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Honeywell

F200 Charged-Media Air Cleaner

PRODUCT DATA



APPLICATION

The F200 Charged-Media Air Cleaner captures a significant amount of the air-borne particles from the air circulated through the unit.

FEATURES

- **Charged-Media filter captures particles as small as 0.3 micron.**
- **Efficiency ratings based on the American Society of Heating, Refrigerating and Air Conditioning Engineers Standard 52.2-1999.**
- **Applicable to all gas, oil, and electric forced warm air furnaces and to compressor cooling up to 5 tons.**
- **Mounts in the return air duct.**
- **Cabinet can support weight of residential furnace and evaporator coil.**
- **Requires no electrical connections.**
- **Mounts in any position.**
- **Requires no maintenance except periodic battery and media filter replacement.**
- **Quick and easy media filter replacement.**
- **Later upgrade to electronic air cleaner is easy.**
- **Integral pressure sensors signal when filter change is required based on increased pressure drop threshold at filter.**
- **Filter change status is transmitted to wall-mounted AIRWATCH® Indicator.**
- **The RF AIRWATCH® Indicator is included.**

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68-0238EF-04

SPECIFICATIONS

IMPORTANT

The specifications in this publication do not include normal manufacturing tolerances; therefore, an individual unit may not exactly match the listed specifications. This product is tested and calibrated under closely controlled conditions, and some minor differences in performance can be expected if those conditions are changed.

Model:

F200E Charged-Media Air Cleaner includes a cabinet, access door and pleated media filter, and an RF AIRWATCH® Indicator.

Application:

Use with gas, oil, and electric forced warm air furnaces and with compressor cooling. Can be used with heat pumps if filter is changed regularly to prevent excessive pressure drop.

Efficiency:

Efficiency Ratings: Based on American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 52.2-1999. Efficiency ranges are defined for small particles, E1=0.3 to 1.0 microns; medium particles, E2=1.0 to 3.0 microns; and large particles, E3=3.0 to 10.0 microns.

Initial Efficiency:
E1=64%
E2=91%
E3=99%

Minimum Efficiency Reporting Valve (MERV): 13 at 492 fpm.

Filter Media: Pleated for greater media capacity.

Filter Element: Underwriters Laboratories, Inc.: UL 900, Class 2 Listed.

Pressure Drop: See Fig. 3.

Initial Pressure Drop: 0.31 in. wc at 492 fpm.

Temperature Rating: -40° to +140°F (-40° to +60°C).

Dimensions: See Fig. 1.

Mounting:

Mounts in any position in the return air duct, usually next to the furnace blower compartment. Cabinet is sturdy enough to support weight of a residential furnace and evaporator coil.

Upgrade Path:

The F200 uses the same cabinet as the F300 Electronic Air Cleaner. Upgrade may require installing the cell key, electronic cells, protective screens and installation and wiring of the power box, depending on model.

