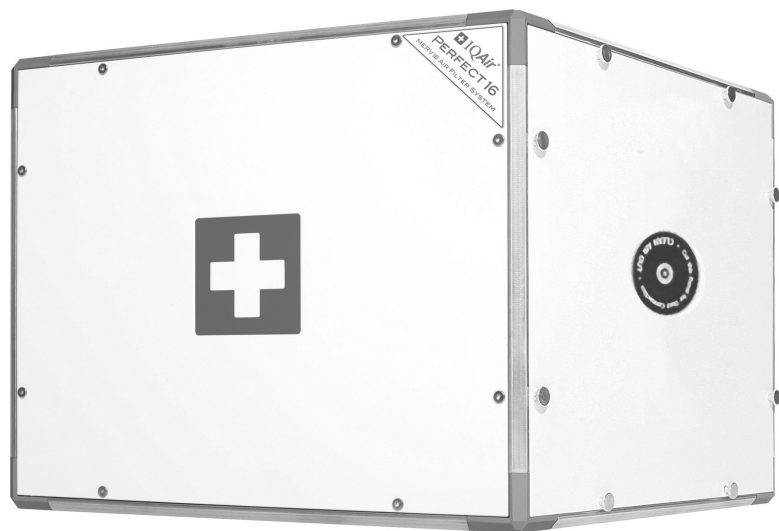


Perfect 16[®]

Medical-Grade HVAC Air Filtration System



Installation Manual

Features

- High-efficiency: close to 100% removal of pollution particles ≥ 0.3 microns
- Low pressure drop: 0.18 to 0.22 inch w.g. at rated airflow
- Low maintenance: up to 3 year filter life
- Safe: produces no ozone and no ions
- Green: fully insulated housing
- Reliable: lifetime warranty

 **IQAir[®]**
First in Air Quality

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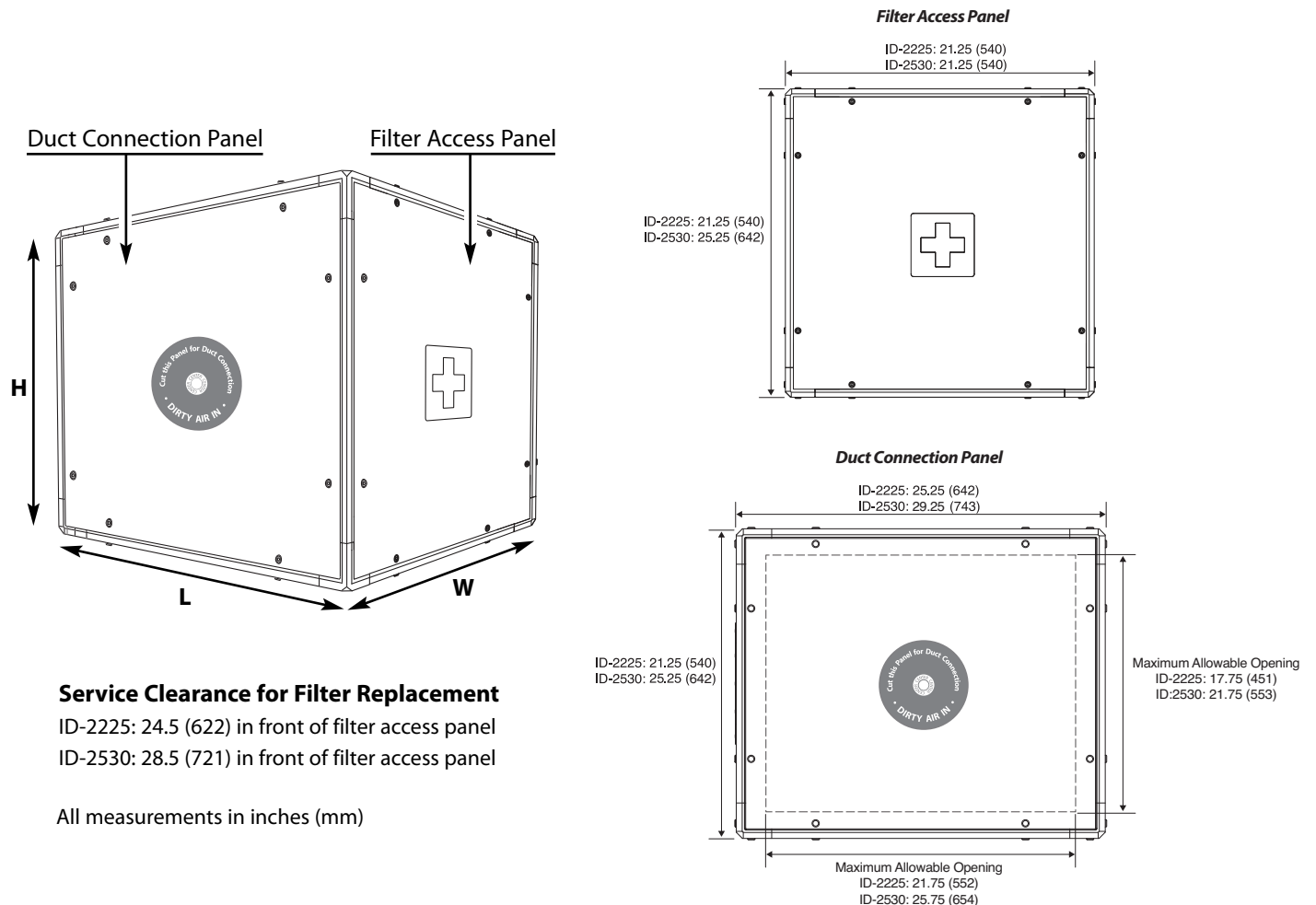
Medical-Grade HVAC Air Filtration System

Application

The Perfect 16 is a high-performance air cleaning system that connects to the return or supply air duct of a forced air system. This medical-grade air filtration system has been designed to provide the highest possible air cleaning rate at the lowest possible pressure drop for residential and commercial forced air systems (HVAC). Two models are available. The ID-2225 is ideal for airflow rates up to 1200 cfm (2040 m³/h) and the ID-2530 for airflow rates up to 2000 cfm (3400 m³/h).

