

F500 Whole House/ Light Commercial HEPA Filtration System

PRODUCT DATA/OWNER'S GUIDE



APPLICATION

The F500 Whole House/Light Commercial HEPA Air Cleaner connects to the return air duct of a forced air system. The HEPA filter captures 99.97 percent of the particles from the air that passes through it.

FEATURES

- HEPA media captures at least 99.97 percent of 0.3 micron particles that pass through it.
- Application for forced air systems.
- Power cord plugs into grounded 120 Vac electrical outlet.
- Requires no maintenance except periodic media filter replacement.
- Quick and easy media filter replacement.
- Wall-mounted AIRWATCH™ Indicator included provides filter change reminders.
- Three-filter system:
 - Activated carbon filter for odors.
 - High-efficiency pleated pre-filter extends HEPA filter life.
 - HEPA filter traps at least 99.97 percent of the 0.3 micron particles that pass through it.
- Easy installation.
- Includes four isolation straps.
- Rugged steel cabinet.
- Quiet operation.
- Model available with fully-insulated cabinet for installation in unconditioned environments.

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SPECIFICATIONS

IMPORTANT

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

TRADELINE® Models available:

F500 Whole House/Light Commercial HEPA Filtration System includes:

HEPA filter, 2 in. pleated prefilter, carbon-odor filter, and motor/blower. Isolation mounting straps and HEPA AIRWATCH™ Indicator are also included.

F500A: Standard cabinet.

F500B: Insulated cabinet.

Color: White.

Dimensions: See Fig. 1.

Electrical Ratings:

Input Power Requirements: 120 Vac, 60 Hz; 1.98A maximum.

Air Flow:

F500A,B: 400 cfm nominal.

Efficiency:

Pleated Prefilter: MERV 8 at 374 fpm.

HEPA Filter: Media removes 99.97 percent of 0.3 micron particles from the air that pass through it.

Temperature Rating:

F500A is intended for mounting in conditioned spaces.

F500B cabinet allows installation outside of conditioned space.

Approvals:

CSA.

Included Accessories:

HEPA AirWatch™ Indicator.

Four isolation mounting straps.

Replacement Media:

For optimum system performance, replace filters according to Table 1. Use the HEPA AIRWATCH™ Indicator to determine when it is time to change each filter.

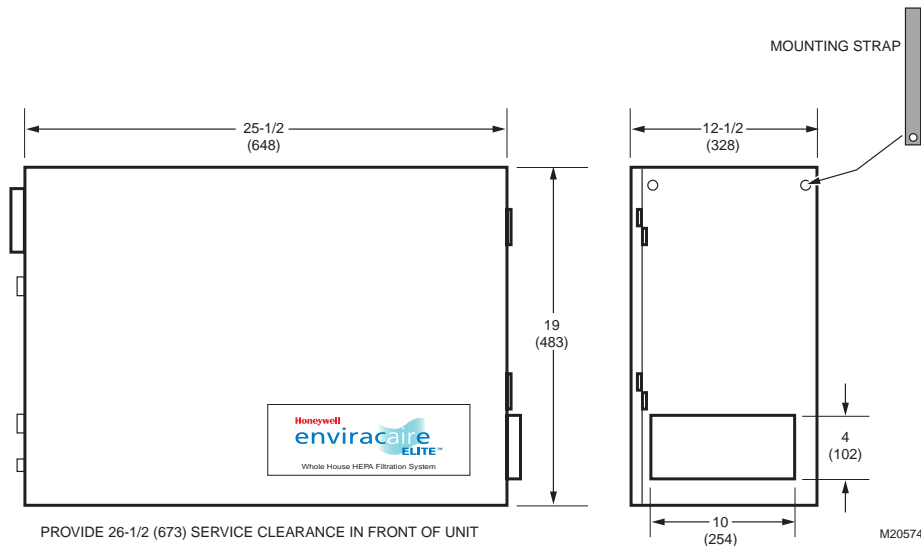


Fig. 1. F500 dimensions.

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 Automation and Control Solutions Sales Office (check white pages of your phone directory).
2. Honeywell Customer Relations
1885 Douglas Drive North MN10-1461
Minneapolis, Minnesota 55422-4386

In Canada—Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Scarborough, 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.

