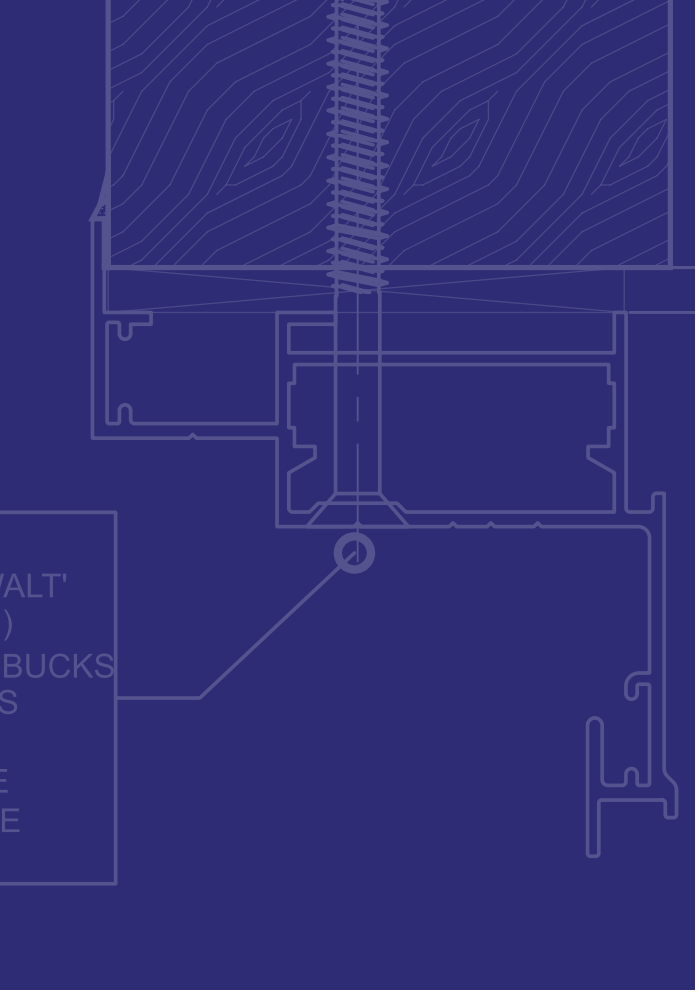

INSTALLATION MANUAL

SERIES MG-450 (FIX WINDOW)

MR-GLASS®

DOORS & WINDOWS MANUFACTURING

PROUD TO BE A U.S. MANUFACTURER

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INTRODUCTION

These instructions are provided as general guide for installation. The Florida Approval FL-40676 LMI & FL-40676 SMI should be used together with these instructions.

Only professionals and experienced installers should attempt to install these windows.

Read all instructions carefully. If in doubt contact Mr-Glass Doors and Windows, we will be happy to assist.

Use the required protection gear and take all necessary safety precautions depending on the type of installation, especially those concerning working on heights.

TYPE OF INSTALLATION

The Fixed Window MG-450 PW features a frontal flange to install on wood buck or especially shaped concrete sill.

With the help of a flush adapter, it can also be installed as a box frame on a flat substrate.

On constructions with extreme wind and water exposure, Mr-Glass recommends that masonry openings be treated with liquid flashing and sealed per standards FMA/AAMA 200-12 and FMA/AAMA/WDMA400-13.