		ID-2225 System	ID-2530 System
Dimension L x W x H	inch mm	25.25 x 21.25 x 21.25 642 x 540 x 540	29.25 x 25.25 x 21.25 743 x 642 x 540
Weight		59 lbs. (27 kg)	74 lbs. (33.5 kg)
Order No.		207 80 21 02	207 80 21 04

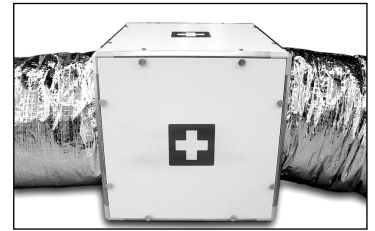
	ID-2225 Replacement Filter Set	ID-2530 Replacement Filter Set
	SIZE 3	SIZE 4
Order No.	202 11 30 02 (Filter Set, 4 count)	202 11 30 03 (Filter Set, 4 count)



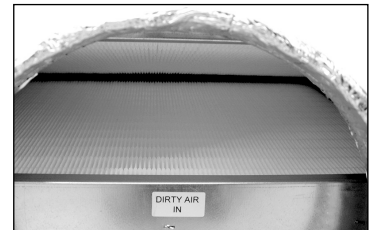
Residential Installation Instructions

The Perfect 16 can be floor-mounted, fixed onto a platform, plenum box, or be suspended from exposed ceiling joist or the ceiling surface (see page 4 for installation examples).

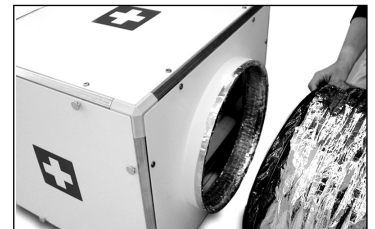
1. Inspect the installation area. Remove existing filters or systems that may add additional pressure drop to the system.
2. Choose a location between the main return duct and the furnace, which is readily accessible for checking and replacing the filter. Allow at least 24.5 in. (622 mm) clearance in front of the ID-2225 and 28.5 in. (724 mm) clearance in front of the ID-2530.
3. Determine the correct air inlet and air outlet side of the system. The air inlet is marked with "Cut this Panel for Duct Connection – DIRTY AIR IN". The air outlet is marked with "Cut this Panel for Duct Connection – CLEAN AIR OUT". Both panels will need to be cut for the proper fit of the ducting prior to installation. Never cut a panel with a Swiss cross.
4. Remove connection panel and adapt for duct connection as necessary (see page 7, Cutting Openings Into Panels). If flex duct is used, it is strongly recommended to use 18" round collar for the ID-2225 and 20" for the ID-2530. Best performance is achieved with rectangular openings. For maximum allowable opening, see diagram on page 2.
5. When positioning the system, ensure that "Dirty Air In" is in your air inlet.
6. Attach ducting. For duct connection, follow the local installation codes.
7. If the Perfect 16 system is to be connected directly to the furnace, remove all filters and secure the cabinet via panel from inside to the furnace using sheet metal screws. Ensure correct airflow direction when reinserting filters. Refer to "Filter Replacement" instructions (see page 9).
8. In basement installations, sheet metal turning vanes may be necessary to improve air movement through an elbow in the duct.
9. To hang or suspend the Perfect 16, replace four TX30 screws with four Perfect 16 eye bolts. Ensure the materials and installation are able to support at least three times the weight of the system. These are available for a nominal fee. Order number 207 90 50 01. * Ensure that all building codes are followed.
10. Use foil tape to seal all duct joints. Important: All leaks on the return side of the system will cause dirty air to leak into the return air stream. Leakage also occurs in many air handlers via the blower door. The blower door should also be sealed with foil tape for the best air cleaning results.
11. Fill out the filter replacement label with the date of the next scheduled filter replacement, which should be no more than 3 years from the current date (based on 50% usage).
12. Check and inspect system for leakage.
13. Test for efficiency with a laser particle counter, such as a ParticleScan, and complete the Perfect 16 "10X Cleaner Air Certificate" (North America only).
14. Register warranty online at www.iqair.com/support.



