



Aisle Containment System

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V-Line™ Aisle End Sliding Door

Installation Manual

VCSD42SNB, VCSD45SNB, VCSD47SNB, VCSD42SNBS, VCSD45SNS, VCSD47SNS

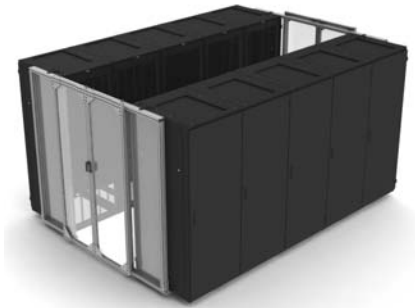
Overview

The V-Line Aisle End Sliding Door is the factory recommended door system for both cold and hot aisle containment, combining cost-effectiveness and ease of installation. Over the long-term the deployment of V-Line Aisle End Sliding Doors will also reduce “total cost of ownership” by making it easier to fully separate cold supply and hot exhaust airflow, improving cooling efficiency.

The sturdy door support frame ensures consistent long term operation and helps to minimize floor point loading. The sliding door design avoids the need for a floor threshold across the aisle and avoids the door operation encroaching into any walkways, providing a safer operating environment.



The V-Line Aisle End Sliding Door kit includes all of the components and fasteners required to assemble and install the doors quickly and easily onto the range of compatible V-Line Cabinet configurations. The doors simply secure to the data room floor and attach to the cabinets with a couple of simple brackets avoiding the need to structurally modify or drill the cabinet. The weight of the door assemblies is supported directly by the floor rather than the cabinet avoiding the requirement to ‘hang it’ onto the cabinet. Being self supporting the door system provides greater long term reliability..



Safety and Quality Assurance

The following recommendations should be carefully observed as part of any door installation. In particular, the safety of the installers must be placed ahead of all other considerations. Some of the following warnings or cautions have been highlighted in the appropriate sections of the manual.

- ✓ **DO READ** and follow the V-Line Aisle End Sliding Door installation manual.
- ✗ **DO NOT** lift the V-Line End Of Aisle Doors on your own.
- ✗ **DO NOT** drill into the raised floor without first ensuring that no electrical wires are in the area of the drilling.
- ✗ **DO NOT** screw into the aisle end rack without first ensuring that no electrical cables are in the area of the screw.
- ✓ **ALWAYS** have at least one person securing the door to ensure it remains upright while the installation is taking place.
- ✓ **ALWAYS** wear personal protective equipment (PPE) when drilling or attaching the door.
PPE includes: Gloves, Safety eyeglasses, Hardhats.
- ✗ **NEVER** leave the door unattended until the installation is completed.

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Cautions and Warnings

This manual contains important information of the installation of your V-Line Aisle End Sliding Door. We strongly recommend that you read and follow the instructions contained in this manual.

At several points in the manual items of special interest or significant impact are highlighted by one of the following notices.



Warning: Hazards or unsafe practices that could cause personal injury or death.

Caution: Hazards or unsafe practices that could cause product damage.

Note: Significant points of interest

Component Overview

The sliding door assembly comes crated and is comprised of four basic components:

- a. (1) off Door frame (Figure 2 shows door frame with door frame header track highlighted)
- b. (1) off Door frame header track (Figure 3 shows door frame header track highlighted)
- c. (1) off Left hand sliding door assembly (Shown in Figure 1)
- d. (1) off Right hand sliding door assembly (Shown in Figure 1)



Figure 1
This view highlights the two sliding doors.



Figure 2
This view highlights the frame the door slides on.



Figure 3
The view highlights the door frame header track which needs to be fixed to the door support frames before mounting to the cabinets. For assembly details see Figure 4.

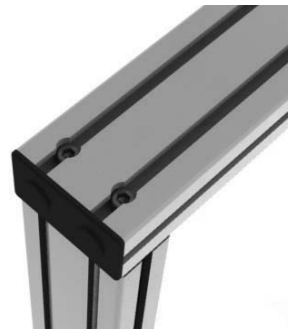


Figure 4
There are eight bolts that attach the top plate or header into the four door posts (two bolts per post).

Warning: Details subject to change without written notice.

Figure 5

Attach frame to floor through the floor attachment L bracket.



Note: Different floor types (solid, raised) may require different anchoring methods to ensure proper strength. Choose anchors that bolt to the raised floor or solid floor.

