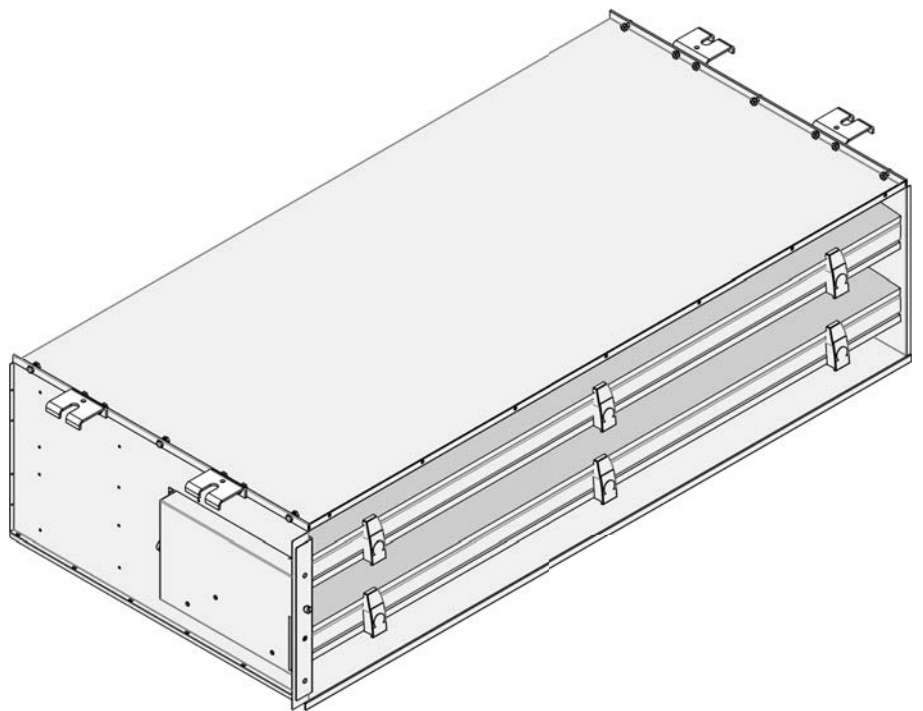




# **DYNAMIC V8® VL SERIES AIR CLEANER INSTALLATION MANUAL**



For LG High Static Ducted Indoor Units



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# Introduction

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## LG Electronics

LG Electronics is a global leader and technology innovator in consumer electronics, mobile communications, and home appliances, employing over 213,000 people in over 115 operations worldwide. LG Electronics comprises four business units - Home Entertainment, Mobile Communications, Home Appliance, and Air Conditioning and Energy Solutions. LG Electronics is one of the world's leading producers of flat panel televisions, audio and video products, mobile handsets, air conditioners, and washing machines. LG's commercial air conditioning (CAC) business unit was established in 1968 and has built its lineup of residential and commercial products to include VRF, Flex multi, duct free split systems, PTACs, and room air conditioners. In 2011, the air conditioning and energy solutions business unit grew to include LED lighting and solar products. For more information, visit [www.lghvac.com](http://www.lghvac.com).

Figure 1: LG Commercial Air Conditioning in Atlanta Georgia.



## Commitment to Innovation

LG Commercial Air-conditioning is committed to providing a full line of products that employ state of the art technology and innovation, such as our award winning Art Cool™ Gallery, duct-free split systems, and the Multi V family of water cooled VRF heat pumps.

As part of our commitment to bringing innovation to the markets we serve, LG Electronics actively seeks partnerships with other innovation leaders. For air cleaning, we are excited to offer the technology developed and patented by Dynamic Air Quality Solutions. We introduce the Dynamic V8® VL series of air cleaning products specially designed to work in harmony with LG Multi V III, Multi V Water, and Multi V Mini VRF high static-ducted indoor units.



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## About Dynamic Air Quality Solutions

In 1982, two university professors from Carleton University in Ontario, Canada developed a design for a residential air-cleaning application that provided a simple means of replacing dirty media. They started Engineering Dynamics, Ltd. (EDL) and began manufacturing 1" and 2" polarized-media electronic air cleaners, room console units, and overhead ceiling-mount units. All of the polarized-media air cleaners on the market today can be traced back to beginnings at EDL, although subsequent patents and refinements have created discernible differences in product designs and features.

EDL was acquired in 1993 by Environmental Dynamics Group, now known as Dynamic Air Quality Solutions, the manufacturer of Dynamic Air Cleaners. Initially the focus was residential, but there was a clear need for improved air quality in commercial and industrial applications. This resulted in a focus on technology enhancements, new configurations, and a complete line of commercial products that now dominate in some applications, such as casinos.

Although there were a number of different configurations that came before the Dynamic V8, all were based on polarizing (charging) fibers in a filter and particles in the air to generate an electric force between those fibers and particles. While the underlying principles have been around for many decades, only in recent years has the technology been fully understood and optimized to provide consistent, reliable performance.

As a result of this research and development, we proudly present the Dynamic V8 Air Cleaner. As the new standard in air cleaning, the Dynamic V8 VL Series delivers maximum performance using an insignificant energy volume. The Dynamic V8 outperforms all existing air cleaning and filtration products in the market. It controls contaminants and slashes filter-related maintenance costs, resulting in the lowest total cost of building ownership. The Dynamic V8 is designed to meet the rigorous requirements of green buildings, data centers, hospitals, and pharmaceutical and clean manufacturing.

## Dynamic V8 VL Series Air Cleaners

The Dynamic V8's patented technology has been commercially available for years in a heavy duty arrangement with eight filter media pads. The Dynamic V8 VL Series of air-cleaners are compact and designed to work specifically with LG Multi V line of High-Static-Ducted Indoor Units. They are available in two configurations: The low-profile 4VL, model and the ultra-low-profile 2VL model.

## Getting Help

For technical assistance with the air cleaner itself, please contact Dynamic Air Quality Solutions (DAQS) at (609) 924-4489. For layout and installation questions, please contact your LG CAC representative. For warranty issues and repair parts, see "DAQS Policies and Warranties" on page 35. For replacement filter media, please contact your LG CAC representative.





# Air Cleaner System Configurations

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## Configurations

Dynamic V8 VL-series air cleaners can be installed using various configurations, depending on the high-static-ducted indoor unit used and the height of the plenum where they will be installed. There are five standard-profile configurations, eight low-profile configurations, and two mixed-profile configurations. Configurations may share the same plan (top) view because they differ only in height.

Table 1: Air Cleaner Configuration and Indoor Unit Models

Code	Description	ARNU073BHA2	ARNU093BHA2	ARNU123BHA2	ARNU153BGA2	ARNU153BHA2	ARNU183BGA2	ARNU183BHA2	ARNU243BGA2	ARNU243BHA2	ARNU283BGA2	ARNU363BGA2	ARNU423BGA2	ARNU483BRA2	ARNU543BRA2	ARNU763B8A2	ARNU963B8A2
Standard-Profile (4VL) Configurations																	
S1R1	One 4VL air cleaners, one return-air plenum	•	•	•	•	•	•	•	•	•	•						
S2R1	Two 4VL air cleaners, one return-air plenum											•		•	•	•	•
S2R2	Two 4VL air cleaners, two return-air plenums											•		•	•	•	•
S3R2	Three 4VL air cleaners, two return-air plenums												•				
S3R3	Three 4VL air cleaners, three return-air plenums												•				
Low-Profile (2VL) Configurations																	
L1R1	One 2VL air cleaner, one return-air plenum	•	•	•	•	•	•		•								
L2R1	Two 2VL air cleaners, one return-air plenum							•		•	•						
L2R2	Two 2VL air cleaners, two return-air plenums							•		•	•						
L3R2	Three 2VL air cleaners, two return-air plenums											•		•	•		•
L3R3	Three 2VL air cleaners, three return-air plenums											•		•	•		•
L4R2	Four 2VL air cleaners, two return-air plenums															•	
L4R4	Four 2VL air cleaners, four return-air plenums															•	
L5R3	Five 2VL air cleaners, three return-air plenums												•				
Mixed-Profile (2VL/4VL) Configurations																	
L1S1R1	One 2VL air cleaner, one 4VL air cleaner, one return-air plenum											•		•	•	•	•
L1S1R2	One 2VL air cleaner, one 4VL air cleaner, two return-air plenums											•		•	•	•	•

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## Configuration Code

Each configuration is defined by three qualities:

- Which air cleaner type or types it uses
- How many of each air cleaner type it uses
- How many return air plenums it requires

Therefore, the code for each configuration is in the form:

L<count>R<count> or S<count>R<count>

Where:

S = standard profile (4VL)

L = low profile (2VL)

R = return-air plenum

<count> = quantity

## Configuration Code Examples

For example, S3R3 means three standard profile (4VL) air cleaners coupled to three return-air plenums, and L1R1 means one low profile (2VL) air cleaner coupled to one return-air plenum.

Some profiles have both standard profile and low profile air cleaners, so their code is slightly longer. For example, L1S1R2 means one low profile (2VL) and one standard profile (4VL) air-cleaner coupled with two return-air plenums.

## Selecting a Configuration

To select a configuration, you must know the indoor unit model number in question and the height of the plenum area you intend to install it in. The underlying property that dictates which configurations are available to an indoor unit model is that model's air flow requirements. The configurations available may or may not be dictated by the available plenum area height.

## Plenum-Area Height Restrictions

Plenum area height restrictions are not defined in the configuration type (S1R1, L2R2, and others); however, which configuration you choose may be dictated by the plenum area you have available. While perhaps not optimal, you can install the ultra low-profile 2VL model in any plenum. In severely height constricted plenums, the ultra low profile 2VL model will probably be your only alternative. Refer to figures 2 and 3.



Figure 2: Elevation view of a typical S1R1 installation.