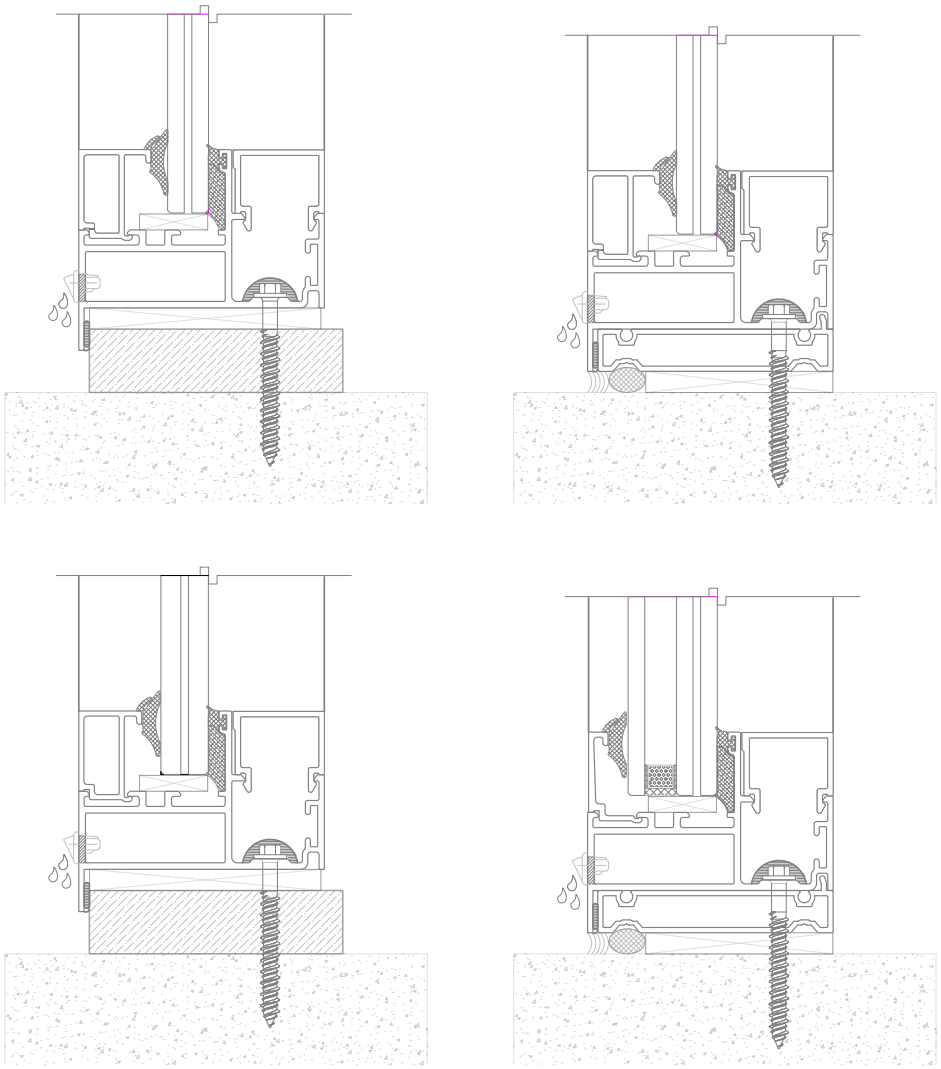


Fig. 1

INSPECTION OF THE OPENING

This is the first step and needs to be executed regardless of the type of installation:

A. Verify that the opening has the correct dimensions, that it is square, plumb and true. No more than 1/4" difference in square (diagonals) will be acceptable. The dimensions of height and width should be within 1/8" of the nominal opening dimension.

B. In case of masonry openings check for cracks or missing mortar mainly in the sill that may eventually allow water and humidity migration. Clean any residue of mortar. Any defect should be addressed and corrected by the trade responsible for the opening.

C. Mr-Glass recommends the sill have a slope to direct the water out of the building. No openings with inverted slope should be accepted. That will compromise the correct drainage and function of the window.

D. Check the shop drawings and verify that the opening preparation follows the specifications.

E. In case the installation is with wood buck, verify that a proper seal has been applied between the wood and the masonry. Also verify that the wood bucks touch each other and that they have been sealed to one another.

F. The wood buck opening dimensions should be verified. It should be plomb, square and true. In case of detecting any defects, do not install until the issue is corrected.