2. Allow for clearance in front of the access door



5. Ensure "DIRTY AIR" is in you air inlet



6. Attach ducting



7. Remove filters and secure via panel from inside to the air handler

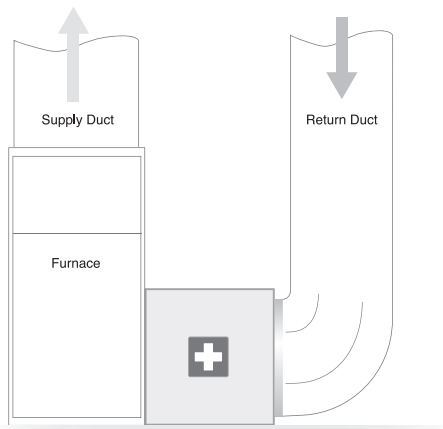


9. The Perfect 16 eye bolt kit.*



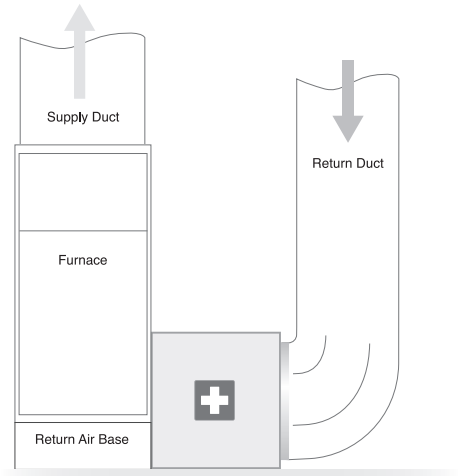
11. Fill out filter replacement label

Residential/Commercial Installation Examples



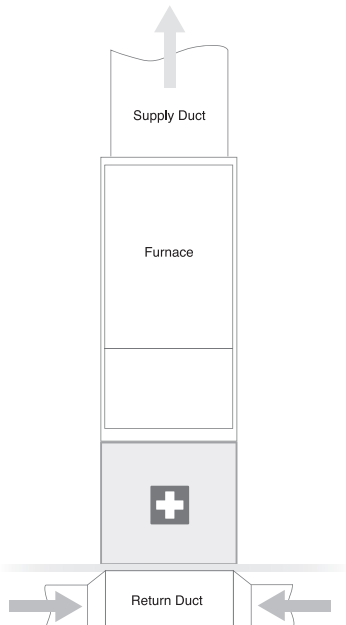
Up-Flow Furnace

Filter system is installed vertically and return air enters the furnace side inlet (up to 4 ton application).



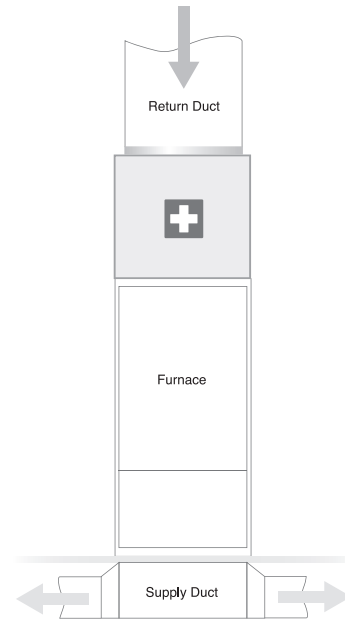
Up-Flow Furnace (5 ton application)

Filter system is installed vertically and return air enters the furnace side inlet (5 ton application).



Up-Flow Furnace

Filter system is installed horizontally beneath the furnace. Return air enters from the bottom.



Down-Flow Furnace

Filter system is installed horizontally in the return air duct just above the furnace.



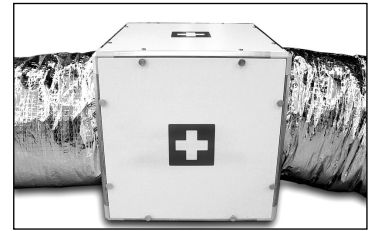
Horizontal Furnace

Filter system is installed vertically in the return air duct near the furnace.

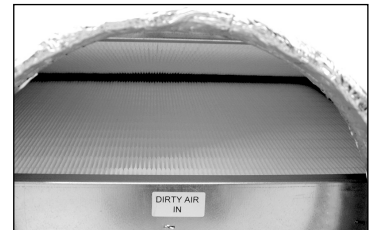
Commercial Installation Instructions

The Perfect 16 can be suspended from exposed ceiling joists or the ceiling surface. Alternatively, it can be floor-mounted, fixed onto platform or plenum box. (see page 4 or 6 for examples).

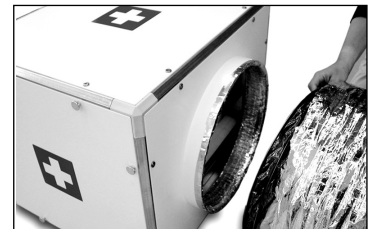
1. Choose a location between the air handler and the supply registers, which is readily accessible for checking and replacing the filter. Allow at least 24.5 in. (622 mm) clearance in front of the ID-2225 and 28.5 in. (724 mm) clearance in front of the ID-2530.
2. Determine the correct air inlet and air outlet side of the system. The air inlet is marked with "Cut this Panel for Duct Connection – DIRTY AIR IN". The air outlet is marked with "Cut this Panel for Duct Connection – CLEAN AIR OUT". Both panels will need to be cut for the proper fit of the ducting prior to installation.
3. Remove connection panel and adapt for duct air handler connection as necessary (see page 7, Cutting Openings Into Panels). If flex duct is used, it is strongly recommended to use 18" round collar for the ID-2225 and 20" for the ID-2530. Best performance is achieved with rectangular openings. For maximum allowable opening, see diagram on page 2. Never cut a panel with a Swiss cross.
4. When positioning the system, ensure that "Dirty Air In" is in your air inlet.
5. Attach ducting. For duct connection, follow the local installation codes.
6. If the Perfect 16 system is connected directly to the air handler, remove all filters and secure the cabinet via panel from inside to the air handler using sheet metal screws. Ensure correct airflow direction when reinserting filters. Refer to "Filter Replacement" instructions (see page 9).
7. In basement installations, sheet metal turning vanes may be necessary to improve air movement through an elbow in the duct.
8. To hang or suspend the Perfect 16, replace four TX30 screws with four Perfect 16 eye bolts. Ensure the materials and installation are able to support at least three times the weight of the system. These are available for a nominal fee. Order number 207 90 50 01. * Ensure that all building codes are followed.
9. Use foil tape to seal all duct joints. Important: All leaks on the return side of the system will cause dirty air to leak into the return air stream. Leakage also occurs in many air handlers via the blower door. The blower door should also be sealed with foil tape for the best air cleaning results.
10. Fill out the filter replacement label with the date of the next scheduled filter replacement, which should be no more than 3 years from the current date (based on 50% usage).
11. Check and inspect system for leakage.
12. Test for efficiency with a laser particle counter, such as a ParticleScan, and complete the Perfect 16 "10X Cleaner Air Certificate" (North America only).
13. Register warranty online at www.iqair.com/support.