Table 1. Replacement Media Recommendations.

| Filter (in in.) | Part Number | Replacement Interval | |
|---------------------------------|--------------|----------------------|------------|
| | | Normal | Light Duty |
| Carbon-Odor Filter (24 x 12) | 32006026-001 | 3 months | 4 months |
| Pleated Prefilter (24 x 12 x 2) | 32006027-001 | 12 months | 16 months |
| HEPA Filter (24 x 12) | 32006028-001 | 3 years | 5 years |

PLANNING THE INSTALLATION

Selecting Mounting Position and Location

The F500 can be suspended from exposed ceiling joists or the ceiling surface, or it can be floor-mounted.

1. Install the F500A in a conditioned space or the F500B in an unconditioned space using these guidelines.
2. Plan the unit location to minimize duct lengths.
3. Locate an existing electrical outlet with the appropriate current rating to plug in the power cord. (If an outlet is not available, have a qualified electrician install one.)
4. Choose a location that is readily accessible for checking and replacing the filter. (Allow at least 26-1/2 in. (673 mm) clearance in front of the unit.)

Planning Ducting

The F500 can be mounted to the whole-house forced air system using a bypass configuration or can be independently ducted to stand alone. See Fig. 2, 3, and 4 for typical installations.

- The Whole House/Light Commercial HEPA air cleaner has 4 in. x 10 in. duct flanges to easily attach the external ductwork.
- The intake port can be moved to a more convenient location, if necessary:
 - Simply cut a new 4 in. x 10 in. hole in the desired location and block off the old hole.
 - Reattach the duct flange over the new hole.
- A transition can be used to connect round ducting to the Whole House/Light Commercial HEPA System.
 - Keep duct sizes as large as possible throughout the installation (8 in. minimum diameter ducting is recommended).
 - Keep intake and exhaust duct runs as short as possible with few bends or elbows.
- The F500 can be installed with a heat recovery ventilator. See Fig. 4.

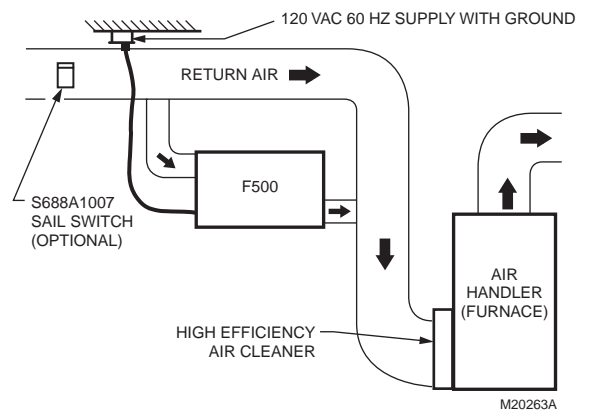


Fig. 2. Typical F500 bypass installation.

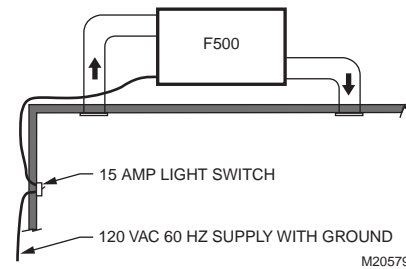


Fig. 3. Typical F500 independent installation.

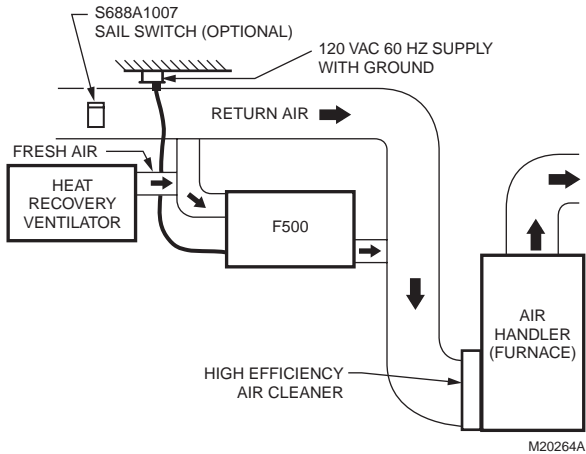


Fig. 4. Typical F500 bypass installation with heat recovery ventilator.

INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow these instructions could damage the product or cause a hazardous condition.
2. Check the ratings on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

Unpacking Whole House/Light Commercial HEPA Filtration System

The Whole House/Light Commercial HEPA Filtration System is shipped fully assembled. Check that all the components are included. The carton contains the following:

- F500A or F500B Whole House/Light Commercial HEPA Filtration System.
- Activated carbon-odor filter, pleated prefilter, HEPA filter.
- HEPA AIRWATCH™ Indicator.
- Four isolation mounting straps.
- Literature.

