



DAIKIN ONE PREMIUM AIR CLEANER INSTALLATION & OPERATION MANUAL



! WARNING

Only personnel that have been trained to install, adjust, service or repair (hereinafter, “service”) the equipment specified in this manual should service the equipment. Daikin will not be responsible for any injury or property damage arising from improper service or service procedures. If you service this unit, you assume responsibility for any injury or property damage which may result. In addition, in jurisdictions that require one or more licenses to service the equipment specified in this manual, only licensed personnel should service the equipment. Improper installation, adjustment, servicing or repair of the equipment specified in this manual, or attempting to install, adjust, service or repair the equipment specified in this manual without proper training may result in product damage, property damage, personal injury or death.

**PROP 65 WARNING
FOR CALIFORNIA CONSUMERS**

! WARNING

Cancer and Reproductive Harm - www.P65Warnings.ca.gov

	Furnaces	Air Handlers
Air Cleaner Model #	DV1-15-2814-FA	DV1-15-2117-AB
	DV1-15-2817-FB	DV1-15-2121-AC
	DV1-15-2821-FC	DV1-15-2124-AD
	DV1-15-2824-FD	

MODELS

- DV1-15-2117-AB
- DV1-15-2121-AC
- DV1-15-2124-AD
- DV1-15-2814-FA
- DV1-15-2817-FB
- DV1-15-2821-FC
- DV1-15-2824-FD



* Complete warranty details available from your local dealer or online at www.daikincomfort.com. To receive the 12-Year Unit Replacement Limited Warranty or the 12-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registrations is not required in California or Québec. The duration of warranty coverage in Texas and Florida differs in some cases.

Description

The Daikin *One* Premium Air Cleaner is an in-line air cleaner that treats home air for airborne particulate matter and chemicals found in the home. The high efficiency MERV 15 media filter removes more than 85% of particles down to 0.3 microns in size at rated flow. The Daikin *One* Premium Air Cleaner also includes a room temperature catalyst (RTC) insert that helps remove formaldehyde and ozone from the air stream.

Proprietary Notice

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Replacement Filters


Air Cleaner Model ⁽¹⁾	Replacement MERV15 Filter ⁽²⁾	Replacement Room Temperature Catalyst (RTC)
DV1-15-2117-AB	0160M00013	DVFC-AB
DV1-15-2121-AC	0160M00014	DVFC-AC
DV1-15-2124-AD	0160M00015	DVFC-AD
DV1-15-2814-FA	0160M00016	DVFC-FA
DV1-15-2817-FB	0160M00017	DVFC-FB
DV1-15-2821-FC	0160M00018	DVFC-FC
DV1-15-2824-FD	0160M00019	DVFC-FD


Filter should be changed once or twice a year based on conditions within the home. RTC should be changed once every six months based on conditions within the home.


⁽¹⁾EPA EST. NO. 073316-TEX-001 • ⁽²⁾EPA EST. NO. 71027-MEX-001

Read and save these instructions.

 **WARNING!** This symbol indicates important instructions. Failure to heed them can result in serious injury or death.



 **CAUTION!** This symbol indicates important instructions. Failure to heed them can result in injury or material property damage.


 **WARNING!** Before beginning any installation or modification, be certain that the main line electrical disconnect switch is in the OFF position. Unexpected start-up of system blower may cause serious injury. Tag disconnect switch with suitable warning labels.


 **CAUTION!** Installation:


- Only trained personnel should install this unit (see warning on cover page).
- Homeowners can perform the basic maintenance functions of replacing filters.*

*See Handling, Storage and Disposal of Replacement Filters

 **WARNING!**  Risk of Carbon Monoxide. Do not use this air cleaner without the cabinet door installed. If the cabinet door is not installed, there is a risk that exhaust fumes may be drawn into occupied spaces, which can cause injury or death.

 **WARNING!** This air cleaner utilizes very strong magnets to fasten the cabinet door. Magnets may interfere with pacemakers and Implantable Cardiac Defibrillators (ICDs).

 **WARNING!** Do not ingest magnets; ingested magnets can cause serious intestinal injury.


 **CAUTION!** This air cleaner utilizes industrial strength magnets. Hold front door panel with both hands when removing or replacing door to avoid pinching fingers between door and cabinet.

Handling, Storage and Disposal of Replacement Filters.