ORDERING INFORMATION

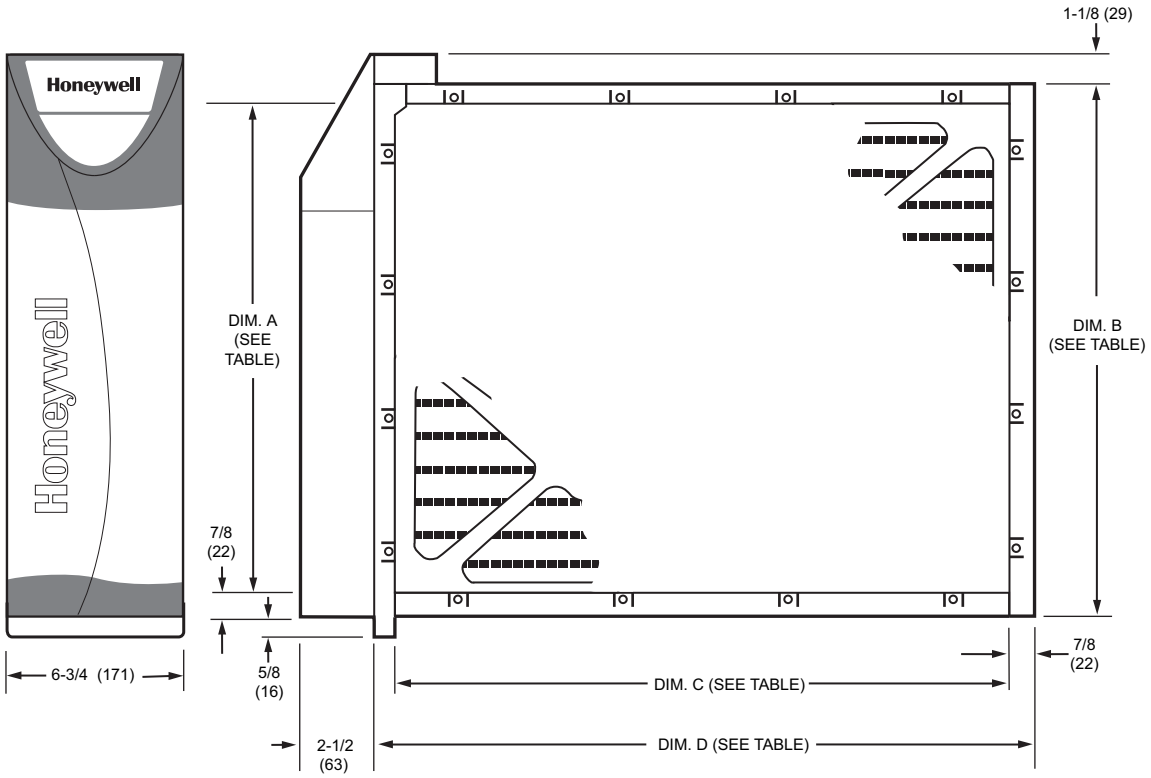
When purchasing replacement and modernization products from your TRADELINE® wholesaler or distributor, refer to the TRADELINE® Catalog or price sheets for complete ordering number.

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   Minneapolis, Minnesota 55422-4386
3. http://customer.honeywell.com or http://customer.honeywell.ca

In Canada—Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Toronto, Ontario M1V 4Z9.
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.

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F200E SIZE		DIM. A		DIM. B		DIM. C		DIM. D	
IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
16 X 25	406 X 635	14 7/16	367	16 3/16	411	23 1/4	591	25	648
16 X 20	406 X 508	14 7/16	367	16 3/16	411	18 1/4	457	20	521
20 X 25	508 X 635	18 7/16	468	20 3/16	513	23 1/4	591	25	648
20 X 20	508 X 508	18 7/16	468	20 3/16	513	18 1/4	457	20	521

Fig. 1. Installation dimensions in in. (mm) of air cleaner.

Media Replacement:

Replace the filter at least annually or when the built-in pressure sensors in the F200 door detect that airflow is impaired and the filter requires cleaning. This condition causes the indicator light on the F200 door to begin flashing and the transmitter to send a signal to the wall-mounted RF Indicator that the filter needs replacing.

After replacing the filter, press the reset button on the F200 door to reset both the door indicator light and the RF AIRWATCH® Air Cleaner Indicator. See Fig. 2. (See Table 1 for AIRWATCH® operation.)

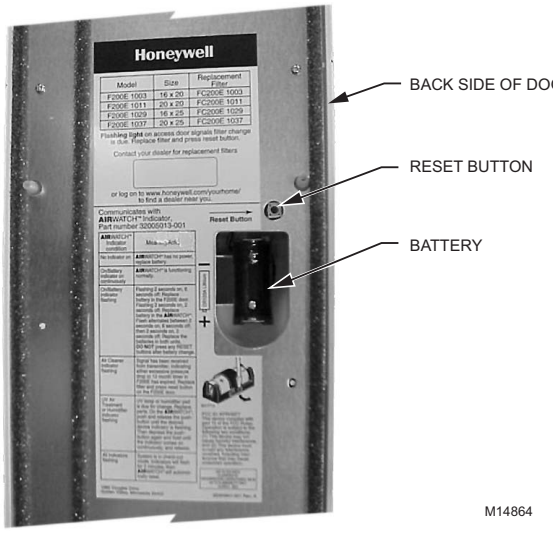


Fig. 2. RF transmitter door - interior view.

