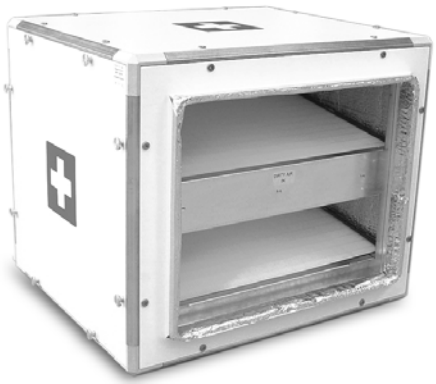
High-Performance Medical-Grade Whole-House/Commerical Air Filtration System

Application

The Perfect 16 ID Series is a V-bank filter system that connects to the return air duct of a forced air system. This Whole-House/Commercial 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. 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).

Features

- Ultra efficient: MERV16 certified (ASHRAE 52.2)
- Low air resistance: ≤0.22 " w.c. (≤54 Pa) at rated airflow
- Long filter life: 3 years in average home use
- Quick and easy filter replacement: No tools needed
- Easy installation: Requires no electrical connections
- Rugged steel cabinet: Supports weight of furnace
- Medical grade finish: Powder coated galvanized steel
- Fully insulated for installation in unconditioned environments
- Swiss made quality: 10 year warranty



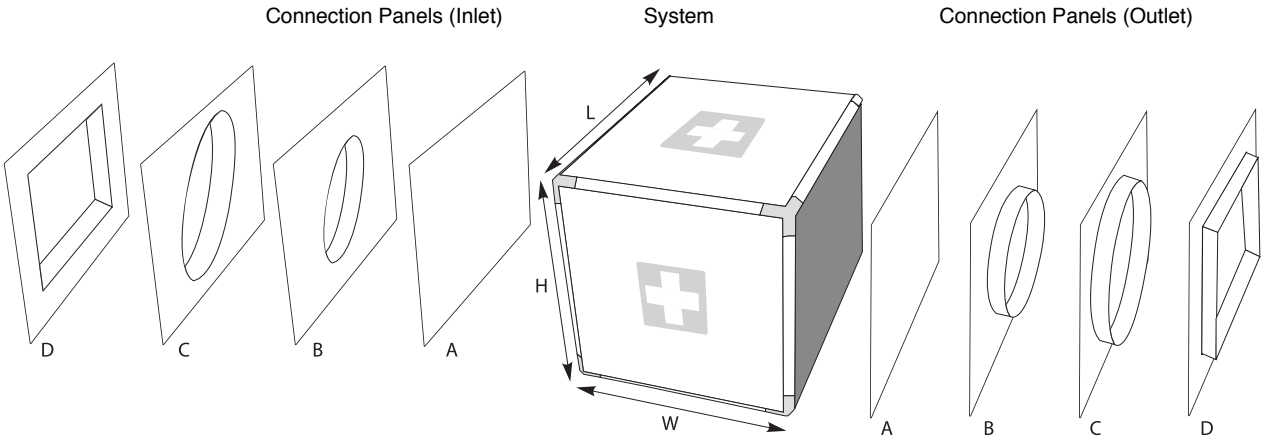
Installation

The Perfect 16 ID-Series can be suspended from exposed ceiling joists or the ceiling surface. Alternatively, it can be floor-mounted (see page 4 for installation options).

1. 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. (622mm) clearance for the ID-2225 and 28.5 in. (724 mm) clearance in front of the unit.
2. Choose two connection panels, which fit your return duct/furncace requirements. Best performance is achieved with the 16"x 20" opening panel for the ID-2225 model, and the 20"x 25" opening panel for the ID-2530. If flex duct is used, it is strongly recommended to use 18" for the ID-2225 and 20" for the ID-2530 for best performance.
3. Determine the correct air inlet and air outlet side of the system. The air inlet (upstream) is marked with "DIRTY AIR IN".
4. If the system is to be located immediately alongside the furnace, remove filters and secure cabinet via panel from inside to the furnace with sheet metal screws. Ensure correct airflow direction when reinserting filters.
5. In basement installations, sheet metal turning vanes may be necessary to improve air movement through an elbow in the duct.
6. Use foil tape to seal all duct joints. Note that all leaks on the return side of the system will cause dirty air leakage in the return air stream. Note: leakage also occurs at many furnace/air handling via the blower door. The blower door should also be sealed with foil tape for best air cleaning results.
7. Fill out filter replacement label with the date of the next scheduled filter replacement, which should be no later than 3 years from current date.