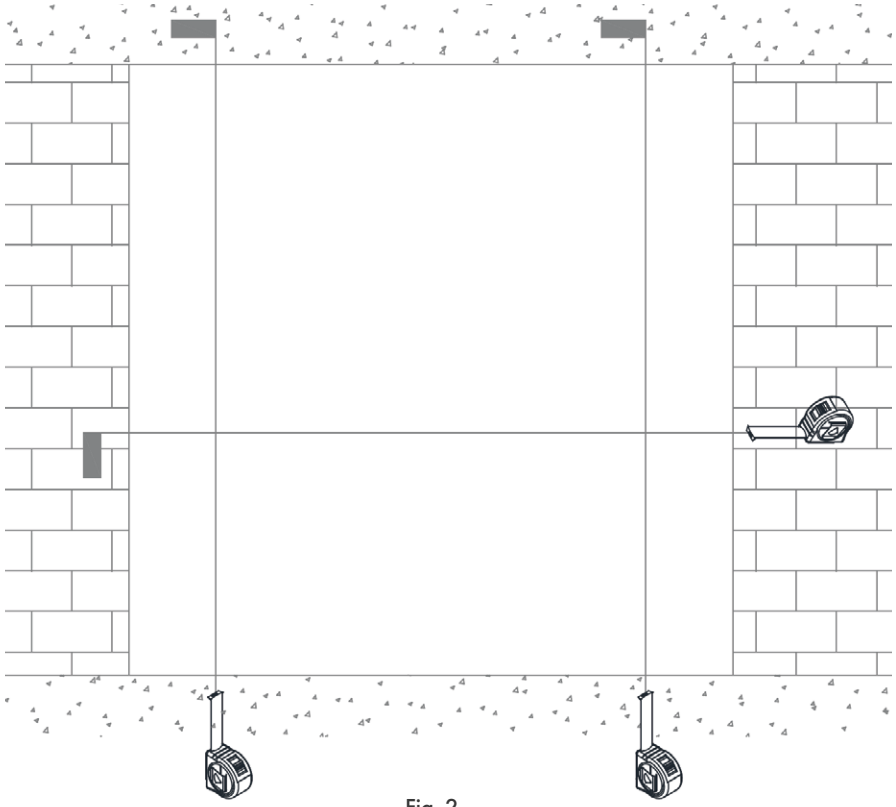


Fig. 2

WOOD BUCK INSTALLATION

In case the wood buck installation falls in the installers scope:

A. Use only pressure treated wood buck of appropriate dimensions.

B. The wood buck should be attached to the masonry independently of the window. Quantity and anchor disposition will be according to the engineer's or shop drawings' specifications.

C. Prior to installation of the buck apply a 3/8" bead of silicone on the face of the wood buck around the entire perimeter (see figure 4) This seal will be smashed to the masonry opening when the wood buck is applied to it.

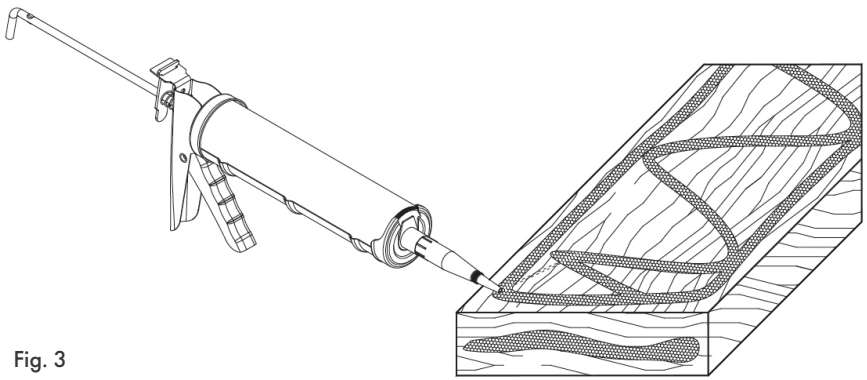


Fig. 3

D. When installing the bucks, make sure that they align with the concrete sill (if it is the case) creating a continuous, planar mounting surface for the flanges.

E. Once the bucks are attached to the masonry apply a bead of silicone to the exterior perimeter between the wood, the masonry, and into the joinery between the end of the bucks. Tool the sealant ensuring its continuity.