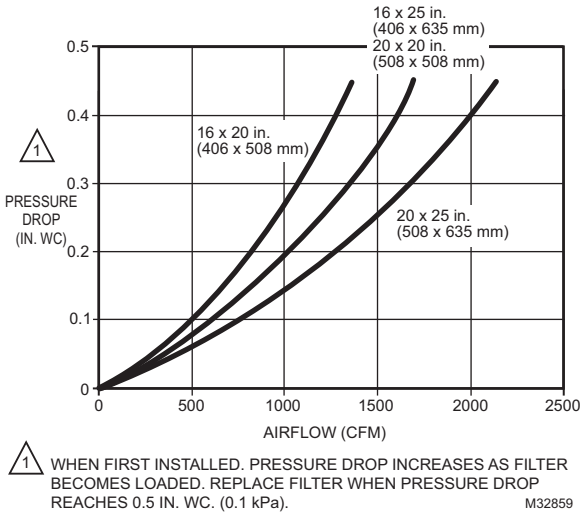


Fig. 3. Capacity, Pressure Drop and Area of F200 Filter Media.

PLANNING THE INSTALLATION

Location

The media air cleaner should be installed where all the air passing through the system is circulated through it. The best location is in the return air duct next to the blower compartment so the media air cleaner can help to keep the blower motor and evaporator coils clean. Do not mount in the supply air duct.

For most efficient air cleaning, spread airflow evenly across the face of the media. If the duct is a different size than the media air filter cabinet, gradual transitions are required. If the duct turns sharply just before the air filter, turning vanes are required.

Choose a location that is readily accessible for checking and replacing the filter. Allow at least 26 in. (660 mm) clearance in front of the unit for removal of the cartridge.

Install the media air filter where the temperature will not exceed the ratings in the Specifications.

Applications With Air Conditioning

Mount the media air cleaner upstream of the evaporator coil in a cooling system. The filter will help to keep the coil clean and reduce maintenance.

Applications With A Humidifier

The media air cleaner is compatible with humidifiers. Avoid applications where water mist will reach the media. If an atomizing humidifier is used, the filter media will require replacement more often because of minerals in the water.

Choose Mounting Position

The media air cleaner can be mounted in any position, but the arrow on the cartridge must point in the same direction as the airflow. See Figs. 4-11 for proper location of the media air cleaner for a variety of furnace installations. Note that the media air cleaner cabinet is sturdy enough to easily support the weight of the furnace and evaporator coil. See Fig. 5.

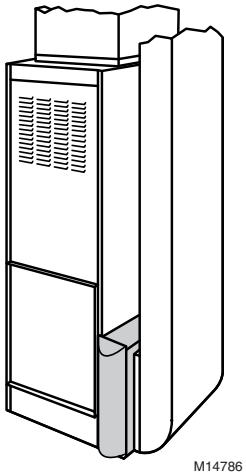


Fig. 4. Highboy furnace, with side installation. Media air filter is mounted vertically where return enters side inlet of furnace.

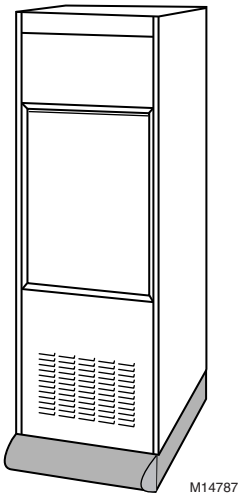


Fig. 5. Media air cleaner is mounted horizontally where return enters from below.