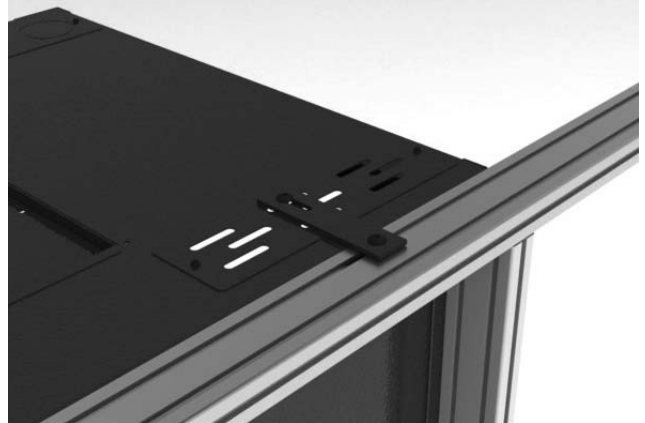


Figure 6

Swap out the standard OZIP plate on the V-Line Cabinet with the pre perforated OZIP adaptor plate (2 off supplied per door kit) and secure the coupling plate to the top of the door frame and the perforated OZIP plate.

Assembly Procedure

Step 1 - Unpack the door assembly from the crate

Separate the door from the packing material.

Tools Required:

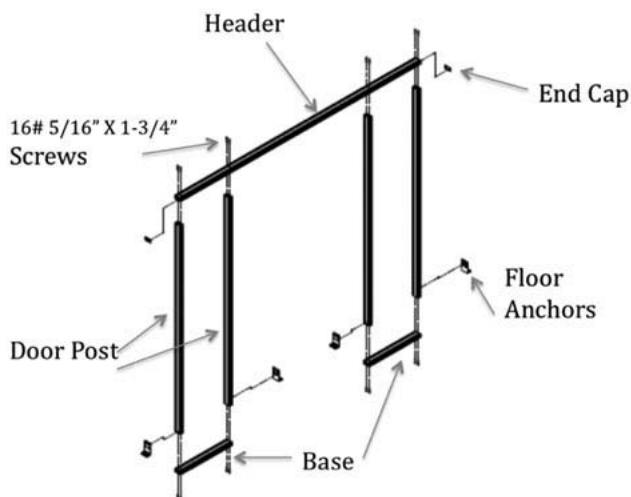
- Drill
- $\frac{3}{8}$ drill bit
- $\frac{3}{16}$ Allen wrench
- Level
- Plumb bob



Caution:

Do not cut into the aluminum or clear door material as you separate the packing material from the door. You can easily cut the door material, which would be unsightly.

Step 2 - Assemble the frame.

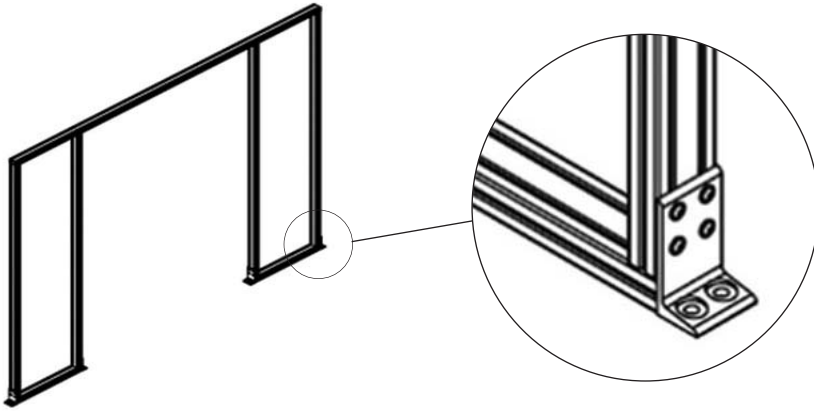


- The frame comes assembled with the exception of the header.
- Attach the header to the door posts using the $\frac{5}{16}$ " x $1\frac{3}{4}$ " screws.
- Attach the four floor anchors to the door posts using the $\frac{5}{16}$ " x $\frac{11}{16}$ " bolts.

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The frame should look like this:



Step 3 - Position the door frame

Using two or more people... stand up the frame into what would be its final position (see Step 3). Ensure the frame is placed so it allows for safe entrance and exit from the contained aisle. Likewise ensure the frame fully butts up against the aisle end racks so as to prevent air from leaking around the sides.



Step 3



Warning: The doorframe is heavy. Should it fall it could cause injury or even death. Always secure the door by having at least one person holding it while measuring for final layout.



Note: Only the frame is required to mark the floor anchors. Do not attach the doors to the frame yet.



Step 4

Step 4 - Plumb the door frame

Once the door is in the desired place attach one of the floor anchors on the outside corner. Next use a level to determine that the doorpost is plumb. The attached floor anchor will ensure the frame does not move.



Step 5

Step 5 - Drill the floor for anchor brackets

Mark the floor where the anchor brackets meet the floor. It's best to draw a small circle in the shape of the opening that matches the bolt. Move the frame so as to drill the marked holes. Drill a $\frac{5}{16}$ " hole on the marks you've made that match the doorframe brackets.

Warning: Details subject to change without written notice.

Step 6 - Attach the door frame to the floor

Using two or more people (as shown in Step 6), stand the frame back into the same place where the marks were made.

- Insert the bolts into the side anchor brackets and through the floor.
- Attach the nut to the bolt.