1. Allow for clearance in front of the access door



2. Ensure "DIRTY AIR" is in you air inlet



5. Attach ducting



6. Remove filters and secure via panel from inside to the air handler.



8. The Perfect 16 eye bolt kit.*



10. Fill out filter replacement label

Commercial Installation Examples

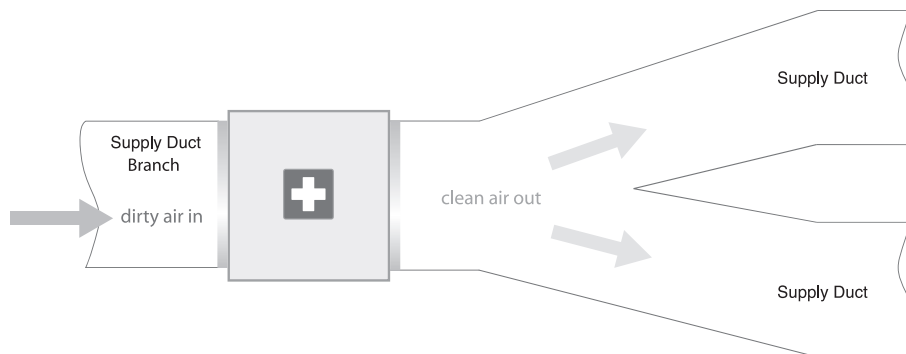
For commercial applications, where the airflow on the return side of the air handler exceeds the recommended airflow, an alternative installation method is to install the Perfect 16 on a section of the supply side.

Important note: It is not recommended to install the Perfect 16 where airflow or ambient temperature exceeds 149°F (65°C).



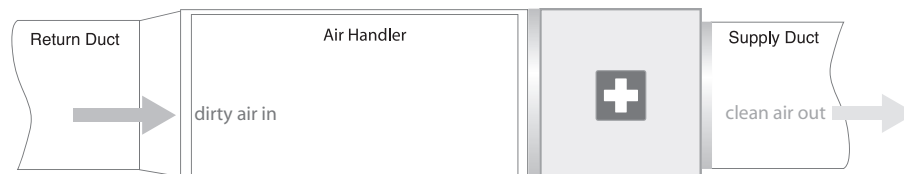
Supply Duct

The Perfect 16 can be installed on supply ducts, provided the airflow of the duct is 2000 cfm or less. Balance volume dampers and/or registers as necessary.



Supply Duct Branch

The Perfect 16 can be installed on supply duct branches, provided the airflow to the branch is 2000 cfm or less. Balance volume dampers and/or registers as necessary.

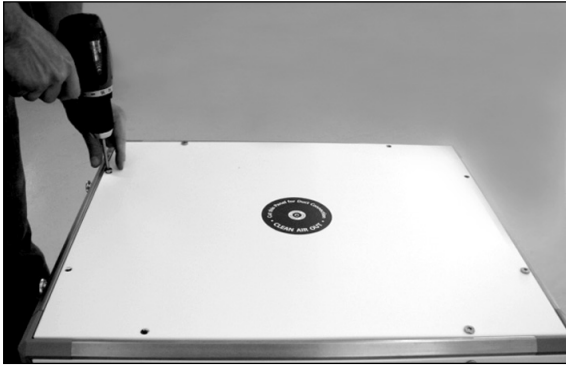


Before Supply Plenum

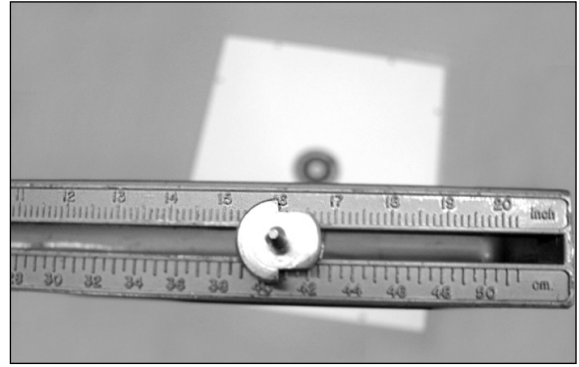
For installations of 2000 cfm (5 tons) or less, the Perfect 16 can be installed before the Supply Plenum.

Note: The Perfect 16 is designed to sustain a maximum of 149°F (65°C).