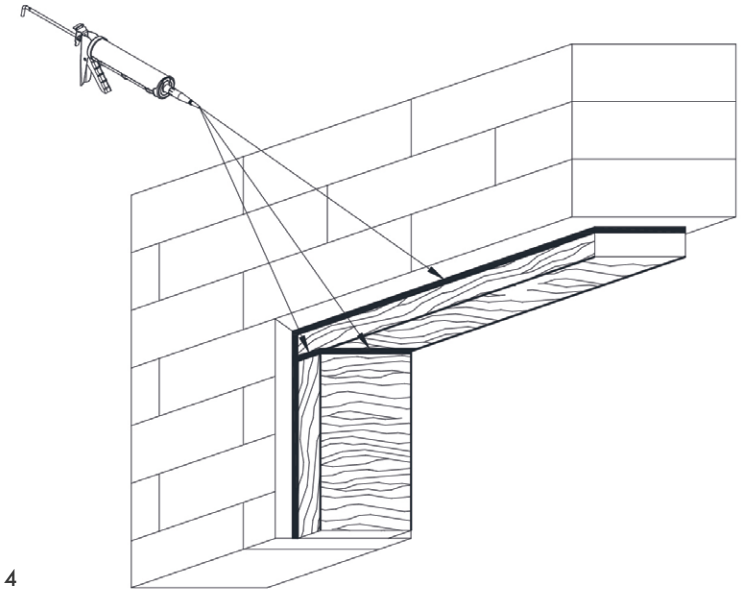


Fig. 4

F. The wood buck opening dimensions should be verified. It should be plumb, square and true. In case of detecting any defects do not install until the issue is corrected.

WINDOW INSTALLATION ON WOOD BUCK

A. Carefully remove any residues from the face of the bucks and concrete sill (if that is the case).

B. Thoroughly inspect the back of the flanges of the window as well as the corners. It may occur that they are misaligned, or a seal is damaged due to manipulation and transport movements. Ensure that the connection between flanges is properly sealed and that they are properly aligned.

C. Before inserting the window frame into the opening, thoroughly clean the interior of the flanges and apply a generous bead of silicone all around the flange perimeter where it will be in contact with the wood buck.

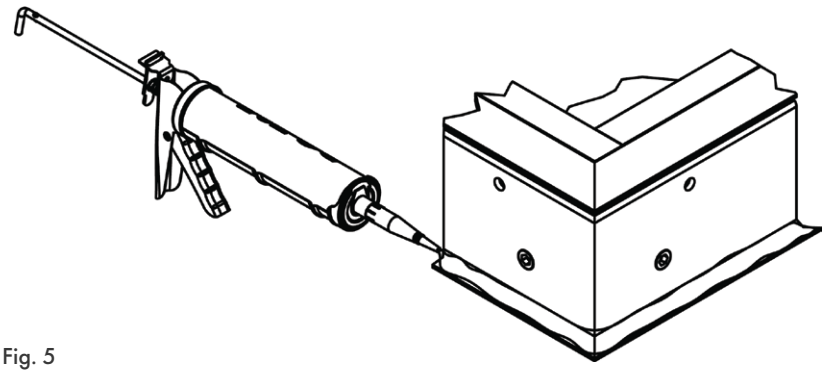


Fig. 5

D. Immediately after, insert the window into the opening. Do not allow for the silicone to start curing which will occur within a few minutes from application. Insert the shims as required to make the window plumb. To hold it in place use temporary screws to fix the window to the wood buck.

E. Use the appropriate anchor type and length per Florida Approval. Ensure that each anchor is properly shimmed before applying full torque. See in the next section the anchor length that is required to ensure that the appropriate embedment is being provided.

F. Do not install the cover until the building official has inspected and approved the installation.

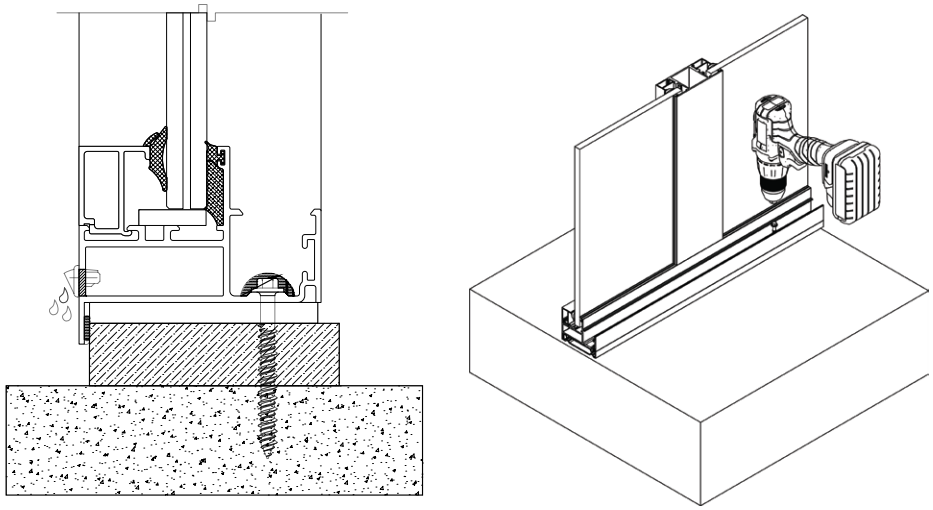


Fig. 6

G. Tool the overflowing silicone from the flange extending it over the buck. Make sure that the exposed surface of the wood buck is covered with silicone. Apply extra silicone if needed (this does not apply to openings treated with liquid flashing).