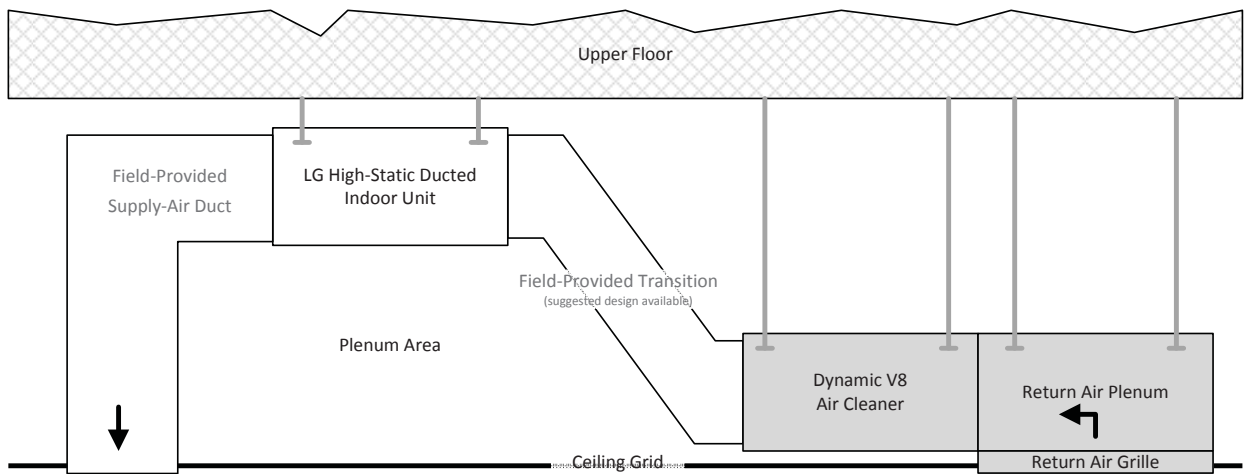


Figure 3: Elevation view of a typical L1R1 installation.

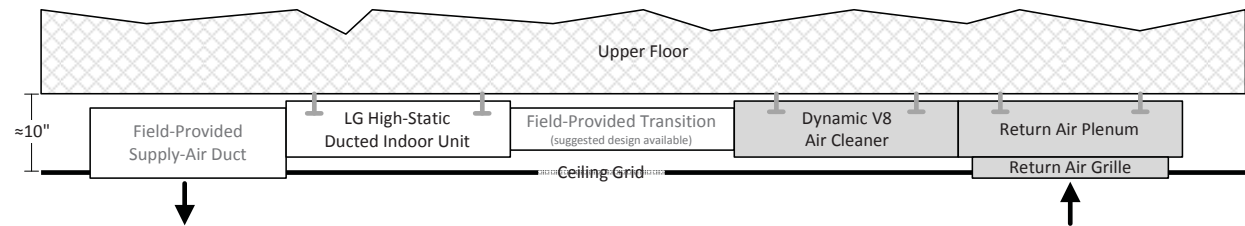
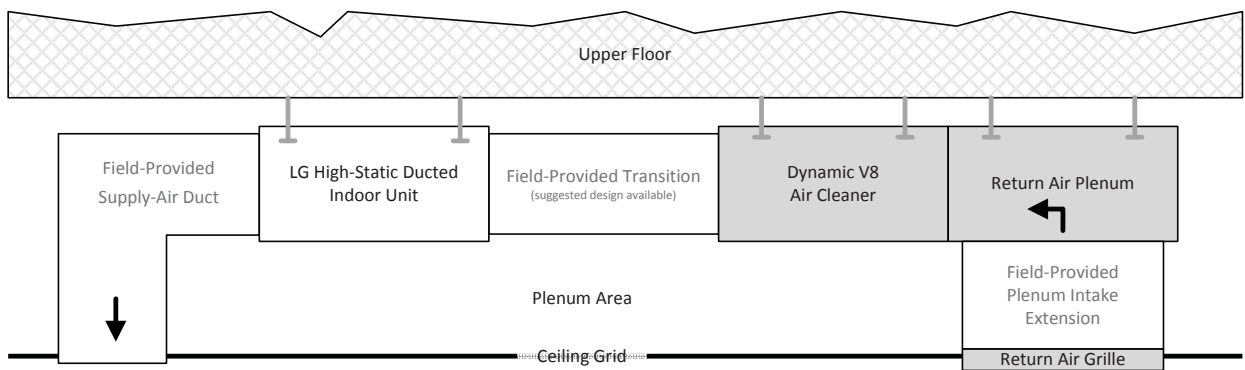


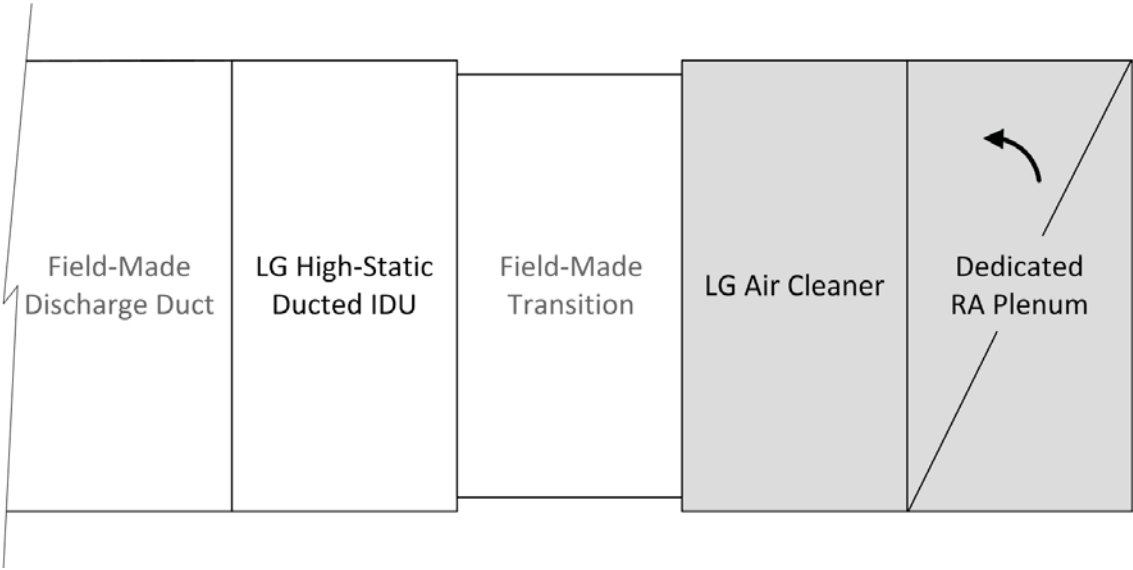
Figure 4: Elevation view of S1R1 with field-provided plenum intake extension.



Configurations S1R1 and L1R1

The simplest configurations have one Dynamic V8 air cleaner and one return air plenum as shown in Figure 5. These configurations only differ in whether the engineer decides to use a standard or low-profile air cleaner, return-air plenum, and supporting ductwork.

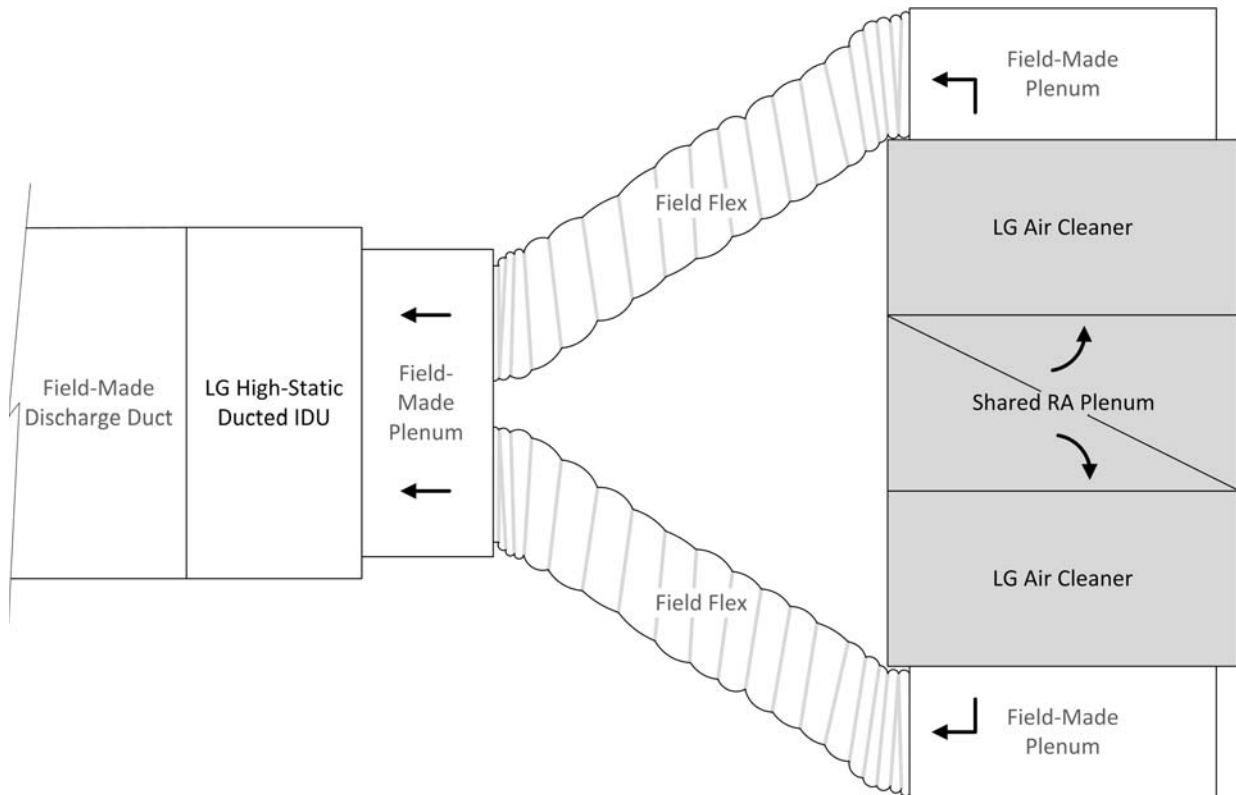
Figure 5: Plan view of S1R1 and L1R1.



### Configurations S2R1, L2R1, and L1S1R1

Two Dynamic V8 air cleaners and one return-air plenum as shown in Figure 6. As before, these configurations only differ in whether the engineer decides to use standard or low-profile air cleaners, return-air plenums, and supporting ductwork. These configurations require more field-provided ductwork.

Figure 6: Plan view of S2R1, L2R1, and L1S1R1.