Cutting Round Openings into Panels with Hole Cutting Tool



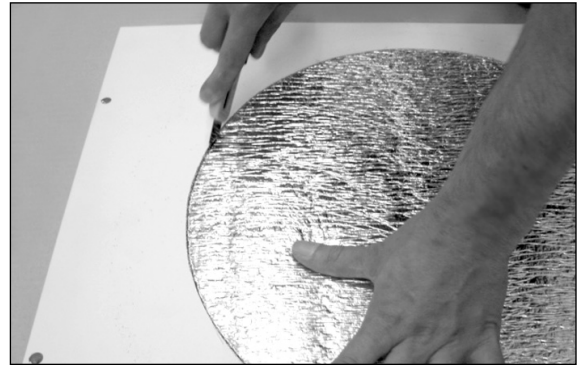
1. Remove the panel with sticker "Cut This Panel for Duct Connection" from the Perfect 16 system. Detach the insulation from the panel.



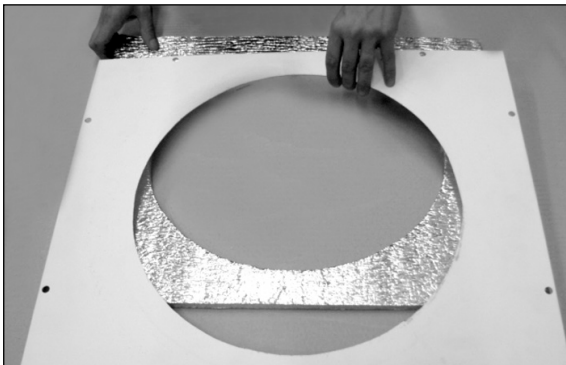
2. For round openings, adjust the cutting tool to the right position and fix it in the center hole of the panel.



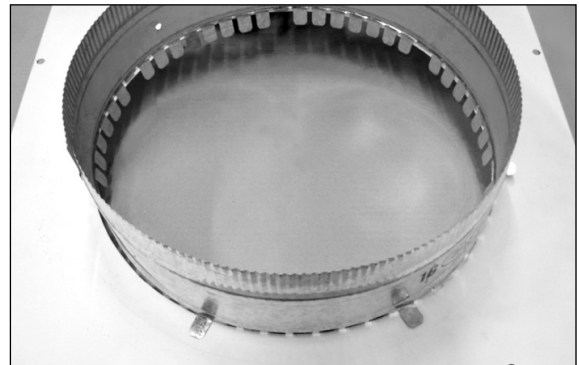
3. Cut the panel and remove the inner part. The panel can be customized to fit your transition. Never cut a panel with a Swiss cross.



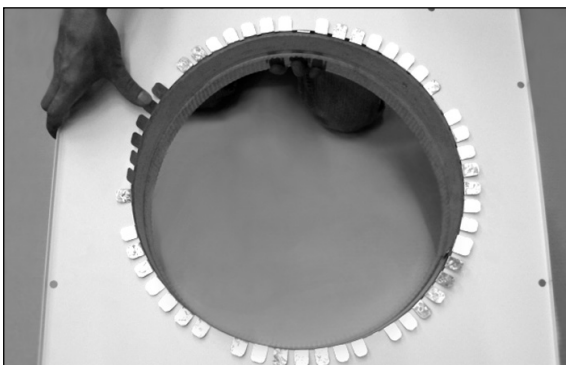
4. Fit the insulation back into the panel. Lay the panel on a hard protected surface. Using a sharp blade, cut the insulation along the panel opening.



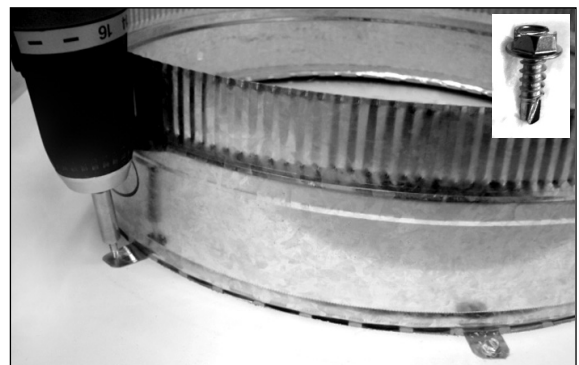
5. Remove the insulation again. The insulation now has the same opening as the panel.



6. Install the dove tail collar on the front of the panel by folding some "teeth" to the outer side which will support the collar on the panel.



7. Turn the panel over and fix the collar by folding the rest of the "teeth".



8. Screw the collar tightly on the front side by fixing the "teeth" with metal screws.

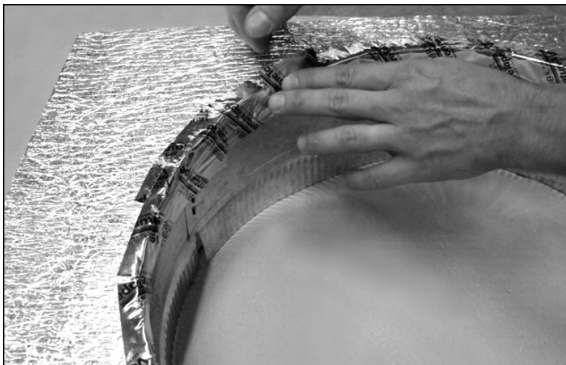
Cutting Round Openings into Panels with Hole Cutting Tool



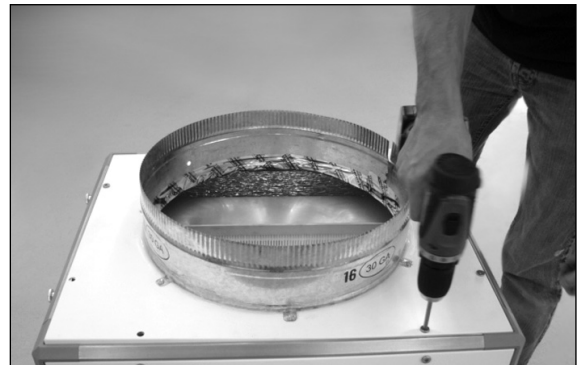
9. Seal the gap between the collar and the front of the panel using duct sealant. Wait until it has dried. Water-based low VOC is recommended, such as DP 1010.



