

INSTALLATION MANUAL



**Model BO 1
BUMP OUT 1**



**Model BO 2
BUMP OUT 2**



**Model BO 4
BUMP OUT 4**

Drive-Thru Windows

DISCLAIMER

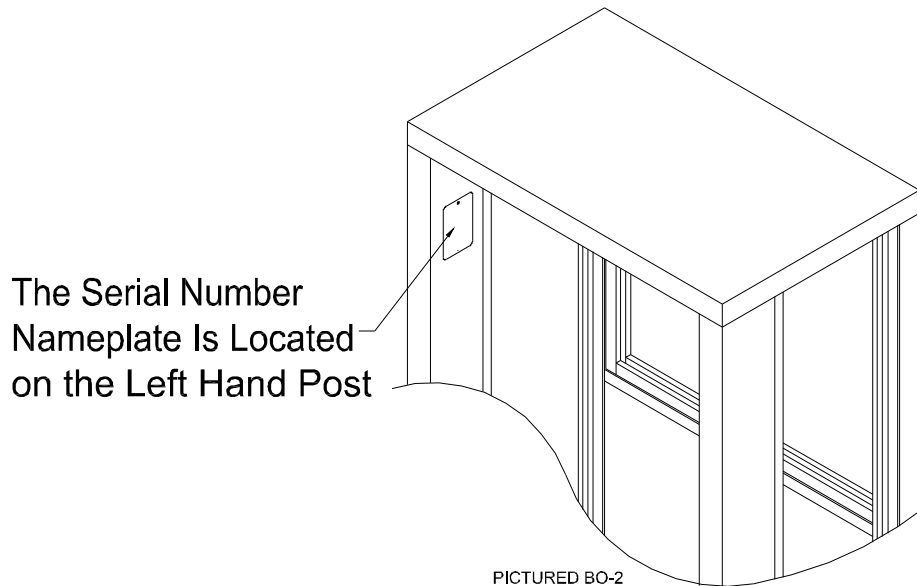
READY ACCESS DISCLAIMS ANY LIABILITY FOR ANY DAMAGE OR HARM CAUSED TO THE BO-1, BO-2 OR BO-4 DRIVE-THRU WINDOWS, ITS OPERATOR OR ANY OTHER EQUIPMENT HOWEVER CAUSED IF ANY OF THESE BUMP OUT SERIES DRIVE-THRU WINDOW IS INSTALLED, REPAIRED OR SERVICED BY ANYONE OTHER THAN AN AUTHORIZED SERVICE ENGINEER OR CONTRARY TO THE MANUFACTURERS WRITTEN INSTRUCTION CONTAINED HEREIN.

THIS MANUAL IS INTENDED FOR USE BY THE IN-HOUSE OR AUTHORIZED FIELD SERVICE ENGINEERS AND SALES REPRESENTATIVES

The manufacturer maintains the right to update, add or issue a new service manual at any time without notice, thereby rendering all previous issues obsolete.

Please write the Serial Number and Installation Date for your drive-thru window in the spaces provided.

Serial Number	
Date of Installation	



Contact Information

For sales and service contact

Ready Access
1815 Arthur Drive
West Chicago, Illinois 60185
Email: ready@ready-access.com

Tel: 630-876-7766
Tel: 800-621-5045
Fax: 630-876-7767
Website: www.ready-access.com

Safety Information

WARNING: To avoid the risk of fire, Electric Shock or injury to persons, observe the following:

1. Before servicing or cleaning the unit, switch the power off at the mechanical switch near the unit (Installed by an Electrician) or the electrical entry service panel/circuit breaker. (Load Center)
 - **OSHA LOCK OUT – TAG OUT** procedures are to be observed to prevent power from being switched on accidentally.
2. Any Installation and / or Electrical work must be done by **QUALIFIED** persons in accordance with all applicable codes / standards and manufacturers recommendations and specifications.
3. **DO NOT** insert fingers and / or foreign objects into the Drive-Thru Window.
DO NOT block or tamper with the unit in any manner while it is in operation.
4. This product must not be used in Potentially Dangerous locations such as Flammable, Explosive Chemical – laden environment.

WARRANTY:

Ready Access will only accept responsibility for manufacturing defects in the product’s construction and/or materials.

Adjustments required during installation are the responsibility of the installer or contractor and will not be covered under warranty.

Problems caused by improper installation are the responsibility of the installer or contractor and will not be covered under warranty.

SPECIFICATIONS AND PERFORMANCE

Fully-Automatic

Model Number	Unit Voltage		Actual Unit Amps	Dimensions In Inches W x H x D	Weight In Shipping Carton
	USA	International			
BO-1 - E	110/120 VAC 60Hz	220/240 VAC 50/60Hz	15 A (US) 8 A (Int'l)	27 ¾" x 48¾" x 15 ¾"	156 lbs
BO-2 - E	110/120 VAC 60Hz	220/240 VAC 50/60Hz	15 A (US) 8 A (Int'l)	27 ¾" x 48¾" x 15 ¾"	156 lbs
BO-4 - E	110/120 VAC 60Hz	220/240 VAC 50/60Hz	15 A (US) 8 A (Int'l)	27 ¾" x 48¾" x 15 ¾"	156 lbs