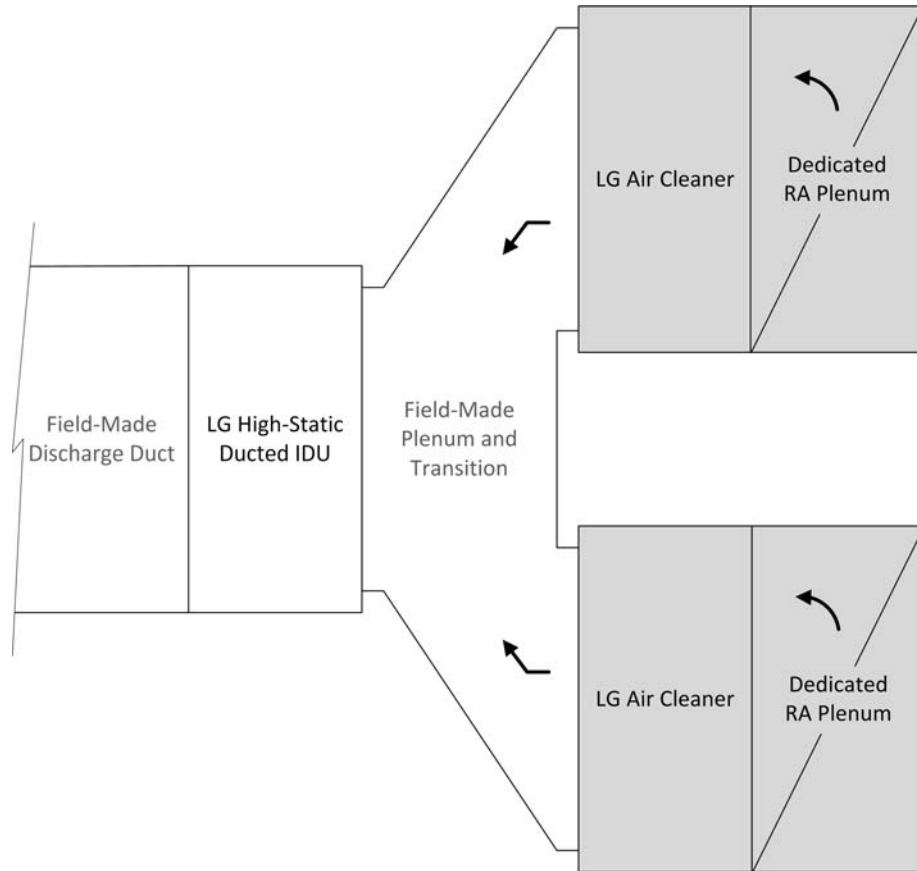




### Configurations S2R2, L2R2, and L1S1R2

Two Dynamic V8 air cleaners and two return air plenums as shown in Figure 7. As before, these configurations only differ in the engineer decides to use a standard or low-profile air cleaners, return-air plenums, and supporting ductwork.

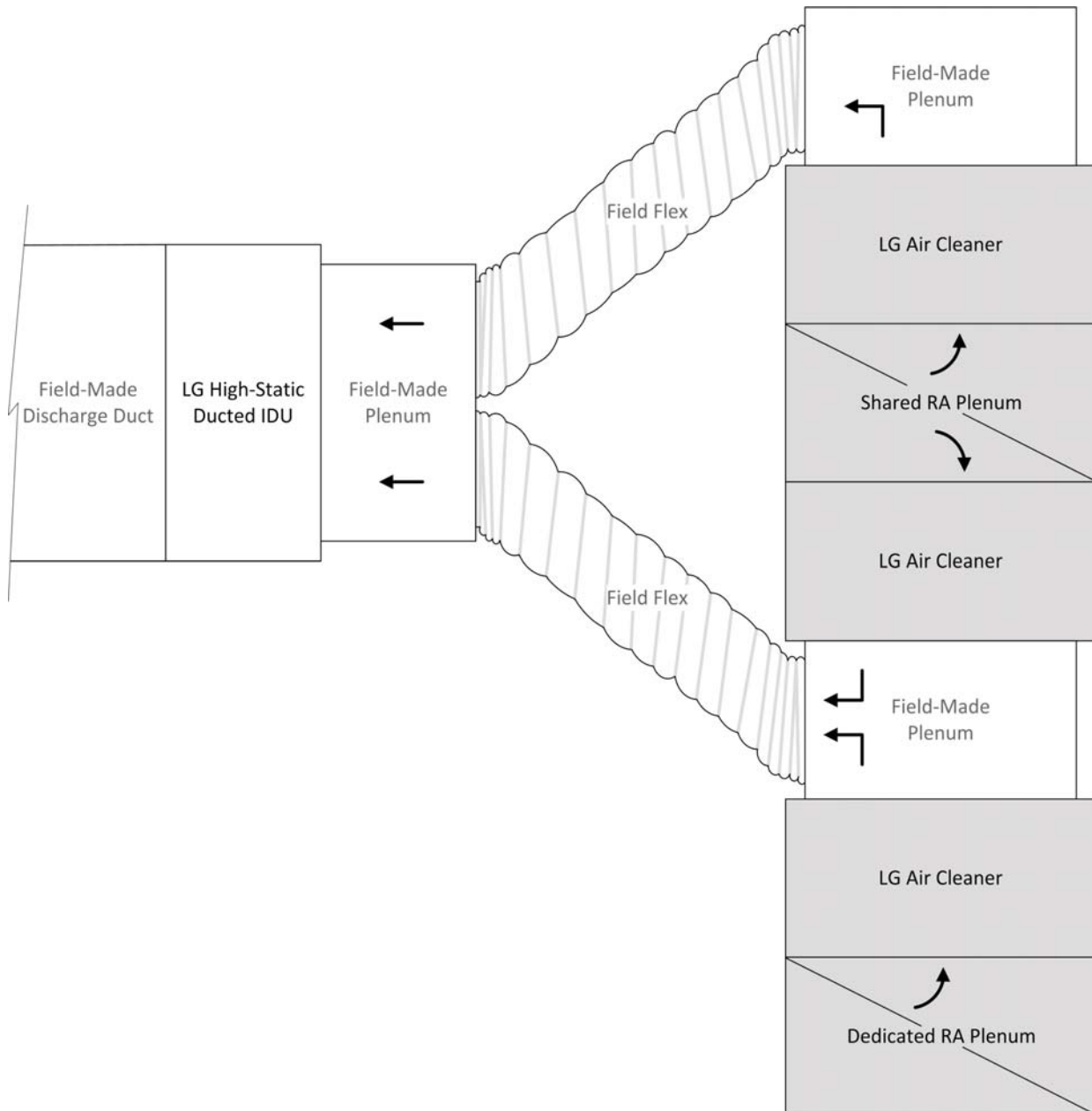
Figure 7: Plan view of S2R2, L2R2, and L1S1R2



## Configurations S3R2 and L3R2

Three Dynamic V8 air cleaners and two return air plenums as shown in Figure 8. As with the other configurations, these only differ in whether the engineer decides to use standard or low-profile air cleaners, return-air plenums, and supporting duct-work. These configurations include some field-provided oversized flexible ducting.

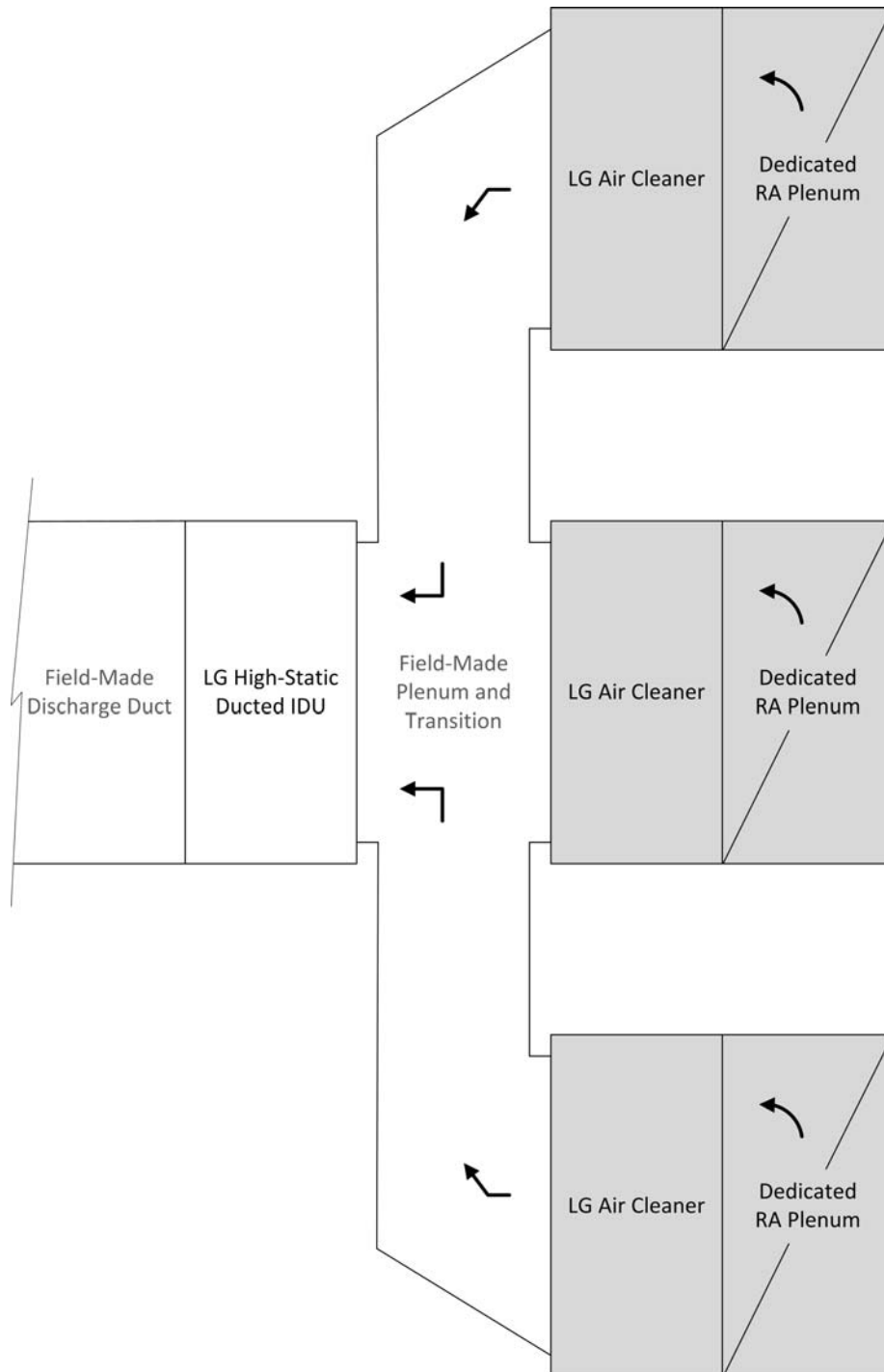
Figure 8: Plan view of S3R2 and L3R2.



### Configurations S3R3 and L3R3

Three Dynamic V8 air cleaners and three return air plenums as shown in Figure 9. As before, these configurations only differ in whether you use standard or low-profile air cleaners, return-air plenums, and supporting ductwork.

Figure 9: Plan view of S3R3 and L3R3.