Storage of Replacement Room Temperature Catalyst Insert

When working on the air cleaner, observe precautions in the Owner's Manual labels attached to the furnace or air handler, and other safety precautions that may apply.

- Always use personal protective equipment that is clean and has been properly maintained.
- Always use safety glasses
- Always use work gloves that is resistant to chemical agents
 - Recommended Natural latex.
- Always use disposable half-mask dust filter.
- Avoid contact with eyes.
- Avoid skin contact.
- Avoid breathing dust.
- Never eat, drink or smoke in the area where you are replacing the filters.
- Always wash hands and face thoroughly after handling.

 **CAUTION!** Potassium iodide exposure may cause skin irritation, serious eye irritation and damage to organs through prolonged or repeated exposure (if swallowed). Do not breathe dust/fume/gas/mist/vapours/spray.

- If on skin; Remove contaminated clothing and wash the skin thoroughly with water
 - If the contaminated area is widespread and/or there is damage to the skin, seek medical attention.
- If in eyes; Rinse thoroughly with fresh, clean water holding the eyelids open. Remove contacts lenses, if present and easy to do. Continue rinsing.
- If there is any redness, pain or visual impairment, consult an ophthalmologist.
- In an event of swallowing, seek medical attention immediately. Do NOT give the patient anything orally. If the swallowed quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

 **Important: Read and save these instructions. This guide to be left with equipment owner.**

Storage of Replacement Room Temperature Catalyst Insert and MERV 15 filter

- Keep away from any chemical (solvents and strong oxidizers).
- Keep away from heat sources.
- Prevent dust generation
- Store in well-ventilated area.
- Keep the package tightly closed and away from dampness and humidity.

Disposal of Replacement Room Temperature Catalyst Insert and MERV 15 filter

- Dispose of in accordance with national, state and local regulations. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected.
- Do not contaminate the ground or water with waste; do not dispose of waste into the environment.

Installation

IMPORTANT: This air cleaner may cause more of a restriction on the airflow in the air-handling system than a standard 1" equipment filter, because of its increased efficiency. As the filter collects particulates, the pressure drop increases and airflow through the filter decreases. This air cleaner is not recommended where added pressure drop would cause operational problems with the heating and cooling equipment.

Location

This air cleaner is adaptable to unitary residential forced air heating or cooling systems. It is designed to be installed in the return air duct close to the blower compartment of the furnace or air handler. This location provides the most even air flow across the filter helping to keep the system motor and fan clean.

To improve the performance of the air cleaner, these simple steps are recommended:

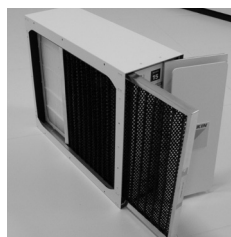
- Run your heating/cooling system fan continuously, on low speed if available, since the air cleaner only removes particulate matter when the system fan is operating.
- Ensure there are no obstructions to airflow (for example, from furniture or carpets) in front of the return air grilles so that air moves freely to the heating/cooling equipment.

WARNING! Turn off the heating and cooling system fan before performing maintenance to the air cleaner.

MODEL	Dimensions (in)							
	A	B1	B2	C	D	E	F	G
DV1-15-2117-AB	17.5	21.1	21.7	1.4	0.8	1.3	14.7	19.4
DV1-15-2121-AC	21.0	21.1	21.7	1.4	0.8	1.3	18.2	19.4
DV1-15-2124-AD	24.5	21.1	21.7	1.4	0.8	1.3	21.7	19.4
DV1-15-2814-FA	14.0	28.0	28.6	0.8	0.8	3.8	12.5	23.9
DV1-15-2817-FB	17.5	28.0	28.6	0.8	0.8	3.8	16.0	23.9
DV1-15-2821-FC	21.0	28.0	28.6	0.8	0.8	3.8	19.5	23.9
DV1-15-2824-FD	24.5	28.0	28.6	0.8	0.8	3.8	23.0	23.9

General Installation Steps

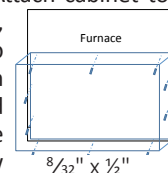
1. **Remove existing equipment filter (if present) and clean blower compartment:** Thoroughly clean the blower compartment, since the air cleaner cannot remove accumulated dirt from the blower chamber and distribution ducts.
2. **Leave sufficient room around the air cleaner:** There must be adequate room to remove and replace the filter from the air cleaner cabinet.
3. **Transitions:** If the air duct does not fit the air cleaner opening, a gradual transition is recommended to reduce air turbulence through the air cleaner and ensure its efficient operation. A maximum of 20° of expansion, or approximately 4 inches per running foot (10 cm per 30 cm), is recommended for each side of the transition fitting. **Note:** Do not reduce ductwork size to fit a smaller air cleaner. This will increase the velocity of airflow and may decrease cleaning efficiency.
4. **Turning vanes:** If the air cleaner is installed adjacent to an elbow or angle fitting, field-installed turning vanes are recommended to improve air distribution across the filter.



