

Manufacturer's Handbook

*All P.V.C Welded
Patio Door Frame S-8000
(Used for S-8800 & 8750)*



CONFIDENTIAL

The contents of this document and all revisions thereof are confidential and subject to the world-wide copyrights of P.H.-Tech Inc. Any use, reproduction or disclosure thereof without the written permission of P.H.-Tech Inc. is prohibited.

Specific details of all the intellectual property rights relating to this document and the systems and components shown are available from P.H.-Tech Inc., P.O. Box 220, Levis, Quebec Canada G6V 6N8.



Table of Contents

REVISION:

PAGE:
i

SECTION 1 INTRODUCTION

1.1 Introduction

1.1.1 All P.V.C. Welded Frame Section.....1

1.2 Catalog of Parts

1.2.1 Profiles for the Frame.....2
1.2.2 Required Hardware for the Frame.....3
1.2.3 Sealant and Staple.....5

1.3 Assembly Drawings

1.3.1 Sill Assembly Section.....6
1.3.2 Head Assembly Section.....7
1.3.3 Jamb Assembly Section, Operating Panel Side.....8
1.3.4 Jamb Assembly Section, Fixed Panel Side.....9

SECTION 2 MANUFACTURING

2.1 Manufacturing

2.1.1 Introduction to Manufacturing Instructions.....10
2.1.2 45° Miter Cut of the Frame.....11
2.1.3 Frame Drainage.....12
2.1.4 Jamb Track Cut-out.....15
2.1.5 Bottom Fixed Support Panel Cut-out.....16
2.1.6 Top Fixed Support Panel Cut-out.....17
2.1.7 Sill Protector Cut-out.....18

2.2 Assembly Procedure

2.2.1 Introduction to Assembly Procedure.....19
2.2.2 Welding of Profiles.....20
2.2.3 Corner Cleaning of the Frame Profiles.....21
2.2.4 Head Screen Track Installation.....22
2.2.5 Operating Support Panel and Dust Plugs Installation.....23
2.2.6 Jamb Track Installation.....24
2.2.7 Head Track Installation.....25
2.2.8 Foam Tape Installation.....26
2.2.9 Bottom Fixed Support Panel Installation.....27
2.2.10 Fixed Panel Installation.....28
2.2.11 Top Fixed Support Panel Intallation.....29
2.2.12 Molded Fixed Panel Anchor Block Installation.....30
2.2.13 Sealing Jamb, Fixed Side.....31
2.2.14 Fixed Panel, Final Installation.....32
2.2.15 Sealing Fixed Panel.....33
2.2.16 Operating Panel Installation.....34
2.2.17 Sill Protector Installation.....35
2.2.18 Aluminum Outside Sill Cladding Installation.....36
2.2.19 Head Weatherseal Installation.....37
2.2.20 Sash Stopper Installation.....38
2.2.21 Handle and Mortise Lock Installation.....39
2.2.22 Metal Anchors Installation.....40



Table of Contents

REVISION:

PAGE:

ii

2.3 Bill of Material

2.3.1 Required Material for Two (2) Panel Door.....41
2.4 Standard Dimensions

2.4.1 Standard Widths for Two (2) Panel Door.....42
2.4.2 Standard Heights for Two (2) Panel Door.....43

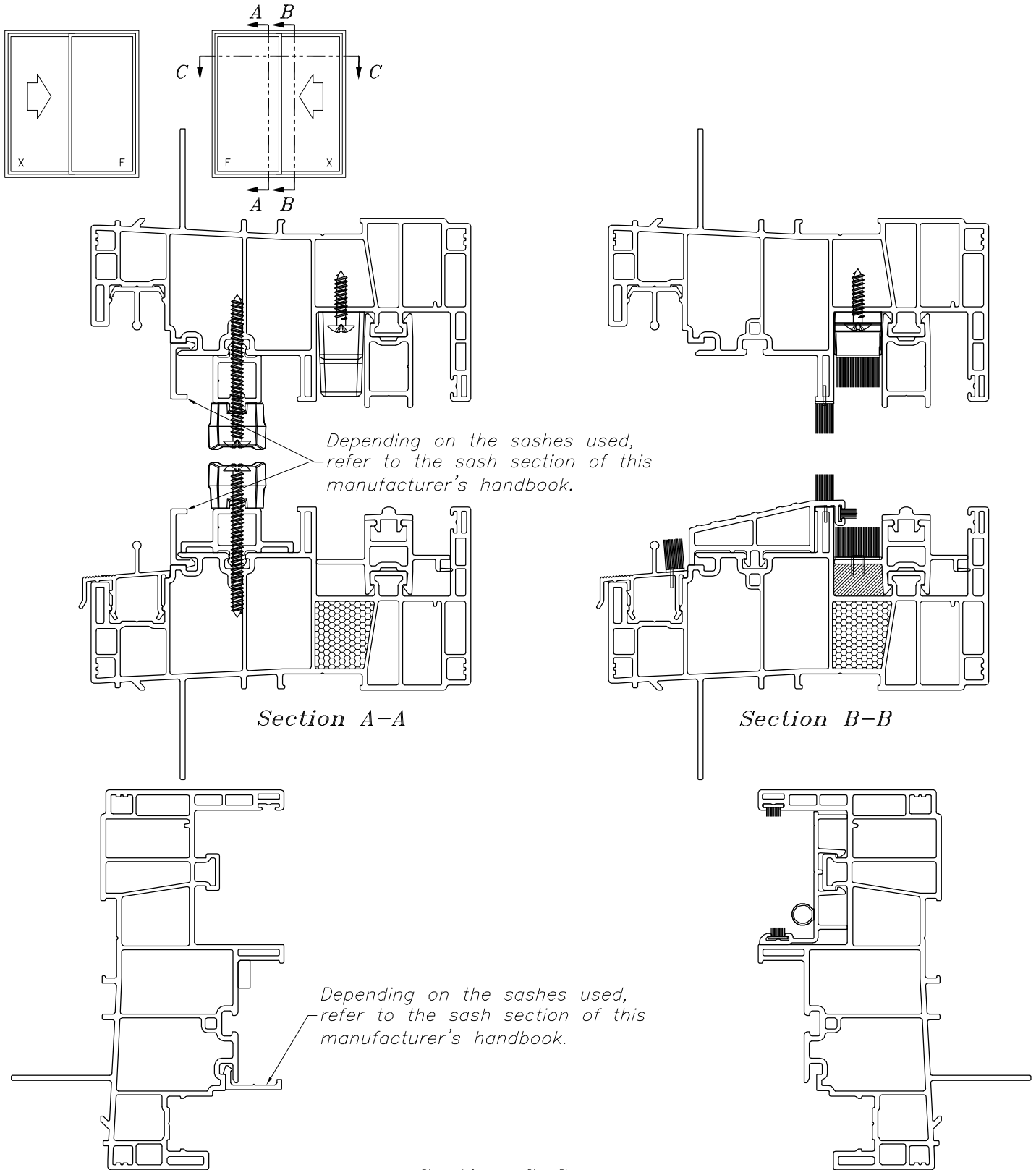
1.1 Introduction

REVISION:
2012/02/02

PAGE:
1

1.1.1 All P.V.C. Welded Frame Section

Two (2) Panel Patio Door



1.2 Catalog of Parts

REVISION:

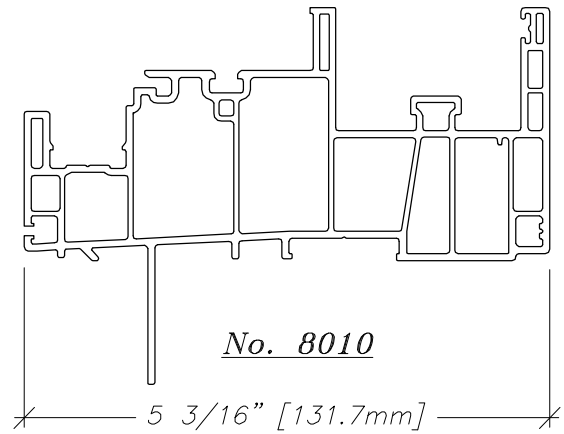
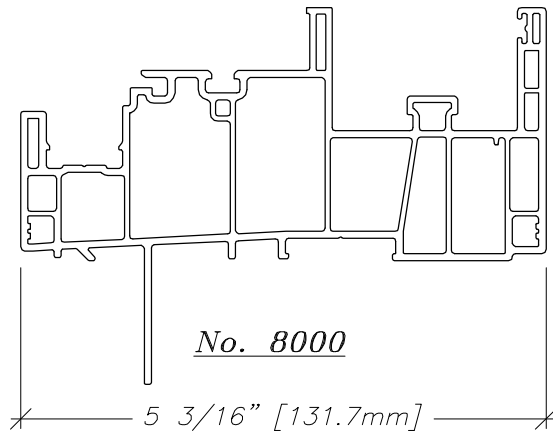
2011/04/28