H. MG-450 is provided with two drainage valves located at the window sill. Make sure that they are free from debris or silicone that prevents the valves to drain effectively.

WINDOW INSTALLATION WITH FLUSH ADAPTER (BOX FRAME)

A. Carefully remove any residues from the masonry opening and concrete sill (if needed).

B. Thoroughly inspect the back of the flanges of the window as well as the corners. In case of misalignment, or a seal is damaged due to manipulation or transport movements. Ensure that the connection between flanges is properly sealed and that they are properly aligned. Apply a generous silicone bead all along the flange and around the window.

C. Clean the face of the flush adapter that will be in contact with the interior of the flange of the window and put together using # 8 screws.

D. Insert the frame in the opening, you may temporarily hold it with temporary screws. Make it plumb, leveled and squared. Place shims where required. Use the appropriate anchor type and length per Florida Approval.

E. Use the appropriate anchor type and length per Florida Approval. Ensure that each anchor is properly shimmed before applying full torque. See in the next section the anchor length that is required to ensure that the appropriate embedment is being provided.

F. Do not install the cover until the building official has inspected and approved the installation.

G. To seal the perimeter use open cell backer rod as required. Apply sealant all around and extend the seal up and out to cover the flange 1/4".

H. MG-450 is provided with two drainage valves located at the window sill. Make sure that they are free from debris or silicone that prevents the valves to drain effectively.