**Note:** An L5R3 configuration is possible; however it is not the most economical solution.

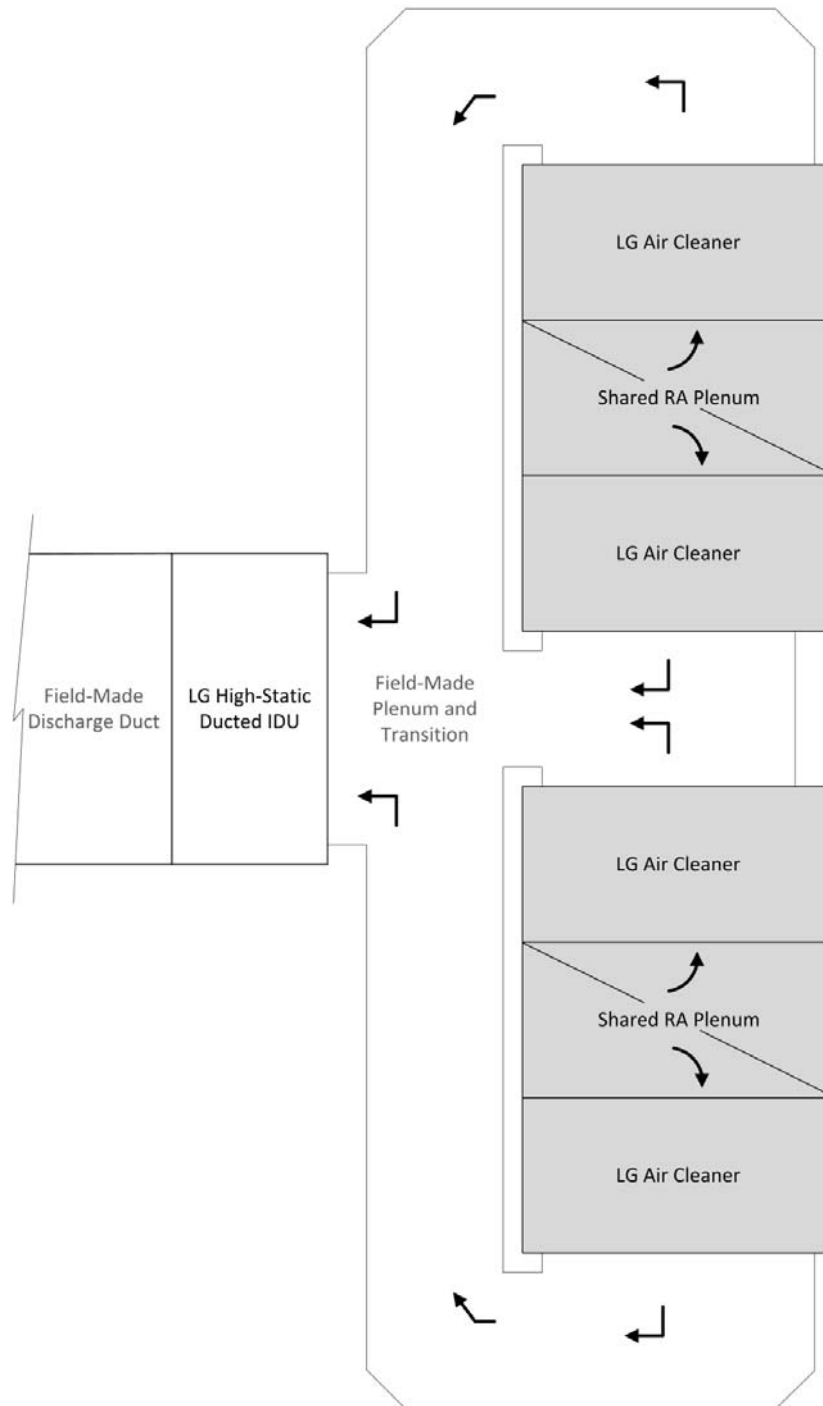


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## Configuration L4R2

Four Dynamic V8 air cleaners and two return air plenums as shown in Figure 10.

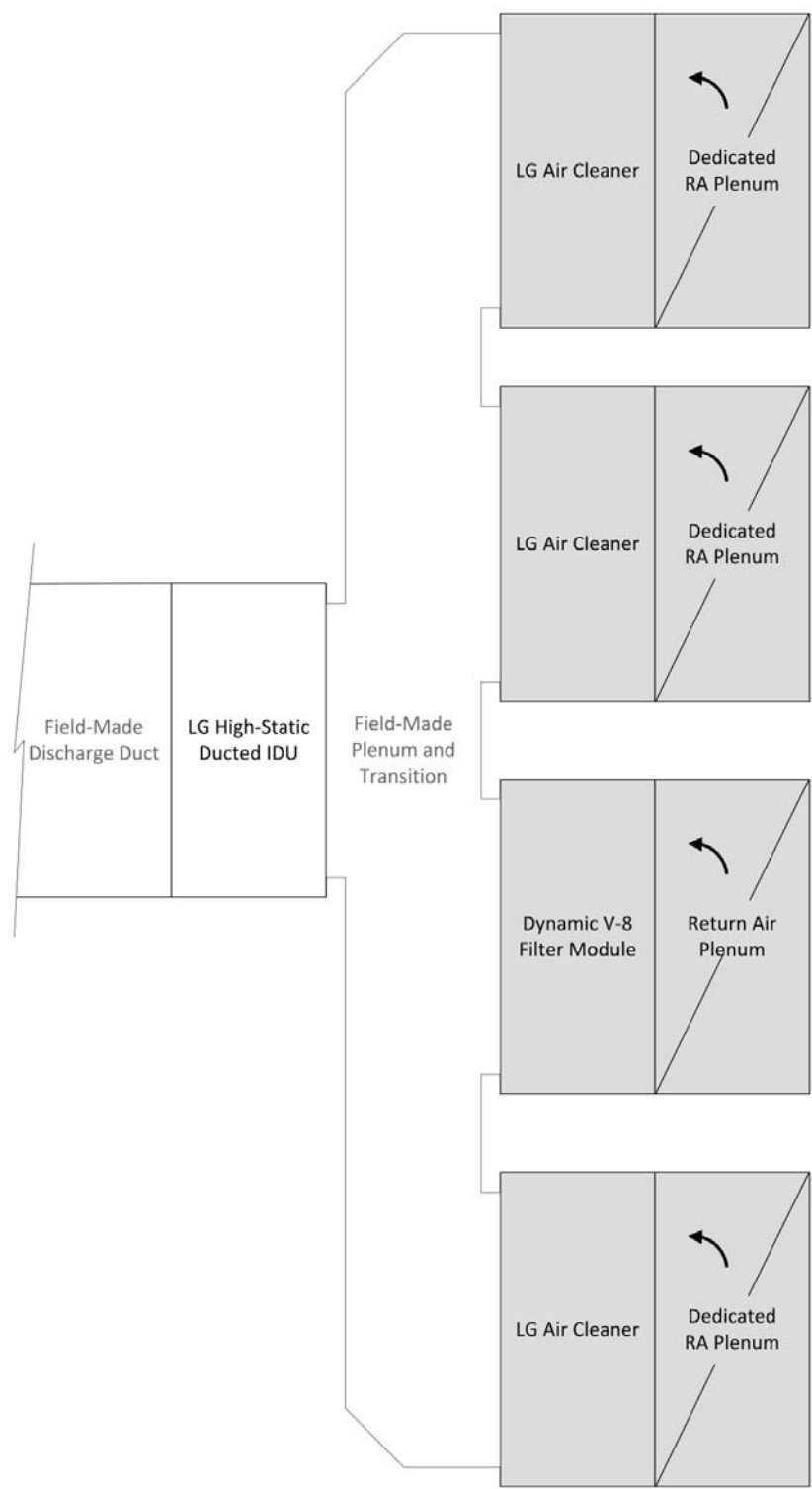
Figure 10: Plan view of S4R2.



Configuration L4R4

Four Dynamic V8 air cleaners and four return air plenums as shown in Figure 13.

Figure 11: Plan view of S4R4.





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Dynamic V8 2VL Air Cleaner on page 20

Return-Air-Plenum Grille Housing on page 22

Egg-Crate Plenum Grille on page 23

Louvered Plenum Grille on page 24



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## Dynamic V8 4VL Air Cleaner

The 4VL Air Cleaner comes complete with four Dynamic V8 filter media pads with a case height of approximately 12".

**Note:** Air cleaners and accessories are not provided with insulation. In some applications, field-provided insulation is required to prevent condensation from forming on exterior or interior surfaces.

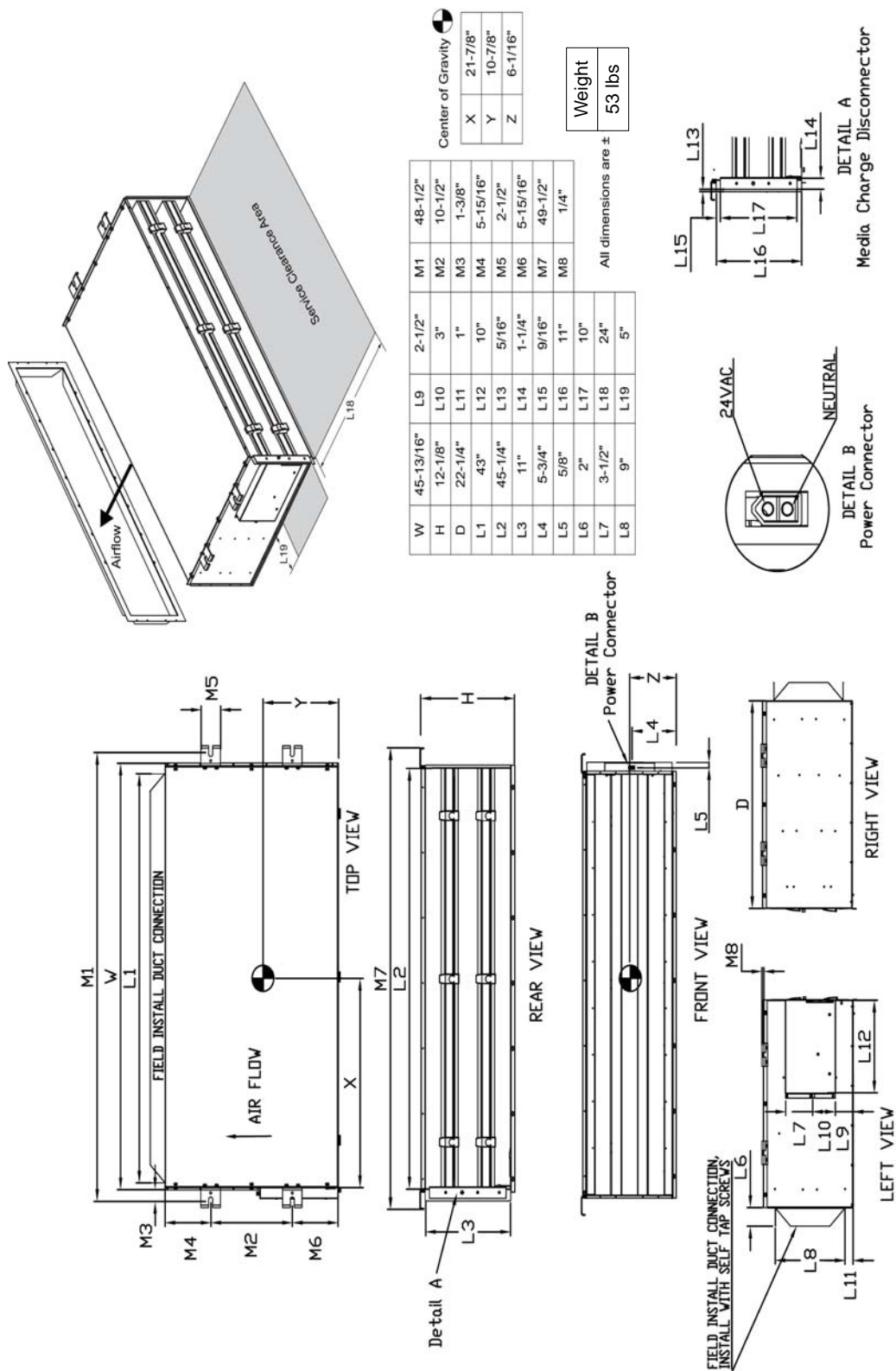
Each 4VL Air Cleaner (standard profile) includes:

- Four Media Pads
- Six Media-Pad Retainers with latches
- One 208 to 24 VAC transformer (VL-208T-FD)
- One 4VL Dynamic V8 Air Cleaner housing
- One Air-Cleaner Discharge Flange, standard profile
- Media Charge Disconnect Plate (VL-073)
- One Power Wire (VL-180C-C)
- Two Power Heads (VL-055)





Figure 14: Dynamic V8 4VL Air Cleaner.



**Note:** Air cleaners and accessories are not provided with insulation. In some applications, field-provided insulation is required to prevent condensation from forming on exterior or interior surfaces.

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## Dynamic V8 2VL Air Cleaner

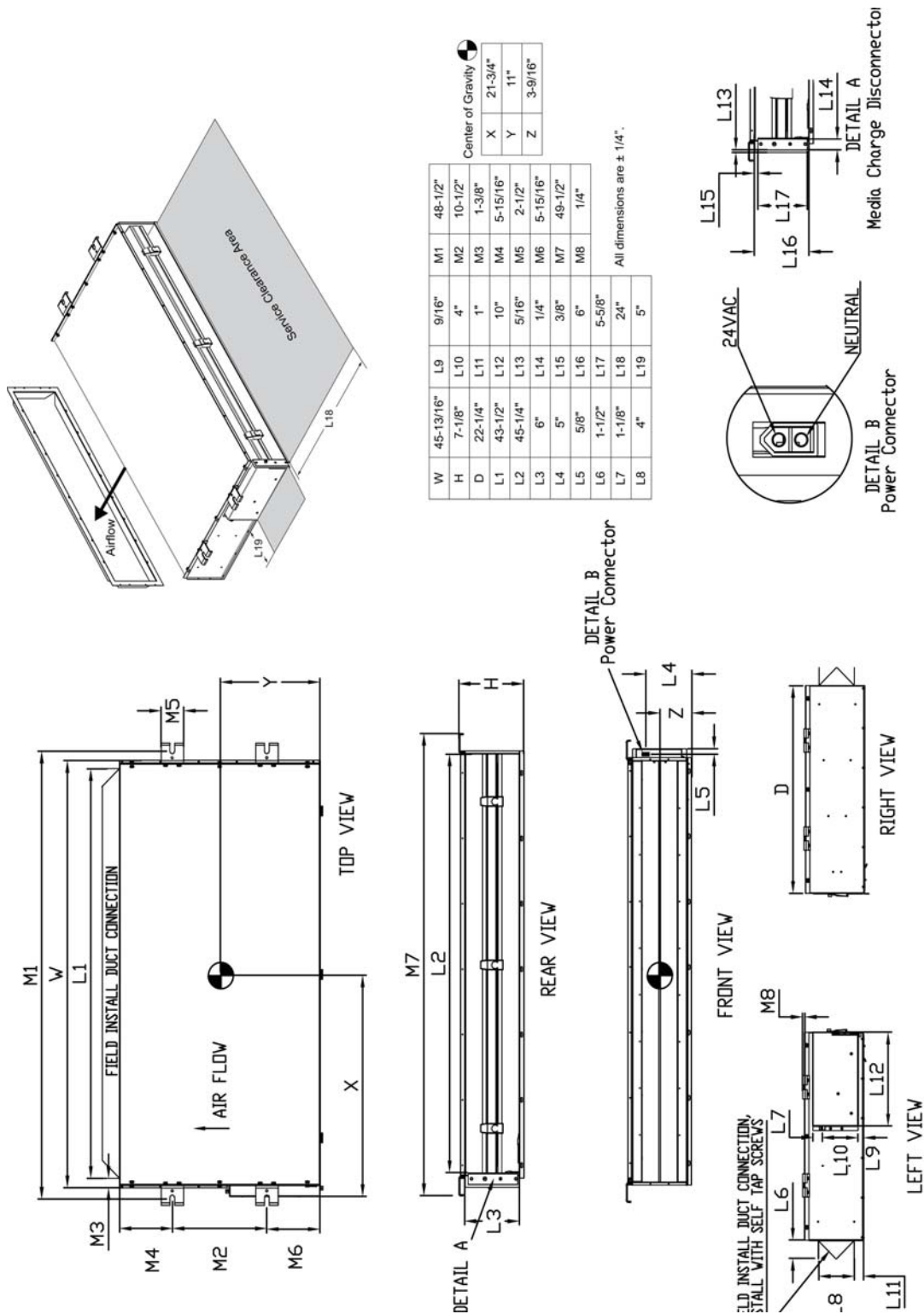
The 2VL Air Cleaner comes complete with two Dynamic V8 filter media pads with a case height of approximately 8".

**Note:** Air cleaners and accessories are not provided with insulation. In some applications, field-provided insulation is required to prevent condensation from forming on exterior or interior surfaces.

Each 2VL Air Cleaner (low profile) includes:

- Two Filter-Media Pads
- Three Filter-Media-Pad Retainers with latches
- One 208 to 24 VAC transformer (VL-208T-FD)
- One 2VL Dynamic V8 Air Cleaner housing
- One Air-Cleaner Discharge Flange, low profile
- Media Charge Disconnect Plate (VL-073)
- One Power Head (VL-055)
- One Power Wire (VL-180C-C)

Figure 15: Dynamic V8 2VL Air Cleaner.



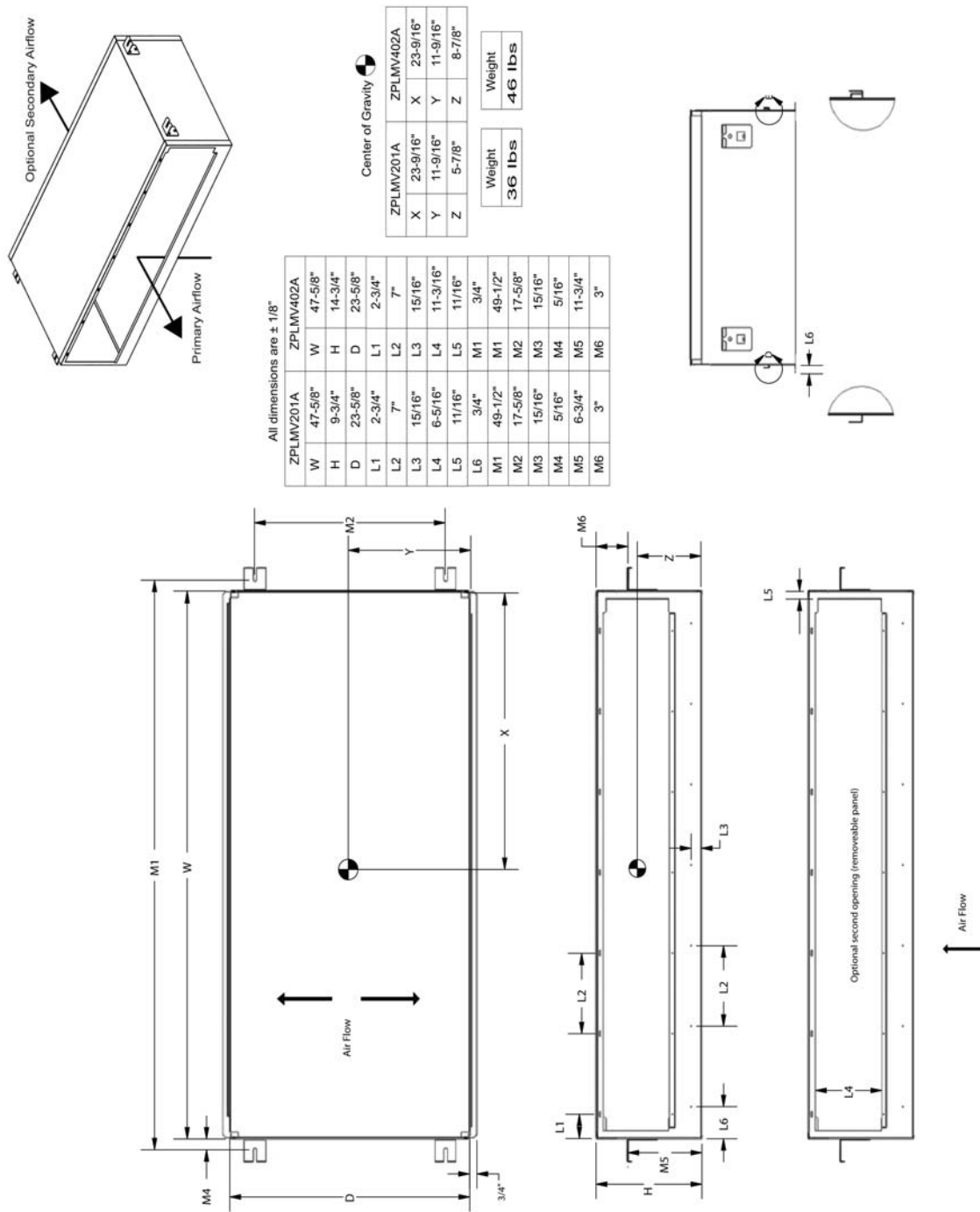
**Note:** Air cleaners and accessories are not provided with insulation. In some applications, field-provided insulation is required to prevent condensation from forming on exterior or interior surfaces.