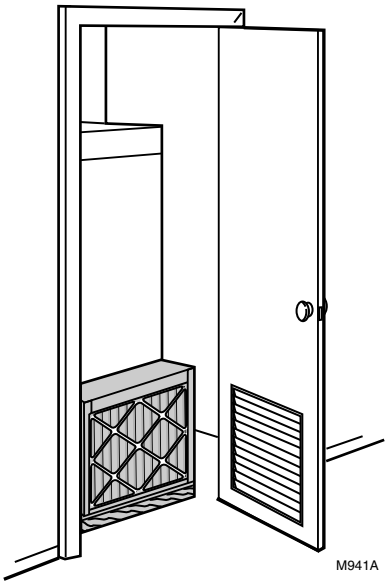


Fig. 6. Highboy furnace, with closet installation. Media air cleaner is mounted vertically on furnace between furnace and louvered return air opening in closet door.

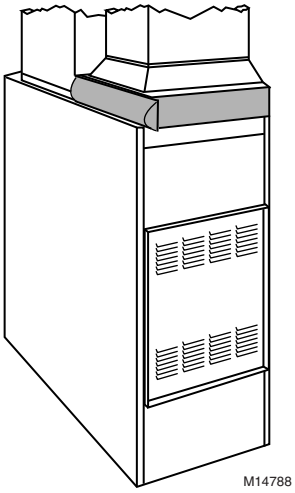


Fig. 7. Lowboy furnace, with media air cleaner mounted horizontally in return plenum just above furnace and opposite heating plenum.

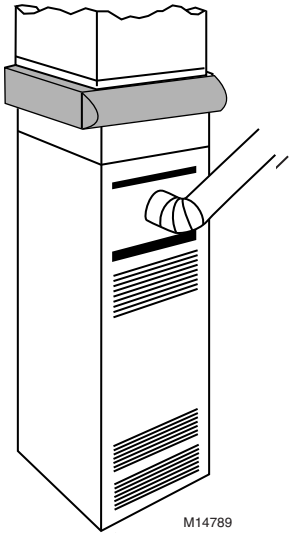


Fig. 8. Counterflow furnace, with media air cleaner mounted horizontally in return duct or plenum just above furnace.

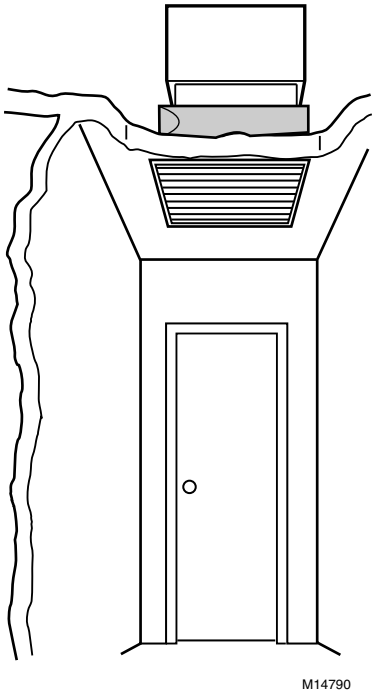


Fig. 9. Central fan installation, with media air cleaner mounted horizontally in central return duct.

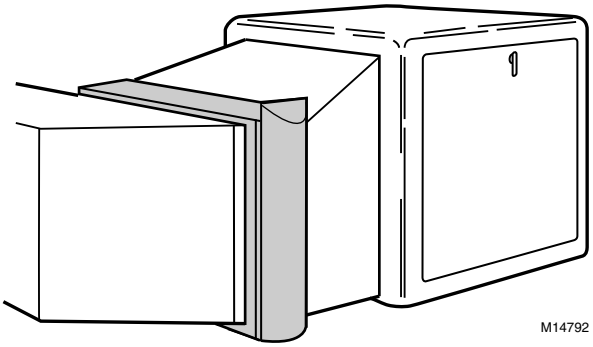


Fig. 10. Horizontal furnace, with media air filter mounted vertically in return duct near furnace.

NOTE: When more than one media air cleaner is used, each air cleaner requires a separate RF AIRWATCH®, if communication is desired with all units.