Dimensions

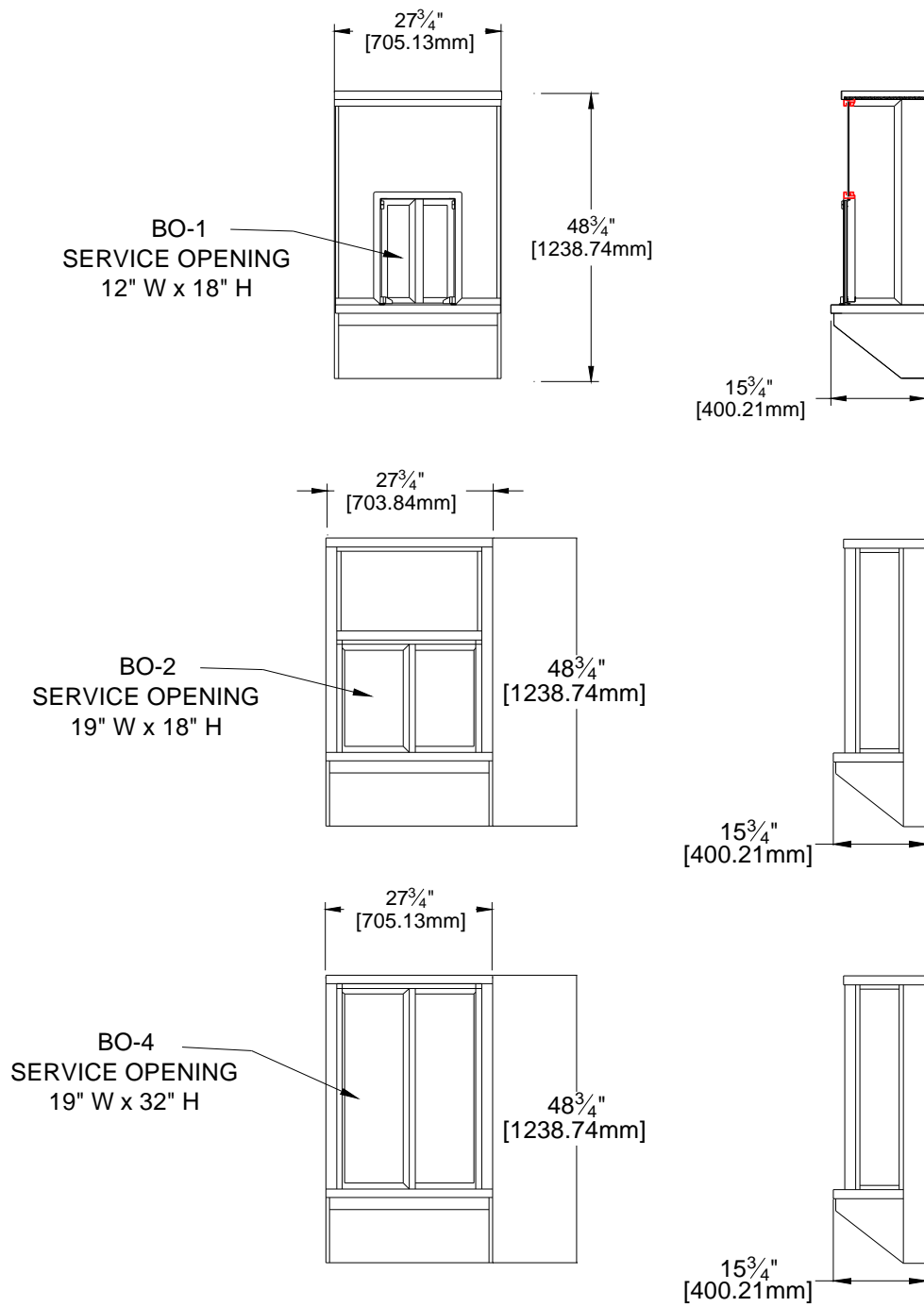


Figure 1

Installation Procedures

Tools required to perform the installation

- Electric Drill
- Metal Drill bits –
 - 3/16" (3mm)
 - 1/4" (6mm)
 - 1/2" (13mm)
 - 1" (25mm)
- Screwdrivers – Slotted and Phillips
- Hacksaw
- Jack / Utility Knife
- Flat File – Coarse
- Caulking gun
- 1/4" Nut Driver
- Extension Cord
- Masonry drill bit –
 - 1/4" (6mm)
 - 1" (25mm)
 - 1 1/2" (38mm)
- Masonry Hole Saw – 1" (25mm)
- Channel Lock Pliers
- Tape Measurer
- Wire Cutter
- Step Ladder
- Level

Materials required for installation

- Window framing, architect specified and installed in building.
(Ready Access recommended material is 3/16" (3mm) x 1 3/4" (44.5mm) x 4" (102mm) hollow aluminum tubing or glazing channel)
- Electrical Tape
- Wire Nuts
- Caulking – silicone (Color specific to the color of window)
- Connectors for conduit as required
- Shingle type shims – as required to level and plum the window

Physical Installation

Before you begin installing your Ready Access Drive-Thru Window, you must determine what type of installation will be required. Wood Frame, Masonry Framing, etc.

Please refer to the details below to pick which one best fits your application.

WARNING:

TWO PEOPLE ARE REQUIRED FOR THE LIFTING AND INSTALLATION OF THE WINDOW.

NOTE: There are two wall-mounting applications. The mounting space can be surrounded either by sidelights (windows) or masonry. The illustrations below will show both configurations. (Figure 2)