Return-Air-Plenum

The return air plenum is engineered to connect directly to the DAQS air cleaner. It comes in both standard and low profile heights. It is designed with snap-lock construction and ships knocked down for easy field assembly.

Figure 16: Return-Air-Plenum Grille Housing.



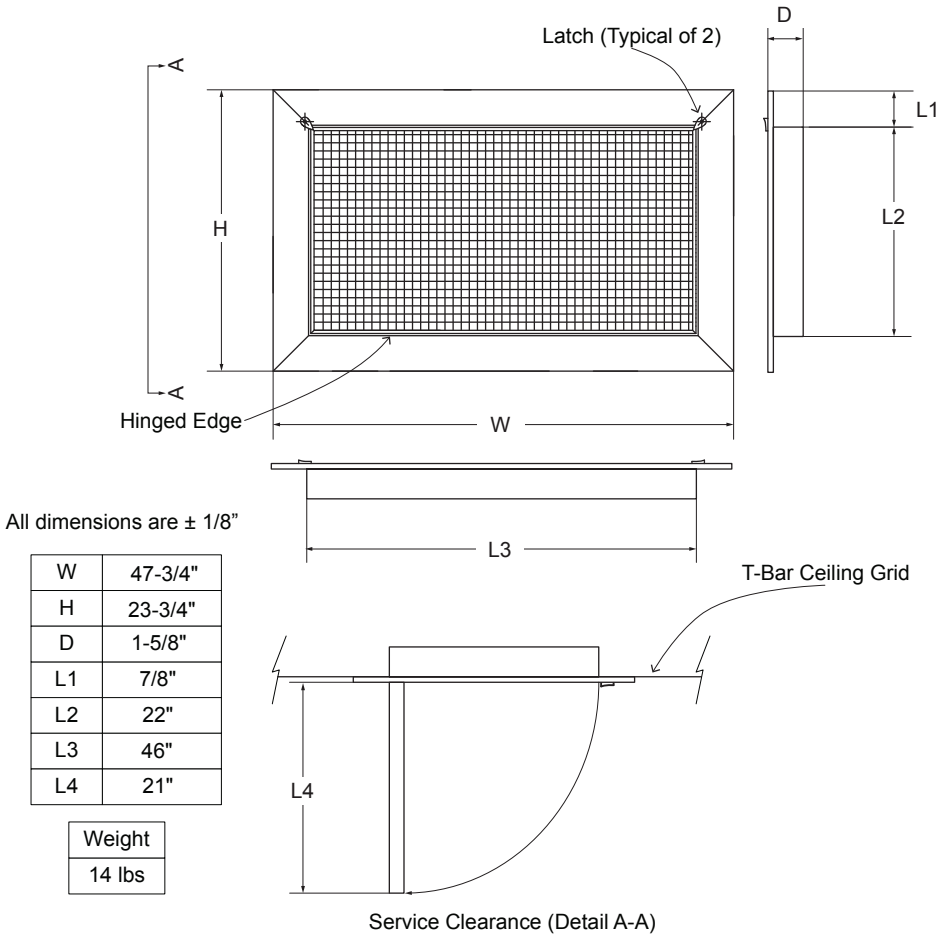
**Note:** Air cleaners and accessories are not provided with insulation. In some applications, field-provided insulation is required to prevent condensation from forming on exterior or interior surfaces.



## Egg-Crate Return Air Grille

This return air grille connects to the return air plenum, but is ordered separately. The grille panel opens without the use of tools to allow easy access to change the air cleaner media.

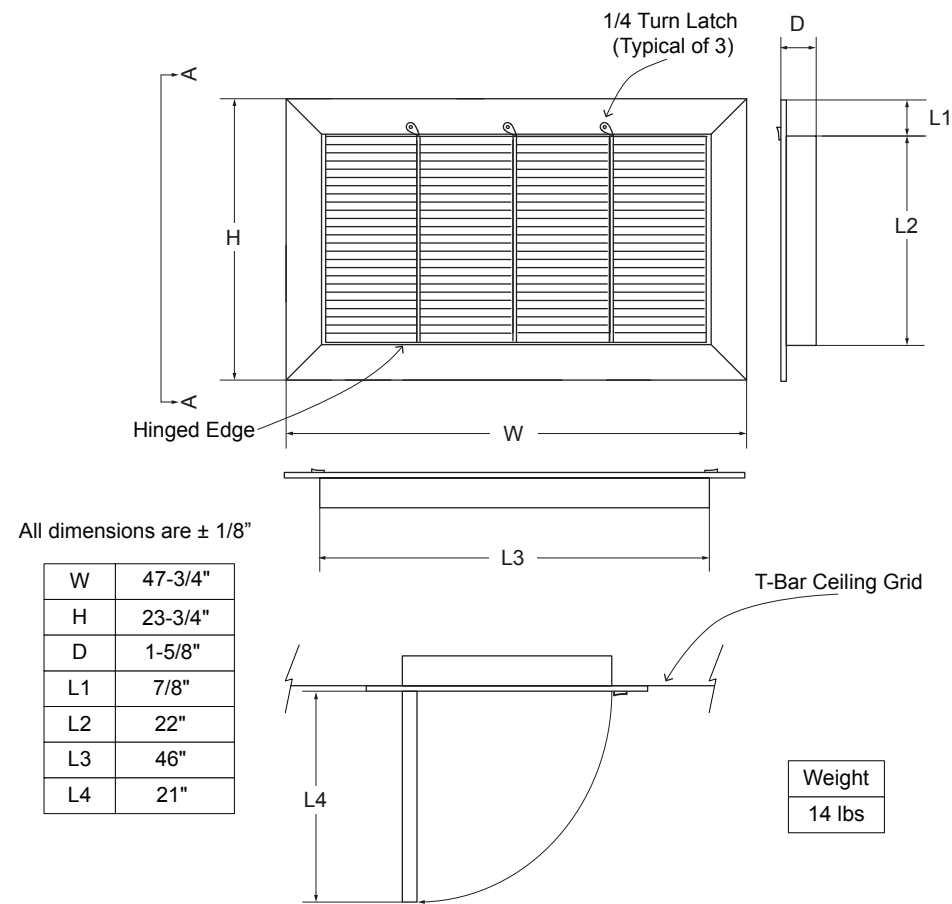
Figure 17: Egg-Crate Plenum Grille.



# Louvered Plenum Grille

The return air grille connects to the return air plenum, but is sold separately. The grille panel opens without the use of tools to allow easy access to change the air cleaner media.

Figure 18: Louvered Plenum Grille.



# Air Cleaner Installation

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Hang Air Cleaners & Plenums on page 31

Prepare Air-Cleaner Electrical Connections on page 33

Complete Post-Installation Checklist on page 34



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## Required Parts and Tools

Installing a Dynamic V8 requires the following tools (not including those needed for field-fabricated ducting):

- Ball peen hammer
- Carpenter level
- Crescent wrenches
- Drill bit sized for the threaded-rod anchor
- Face shield
- Hammer drill or impact driver
- Nut driver
- Round wire brush
- Rubber mallet (for plenum assembly)
- Screwdriver
- Socket wrenches
- Thermometer
- Torque wrench

In addition to the parts that come with the air cleaner, each installation may require these parts or consumables:

- 2" x 4" x 6" wooden block
- Beam clamps
- Duct clamps
- Duct tape
- Duct wrap or insulation
- Electrical tape (for marking drill-hole depth)
- #8 Self-tapping screws
- Sheet metal for duct fabrication
- Steel channel with mounting accessories
- Threaded rod anchors
- Threaded rods, including nuts, flat washers, and spring washers

## General Planning

Before starting the installation, consider the following:

- Ensure the entire configuration and installation, including the attached indoor unit, is carefully planned prior to installation. In some cases, the location of the indoor unit itself may be affected by the chosen air cleaner configuration.
- If the overhead plenum height is sufficient, employ standard- or mixed-profile configurations as they are the most economical choices. Reserve low-profile configurations for restricted height plenum applications.
- Identify and plan the layout of all field-fabricated ducting prior to mounting.





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## Choosing a Mounting Location

When deciding on a location ensure the air cleaner and indoor unit are placed an adequate distance from heat sources or steam.

### Support Strength

Ensure the mounting location can support the weight of the air cleaner, accessories, and field-provided ductwork.

### Maintenance Access

- For easiest access to the air cleaner media, remotely locate the air cleaner relative to the LG indoor unit and specify the plenum/grille assembly. The plenum, in conjunction with the return-air grille, is designed to allow access to the media pads without removing the ceiling tiles or accessing the ceiling plenum area.
- If the return air plenum grille accessory is used, the proposed location the return air grille should accommodate fully opening the hinged access grille.
- If the air cleaner is mounted in a manner where return air ductwork is not used, verify an area 47" x 23" x housing height directly behind the air cleaner is free of obstructions. Refer to the cutsheets for service area dimensions.

### Plenum Area Clearance

- Ensure the plenum area has ample horizontal room for all air cleaners, return air plenums, and field fabricated ducting for the chosen configuration.
- Ensure the plenum area has ample vertical room for the chosen air cleaner(s).

### Return Air Grille Location

- Ensure the return-air-grille mounting location is in an area that encourages air circulation in the conditioned space.
- Ensure the mounting location is free of any high-frequency electronic noise that might affect the operation of the air cleaner.
- Ensure return-air-plenum grille housings or extensions are aligned with the t-bar ceiling grid below where the return-air grille will reside.
- Locate the return-air plenum and grille first, followed by the connection of the air cleaner plenums to the grilles, and air cleaner housing(s) to each mounted plenum.
- **Locations to Avoid**
  - In restaurants and kitchens, ensure that installed hoods and ventilation systems are sufficient to keep oil, smoke, and steam away from the return-air grille.
  - Avoid installation into areas with oil based or conductive particulate loads.
  - Avoid installation in environments where acidic or corrosive gasses are present.
  - Violating these guidelines will shorten filter media lifespan dramatically.



## Air Cleaner Installation

### Ensure All Parts and Tools Are Present

1. Ensure that you have all the necessary tools from the tool list on page 2.
2. Ensure that you have all required threaded rods, nuts, flat washers, and lock washers to secure all the components to the structure.

**Important:** Typically, 3/8" or 1/2" threaded rod is used to install these components; however, your scenario may require a different solution. We suggest consulting a structural engineer to determine the proper mounting components, component quantity, and component placement.

3. Inspect the air cleaner(s), return-air plenum(s), and grille housing(s) to verify each kit is complete. See pages 18 and 20 for a list of air cleaner kit components.

### Prepare Field Fabricated Ductwork

Construct the field-fabricated ductwork.