IQAir® Perfect 16™ ID-Series System Configuration

MERV16 Micro-Particle Filtration System



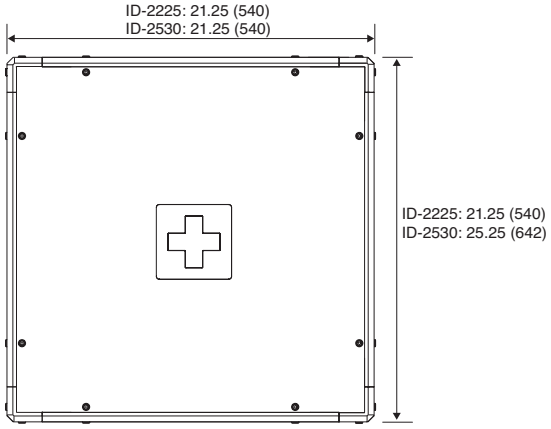
	ID-2225 System	ID-2530 System
Dimension LxWxH inch	25.25 x 21.25 x 21.25	29.25 x 25.25 x 21.25
mm	641.5 x 540 x 540	743 x 541.5 x 540
Weight	59 lbs. (27 kg)	74 lbs. (33.5 kg)
Order No.	207 70 20 02	207 70 20 04

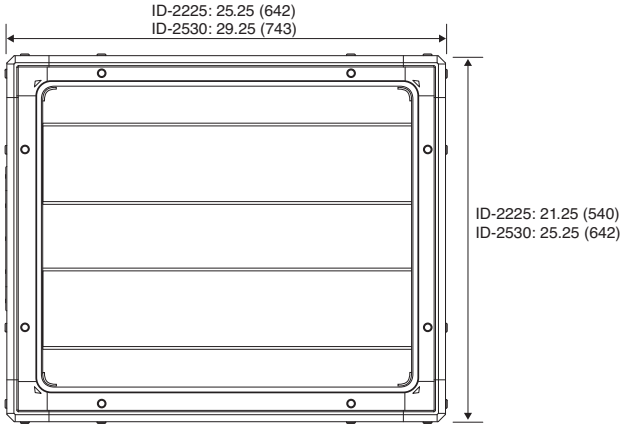
	ID-2225 Connection Panels	ID-2530 Connection Panels
Panel A	**without opening**	**without opening**
Order No.	207 30 05 04	207 30 10 04
Panel B	**16" (400 mm) round connection**	**18" (450 mm) round connection**
Order No.	207 30 06 04	207 30 12 04
Panel C	**18" (450 mm) round connection**	**20" (500 mm) round connection**
Order No.	207 30 07 04	207 30 13 04
Panel D	**16"x 20" (400 x 500 mm) connection**	**20" x 25" (500 x 635 mm) connection**
Order No.	207 30 09 04	207 30 14 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)

System

All measurements in inch (mm)