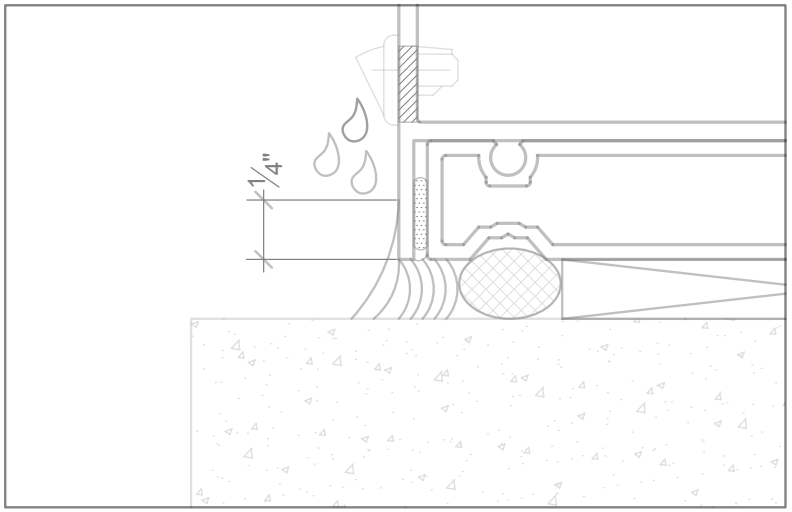


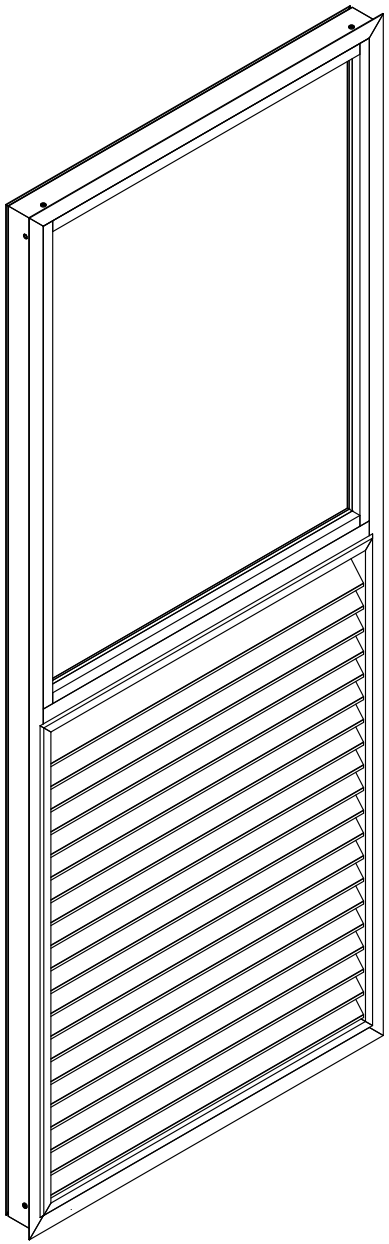
Fig. 7

LOUVERS (MG-450)

MG-450 is a fix frame window that can be supplied with one glass or multiple lites separated by true dividers. It can also include Fix Louvers and a combination of louvers and glass.

Note that at intermediate locations, an additional anchor cluster is required per Florida Approval.

For quantity and spacing see Florida Approval.



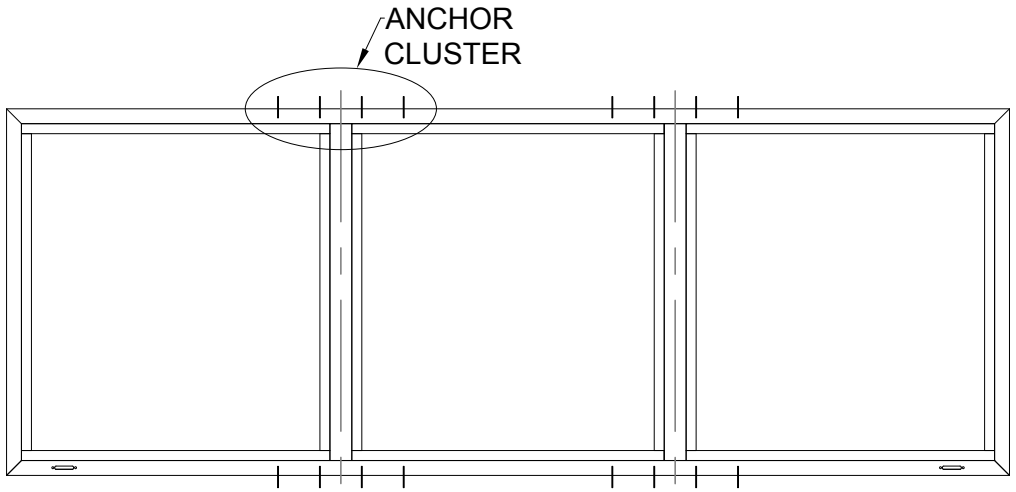


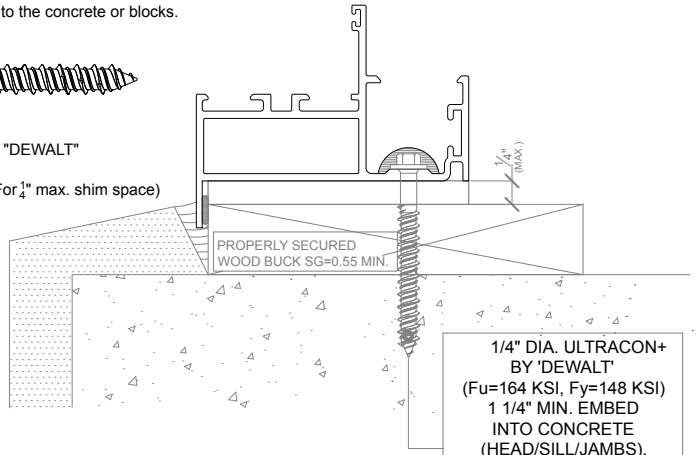
Fig. 8

ANCHORS (MG-450)

a) THRU "1 BY" and into the concrete or blocks.
ULTRACON

Ø 1/4" ULTRACON+ BY "DEWALT"

2 3/4" Minimun Length (For 1/4" max. shim space)