### Assemble Return-Air Plenum(s)

If the return air plenum accessory was purchased, it ships knocked down and requires field assembly:

1. The plenum kit contains the housing's top panel, two end side panels, two side panels, one filler panel, 4 hanger brackets, 4 bolts, 4 lock nuts, and 4 strips of self-stick aluminum foil tape.
2. Assemble the plenum. Begin by placing the large top panel on a flat surface upside down. Select an end panel (they are identical) and orient it to stand vertically along one of the short edges of the top panel with the snap lock seam facing the work surface and facing the inside of the plenum.
3. With the end panel(s) in position the two square holes in the panel are above the round holes.
4. Next, mate the snap lock edge of the side panel with the top panel. Begin by tilting the side panel and insert the corner of the panel and strike the opposite edge of the end panel with the rubber mallet. Continue along the bottom edge of the side panel inserting and driving the lower edge of the vertical end panel into the mating edge of the top panel. Continue until the lower edge of the side panel is fully seated in the slot of the top panel. The panels are fully seated once the raised tabs along the inside of the seam are recessed and no longer visible. Also the outside surface of the top and end panel meet tightly together without a gap between. Repeat this process for the second end panel, then proceed to step 5.
5. Install the front and back panels.

**Note:** It is very important that the back and front edges of the end panels already mounted line up with the back and front edges of the top panel before beginning installation of the front and back panels. If necessary, adjust the end-to-top panel alignment before proceeding.



6. Flip the plenum assembly on its side with one edge of the top panel and the edges of both end panels on the work surface. It does not matter which edge faces the work surface.
7. Select a side panel - they are identical. Lay the side panel selected on top of the assembly with the raw edge facing down (toward the inside of the assembly). Orient the side panel with the thin edge of the side panel closest to the top panel.
8. In a similar fashion as done with the end panels, start at the outside corner of an end panel, the outside corner is the one opposite the corner connected to the top panel.
9. Tilting the side panel, insert the corner into the snap lock seam slot on the end panel aligning the side panel and end panel edges. Using the rubber mallet strike the face surface of the side panel until the snap lock edge of the side panel is recessed about half way into the seam slot of the end panel. The raised tabs should still be visible.

**Note:** Before fully mating the end and side panels, verify the long edge of the side panel aligns with the slot on the long edge of the top panel. Adjust the side/end panel alignment if necessary to create square and tight edge joints.

10. Insert the raw edge of the side panel into the seam slot of the top panel beginning at the end where the side panel is already half mated. Using the rubber mallet work your way down the side and top panel seam half mating the panels together as you go.
11. Next, insert the raw edge of the remaining side panel to the seam slot of the end panel. Begin at the corner of the end panel closest to the top panel. Using the rubber mallet strike the face surface of the side panel is recessed fully in the seam slot of the end panel.
12. Using the rubber mallet and striking the face of the side panel along the edge, fully mate the side panel with the current end panel.
13. Complete the side panel installation by going back and fully mating the side panel to the top panel and finally the other end panel. The side panel installation is complete when the raised tabs on the side panel edge are engulfed by the opposing slot. The three edges of the side panel should fit snug against the opposing panel edge without a gap between.
14. Flip the assembly over so the side panel just mated is laying on the work surface. Mate the remaining side panel to the assembly following the same procedure in steps 8 to 14.
15. If the duct configuration calls for the plenum to serve two (2) air cleaners, do not install the plenum filler panel that came in the plenum kit. If the design calls for the plenum connecting to only one (1) air cleaner, install the filler panel at this time using field provided #8 self tapping screws. Install screws with the heads facing inside the plenum.
16. Place the plenum assembly so one of the side panels is laying on the work surface.
17. Locate the strips of aluminum tape that came with the plenum.



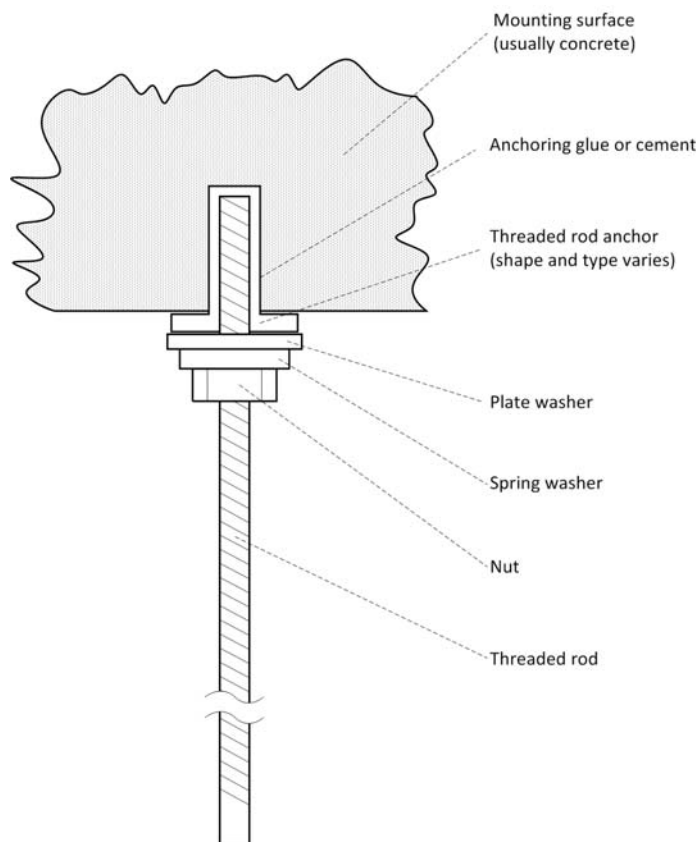
18. Remove the white protective backing from one of the strips and expose the adhesive.
19. Beginning at the outside corner of the plenums end/side panel edge, align the end of the tape strip to the outside corner of the plenum. Align the long edge of the tape with the duct opening. Alignment along the duct opening should not allow folding the aluminum tape around the outlet opening edge.
20. Next, fold the remaining width of the tape around the side edge panel seam and securely fasten the tape to the end panel surface. When complete, about two-thirds of the tape will be adhered to the end panel and one fourth of the side panel.
21. Next, fold the remaining 2-inch flap of tape over the end/top panel edge and securely adhere about 3/4 of the tape to the top panel surface.
22. Lastly, fold the remaining tape around the top/front panel edge and affix the tape to the side panel surface. The hole in the inside corner of the plenum should now be covered.
23. Repeat steps 7-22 for three other edges on the plenum.
24. Next, attach the four hanger brackets to the end panels of the housing. Begin by sliding the square-shaped tab on the back of the bracket through the square hole. Line up the round hole of the bracket to that in the end panel and insert the bolt provided through the hole and place the lock/nut on the back with the tooth washer facing the bracket and plenum wall. Hand tighten the nut. Repeat this process for the other three brackets.
25. Tighten the four bracket mounting bolts to approximately 15 ft-lbs. Using a hammer, and a wooden block as a backer, thoroughly flatten the tabs on the back of each bracket tightly against the end panel inside surface.

### Prepare Threaded Rods

1. Measure and note the location of the threaded-rod hangers on the air cleaner and return air plenum. Refer to the cut sheets for dimensional information.
2. Using the plan developed earlier, carefully mark the mounting points of the hanger rods on the structural support member or surface chosen above the unit.
3. Following the hanging rod and mounting channel manufacturers' instructions, mount threaded-rod anchors as appropriate from the hanging surface or channel. Be sure to select anchors that are rated to support the anticipated weight of connected components.



Figure 19: Typical hanger-rod ceiling connection.



4. Select the diameter of the threaded rods based on your structural load calculations.  
Ensure the rods, when fully seated in their ceiling anchors, will not extend beyond the bottom of the return-air-plenum but will extend at least one inch beyond the hanger brackets on the air cleaner.
5. Ensure the threaded rods hang vertically.
6. Loosely thread one nut, followed by a lock washer and then a plate washer approximately two inches down the threaded rod.
7. Spin the threaded rod into its ceiling anchor until it is finger tight.
8. Finger and then wrench tighten the nut to 10–15 ft-lbs, fixing the threaded rod into the structural support member or surface.
9. Repeat the procedure for all threaded rods.

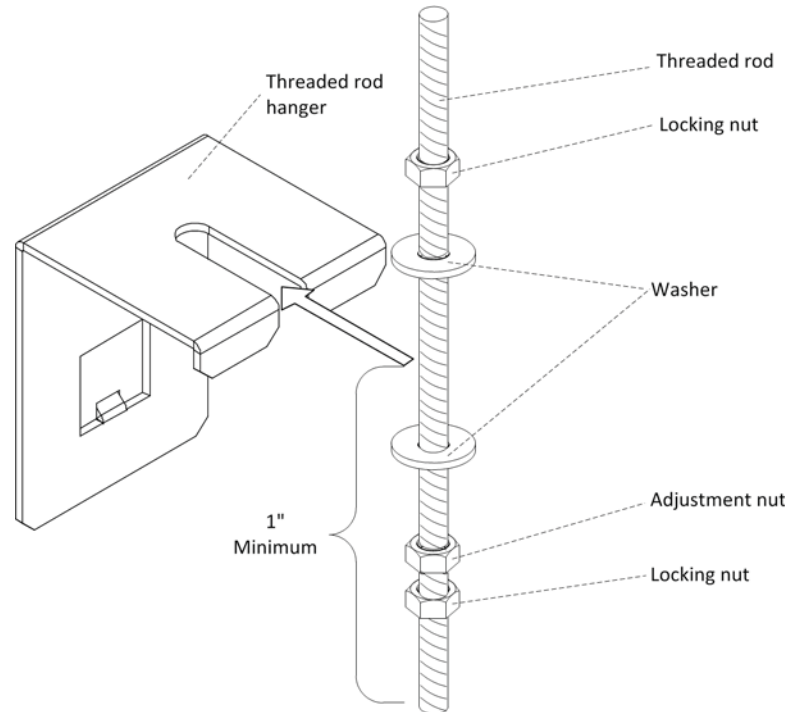
### Hang Air Cleaners & Plenums

1. Hang the plenum from the building structure using threaded rods.
2. In most applications, the bottom of the plenum will be located in the confines of a single 2'x4' ceiling grid opening. If the plenum will be located at a distance above the ceiling grid, fabricate a return-air plenum inlet extension and install it between the plenum opening and return air grille provided.



3. On the lower end of the threaded rods, thread a nut several inches up followed by a lock washer, two plate washers, a second lock washer and two more nuts.