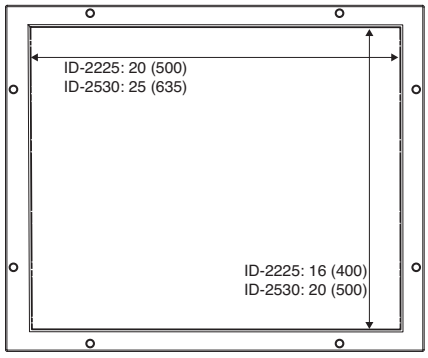


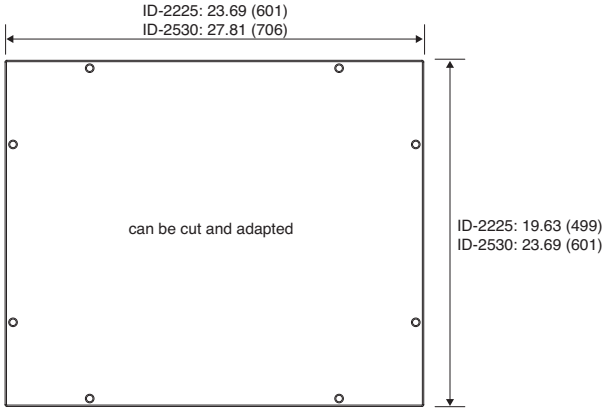


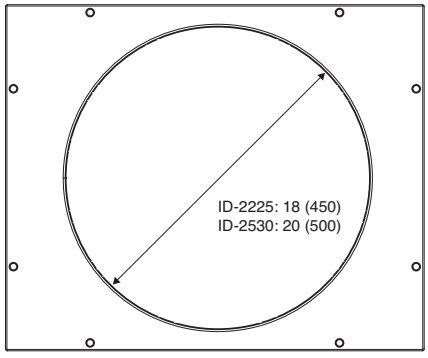
ID-2225: Provide 24 1/2 (622) service clearance in front of unit.
ID-2530: Provide 28 1/2 (724) service clearance in front of unit.

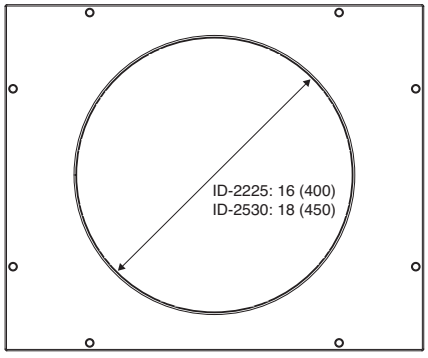
Connection Panels

All measurements in inch (mm)

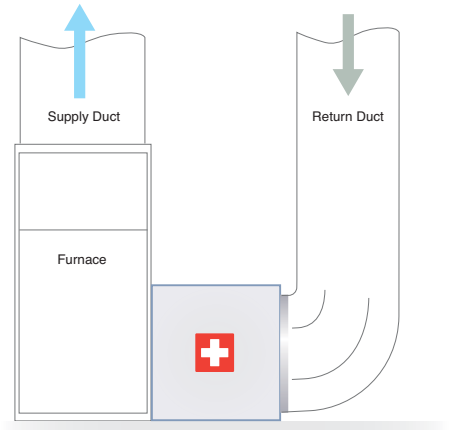






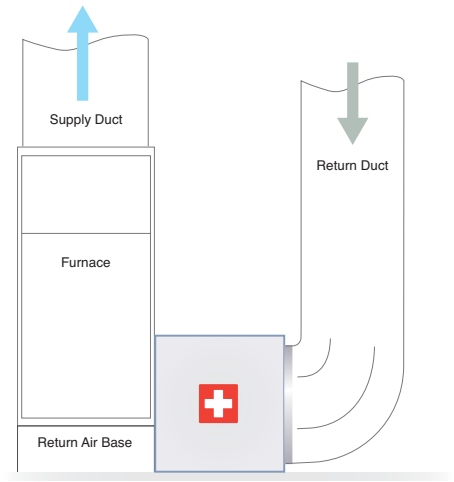


Installation Examples



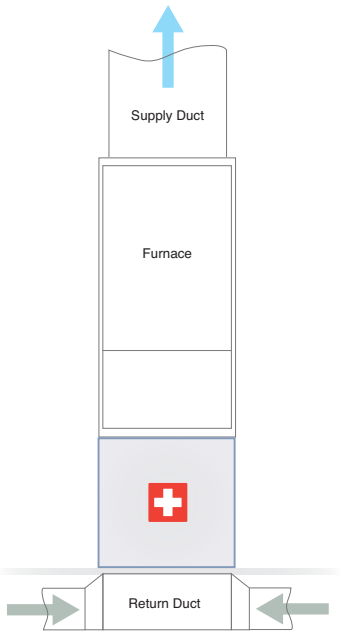
Up-Flow Furnace

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



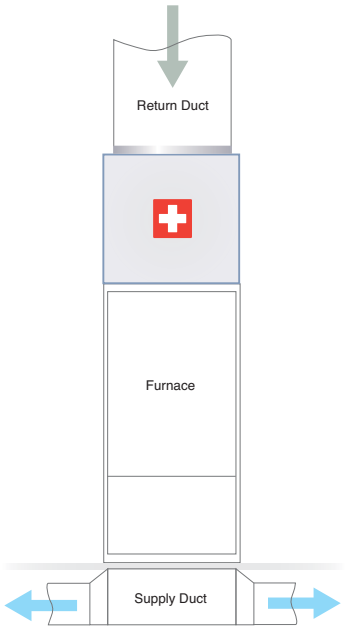
Up-Flow Furnace (5 ton application)