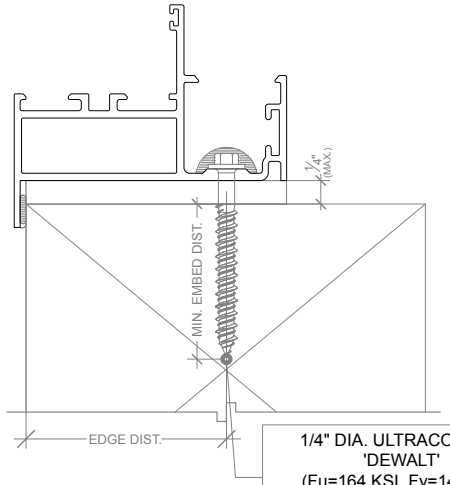


1/4" DIA. ULTRACON+
BY 'DEWALT'
(Fu=164 KSI, Fy=148 KSI)
1 1/4" MIN. EMBED
INTO CONCRETE
(HEAD/SILL/JAMBS),
1-1/4" MIN. EMBED
INTO BLOCKS.
1" MIN. EDGE DISTANCE
INTO WOOD STRUCTURE
2-1/2" EDGE DISTANCE INTO
CONCRETE AND BLOCKS

b) INTO "2 BY" wood buck or wood structures.
ULTRACON

Ø 1/4" ULTRACON+ BY "DEWALT"

2 1/4" Minimun Length (For 1/4" max. shim space)

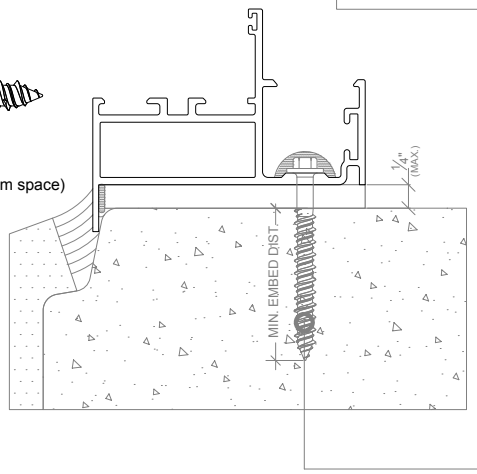


1/4" DIA. ULTRACON+ BY
'DEWALT'
(Fu=164 KSI, Fy=148 KSI)
1 1/2" MIN. PENETRATION
INTO WOOD
(HEAD/JAMBS),
1" MIN. EDGE DISTANCE
INTO WOOD STRUCTURE

c) Into concrete or blocks.
ULTRACON

Ø 1/4" ULTRACON+ BY "DEWALT"

2 1/4" Minimun Length (For 1/4" max. shim space)



1/4" DIA. ULTRACON+
BY 'DEWALT'
(Fu=164 KSI, Fy=148 KSI)
1 1/2" MIN. EMBED
INTO CONCRETE
(HEAD/SILL/JAMBS),
1-1/4" MIN. EMBED
INTO GROUT-FILLED
BLOCKS (JAMBS).
2-1/2" MIN. EDGE DISTANCE
INTO CONCRETE AND
BLOCKS

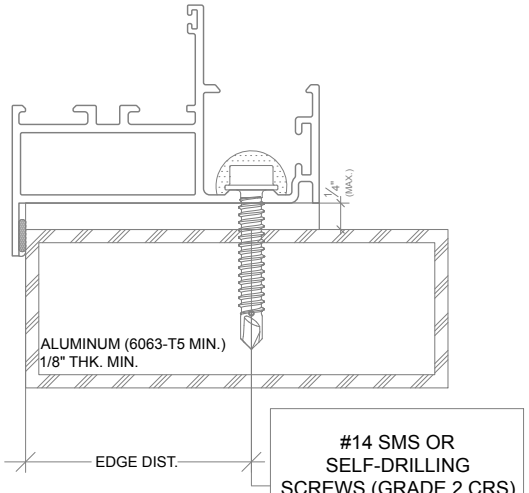
Fig. 9

ANCHORS (MG-450) (CONT.)

d) Into Metal Structures. (Aluminum)

#14 SMS OR SELF-DRILLING

1 1/2" Minimun Length (For 1/4" max. shim space)



e) Into Metal Structures. (Steel)

#14 SMS OR SELF-DRILLING

1 1/2" Minimun Length (For 1/4" max. shim space)