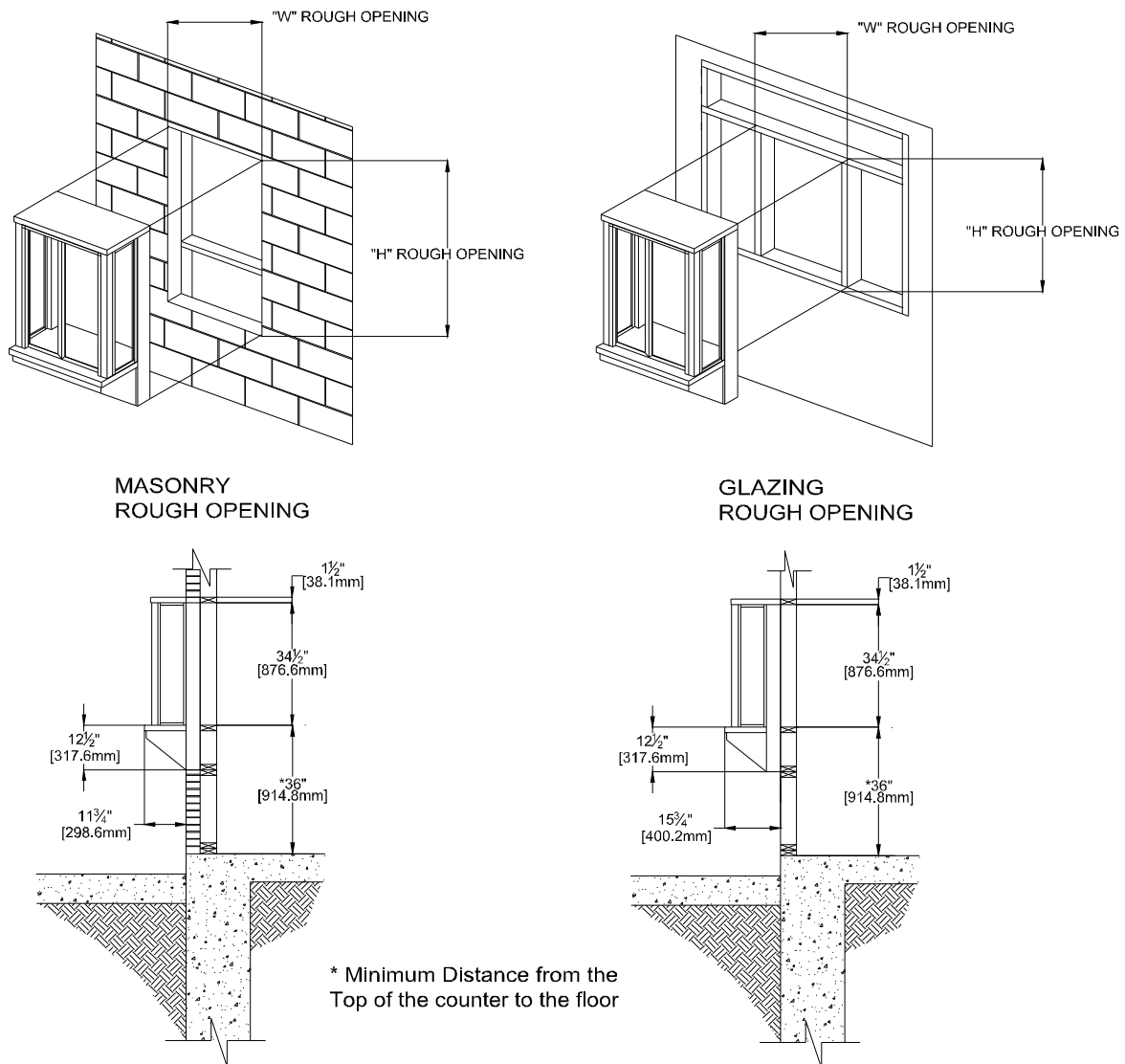


Figure 2
PICTURED BO-4

1. Confirm that the customer-supplied frame is made to accommodate the dimensions as illustrated on page 6.
2. Confirm that AC power has been run and is ready for connection to the window.
3. Check shipping carton for any shipping damage and remove window from the carton.
4. Check window for any shipping damage.
5. Once the application has been determined, check the daylight opening of the frame being used. The opening dimensions should be 24 ¼" wide x 34 ½" high.
6. For a Fully-Automatic installation, check for the electrical hook-up. The AC electric should be installed directly from the breaker box (Load Center) to the window opening before the installation of the window.
7. Using the paper mounting template, drill a quantity of 10, ¼" diameter pilot holes for mounting. (See Figure 3) **OUTSIDE ONLY – DO NOT DRILL THROUGH THE FRAME.**

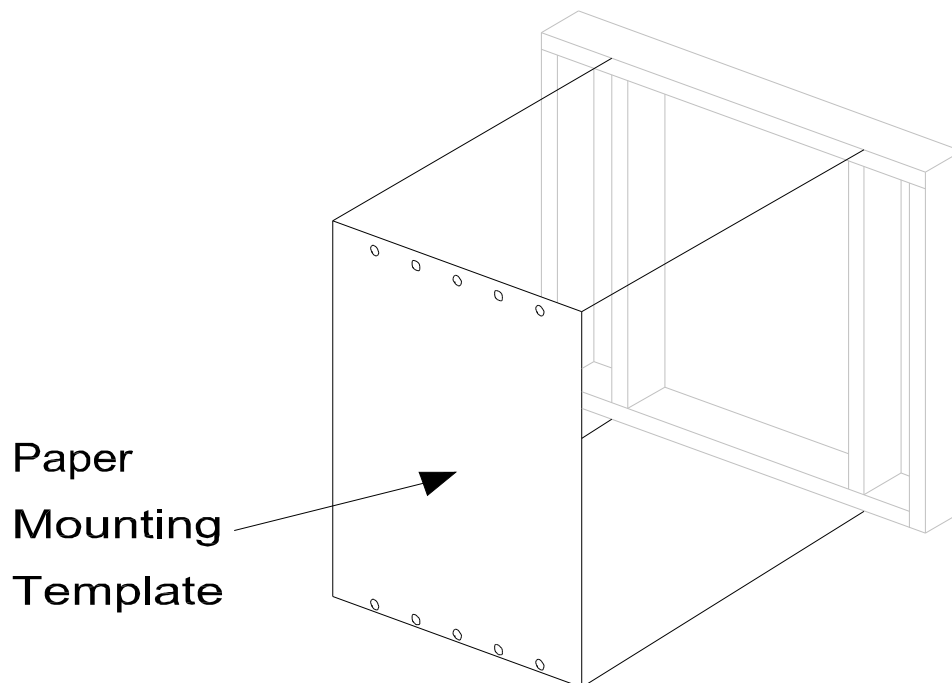


Figure 3

8. Remove the template and drill 10, ½" hole using the ¼" pilot holes. **OUTSIDE ONLY – DO NOT DRILL THROUGH THE FRAME.**

9. For Semi-Automatic installations, Drill a 1" hole through the wall as illustrated in Figure 4. (The dimensions shown are from the inside of the building.)