10. Put the insulation to the inner side of the panel and fix the insulation to the collar with a duct tape.



11. Stick the tape tightly to the insulation. Slice or notch the tape to secure it smoothly to a round opening.



12. Attach the connection panel again to the Perfect 16 system, using the supplied TX30 Stainless Steel Screws. The screws are included with the panel.



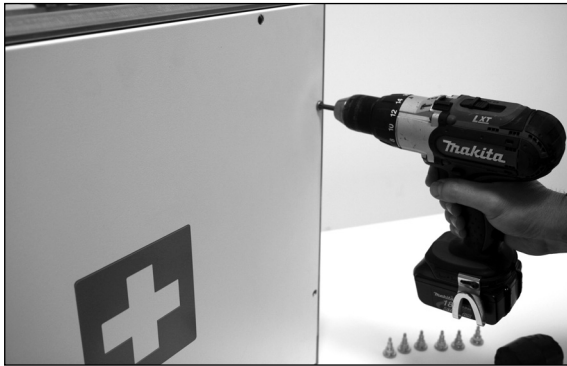
13. Repeat for second duct connection panel.



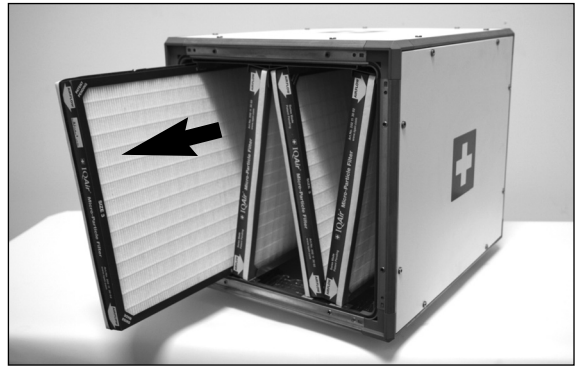
14. Dispose and recycle waste per local laws and regulations.

Disassembling the Perfect 16 Frame

The Perfect 16 can be disassembled to fit through smaller openings when space or size may be an issue.



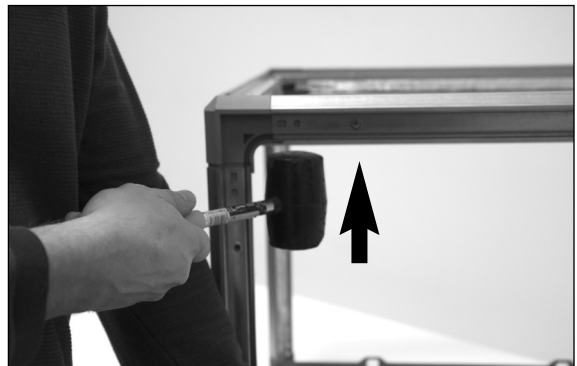
1. Remove all of the panels by removing all eight screws from each panel.



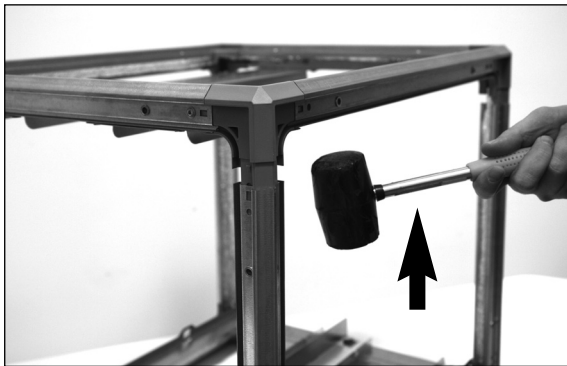
2. Remove all four filters.



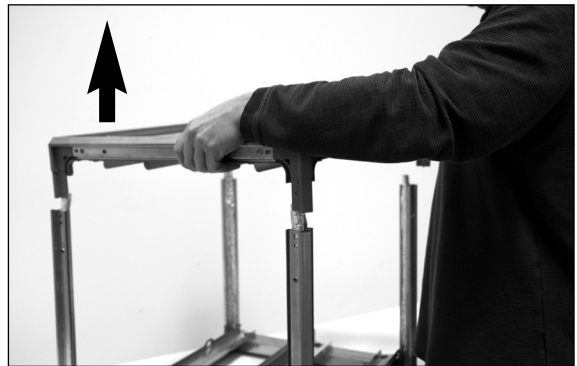
3. Locate the serial number sticker on the frame, making sure that it is on top.



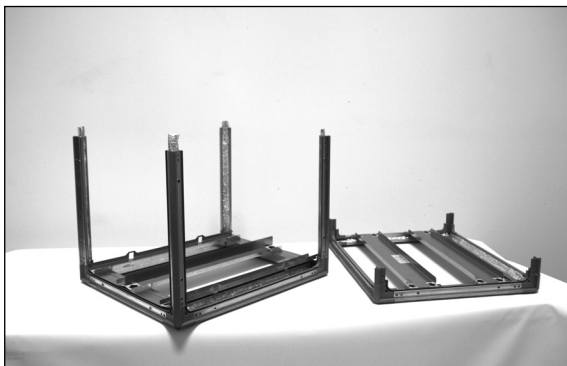
4. Gently tap the top frame out of the lower frame with a rubber mallet. Tap on the corners only to avoid damage to the filter insertion slots.



