



Installation Guide

Document No. 1788-20

BioSafe® Cleanroom Windows

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Your Comprehensive
 Equipment Source





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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

Terra Universal's BioSafe® Cleanroom Windows feature a flush-mount frame design that eliminates horizontal surfaces and crevices where contaminants can collect. The 304 stainless steel frame seals tightly against the interior wall surface to allow for easy cleaning and sterilizing.

Choices for window materials include tempered glass, fire-rated glass, static-dissipative PVC, polycarbonate, and acrylic. Static-dissipative PVC (SDPVC) has dissipative material molecularly embedded in the layers of PVC for long-lasting performance. Polycarbonate is shatter-resistant and offers greater resistance to common acids, solvents, and cleaning solutions. Acrylic is economical, but it can be damaged by alcohol and other strong cleaning agents.

Note: SDPVC is recommended for most cleanroom applications due to its ability to avoid static build-up, which normally causes oppositely charged particles to cling to the surface as a result of electrostatic attraction.

Each window material can be specified as either single-pane or double-pane. A double-pane window uses a stainless steel frame that mounts flush on both sides, making it ideal for adjoining cleanrooms. A single-pane window includes a flush-mounted cover for only one side.

2.0 Specifications

Standard Size Windows

The following specifications apply to a standard size BioSafe® Cleanroom Window when preinstalled in a Terra cleanroom:

BioSafe® Cleanroom Window Specifications	
Standard Placement	39" from floor to window bottom
Wall Cut-Out	46.75"W x 36.25"H
Window Pane Cut Size	45.875"W x 35.375"H
Finished Visible Opening	44.75"W x 34.125"H
Frame Material	304 Stainless Steel

Custom Size Windows

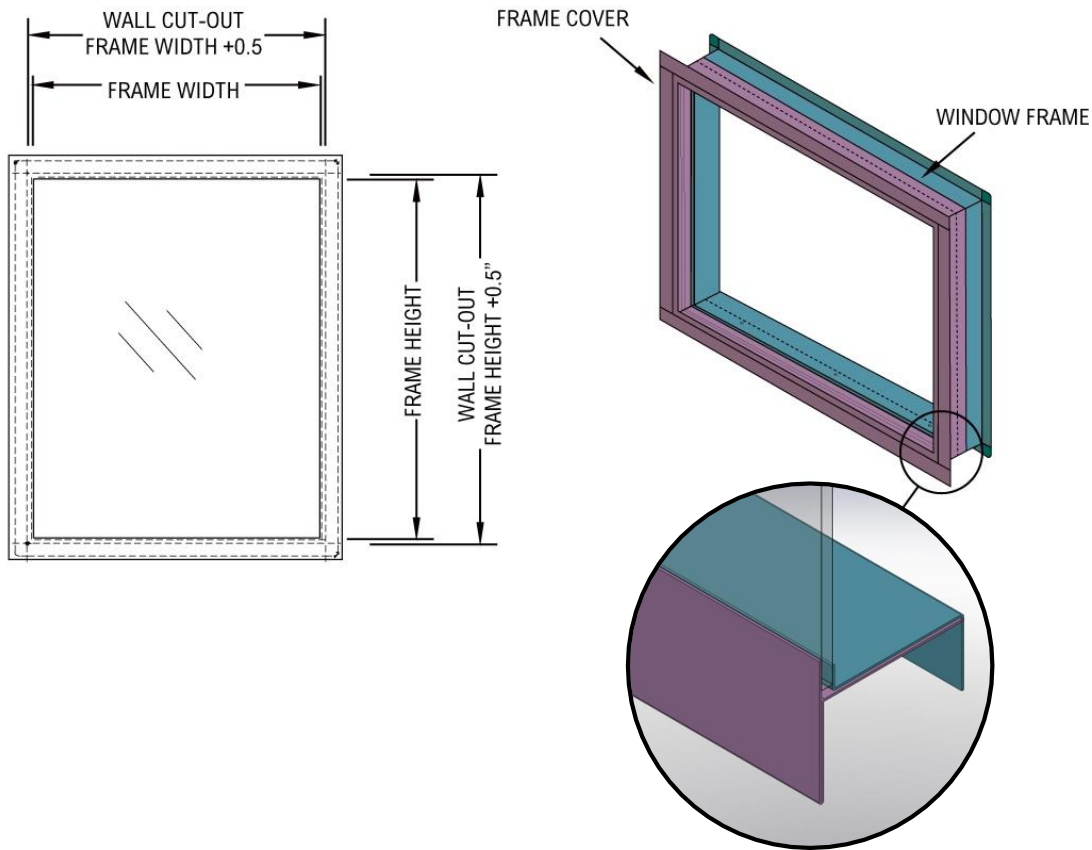
For custom windows, the frame is built to the specifications outlined in the original order form. Refer to **Section 4** on the following page for installation instructions.