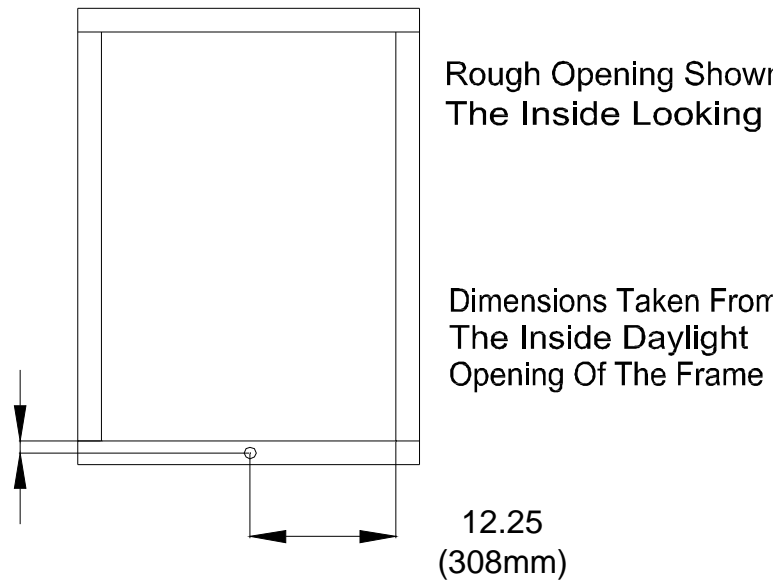


Figure 4

10. For Fully-Automatic, Drill a 1 ½" hole through the wall as illustrated in Figure 4. (The dimensions shown are from the inside of the building.)

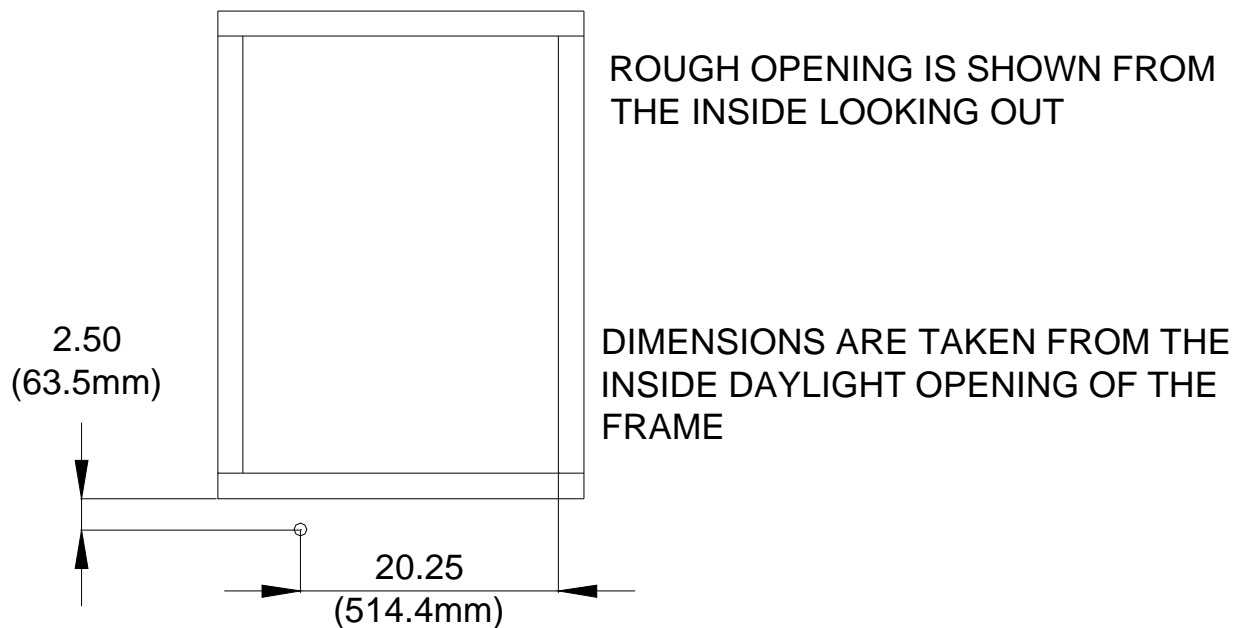


Figure 5

11. Requiring 2 people, remove Ready Access Window from carton and place on top of carton lid to prevent scratching.
12. Person number 1 should remove the bottom cover from the window and organize the mounting hardware.

Person number 2 should apply a bead of caulk to the outside surface of the building window frame. (Reference 1/2" drilled holes for mounting window.)

13. Requiring 2 people, stand window upright. With one person on each side of the window, lift the window into position, aligning the counter top with the building frame sill.

With one person holding the front of the window from falling forward, the other person from the inside will start inserting 5 of the well nuts with the washers and bolts through the inside top of the window into the building frame. (Figure 6)

(If mounting through wood, use lag bolts. If mounting to masonry, use mason anchors)

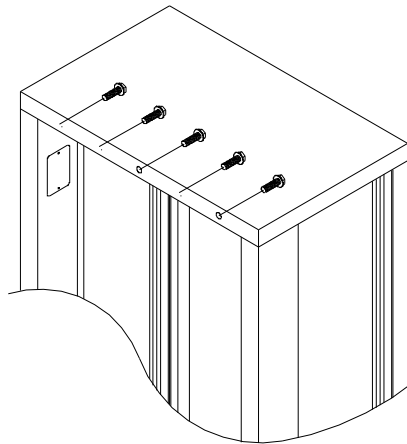


Figure 6

From the outside, insert the remaining 4 well nuts and fasten with the bolts and washers provided, through the bottom, underneath the counter, into the building frame.