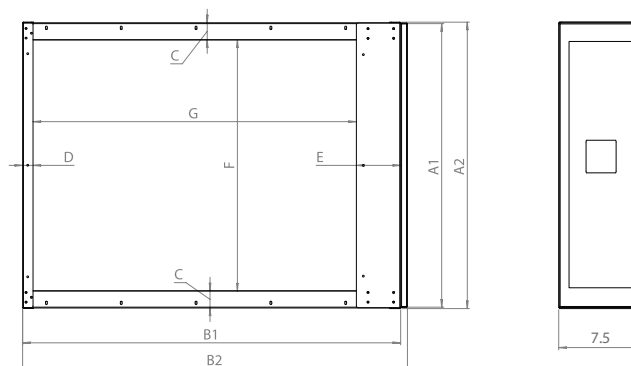
5. **Remove the door:** When removing or replacing the door, hold the outer door panel with both hands. The door has industrial strength magnets in it which can pinch fingers if caught between door and cabinet.

6. **Remove filters:** remove filters (MERV 15 & RTC) from cabinet

7. **Install the cabinet:** Attach cabinet to furnace and filter riser, air handler or to plenum with the ten self-tapping hex head screws provided. Note direction of flow indicated on top and bottom of cabinet.



8. **Seal the joints in the return air system:** All joints and seams between the air cleaner, the heating / cooling equipment and the return air duct should be sealed with aluminum tape or mastic to prevent dust from entering the clean air stream.
9. **Replace filters and door:** After attaching cabinet and sealing all joints, reinstall filters (note direction of flow). Reinstall door, making sure it is properly seated. Remove plastic bag before installing the room temperature catalyst (RTC) insert.
10. **Adjust Daikin Badge:** If a different orientation is needed, slide badge up and pull out of door. Rotate to proper orientation and reinstall.



Specifications							
Model	DV1-15-2117-AB	DV1-15-2121-AC	DV1-15-2124-AD	DV1-15-2814-FA	DV1-15-2817-FB	DV1-15-2821-FC	DV1-15-2824-FD
Airflow - up to maximum rated flow	Up to 1200 cfm (2039 m3/h)	Up to 1600 cfm (2718 m3/h)	Up to 1800 cfm (3058 m3/h)	Up to 1200 cfm (2039 m3/h)	Up to 1600 cfm (2718 m3/h)	Up to 2000 cfm (3398 m3/h)	Up to 2000 cfm (3398 m3/h)
Duct Size	21 x 17 in (53 x 43 cm)	21 x 21 in (53 x 53 cm)	21 x 24 in (53 x 61 cm)	28 x 14 in (71 x 36 cm)	28 x 17 in (71 x 43 cm)	28 x 21 in (71 x 53 cm)	28 x 24 in (71 x 61 cm)
Pressure Drop* (MERV 15 Filter Only)	0.09 in. w.g. @ 600 cfm	0.09 in. w.g. @ 800 cfm	0.09 in. w.g. @ 900 cfm	0.08 in. w.g. @ 600 cfm	0.08 in. w.g. @ 800 cfm	0.08 in. w.g. @ 1000 cfm	0.06 in. w.g. @ 1000 cfm
	0.26 in. w.g. @ 1200 cfm	0.29 in. w.g. @ 1600 cfm	0.25 in. w.g. @ 1800 cfm	0.25 in. w.g. @ 1200 cfm	0.24 in. w.g. @ 1600 cfm	0.22 in. w.g. @ 2000 cfm	0.17 in. w.g. @ 2000 cfm
MERV Rating*	15	15	15	15	15	15	15
Total Pressure Drop* (MERV 15 & RTC Filters Only)	0.11 in. w.g. @ 600 cfm	0.12 in. w.g. @ 800 cfm	0.11 in. w.g. @ 900 cfm"	0.11 in. w.g. @ 600 cfm	0.10 in. w.g. @ 800 cfm	0.10 in. w.g. @ 1000 cfm	0.08 in. w.g. @ 1000 cfm
	0.36 in. w.g. @ 1200 cfm	0.39 in. w.g. @ 1600 cfm	0.33 in. w.g. @ 1800 cfm	0.35 in. w.g. @ 1200 cfm	0.32 in. w.g. @ 1600 cfm	0.28 in. w.g. @ 2000 cfm	0.22 in. w.g. @ 2000 cfm