3.0 Installation

Single-Pane Flush-Mount Window Installation

Frame components are fabricated to fit the wall thickness specified in the order.
Minimum wall thickness: 4.75"



MALE/FEMALE FIT:
FLUSH-MOUNT FRAME COVER
SLIDES OVER THE WINDOW FRAME

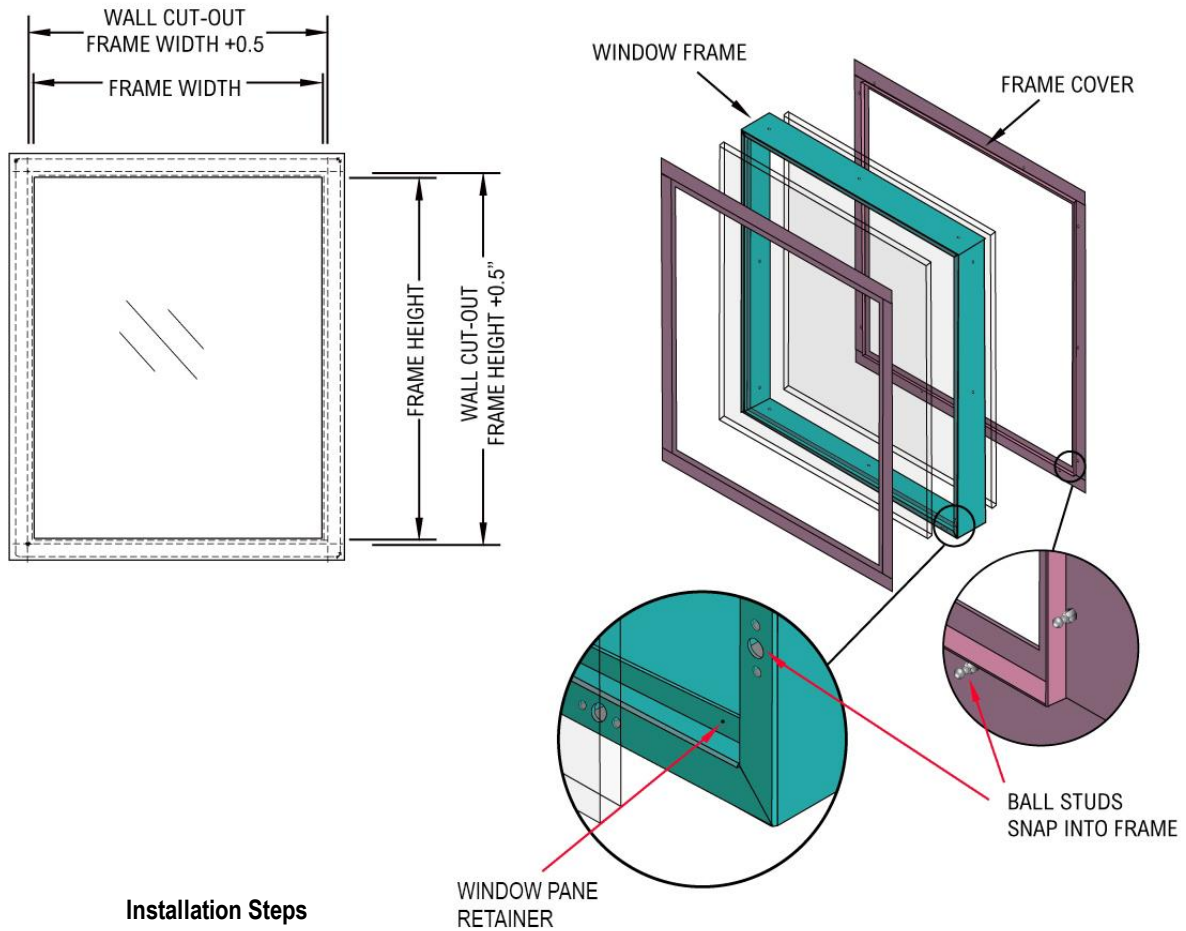
Installation Steps

1. Make the wall cut-out according to the diagram above and frame it with a rigid material.
2. Push the frame cover into the wall cut-out from the "clean" side.
3. Place the window pane inside the frame cover. With one person holding the frame cover in place, slide the window frame into the wall opening from the "dirty" side. As shown in the diagram above, the window frame slides into the frame cover until the window pane is sandwiched tightly between the two pieces.
4. Align the pre-drilled holes on the bottom, sides, and top of the window frame and fasten the completed window assembly to the framed wall cut-out.
5. Although it is not required for positive pressure cleanrooms, an appropriate sealant can be applied along the flush-mount edges of the window, if desired.