Figure 20: Threaded-rod air cleaner and plenum hanger detail

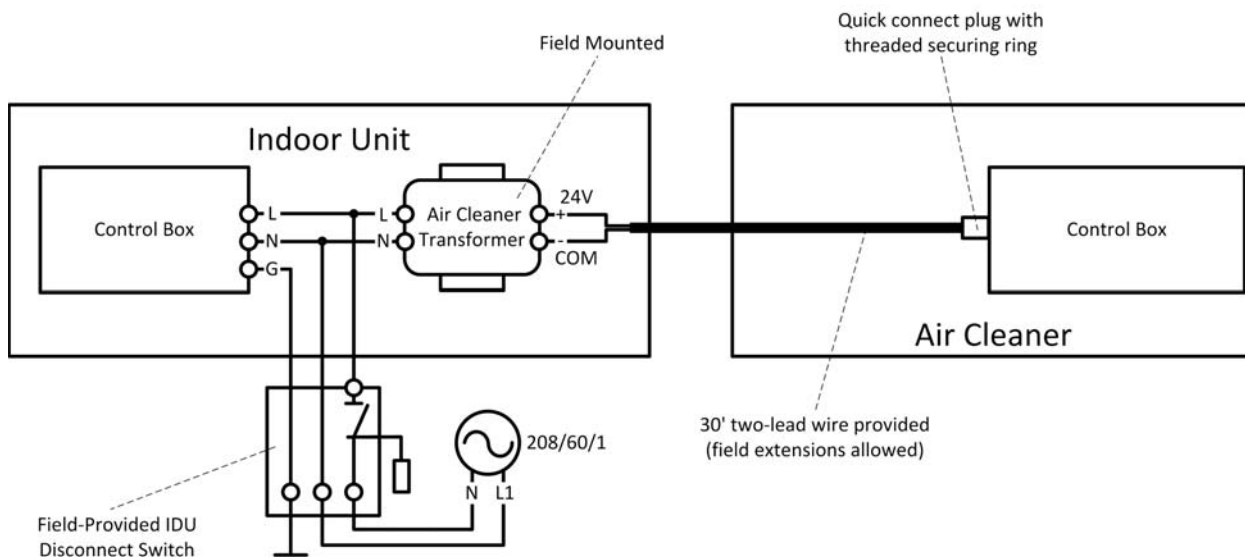


4. If the T-Bar ceiling frame is not in place you may choose to attach the return air plenum to the air cleaner(s) before installing the return air plenum in the ceiling cavity.
5. To mount the air cleaner to the plenum, locate the lip along the bottom edge of the air cleaner and "hook" it to the mating lip on the plenum outlet opening. Secure the air cleaner to the plenum using field provided #8 self-tapping screws. Install the screws from inside the plenum. If necessary, seal joint between the plenum and air cleaner to make airtight.
6. Hang the plenum and air cleaner. Insert each hanger bracket in between the two plate washers at the lower end of the all thread rods.
7. Adjust the position of the lower nuts on the all thread rods until the air cleaner/return air plenum assembly is level.
8. Once all lower nuts are positioned correctly, lock each hanger to the all-thread rod into place by tightening the top nuts and the bottom locking nuts to 15 ft-lbs.
9. Install, support, and connect ductwork between air cleaner and indoor unit as appropriate.

## Prepare Air-Cleaner Electrical Connections

1. Mount the 208/60/1 to 24 VAC low-voltage transformer provided with the air cleaner in close proximity to the Multi V indoor unit's field-provided disconnect switch.

Figure 21: Air-cleaner electrical components



2. Attach field-supplied power wire, sized per NEC and local code, from the line side of the air cleaner transformer to the L1 terminal on the load side of the field provided indoor unit disconnect switch.
3. Connect the low voltage wire provided with the air cleaner to the 24 V load side of the transformer as shown in Figure 21.
4. Connect the male plug provided on the opposite end of the low voltage wire into the socket on the back of the air cleaner control box. Using tie wraps, securely attach the low voltage wire between the transformer and the air cleaner to appropriate building components to prevent damage and maintain a safe environment.



## Complete Post-Installation Checklist

Complete the following checklist for each air cleaner installation.

Table 3: Post-Installation Checklist

	Inspection Item
<input type="checkbox"/>	Are the air cleaners and return-air plenums-mounted level?
<input type="checkbox"/>	Is the field-fabricated ductwork between the air cleaner(s) and the indoor unit sealed and airtight?
<input type="checkbox"/>	Are the air cleaners, return-air plenums, and field-fabricated ductwork properly insulated to prevent condensate from forming?
<input type="checkbox"/>	Is the media properly installed? Media pads have a white plastic resin border on one side and either a blue or red plastic resin border on the other. The side of the pad with the white resin frame always faces upstream and is entering the air side of the pad. Install the media pad(s) with the red edge facing up in the lower clam-shell retainer of the "V" so when the clamshell frame is closed (raised), the red border will be on the leaving air side. Install the media pad(s) with the blue edge face down in the upper clamshell of the "V" so when the clamshell frame is closed (lowered) the blue border will be on the leaving air side.
<input type="checkbox"/>	Is the media rotation correct? If the rotation is correct, the metal button on the media pad will align with the mating receptacle found on the clam-shell expanded metal frame.
<input type="checkbox"/>	Are the media pads properly seated in the clamshell frame retainers? Each retainer assembly should close without using force.
<input type="checkbox"/>	Is the air cleaner transformer properly installed and mounted per NEC and local codes?
<input type="checkbox"/>	Is the air cleaner low-voltage wire provided with the air cleaner properly connected to the load side of the transformer?
<input type="checkbox"/>	Is the air cleaner low-voltage wire's quick-connect plug properly seated in the socket on the air cleaner's control box?
<input type="checkbox"/>	Has the indoor unit's fan speed setting been adjusted to the recommended ESP setting value (see product engineering manual) to offset additional static pressure consumed by the air cleaner accessory? Refer to the Multi V Indoor Unit Zone Controller Installation manual for detailed information on how to modify the ESP setting value.
<input type="checkbox"/>	Is the return air plenum securely fastened to the air cleaner?
<input type="checkbox"/>	Is the return air plenum securely fastened to the return-air grille?
<input type="checkbox"/>	Does the return-air grille access door open and close freely without binding or hitting obstructions below?
<input type="checkbox"/>	Are all field-fabricated components independently supported so that they do not depend on the indoor unit, air cleaner, or return air plenum to support their weight?



# DAQS Policies and Warranties

Return Policy on page 36

Dynamic V8 VL Series Limited Warranty on page 36

Return-Air-Plenum Grille Limited Warranty on page 37

Warranty Procedures for Commercial Products on page 37



The Dynamic V8 is covered by the warranty and policies of Dynamic Air Quality Solutions (DAQS). The DAQS warranty and policies as of April 30th 2012 are listed verbatim below:

## Return Policy

Requests to return new and unused products must be made within six weeks from date of purchase or eight weeks from the date of manufacture and should be directed to Heidi Birkland via email at [hbirkland@DynamicAQS.com](mailto:hbirkland@DynamicAQS.com) for a Return Authorization. Credits for returned goods are contingent upon inspection of the item(s) once received. A 15% restocking fee will be charged and the customer is responsible for freight. Non-standard sizes may only be returned if demand warrants. Do NOT return anything without a Return Authorization. All returned goods must have prior approval and be accompanied by a Return Authorization Number.

## Dynamic V8 VL Series Limited Warranty

All Dynamic Products come with a Limited Warranty on parts. This Limited Warranty provides that a replacement part will be furnished at no charge for any part of the product which fails due to defects in material or manufacture while in normal use and service during the applicable Warranty period. Replacement parts are warranted for the unexpired portion of the original Warranty. The Effective Date of the Warranty will be the earlier of the date of installation or three (3) months from the date of manufacture. The Warranty Periods and any specific exclusions for various commercial products are as described below:

4VL and 2VL Series Polarized Media Electronic Air Cleaners are warranted for FIVE (5) YEARS after the Effective Date. Use of any replacement media other than that manufactured by Dynamic will void the warranty.

Control Panel and Control Boxes for the 4VL and 2VL Air Cleaners are warranted for a period of FIVE (5) YEARS after the Effective Date.

All other parts and assemblies including motors are warranted against defects in material and workmanship for a period of ONE (1) YEAR after the Effective Date.

Exclusions from this Warranty include damage or failure arising from: wear and tear; corrosion, erosion, deterioration; modifications made by others to the Products; repairs or alterations by a party other than Company that adversely affects the stability or reliability of the Products; vandalism; neglect; accident; adverse weather or environmental conditions; abuse or improper use; improper installation; commissioning by a party other than Company; unusual physical or electrical or mechanical stress; operation with any accessory, Products or part not specifically approved by Company; and/or lack of proper maintenance as recommended by Company. Nor does the Warranty cover any repairs other than those provided by an authorized services facility, nor does it cover labor or transportation costs that the Dealer may charge. Dynamic Air Quality Solutions is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use or performance



of the product or other damages with respect to any economic loss, loss of revenues or profit, or costs of removal, installation or reinstallation.

There may be charges rendered for shipping and repairs to the product made after the expiration of the aforesaid Warranty periods. Except as provided herein, Dynamic Air Quality Solutions makes no express or implied warranty of merchantability or fitness for a particular purpose. This Warranty gives specific legal rights and other rights may be available, which may vary from state to state.

## Return-Air-Plenum Grille Limited Warranty

Manufacturer warrants that their products shall be free from defects in material or workmanship appearing within 30 days from the date of shipment. This warranty is contingent upon buyer giving seller prompt notice of any defect appearing within the prescribed 30 day time period. Manufacturer's obligation under this warranty is limited to the repair or replacement at its factory of any of the products which are defective in material or workmanship and which are returned to the seller with transportation charges prepaid and is conditioned upon the buyer furnishing satisfactory evidence that the products alleged to be defective have been properly installed, maintained, and operated under normal conditions. This warranty shall not apply to goods which have been subjected to misuse, abuse, neglect or improper storage, handling or maintenance.

## Warranty Procedures for Air Cleaners

This information is provided as a guide regarding warranty claim procedures for Dynamic Air Quality Solutions indoor air cleaners.

1. Determine model number from the label on the unit.
2. For technical support, warranty information, warranty parts or replacement parts, contact Dynamic Air Quality Solutions, toll-free M-F, 9:00 AM-5:00 PM ET at (800) 578-7873. A Dynamic representative will help you troubleshoot and diagnose the problem. Warranty matters involving products sold through a manufacturer representative should be directed to the appropriate representative.
3. If the part is found to be defective, Dynamic will ship a new replacement part, freight prepaid, along with a Return Authorization / Return Label or envelope, if Dynamic wants the part returned.
4. Important: Do NOT return anything without a Return Authorization.
5. All returned parts are quality tested. If the returned part is found not to be defective, you may be invoiced for the new part and shipping costs.





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9 AM - 5 PM  
Monday - Friday