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



Up-Flow Furnace/Air Handler

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



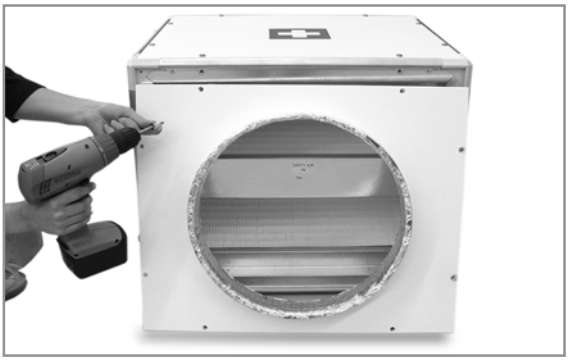
Down-Flow Furnace/Air Handler

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

Horizontal Furnace/Air Handler

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

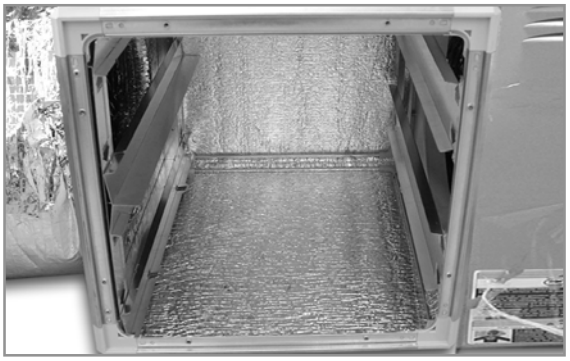
1. Choose between connection panels with rectangular/ round openings or choose panel without opening to cut as necessary. See page 2 "System Configuration".



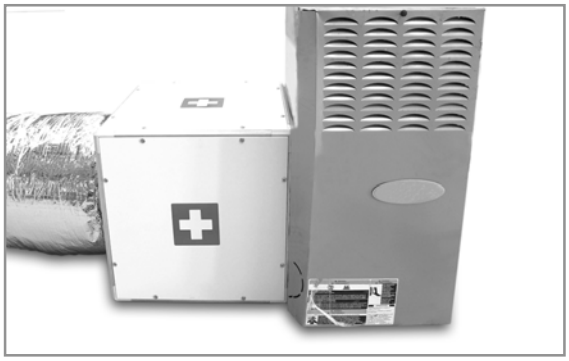
2. Attach the inlet and outlet connection panels with the supplied TX 30 stainless steel screws. The screws are included with the panels.

3. When positioning the unit, ensure that "Dirty Air In" is your air inlet.

4. For duct connection, follow local installation codes.



5a. To attach the Perfect 16 directly to a furnace, take out all filters and use sheet metal screws to tab through square connection panel.



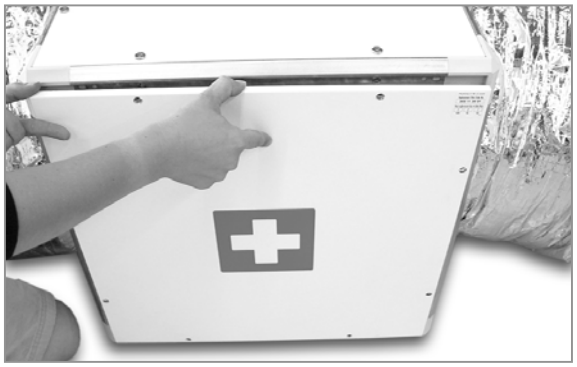
5b. Side connection as pictured can be used for up to 4 ton applications. For 5 ton applications use return base.

6. Ensure that there is unobstructed access to the filter replacement door. Ensure 24 1/2 (622 mm) front clearance for unit ID-2225 and 28 1/2 (724 mm) for ID-2530.

7. To hang or suspend the Perfect 16, replace four TX30 screws with four Perfect 16 eye bolts. These are available for a nominal fee.

