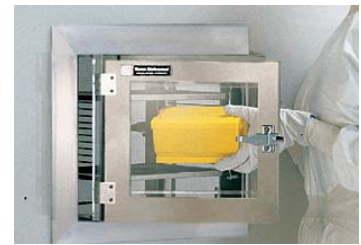


Pass-Through Chamber

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Safety Notice

A thorough familiarity with all operating guidelines is essential to safe operation of the product. Failure to observe safety precautions could result in poor performance, damage to the system or other property, or serious bodily injury or death. The following symbols are intended to call your attention to two levels of hazard involved in operation.



CAUTION

Cautions are used when failure to observe instructions could result in significant damage to equipment.



WARNING

Warnings are used when failure to observe instructions or precautions could result in injury or death.

The information presented here is subject to change without notice.

1.0 Introduction

This manual provides information on installing and operating Terra Universal's Pass-Through Chamber.

To ensure optimal performance and long life for your product, please adhere to the guidelines for installation, operation and maintenance laid out in the manual.

2.0 Description

Terra Universal's Pass-Through Chamber allows easy transfer of materials without contamination. The modular panel mounting system allows installation at any modular clean room location, and keeps particle counts low by elimination unnecessary personnel entry.

An optional mechanical interlock minimizes the risk of cross contamination. This device allows only one door at a time at one time thus minimizes the amount of "dirty" air that can enter the cleanroom.



CAUTION:

For doors with mechanical interlocks:

Prior to opening either door, it is imperative that the operator checks to see that the opposite door is fully shut. Do not yank, rattle or apply excessive force to the doors. Attempting to force open a door while the mechanical interlock is engaged will result in damage to the unit.





3.0 Installation

1. Make a cut-out in the wall 1/2" larger than the height and width of the pass-through chamber. The perimeter of this opening should be lined with a rigid support material (wood or metal).
2. Insert the pass-through into the wall from the "clean" side until the welded mounting bracket is flush with the "clean" side wall. Secure the unit to the wall (through the screw holes provided on each edge of the framing bracket; select mounting screws compatible with your wall type).
3. To secure the "dirty room" side of the Pass-Through, slide the remaining framing bracket onto the unit with the horizontal flange pointing into the wall. Slide this flange into the wall (between the wall perimeter lining and the Pass-Through) and secure the frame flush against the wall with user-supplied fasteners.

Note: Due to not knowing, what material the pass-through chamber is getting installed in (drywall concrete, etc.) Terra Universal does not supply any fastener hardware for the mounting brackets.

4. Make sure that the control cord is connected between the optional blower unit and the Pass-Through, and insert the power cord into the blower unit. Connect the power cord to an 110VAC, 60Hz power supply.

Important Note: Review "Door Alignment" procedure below if your chamber doors are larger than 24" wide.

Door Alignment

Pass-through chambers being installed in a cleanroom wall must be properly aligned to ensure proper operations of the latch and the interlock mechanism

1. Align pass-through chamber so that the front door catches are centered in the corresponding catch (see photo). To align the chamber, you may need to shim one corner before bolting the mounting brackets to the wall.
2. Large chambers may include support frames with leveling feet. The feet adjacent to the cleanroom wall should be adjusted to support the chamber once the clean side door has been properly aligned.
3. Repeat this procedure for the opposite (i.e., dirty) door. Raise or lower the chamber corners until the latch engages the center of the catch. Then adjust the support frame leveling feet to retain this alignment. If your installation includes support brackets, mount these to the chamber and the wall to achieve correct door alignment (see illustration).



Door Latch Too High



Door Latch Too Low

Door Latch Correctly Centered



Optional Air Shower Operation

The stainless steel Pass-Through is equipped with interlocks to prevent the opening of both doors simultaneously. When one door is open, the other cannot be opened until the first one is closed. This contamination protection is accomplished with a mechanical locking mechanism.



Pass-Through Chamber



CAUTION: To prevent damage to the Pass-through, the closed door should never forced open. Neither door should ever be cleaned with alcohol or other strong cleaning agents, or streaking will result.

In practice, parts are introduced from the "dirty" side into the pass-through, and the "dirty" side door is closed. The air shower starts as soon as the door is closed, drawing clean air from the "clean room" side, directing it through the nozzle located on the ceiling of the Pass-Through, and venting it through the perforated ducts located on the "dirty" side. The shower continues to run for 30 seconds after the door is closed. This time delay is set at the factory and can be changed for longer or shorter times. To change the factory settings, remove the top cover of the blower module, and adjust the timer potentiometer to the desired setting (the potentiometer is scaled in seconds).

Optional Sliding Door Pass-Through

This Clean Room Pass-Through features counterweighted access doors equipped with interlocks to prevent the opening of both doors simultaneously. When one door is open, the other cannot be opened until the first one is closed. This contamination protection is accomplished with a spring-loaded mechanical locking mechanism.

1. Make a cut-out in the wall 1/2" larger than the height and width of the pass-through chamber. The perimeter of this opening should be lined with a rigid support material (wood or metal).
2. Before installing the pass-through in the wall, you must first remove the sliding door assembly from the "dirty" side of the pass-through. To remove this assembly:
 - A. Close the access door on the clean room side of the unit (this is the side that features mounting holes along the vertical edges of the rails). Make sure that the door slides all the way down into the bottom "U" channel.
 - B. Remove the rear rail assembly by opening the "dirty" side door and removing the screws from inside the chamber. There are five screws vertically arranged on each side of the chamber, and five along the bottom edge. Once the rear rail assembly is removed, you will be able to observe how the spring-loaded interlock mechanism operates. Be careful not to interfere with this mechanism as you install the unit in the wall
3. Install the pass-through in the wall by sliding it in from the "clean" side. The front rail assembly should fit flush against the clean room wall.
4. Anchor the pass-through to the wall by using the appropriate wall fasteners for your application (fasteners will depend on the type of wall in your facility). There are six 3/8" holes arranged vertically along each edge of the front rail assembly for this purpose. Fasteners should be tightened so that the rails seal tightly against the wall, eliminating gaps where particles could collect.

NOTE: Before tightening, center the pass-through chamber in the cut-out (leaving a 1/8" gap between chamber and wall cut-out) to allow positioning of the mounting frame brackets along each edge of the chamber on the "dirty" side of the wall.

5. Install the top edge facade plate to cover the top gap between the chamber and the wall on the clean side of the wall. Slide the edge plate flush against the top edge of the chamber and attach with appropriate fasteners (this plate has three #10 screw holes for this purpose).
6. Attach the mounting frame brackets on the "gray" side of the wall to cover the gaps between the edge of the chamber and the wall cut-out. For each bracket, one flange should fit inside the gap, one should fit snugly against the wall, and the other should fit snugly against the chamber. Attach each bracket to the wall. The pass-through chamber is now installed.



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Generally, customers can improve the chance of collecting on a freight claim by following these procedures: 1) formally requesting that the carrier inspect the shipment immediately upon suspecting damage or shortage to verify condition; 2) notifying the carrier upon discovery of concealed damage and requesting an inspection within 15 days of receipt, both in person or phone and following up via mail; 3) keeping the shipment as intact as possible, including retaining original packaging materials and keeping the product as close to the original receiving location as possible; 4) holding salvage for disposition by the carrier.

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