5. Rotate the frame so all four sides can be tapped out gradually. If you try to remove the legs all at once you may damage the frame.



6. Remove the top frame.

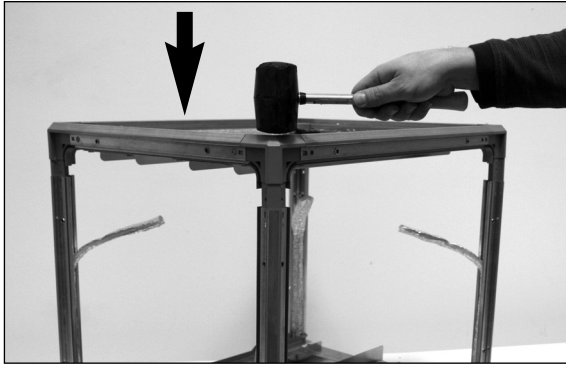


7. The two frame pieces of the Perfect 16 can now be fit into a smaller opening.

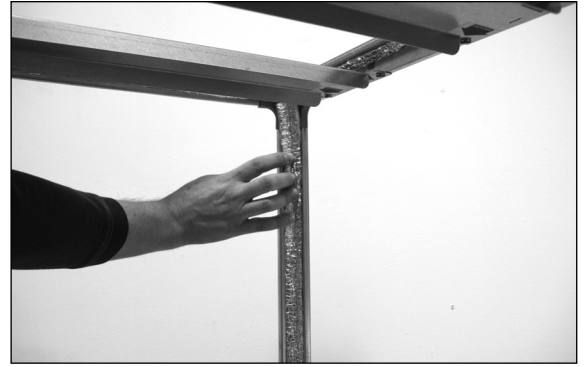


8. After you have the system in its new location, reinstall the top frame to the bottom frame.

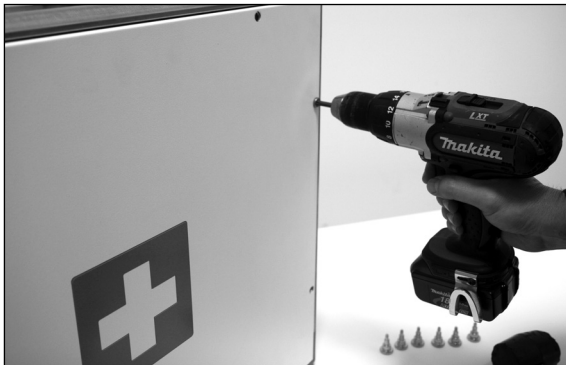
Disassembling the Perfect 16 Frame



1. Pull down the insulation and carefully tap the top into the bottom.



2. Reinstall the insulation strips into the grooves.



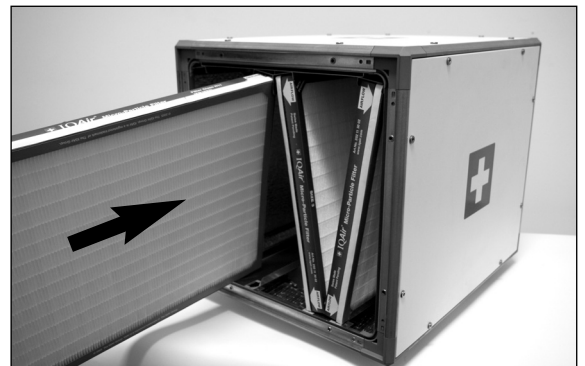
3. Reinstall the panels by replacing all eight screws on each panel.



4. Leave the filter access panel off until after all four filters are replaced.



5. Make sure the filters are installed correctly by aligning the airflow arrows.



6. Carefully insert each of the four filters.

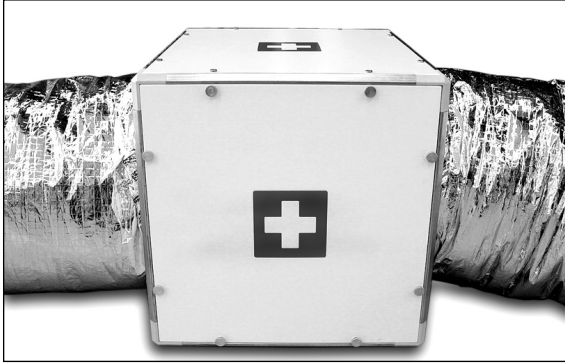


6. Ensure that you align the filters with the airflow arrows matching the airflow arrows on the cabinet.



7. Install the filter access panel by using the eight large thumbscrews.

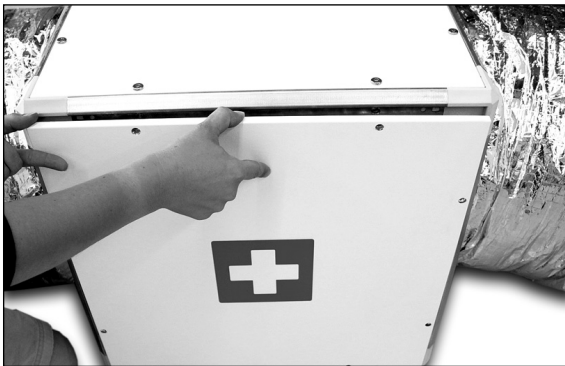
Perfect 16 Filter Replacement Instructions