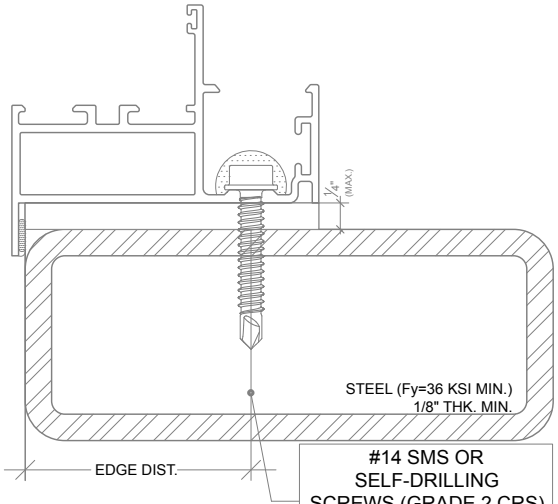


Fig. 10

WINDOW CLEANING

A. Once the installation is complete proceed to clean the window. Mr-Glass recommends using water and mild soap or detergent.

B. Consult Service Bulletin 01-2021 "Maintenance of coated surfaces" and 02-2021 "Glass Cleaning Recommendations".

C. Do not use sharp objects that may damage the finish in the aluminum or scratch the glass.

D. Remove all temporary seals and logos.

E. Clean the work area and dispose of all the packaging residues.

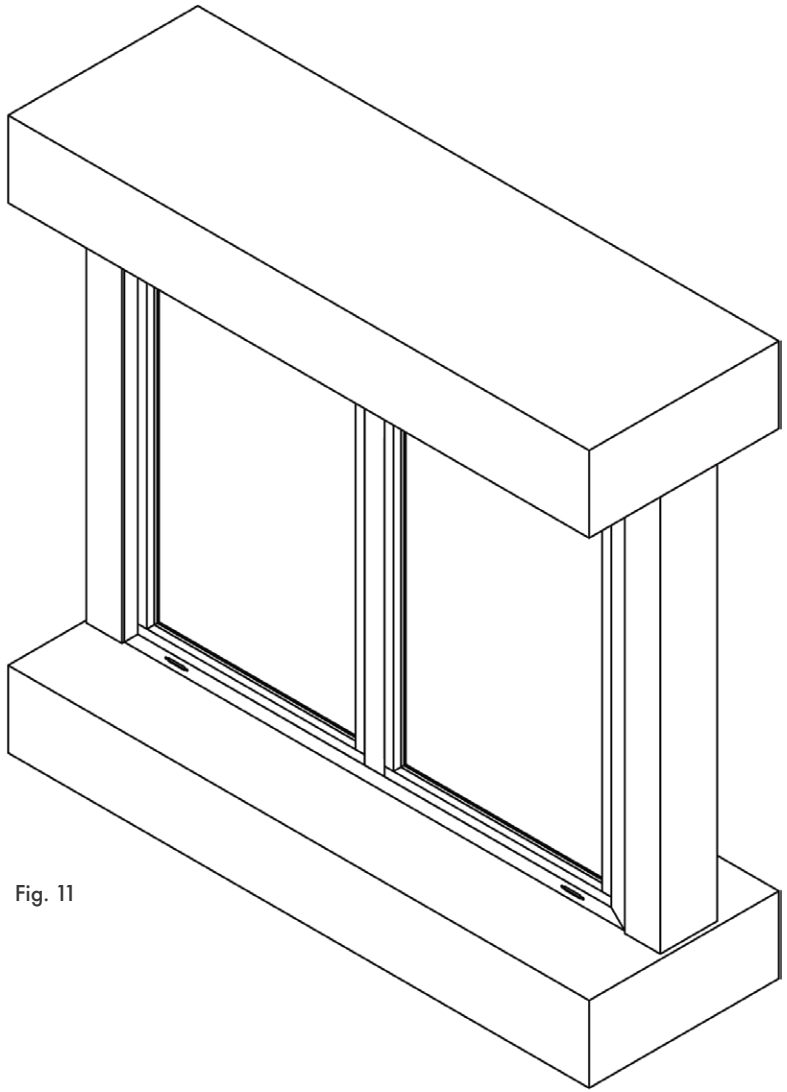


Fig. 11