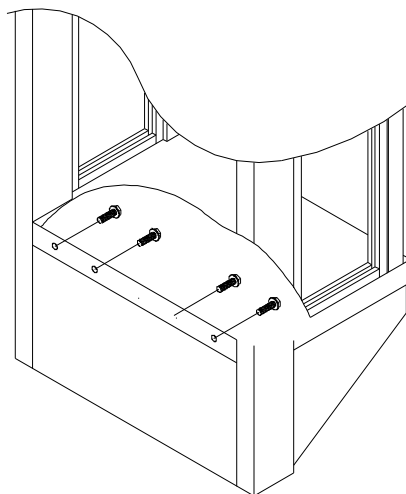


Figure 7

14. DO NOT TIGHTEN - Shim unit to be square and plum. Once this has been done, tighten mounting hardware.
15. When the window is fully secured, seal the outside of the window to the frame or building using silicone caulk.

Semi Automatic Instructions

Push Pad Assembly

1. Mount the guide block retainer to the interior side of the wall. (Figure 8)
2. From the inside, slide the push-pad assembly through the guide block into the bottom of the window. (Figure 9)
3. From the outside, underneath the window attach the push-pad shaft to the slide rider with the clevis pin and hitch pin. (Figure 10)
4. Test the unit by pushing on the push-pad. Secure the cover to the outside of the window.

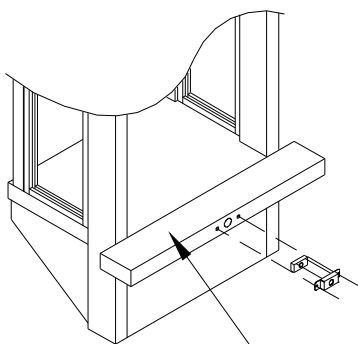


FIGURE 8

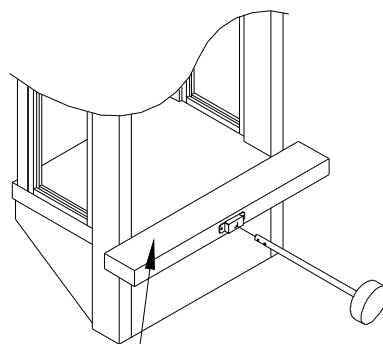


FIGURE 9

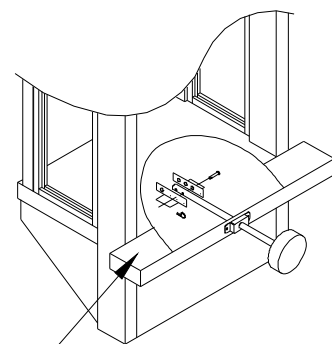


FIGURE 10

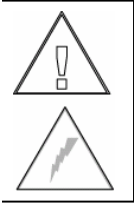
The mounting frame is pictured for the purpose of illustration only.
(IT IS NOT PART OF THE WINDOW.)

Fully-Automatic Instructions (BO-2 and BO-4 ONLY)

Electrical Installation

All power must be connected and wired by a **qualified electrician** and must be in compliance with all state and local codes.

The incoming AC power line must be connected to the receptacle located underneath the counter top. (Per Standard electrical code.) The green "grounding" wire is to be attached to the frame of the unit.



WARNING: Use only 110/120VAC – 60Hz source with a dedicated 15Amp circuit.
International power: 220/240VAC – 50/60Hz with a dedicated 8amp branch circuit.

WARNING: This must be a dedicated circuit. Other electrical equipment must not share the same line from the 15Amp circuit breaker.

WARNING: Turning off the front panel rocker switches does not remove the 110/120 volts of electrical power from the unit

WARNING: To disconnect the power completely from this unit, turn OFF the mechanical switch near the unit (Installed by an Electrician) or the electrical entry service panel/circuit breaker panel (Load Center) for this unit.

- **OSHA LOCK OUT – TAG OUT** procedures are to be observed to prevent power from being switched on accidentally.

1. Remove the screws holding on the front cover.
2. Wire the AC source line to the receptacle located underneath the window countertop.
(See Figure 11)