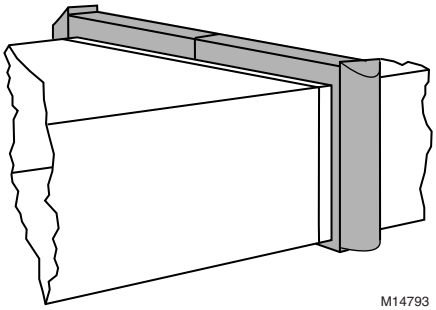


Fig. 11. Two or more media air cleaners used in a high capacity system.

Determining Sheetmetal Requirements

The media air cleaner is adaptable to all new or existing forced air heating and cooling systems used in residential applications. Transitions or turning vanes may be required in some applications for effective media air cleaner operation.

Transitions

Transitions are needed when the duct is a different size than the media air cleaner cabinet. Follow these guidelines when fabricating:

1.Use gradual transitions to reduce air turbulence and increase efficiency. See Fig. 12.

2.Use no more than 20 degrees (about 4 in. per running ft. (100 mm per 300 linear mm)) of expansion on each side of a transition fitting.

Turning Vanes

If the media air cleaner is installed next to an elbow or angle fitting, add turning vanes inside the angle to distribute airflow more evenly across the face of the media. See Fig 13.

Offsets

If the duct connection to the furnace in a side installation allows less than 7 in. (178 mm) for mounting media air cleaner cabinet, attach an offset to the elbow. See Fig. 14.

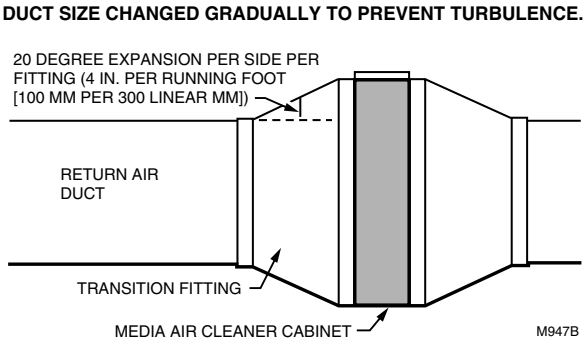


Fig. 12. Duct size changed gradually to prevent turbulence.

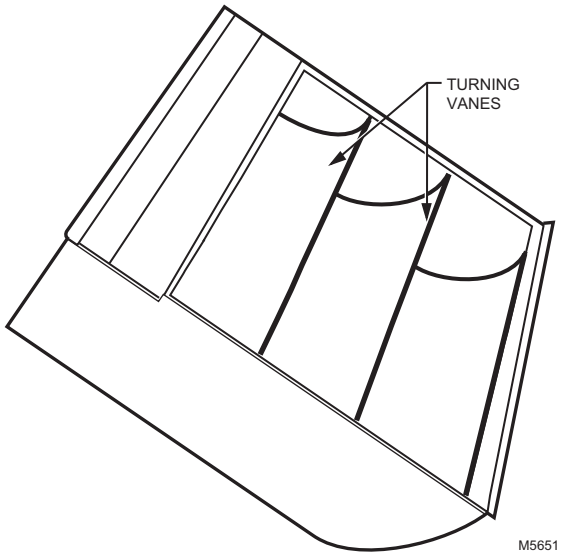


Fig. 13. Turning vanes installed in bend help distribute airflow evenly over face of media.

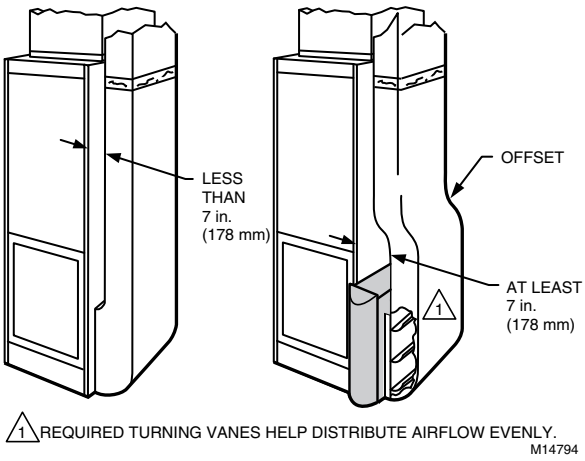


Fig. 14. Typical use of duct offset to make room for media air cleaner.