1. Access to replace filters is gained from the side panel with the finger screws attached to it.



2. Remove all eight finger screws. Turn screws counter clockwise.



3. Remove access panel.



4. Remove filters starting from the top. Dispose or recycle used filters per local laws or regulations.



5. Insert new filters starting from the bottom.



6. Ensure that you align the filters with the airflow arrows matching the airflow arrows on the cabinet.



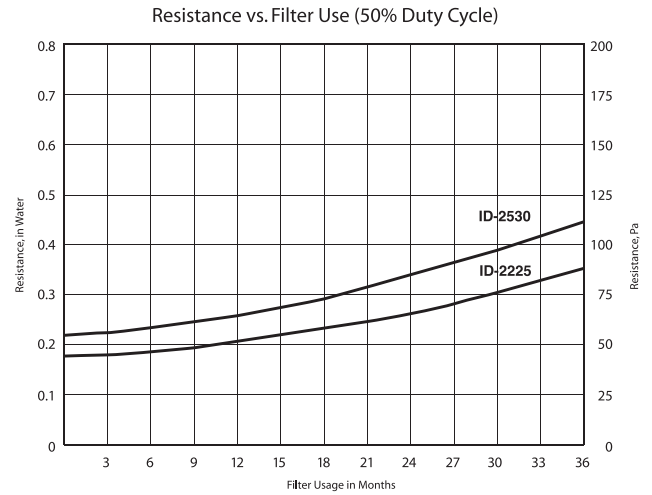
7. Double check that all filters have been inserted correctly and replace access panel with screws.



8. Fill out the filter replacement label with scheduled date of next filter replacement. This should be no more than 3 years from current date, and affix on outer panel.

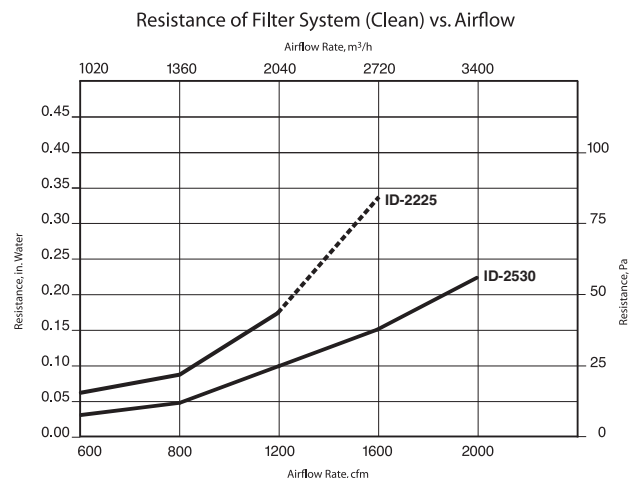
Performance Data

Usage vs. Resistance Average home based on 50% duty cycle				
Filter Usage	ID-2225 at 1200 cfm		ID-2530 at 2000 cfm	
	in H ₂ O	Pa	in H ₂ O	Pa
new	0.18	44	0.22	54
3 months	0.18	45	0.22	55
6 months	0.19	47	0.23	57
9 months	0.20	50	0.24	60
12 months	0.21	53	0.25	63
15 months	0.22	56	0.27	67
18 months	0.24	59	0.29	72
21 months	0.25	62	0.31	77
24 months	0.26	66	0.33	83
27 months	0.28	71	0.36	89
30 months	0.30	76	0.38	96
33 months	0.33	82	0.41	103
36 months	0.36	89	0.44	110



	Minimum Efficiency Reporting Data	
	ID-2225	ID-2530
Minimum Efficiency Reporting Value (MERV)	MERV 16@492 fpm (2.5m/s)	MERV 16@492 fpm (2.5 m/s)
Rated airflow	1400 cfm (2380 m ³ /h)	2000 cfm (3400 m ³ /h)
Composite Average Efficiency	E1 (0.3 – 1.0 μm) = 96.7% E2 (1.0 – 3.0 μm) = 97.7% E3 (3.0 – 10.0 μm) = 98.5%	E1 (0.3 – 1.0 μm) = 95.9% E2 (1.0 – 3.0 μm) = 97.3% E3 (3.0 – 10.0 μm) = 98.3%
Media area	170 sq.ft. (15.8 m ²)	210 sq.ft. (19.5 m ²)

cfm (m ³ /h)	Airflow vs. Filter System Resistance			
	ID-2225		ID-2530	
	in H ₂ O	Pa	in H ₂ O	Pa
600 (1020)	0.06	14	0.03	8
800 (1360)	0.09	21	0.04	12
1200 (2040)	0.18	44	0.10	24
1600 (2720)	0.33*	82*	0.15	38
2000 (3400)	0.49*	122*	0.22	54



Based on ASHRAE 52.2 Air Cleaner Performance Reports from Intertek Testing Services (ETL SEMKO), Cortland, NY

* Not recommended for residential applications due to pressure drop.

IQAir Technical Support

Should technical questions or issues arise, please contact IQAir's Technical Support Team at:

North America (United States, Canada and Mexico)

Our website www.iqair.com is available 24 hours per day and has answers for your most frequently asked questions. Technical Support is available from 8 a.m. - 4:30 p.m. PST Monday-Friday. Call 1-888-560-1020, or visit: www.iqair.com/support.

To expedite your service request, please have the following information ready when contacting us:

- IQAir model, item number and serial number (found on the base of the system)
- Your details (name, address, phone, e-mail)
- Date of purchase
- Description of issue

Worldwide

Our website www.iqair.com is available 24 hours per day and has answers for your most frequently asked questions. For additional technical support, email info@incen.com.



First in Air Quality

www.iqair.com