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

2. Remove all eight finger screws.

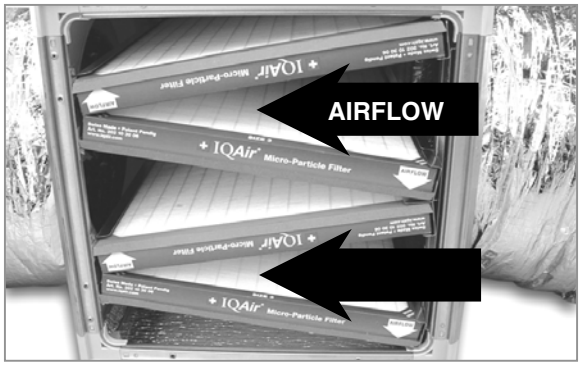


3. Remove access panel.

4. Remove filters starting from the top.

5. Insert new filters starting from the bottom.

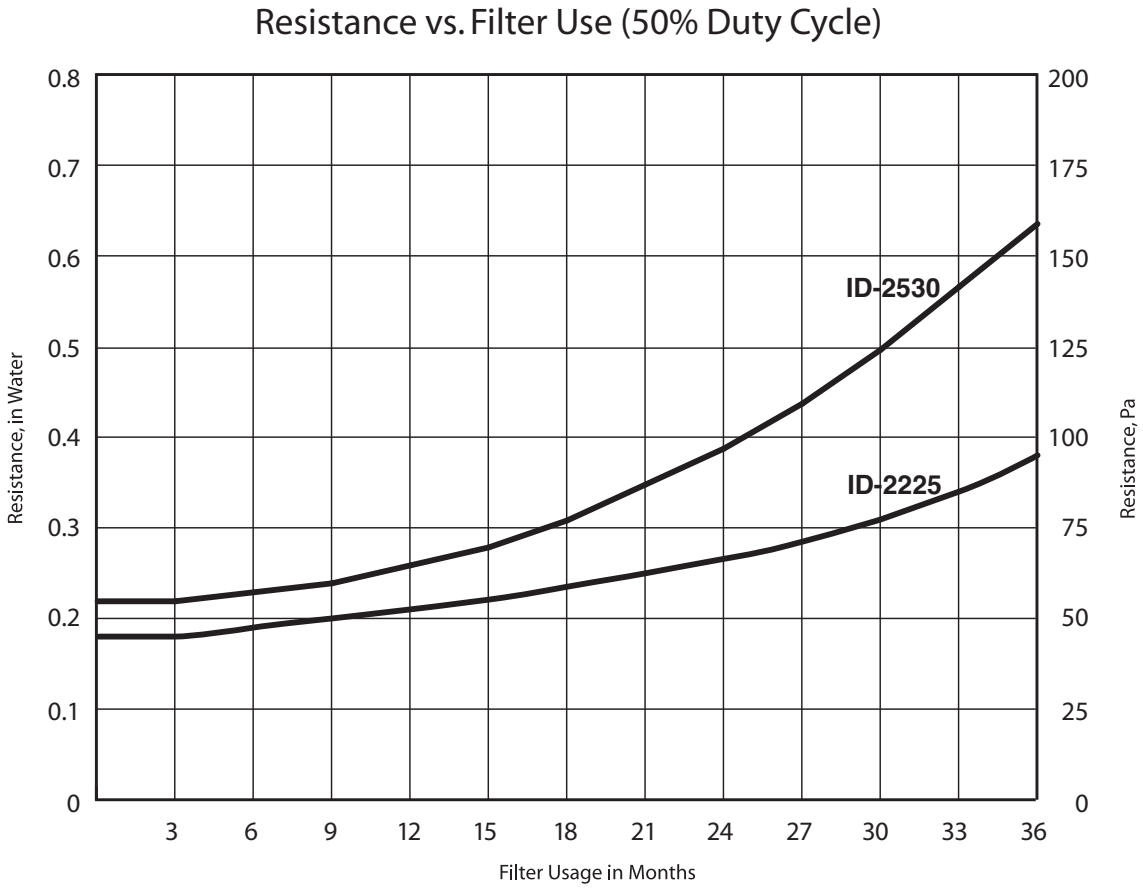
6. Ensure that you align the filters with the airflow arrows matching the airflow arrows on the cabinet.