INSTALLATION AND CHECKOUT

When Installing this Product…

1. Read these instructions carefully. Failure to follow them could damage the media air filter or cause a hazardous condition.
2. Check the ratings given in the instructions and on the media air cleaner to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.

Remove Furnace Filter And Clean Blower Compartment

Before starting the installation, remove and discard the existing furnace filter (if used). Thoroughly clean the blower compartment. If possible, power vacuum the ductwork to remove accumulated dust in an occupied home or remove construction dirt in a new home. The media air cleaner cannot remove dirt that has settled in the blower compartment and distribution ducts.

Install The Cabinet

The following procedure describes a typical side installation on an existing highboy furnace. Alternate procedures are noted as appropriate. Other changes in installation procedures may be necessary to complete your installation.

Review The Installation Plan

Temporarily place the cabinet on the floor, oriented as it will be when installed. Insert and remove the cartridge to make sure the plan allows adequate clearance for easy removal and replacement of the cartridge.

Make sure that shop-fabricated sheetmetal components, such as turning vanes, are available.

Fasten The Cabinet To The Furnace

Align the cabinet with the return air opening. Place blocks under the cabinet, as necessary, to make sure the unit sits securely. Create an opening in the furnace to match the cabinet opening. Attach the cabinet securely to the furnace. Attach the unit directly or fit a starting collar in the furnace opening. Either drill holes and fasten with sheetmetal screws or rivets, or use slip joints. If you are drilling holes, use a locking pliers to help hold the unit in place during drilling.

Install Turning Vanes

Install turning vanes to help distribute air equally over the full surface of the upstream side of the media. Install them whenever an abrupt 90 degree elbow is installed directly against the media air cleaner cabinet.

Fasten Cabinet To Ductwork

Fasten side of cabinet to the ductwork using sheet-metal screws, rivets, or slip joints, as appropriate.

Connect Ductwork

Connect the vertical duct section to the elbow. If the vertical drop of the duct is less than 7 in. (178 mm) from the side of the furnace, shorten the horizontal trunk or attach an offset fitting to the elbow. See Fig. 12. When ductwork is properly aligned, connect the vertical duct to the horizontal trunk.

Seal Joints

Seal all joints in the return air system between the media air filter and the furnace to prevent dust from entering the clean airstream.

Install Filter Cartridge

Slide the filter cartridge into the cabinet, making sure the arrow on the cartridge points in the direction of air flow.

Install battery in door. Replace access door. Insert the tab on the bottom of the door into the slot in the cabinet. Swing the door closed and press it into place.

Install RF AIRWATCH® Indicator

The AIRWATCH® Indicator provides a signal when the F200 filter needs replacing. When the filter begins restricting airflow because of accumulated dirt, pressure sensors in the F200 initiate a radio frequency signal to be sent to the AIRWATCH® Indicator. The AIRWATCH Indicator also has 12-month timers to indicate when the humidifier pad and the ultraviolet air treatment lamps need replacing.

Install Battery

1. Remove the AIRWATCH® Indicator from the base:

a. Depress the tab on the bottom edge of the base.

b. Pull off the bottom of the front cover.

2. Install one CR123A Lithium Battery (provided) in the holder on the back of the unit.

3. Observe that the On/Battery LCD segment comes on.

Select Location

The RF AIRWATCH can be mounted in any convenient location in the home.

1. Select the desired location (at least six feet away from transmitter in door).
2. Check for communication between the F200 Media Air Cleaner and the AIRWATCH® Indicator as follows:
   a. Place the AIRWATCH® Indicator in the desired mounting location. Use a piece of masking tape to hold the device to the wall.
   b. At the F200, press the reset button on the door.
   c. Verify that the arrows on the AIRWATCH® Indicator are flashing. (The arrows will flash for about two minutes before returning to normal.)
3. If there is no response on the AIRWATCH® Indicator, choose another location within the home and begin again at step 2.