Mounting and Ducting

1. Mount four vibration isolation straps to the side of the HEPA System using the mounting screws located on the cabinet.
2. Securely fasten the other ends of the straps to the floor joists with wide-head nails or screws (not supplied); be sure the unit is level.
3. Connect the HEPA System to the return air duct. See Fig. 1 and 2. Seal all duct joints with caulk, mastic, or high quality foil duct tape.

Installing Whole House/Light Commercial HEPA Filtration System Electrical Connections

The F500 has a 3-prong, 120 Vac connector plug with ground. If further wiring is required, contact a qualified electrician to make all electrical connections.

IMPORTANT

Be sure the unit is grounded correctly.

The F500 can be installed either to run continuously or to run only when the HVAC system blower is operating.

- To run the air cleaner continuously, simply plug the air cleaner into a 120 Vac outlet. The unit turns on and operates continuously when the power switch is turned on.
- To run the air cleaner only when the system blower is on, use an optional Honeywell S688A1007 Sail Switch in the return air duct. See the S688A product literature for correct installation procedures.

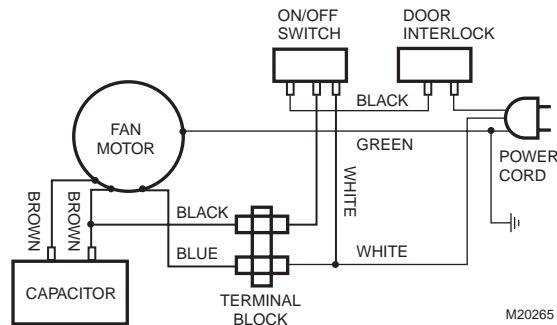


Fig. 5. F500 internal wiring diagram.

Installing HEPA AIRWATCH™ Indicator

Mount the HEPA AIRWATCH™ Indicator next to the thermostat or in any other convenient location in the home living area. The battery-operated device has no external electrical requirements.

1. Remove the AIRWATCH Indicator from the base:
 - a. Press 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.
3. Using the holes in the base as a template, mark the locations for the anchors and screws provided.
4. Drill the holes (3/16 in.) and install the screw anchors provided.
5. Position the base over the holes and install the screws to firmly secure the base to the wall.

NOTE: Jumper is factory-installed on pins 1 and 2 for normal usage.

6. Move the jumper to pins 2 and 3, if desired, for light duty filter change intervals as shown in Table 2.

Table 2. Filter Change Intervals.

| Filter | Normal (Factory Setting) | Light Duty |
|--------------------|--------------------------|------------|
| Carbon odor filter | 3 months | 4 months |
| Pleated prefilter | 12 months | 16 months |
| HEPA filter | 3 years | 5 years |

7. Install two AAA alkaline batteries (provided) in the harness on the back of the device.
8. Observe that the device performs a self-test, beeping and flashing the LCD display.
9. To start the timers, press and hold the black reset button on the bottom of the device for five seconds or until the display stops flashing.

10. Observe the battery LCD (see Fig.5):
 - a. On solidly means the unit is correctly powered.
 - a. Flashing indicates the battery requires replacing.
11. Observe the AIRWATCH (see Fig. 6):
 - a. Beep every ten minutes when an LCD is flashing.
 - b. Beeping indicates need to replace the system part that corresponds with the flashing LCD.

NOTES:

- When batteries need replacing, replace them within 30 seconds of removal to maintain the correct indicator time.
- After 30 seconds of replacing the batteries, if the LCD is blank, remove and install new batteries.
- When replacing other parts, press and hold the black button on the bottom of the device to reset the timer after replacing the parts.

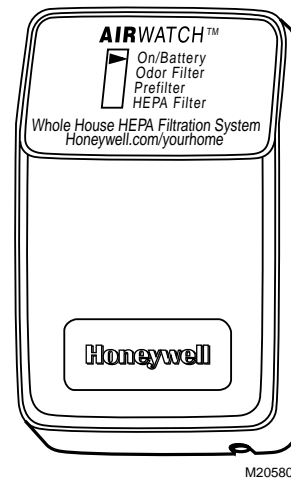


Fig. 6. HEPA AIRWATCH™ Indicator.

STARTUP AND CHECKOUT

After the Whole House/Light Commercial HEPA System is installed, with the ductwork in place and the unit plugged into a correctly grounded outlet:

1. Be sure filters are installed in correct locations and oriented correctly. (Note the air flow direction arrows on the prefilter and the HEPA filter.)
2. Turn the On/Off switch to the On position.
3. If interconnected to the HVAC system blower, turn on the system blower.

