Honeywell Limitée 155 Gordon Baker Road North York, Ontario M2H 3N7 Honeywell Europe S.

A. 3 Avenue du Bourget 1140 Brussels Belgium Honeywell Asia Pacific Inc. Room 3213-3225 Sun Hung Kai Centre No. 30 Harbour Road Wanchai Hong Kong 68-0192--2 J.S. Rev. 6-98 Printed in U.S.A. on recycled paper containing at least 10% post-consumer paper fibers.

www.honeywell.com .



[You're reading an excerpt. Click here to read official HONEYWELL HE420A1009 user guide](http://yourpdfguides.com/dref/3237976)
<http://yourpdfguides.com/dref/3237976>