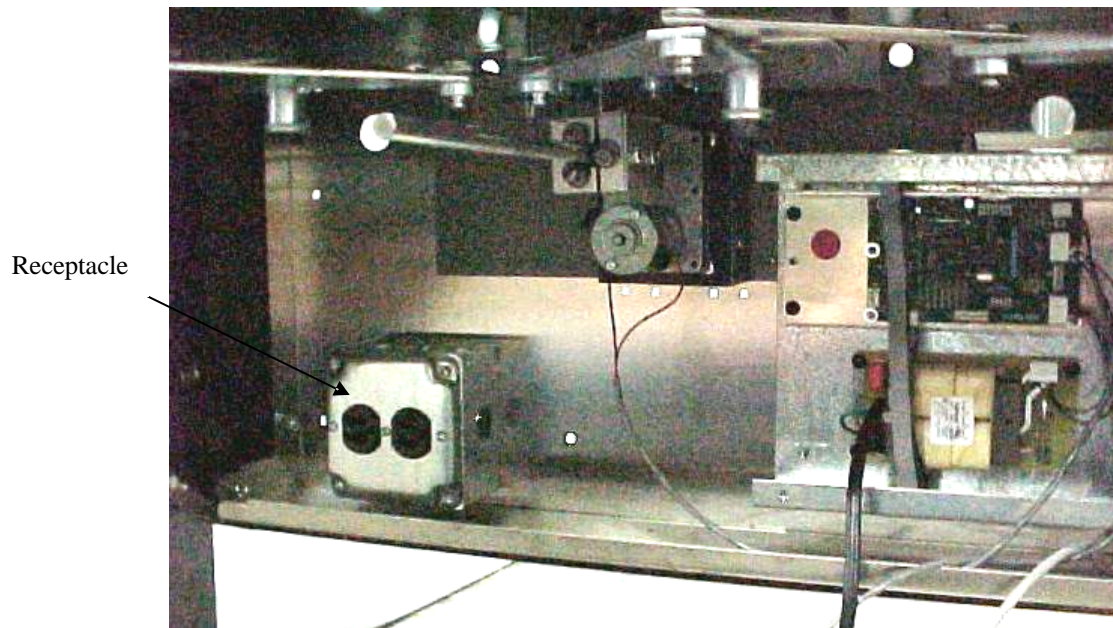


Figure 11

Mounting Electric Eye Housing

1. Position eye housing on the interior wall covering the 1-1/2" hole drilled through for electric cable passage way.
2. Align the wall mounting brackets on inside finished wall. Use as a template to scribe holes for drilling 1/4" holes for plastic mounting anchors
3. Drill 4 - 1/4" (6.5mm) holes using the masonry drill bit.
4. Insert the plastic anchors and mount the brackets with the #10 or #12 screws.
5. Attach electric eye mounting channel to the wall mounting brackets with the (4) 8-32 x 1/2" screws provided
6. Attach the sensor to the brackets and secure.
7. Take electric eye cable and pass through 1" hole into the bottom of the window unit and connect to the cable marked "ELEC.EYE".
8. Assemble plastic electric eye housings to the electric eye mounting channel.

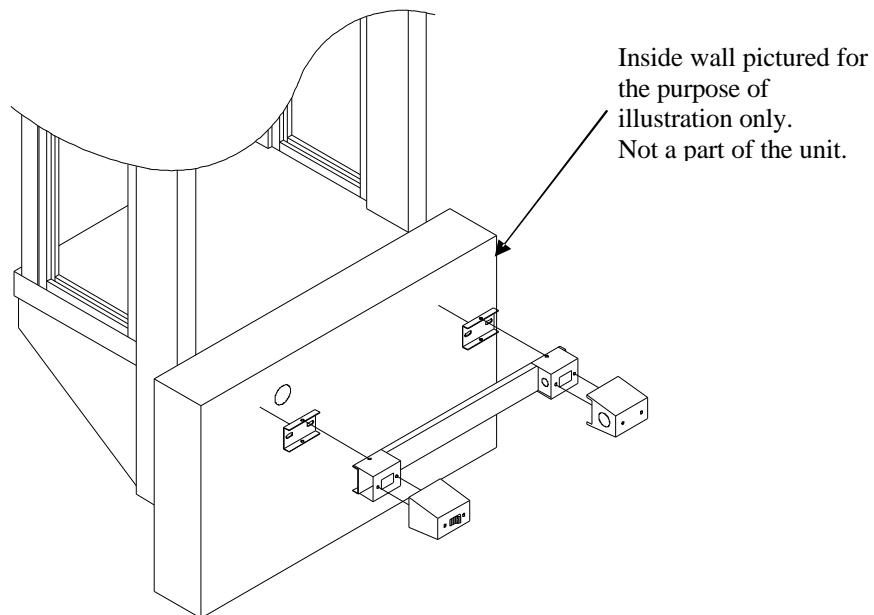


Figure 12

9. Turn "ON" the power to the unit. (Load center circuit breaker and power switch on the "Control unit".
10. Test window operations. See "Testing Procedures".

Initial Window Operation

Testing Procedures Semi Automatic Operations

Action	Reaction
Press your hip against the push-pad cushion and push into the window.	The doors will open
When you step away from the push-pad	The doors will self-close and the push-pad will extend back into position.

Fully - Automatic Operations (Electric)

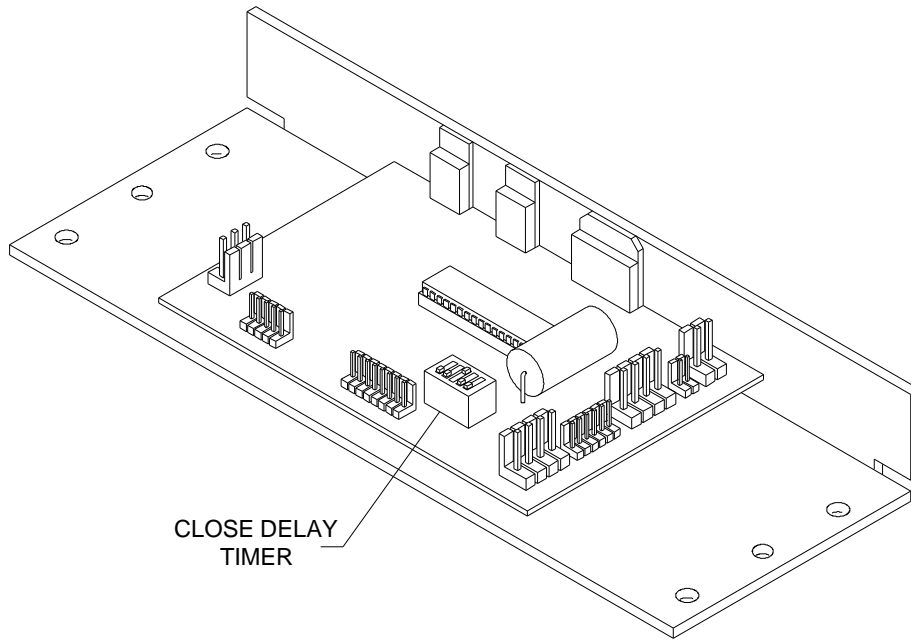
Action	Reaction
Turn the power " OFF " at the rocker switch located on the controller unit. Manually open and close the doors several times.	When the doors are opening, the "MOTOR RUN" lamp will illuminate green. When the doors are closing, "MOTOR RUN" lamp will illuminate red. The "POWER" lamp must illuminate during both operations. If neither of these lamps illuminate during any of the processes, proceed to the "Troubleshooting" section.
Turn the power " ON " at the rocker switch located on the controller unit. Break the electric eye beam to open the door.	The doors will open to an 18" (457.2mm) opening.
With the power " ON " break the electric eye beam momentarily to open and close the doors.	The doors will open. They will remain in the open position for either approximately 3.0 seconds before closing NOTE: The DC-3 PCB allows for longer close delay times (See the Adjustments and Calibration Section)
With the power " ON " press the "CLOSE DELAY" button located on the controller unit once and break the electric eye beam to open the doors	The doors will open and the length of time that the doors remain open will toggle between 1.5 and 3.0 seconds before closing.
With the power " ON " break the electric eye beam momentarily to open and close the doors. Insert an object at least 4" (101.6mm) wide between the doors as they are closing.	The doors will automatically reverse their action (the doors will open), when an object is caught between or restricting the closing of the doors.