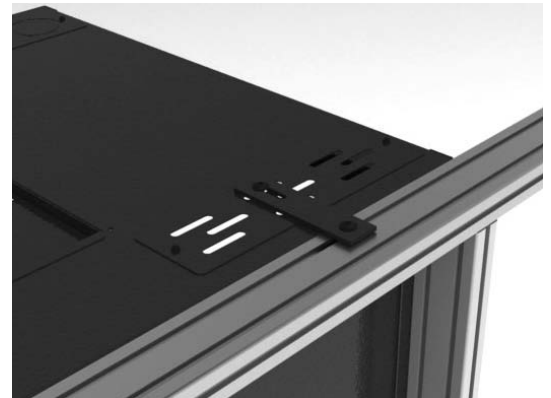
Step 6

Step 7 - Attach the top of the frame to the aisle end cabinet

Attach one end to the doorframe with the provided hardware. The other end of the bracket with the slotted hole allows attachment to the cabinet using the self-tapping metal screw provided. Alternately you can attach to factory points if available on the top of the cabinet. Secure the doorframe top rail snug against the side of the cabinet on both sides of the aisle.



Note: There are several ways to attach the frame to the aisle end cabinet. Choose an option that best fits the cabinet design. The key is to hold the frame firmly against the cabinet so that it will remain in place and not create an air gap.



Step 7

Step 8 - Installing the doors

Place the doors on the frame header. The door is held onto the frame by rollers.



Note: The rollers on the doors are both above and below the header or top rail to hold the doors captive stopping them from being lifted off.



Step 8a

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Step 8 - Installing the doors (con't)

The finished door should look like this:

Place each door on the assembled upright attached frame header. Ensure the wheels are in the position as shown. Verify that the doors slide easily from closed to fully open position.



Warning: Ensure that the wheels are fully engaged in the grooves on the door frame header. Do not leave the doors unattended until the lower guide wheels are adjusted to hold the doors captive (see Step 9b).



Step 8b

Step 9 - Field adjust the door rollers

The lower roller guide wheel (see Step 9a) may need minor adjustment to ride in the lower track.

- First adjust the lower roller, if needed, so the door rolls easily yet is held captive in the track by this lower wheel.
- When satisfied that the door is rolling smoothly, slide the upper vertically adjustable roller(see Step 9b) into the upper frame groove to prevent the door from being able to be lifted off of or removed from the upper frame header.
- Loosen the two screws holding the bracket sufficiently to slide the wheel up until it contacts the groove in the bottom of the frame header. Tighten the two screws to hold it in place.
- Ensure all guide wheels are tightened and secure and that the door assemblies are stable, operate smoothly and are held captive.



Step 9a

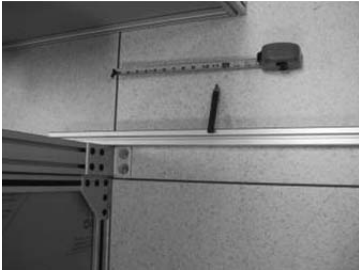


Step 9b

Warning: Details subject to change without written notice.

Step 10 - Install the floor guide

The door will slide better if a guide can be installed in the floor.



- Draw a line with a straight edge on floor 12" out from the door jam. This should help you center the guide.



- Next, draw a perpendicular line on the floor 12" away from the door jam.



- Drill a hole with a 1/8" drill bit.



- Install #6 x 1 1/4" screw and nylon spacer (as shown) into the floor. The height of the spacer will vary and is determined by how much of a gap exists between the floor and bottom of the sliding door.



- Slide doorframe over screw.

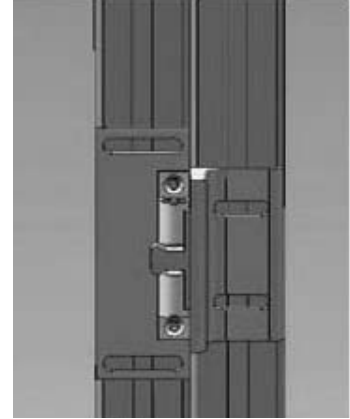
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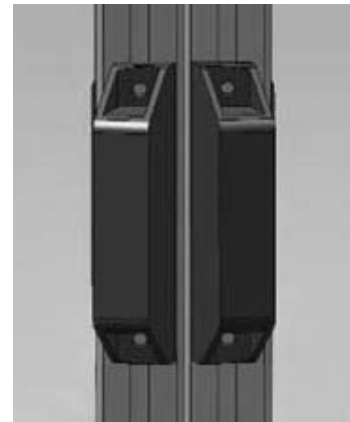
Step 11 - Adjust the door latch and handles

The door latch can now be adjusted so each side fits into one another.

- Loosen the screws on both the male and the female latch as indicated in Step 11a. Insert the latches so they are in the position when the doors are closed. Tighten the screws on the male side. After ensuring the latches remain tight, tighten the female side.
- The two screws at the top and bottom of the handle can adjust the door handle position vertically. Simply loosen the screws and move to the desired height and tighten as indicated in Step 11b.



Step 11a



Step 11b

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