Double-Pane Flush-Mount Window Installation

Frame components are fabricated to fit the wall thickness specified in the order.
Minimum wall thickness: 2"



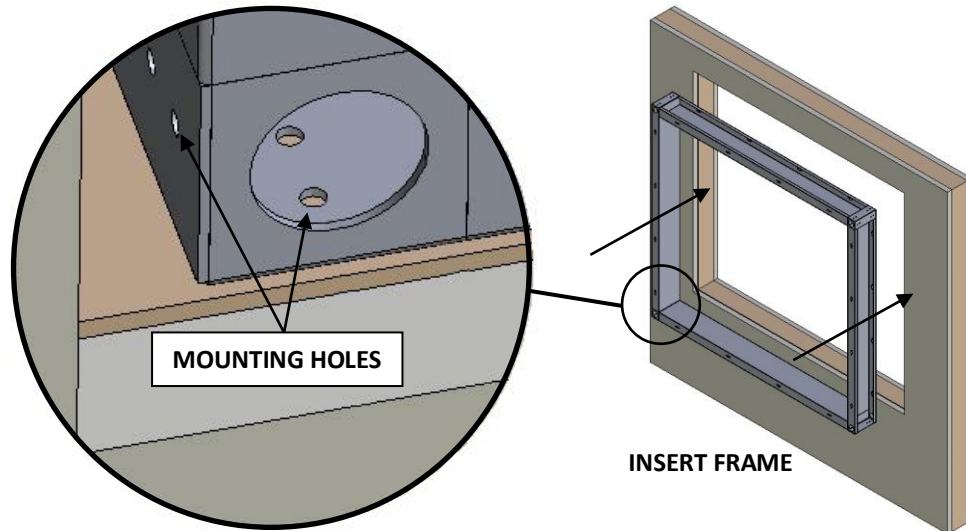
Installation Steps

1. Make the wall cut-out according to the diagram above and frame it with a rigid material.
2. Center the window frame in the wall cut-out and fasten the window frame to the framed wall cut-out using the pre-drilled holes on the bottom, sides and top.
3. Hold the window pane up against the retainer in the window frame and snap on the frame cover to secure it in place. The frame covers have ball studs welded on the inside surface which snap into corresponding holes on the window frame.
4. Repeat for the window pane on the other side. Once snapped in, the edges of the frame covers should be flush with the wall surface.
5. Although it is not required for positive pressure cleanrooms, an appropriate sealant can be applied along the flush-mount edges of the window, if desired.



Frameless Flush-Mount Window Installation

Frame components are fabricated to fit the wall thickness specified in the order.



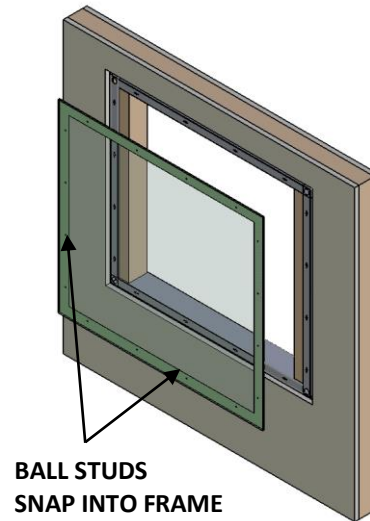
Installation Steps

1. If available, please refer to the drawings specific to your window order for the most accurate dimensions for cutting and framing.

General Wall Cut-Out Procedure:

Build the internal framing for the window so that the opening is 1" wider and 1" taller than the steel frame. Cut the wall surface material (either drywall or FRP) so that there is a 1/4" ledge around the entire opening (1/4" of the internal framing should be visible).

Check the wall cut-out by inserting the glass, making sure that the glass fits within the opening, is flush with the wall surface, and can be pressed securely against the 1/4" of exposed trimming.



2. Insert the steel frame into the wall cut-out.
3. Fasten the steel frame to the wall using the predrilled holes inside each corner. A 1"-diameter access hole is provided to allow a right-angle drill bit to be used to drill pilot holes and insert the screws.
4. Snap the glass into the frame by aligning the ball studs with the frame's sockets. Ensure that all studs are fully inserted and the glass is completely flat against the frame before proceeding. Repeat for the window on the opposite side.
5. Apply an appropriate sealant around the edges of the windows to create an airtight seal and clean finish.



4.0 Warranty

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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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***Thank you for ordering from
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