Adjustments and Calibrations

Calibration:

The only calibration available on the DC-3 PC board is setting the close delay timer using the dipswitch package mounted near the ribbon cable connector.

The CLOSE DELAY TIMER is default set a 3 seconds.



Follow the chart below for changing
The CLOSE DELAY TIMER settings

DIP SWITCH SETTINGS					
TIME IN SECONDS	SWITCH POSITION				
	1	2	3	4	5
1	ON	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF
3	OFF	OFF	ON	OFF	OFF
4	OFF	OFF	OFF	ON	OFF
5	OFF	OFF	OFF	OFF	ON
12	ON	ON	OFF	OFF	OFF
13	ON	OFF	ON	OFF	OFF
14	ON	OFF	OFF	ON	OFF
15	ON	OFF	OFF	OFF	ON
23	OFF	ON	ON	OFF	OFF
24	OFF	ON	OFF	ON	OFF
25	OFF	ON	OFF	OFF	ON
34	OFF	OFF	ON	ON	OFF
35	OFF	OFF	ON	OFF	ON
45	OFF	OFF	OFF	ON	ON

Operation Procedures

Modes of Operation:

The BO-2 and BO-4 windows have two modes of operation, Semi-Automatic and Automatic. The BO-1 is only available in a Semi-Automatic Style of window.

Semi-Automatic Operations

Press your hip against the push-pad cushion and push into the window. The doors will open. When you step away from the push-pad, the doors will self-close and extend the push-pad back into position.

Fully-Automatic Operations

The **Manual Mode** is reached by turning "OFF" the main power to the window. The opening and closing of the window is done by hand (**DO NOT OPEN OR CLOSE THE DOORS WITH ANY UNDUE FORCE**)

The **Automatic Mode** is reached by turning "ON" the main power to the window. Stepping in and out of the sensor's range opens and closes the doors.

Operations

After installation of the Bump-Out model Semi-Automatic or Electric Sliding window, completion of the testing procedures and the installation of the decorative covers, the window is ready for normal use

Semi – Automatic

1. Using your hip. Lean in on the orange push pad. And then step aside.
2. The doors should open and close smoothly.
3. If the doors do not operate correctly, go to the troubleshooting guide in this manual. If the doors still do not operate properly, then call Ready Access at

1-800-621-5045

Electric (Fully – Automatic)

1. On the controller unit, turn the power rocker switch to the "ON" position.
2. Check that the red portion of the rocker switch is visible and that the red power lamp is illuminated
3. Break the electronic eye beam or step into the sensor beam path.
4. Step out of the beam path and wait 3 to 6 seconds for the doors to close.
5. If the doors do not operate correctly, go to the troubleshooting guide in this manual. If the doors still do not operate properly, then call Ready Access at

1-800-621-5045

6. The doors can be operated manually by pulling the manual release located at the top of the door.

NOTE: Turn the power off to the window to prevent any damage to the PCB.

Each operator must read the operations manual before operating the unit.

Maintenance

Maintenance Schedule

Scheduled maintenance should be performed on a regular basis. This is to assure proper operation and performance of the Bump-Out windows.

Daily

- Check the sill for foreign materials and/or syrup. (Anything that might cause the window to bind up and not operate smoothly.)

Monthly

Follow safety procedures before opening the unit.

- Check the interior of the unit for any build up of any foreign materials using a dry cloth.

NOTE: KEEP ANY LIQUIDS OFF THE INTERIOR COMPONENTS.

- Clean moving parts and lubricate with silicone or Teflon spray.

NOTE: Do NOT use Grease or Oils. Do NOT lubricate the motor clutch assembly.

Semi Annual (6 Months)

- Check the front cover and side panels to ensure that they are not rubbing on the moving mechanism.
- Check the lock bar and door locks. Inspect for missing parts and smooth operations
- Lubricate the locks with silicone.
- Inspect the hinges and bushings for any wear or damage.
- Inspect the weather stripping around the doors for wear or damage.
- Check the setscrews on the locking plate to ensure that they are tight and properly aligned with the locking plate.
- Inspect all the bolts on the slide to make sure that they are in place.
- Check all the "Tru-arc" retaining rings to make sure that they are in place.
- Lubricate all the linkage and pivot points with silicone.

NOTE: DO NOT LUBRICATE THE DRIVE SHAFT OR LINEAR ACTUATOR.

Yearly

- Have a service technician come in and perform a maintenance check on the unit.

IF NEEDED, CONTACT YOUR READY ACCESS SERVICE AGENT FOR SERVICE.