4. Verify that the Whole House/Light Commercial HEPA Air Cleaner turned on.

TROUBLESHOOTING

See Table 3 for troubleshooting guide.

Table 3. Troubleshooting Guide.

| Symptom | Cause | Solution |
|----------------------------------|------------------------------------|--|
| Poor airflow | Filters plugged | Remove and replace filter(s). Maintain filters at regular intervals. |
| | Poor power supply at the site. | Have electrician check supply voltage at outlet. |
| | Ductwork is restricting airflow. | Check duct installation. |
| AIRWATCH beeping and/or flashing | Battery or filter needs replacing. | Observe which LCD is flashing. Replace the battery or filter, as indicated. |

PARTS LIST

See Table 4 and Fig. 7 for Parts List.

Table 4. Parts List.

| Illustrated Parts List No. | Part Number | Description |
|----------------------------|--------------|--------------------------|
| 1 | 32005012-001 | HEPA AIRWATCH™ Indicator |
| 2 | 32006670-001 | Blower Motor Assembly |
| 3 | 32006026-001 | Carbon-Odor Filter |
| 4 | 32006027-001 | Pleated Prefilter |
| 5 | 32006028-001 | HEPA Filter |

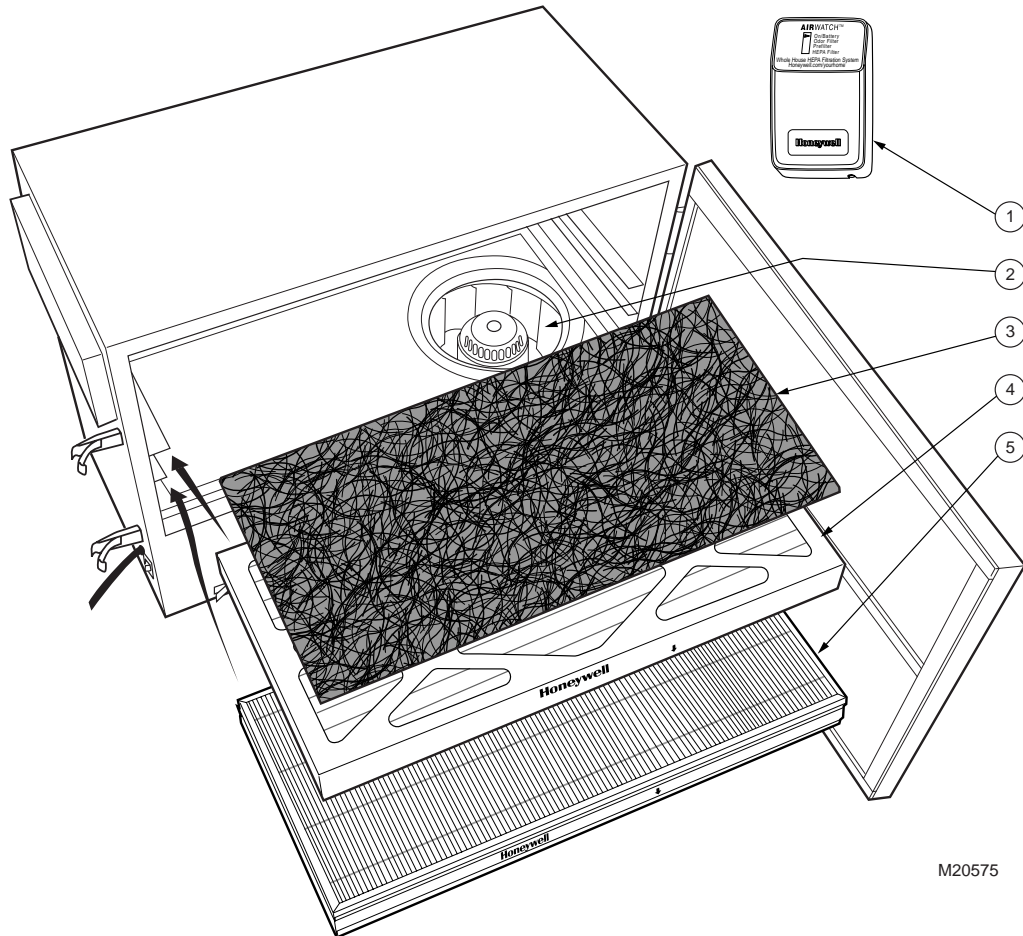


Fig. 7. Illustrated Parts List.

Honeywell

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