Mount AIRWATCH® Indicator

1. Remove the AIRWATCH® Indicator from the base:
   a. Depress the tab on the bottom edge of the base.
   b. Pull off the bottom of the front cover.
2. Position the base on the wall in the desired mounting position; using the holes in the base as a template, mark the locations for the anchors and screws provided.
3. Drill holes (3/16in.) and install the screw anchors provided.
4. Position the base over the holes and install the screws provided; tighten the screws until the base is mounted firmly to the wall.
5. Reinstall AIRWATCH® Indicator onto base:
   a. Hook the top.
   b. Snap the bottom into place.

Initialize the AIRWATCH® Indicator to accept signals from the F200 transmitter:

1. Be sure the RF AIRWATCH® receiver is at least six feet away from the transmitter in the door to ensure communication.
2. Push and hold the AIRWATCH® Indicator button until all four arrows come on (about five seconds).
3. Push the red reset button on the F200 door within two minutes.
4. Observe the indicator arrows on the RF AIRWATCH® begin to flash and continue for about two minutes until initialization is completed.

The AIRWATCH® Indicator default setting is UV Light and Humidifier timers are disabled; the Filter indicator is always enabled. To display active timers:

1. Press and hold the button on the AIRWATCH® Indicator for about three seconds.
2. Observe the arrow showing the active timer(s).

To activate a timer:

1. Press and release the AIRWATCH® Indicator button until the desired device is selected, as indicated with the flashing arrow.
2. Press and hold the button until the arrow stops flashing.
3. Release the button while the arrow is on.

To deactivate a timer:

1. Press and release the AIRWATCH® Indicator button until the desired device is selected, as indicated with the flashing arrow.
2. Press and hold the button until the arrow turns off (about four seconds).
3. Release the button while the arrow is off.

AIRWATCH® Indicator Operation

The Indicator has an LCD with four indicator segments: On/Battery, Air Cleaner, UV Air Treatment and Humidifier. See Table 1.

Checkout

Visually check the installation. Make sure:

- Airflow is in the direction of the arrow on the media air filter cartridge.
- Turning vanes and transitions, if used, are properly installed.
- Joints in sheetmetal between media air filter and furnace are sealed.
- All sheetmetal connections are complete.
- Original furnace filter has been removed and blower compartment is cleaned.

Replace any access doors removed during the Installation or Checkout.

Run the furnace or cooling system through one complete cycle to make sure the system operates as desired.

Table 1. AIRWATCH® Indicator LCD Description.

AIRWATCH® Indicator Condition	Meaning/Action
No indicator on.	AIRWATCH® has no power; replace battery in AIRWATCH®
On/Battery indicator on continuously.	AIRWATCH® is functioning normally.
On/Battery indicator flashing.	Flashing two seconds on, six seconds off: Replace battery in the RF door. Do not press any reset buttons after battery change. Flashing two seconds on, two seconds off: Replace battery in AIRWATCH®. Do not press any reset buttons after battery change. Flashing alternates between two seconds on, six seconds off; then two seconds on, two seconds off: Replace the batteries in both units. Do not press any reset buttons after battery change.
Air Cleaner indicator flashing.	Signal was received from transmitter, indicating either excessive pressure drop or 12-month timer has expired. Replace filter and press reset button inside RF door. See Fig. 2.
UV Air Treatment indicator flashing or Humidifier indicator flashing.	UV lamp(s) or humidifier pad needs replacing. Replace parts. On the AIRWATCH®, push and release button until desired device indicator is flashing. Then press button again and hold until indicator comes on continuously; then release.
All indicators flashing.	System is in checkout mode. Indicators flash for two minutes, then AIRWATCH® automatically resets.





Table 2. F200E Parts List.

Callout No.	Description	F200E1003 16 x 20 in.	F200E1029 16 x 25 in.	F200E1011 20 x 20 in.	F200E1037 20 x 25 in.
1	Replacement filter	FC200E1003	FC200E1029	FC200E1011	FC200E1037
2	Door with RF Transmitter	32004876-002	32004876-002	32004876-001	32004876-001
3	AIRWATCH® RF Receiver	W8600B1005	W8600B1005	W8600B1005	W8600B1005

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