- Notes:**
1. Installation with units with ECM motors recommended.
 2. Two filters should be considered for any airflow rates above maximum rated flow or when duct pressure loss is excessive.
 3. Room Temperature Catalyst (RTC) filter can be removed if total system pressure drop is excessive.
 4. Furnace Risers are recommended to be used in furnace applications to expand filtered airflow and minimize pressure drop.

Furnace Size	A	B	C	D
Furnace Riser	AMP-BSRB1428	AMP-BSRB1728	AMP-BSRB2128	AMP-BSRB2428

When using a furnace riser use DV1-15-2824-FD on all size furnaces

MERV Rating 15 - Minimum Filtration Efficiency @492 fpm: • E1 85% (0.3 - 1.0 micron) • E2 90% (1.0 - 3.0 micron) • E3 95% (3.0 - 10.0 micron)

*Independent testing performed by LMS Technologies, Inc. Specification values may vary due to individual systems.

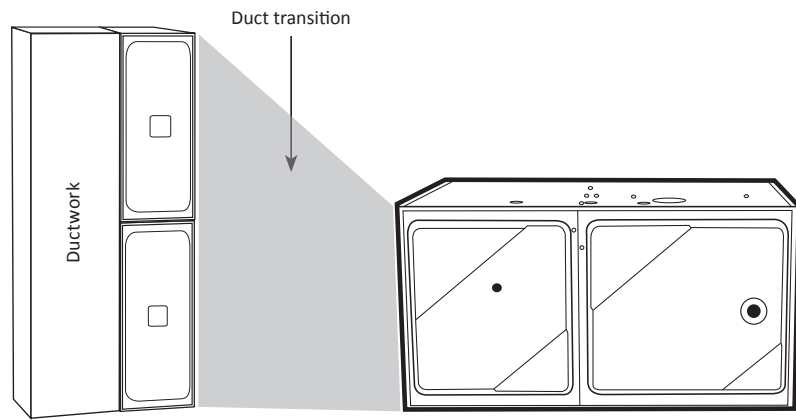


Furnace Riser

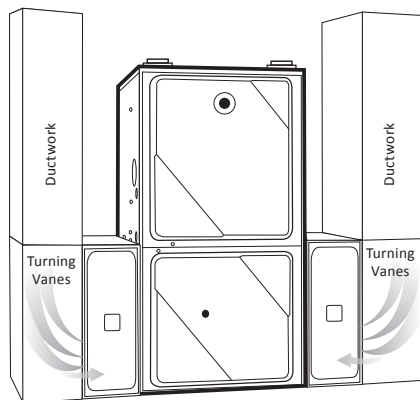
Filter Match-up Options

Air Handler Filter Options		
Air Handler Size	Bottom/Top Return	Plenum Return
B	21x17	21x21
C	21x21	21x24
D	21x24	21x24

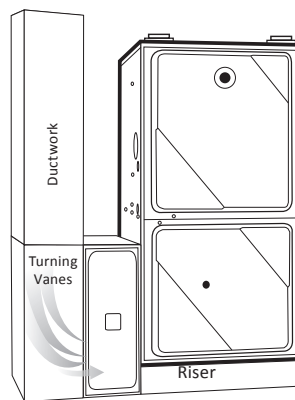
Furnace Filter Options			
Furnace Size	Bottom/Top Return	Side Return	Side Return with Furnace Riser
A	28x14	28x17	28x24
B	28x17	28x17	28x24
C	28x21	(2) 28x17	28x24
D	28x24	(2) 28x17	28x24



Duct transition for side flow dual filter installation furnace/air handler application



Dual filter furnace application, side return (For any side return on a furnace without a furnace riser, use one DV1-15-2817-FB on A & B or two DV1-15-2817-FB on C & D furnace sizes)



Single filter furnace application, side return with furnace riser (When using a furnace riser, use DV1-15-2824-FD on all furnace sizes)



Furnace Riser

NOTE: Not all installation options are included below.