SERVICE

Troubleshooting Guide Semi Automatic

Issue	Probable Cause	Resolution
The doors do not open.	<ul style="list-style-type: none"> • Broken Hinge 	<ul style="list-style-type: none"> • Replace Hinge
	<ul style="list-style-type: none"> • Tru-Arc retaining ring popped off 	<ul style="list-style-type: none"> • Check for missing or broken Tru-Arc Ring • Reattach or replace the ring
	<ul style="list-style-type: none"> • Push Pad assembly not connected 	<ul style="list-style-type: none"> • Check for a missing or broken clevis or hinge pin • Reattach or replace the pin
Only one door opens and the other door goes in the opposite direction.	<ul style="list-style-type: none"> • Roller bearing on the top of the doors broken or fell off 	<ul style="list-style-type: none"> • Check the roller bearing • Repair or replace
Door binds when trying to open.	<ul style="list-style-type: none"> • Door hinges are no longer square 	<ul style="list-style-type: none"> • Repair or replace the hinges
	<ul style="list-style-type: none"> • Unit may have been hit by a car 	<ul style="list-style-type: none"> • Inspect the counter top • Replace if damaged
Doors hang loose.	<ul style="list-style-type: none"> • Shoulder screws have come loose and fallen off the hinges 	<ul style="list-style-type: none"> • Check for the shoulder screws being in place • Repair or replace as needed
Doors do not close.	<ul style="list-style-type: none"> • The pull back spring has come loose or broke 	<ul style="list-style-type: none"> • Check for mounting hardware • Reattach or replace the pull-back spring
Doors slam shut.	<ul style="list-style-type: none"> • Pneumatic closer worn out 	<ul style="list-style-type: none"> • Adjust the screw on the end of the closer • Replace if needed

SERVICE

Troubleshooting Guide Fully Automatic

Issue	Probable Cause	Resolution
When the beam is broken, the doors do not open.	<ul style="list-style-type: none"> Defective motor assembly 	<ul style="list-style-type: none"> Replace the motor assembly
	<ul style="list-style-type: none"> Dirty drive shaft 	<ul style="list-style-type: none"> Clean the drive shaft. It must be free from dirt and lubricants
	<ul style="list-style-type: none"> Broken Hinge 	<ul style="list-style-type: none"> Replace Hinge
	<ul style="list-style-type: none"> Tru-Arc retaining ring popped off 	<ul style="list-style-type: none"> Check for missing or broken Tru-Arc Ring. Reattach or replace the ring
	<ul style="list-style-type: none"> Linear actuator is slipping 	<ul style="list-style-type: none"> Clean shaft and adjust tension from the block
	<ul style="list-style-type: none"> Dirty or defective electric eye <ul style="list-style-type: none"> ∅ Dirt or other material is blocking eye ∅ Defective electric eye 	<ul style="list-style-type: none"> ∅ Clean the dirt off the eye and reflector ∅ Replace the electric eye
	<ul style="list-style-type: none"> Defective PCB Assembly 	<ul style="list-style-type: none"> Replace the PCB Assembly
Only one door opens and the other door goes in the opposite direction.	<ul style="list-style-type: none"> Roller bearing on the top of the doors broken or fell off 	<ul style="list-style-type: none"> Check the roller bearing Repair or replace
Door binds when trying to open.	<ul style="list-style-type: none"> Door hinges are no longer square 	<ul style="list-style-type: none"> Repair or replace the hinges
	<ul style="list-style-type: none"> Unit may have been hit by a car 	<ul style="list-style-type: none"> Inspect the counter top Replace if damaged
Doors hang loose.	<ul style="list-style-type: none"> Shoulder screws have come loose and fallen off the hinges 	<ul style="list-style-type: none"> Check for the shoulder screws being in place Repair or replace as needed
Unit works intermittently.	<ul style="list-style-type: none"> Defective PCB Assembly 	<ul style="list-style-type: none"> Replace the PCB Assembly
Doors open as soon as the switch is turned "ON".	<ul style="list-style-type: none"> Bad connection to the electronic eye 	<ul style="list-style-type: none"> Check and tighten connectors
	<ul style="list-style-type: none"> Bad PCB Assembly 	<ul style="list-style-type: none"> Replace PCB Assembly

SERVICE

Troubleshooting Guide Fully Automatic

Issue	Probable Cause	Resolution
Power switch in the "ON" position but the light is not illuminated.	<ul style="list-style-type: none"> • No power to the controller unit <ul style="list-style-type: none"> ∅ Main Circuit breaker is defective or not "ON" ∅ The fuse on the power supply is blown ∅ Main power rocker switch is defective ∅ AC wiring is defective 	<ul style="list-style-type: none"> ∅ Reset or replace the main circuit breaker in the load center ∅ Replace the fuse on the power supply ∅ Test rocker switch with an ohmmeter. Replace if necessary ∅ Check AC wiring for opens. Replace if necessary
	<ul style="list-style-type: none"> • Red Lamp/s not illuminating 	<ul style="list-style-type: none"> • Replace the switch
	<ul style="list-style-type: none"> • The 4 pin power connector to the main PCB assembly is not secure 	<ul style="list-style-type: none"> • Secure the connector/s to the power supply
	<ul style="list-style-type: none"> • The connector/s to the rocker switch are not secure 	<ul style="list-style-type: none"> • Secure the connector/s to the rocker switch
Motor runs but the doors will not open or close.	<ul style="list-style-type: none"> • Linear actuator is slipping 	<ul style="list-style-type: none"> • Clean shaft and adjust tension from the block
Doors do not close completely.	<ul style="list-style-type: none"> • There is dirt and/or lubricant on the drive shaft or linear actuator 	<ul style="list-style-type: none"> • Clean the drive shaft and actuator
	<ul style="list-style-type: none"> • The linear actuator is loose 	<ul style="list-style-type: none"> • Tighten the linear actuator

Drawings