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

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

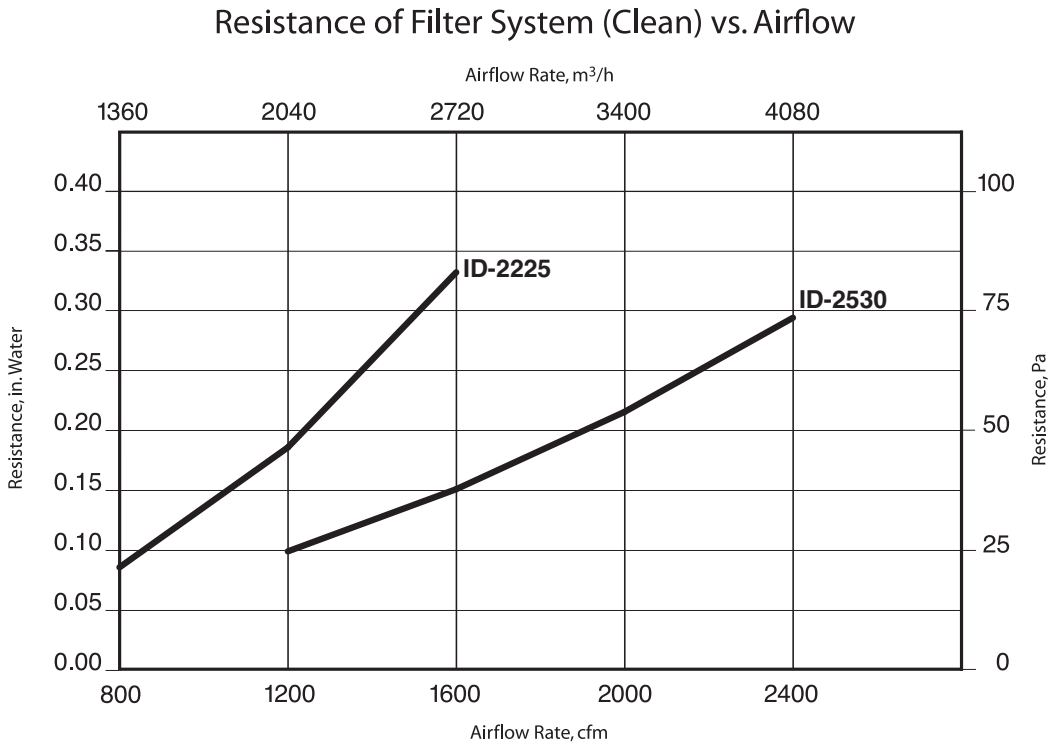
	Usage vs. Resistance Average home based on 50% duty cycle			
	ID-2225 at 1200 cfm		ID-2530 at 2000 cfm	
Filter Usage	in H_2O	Pa	in H_2O	Pa
new	0.18	44	0.22	54
3 months	0.18	45	0.22	55
6 months	0.19	47	0.23	57
9 months	0.20	50	0.24	60
12 months	0.21	53	0.26	64
15 months	0.22	56	0.28	70
18 months	0.24	59	0.31	78
21 months	0.25	62	0.35	87
24 months	0.26	66	0.39	97
27 months	0.28	71	0.44	110
30 months	0.31	77	0.50	125
33 months	0.34	85	0.57	142
36 months	0.38	94	0.64	161



IQAir® Perfect 16™ ID-Series ASHRAE 52.2 Performance Data

MERV16 Micro-Particle Filtration System

	Minimum Efficiency Reporting Data	
	ID-2225	**ID-2530**
Minimum Efficiency Reporting Value (MERV)	MERV 16@492 fpm (2.5 m/s)	MERV 16@492 fpm (2.5 m/s)
Rated airflow	1400 cfm (2380 m³/h)	2000 cfm (3400 m³/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 m²/h)	210 sq.ft. (19.5 m²/h)



	Airflow vs. Filter System Resistance			
	ID-2225		**ID-2530**	
cfm (m³/h)	**in H_2O**	**Pa**	**in H_2O**	**Pa**
800 (1360)	0.09	21	–	–
1200 (2040)	0.18	44	0.10	24
1600 (2720)	0.33	82	0.15	38
2000 (3400)	–	–	0.22	54
2400 (4080)	–	–	0.29	73

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