PAGE:

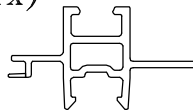
2

1.2.1 Profiles for the Frame

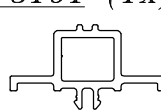
Main Frame (Sold in 16' [4.88m] length)



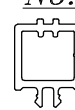
Operating Support Panel
No. 8021 (1x)



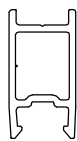
Bottom Fixed Support Panel
No. 8001/8101 (1x)



Top Fixed Support Panel
No. 8022/8122 (1x)



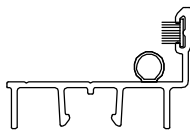
Head Track No. 8002 (1x)



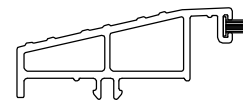
Head Screen Track
No. 8012 (1x)



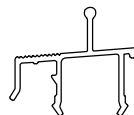
Jamb Track No. 8004 (1x)
-Weatherstrip No. 9571
(Schlegel No. PB-8420-270) (1x)



Sill Protector No. 8011/8111(1x)
-Weatherstrip No. 8988
(Schlegel No. FS-7630-187) (1x)



Aluminum Outside Sill Cladding
No. 9791 (1x) (Sold in 16' [4.955m] length)



Aluminum Rolling Rail No. 9790 (1x)
(Sold in 16' [5.400m] length)



1.2 Catalog of Parts

REVISION:

2011/04/28

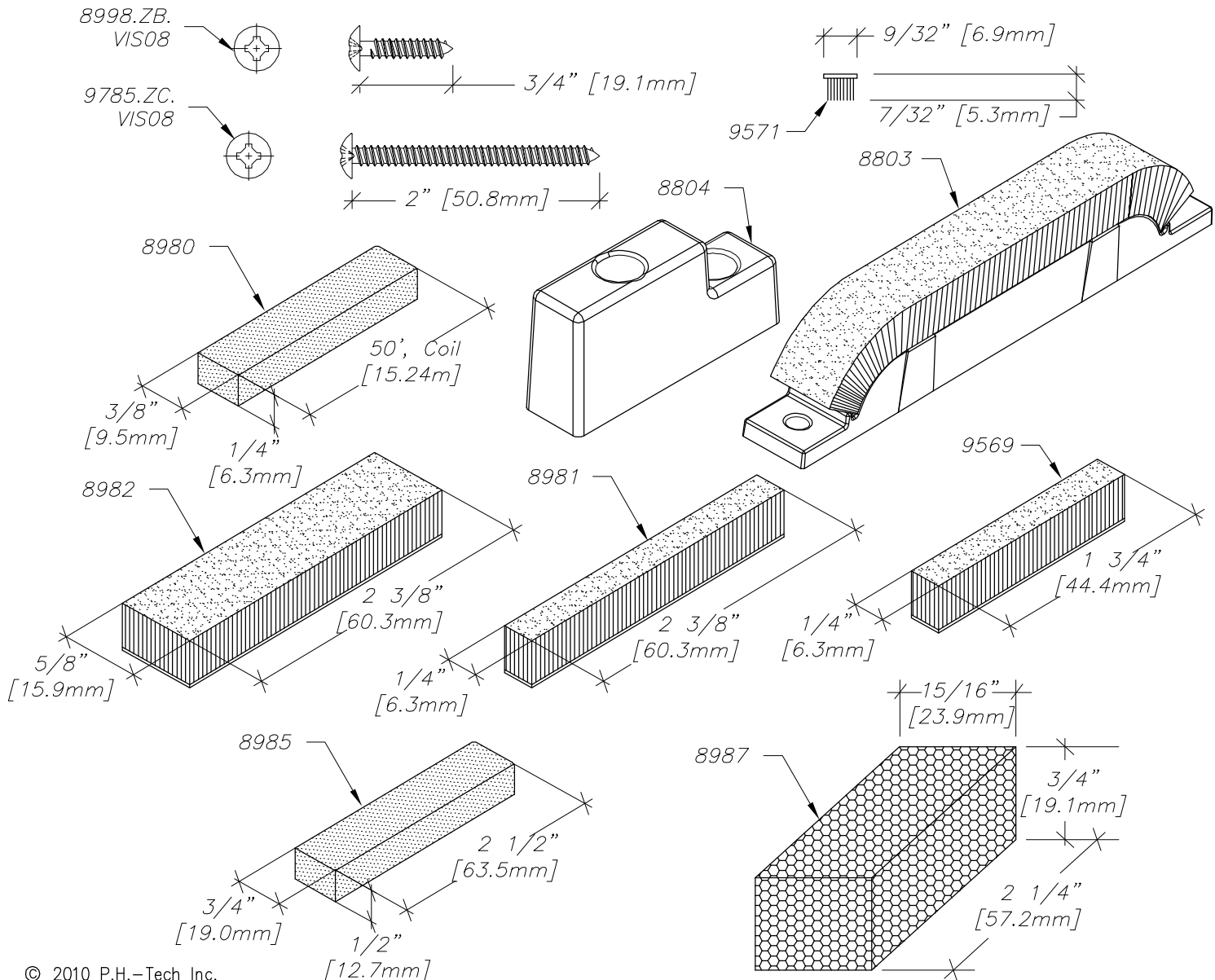
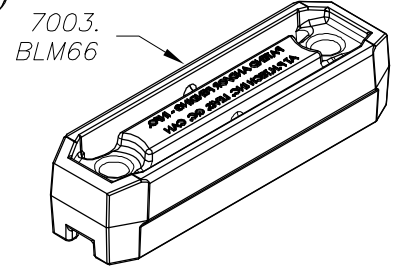
PAGE:

3

1.2.2 Required Hardware for the Frame

Hardware List

- Molded fixed panel anchor block No. 7003.BLM66 (2x)
- Head weatherseal No. 8803 (1x)
- Sash stopper No. 8804 (1x)
- Sill dust plug No. 8982 (1x)
- Foam tape No. 8980 (50', coil)
- Interlock dust plug No. 8981 (2x)
- Sill dust plug No. 8982 (1x)
- Sill foam block No. 8985 (1x)
- Insect stop foam No. 8987 (1x)
- Insect stop No. 9569 (1x)
- Weatherstrip No. 9571 (Schlegel No. PB-8420-270) (Coil)
- No. 8 x 3/4", truss head, Quadrex, screw No 8998.ZB.VIS08 (4x)
- No. 8 x 2", pan head, Quadrex, wood screw No 9785.ZC.VIS08 (8x)



1.2 Catalog of Parts

REVISION:

PAGE:

4

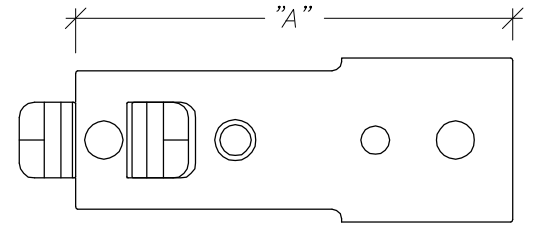
1.2.2 Required Hardware for the Frame (Continued)

Metal Anchor (option)

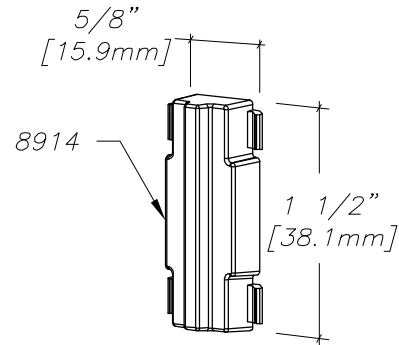
No. 9832: A = 7 3/4" [197mm]

No. 9858: A = 2 7/8" [74mm]

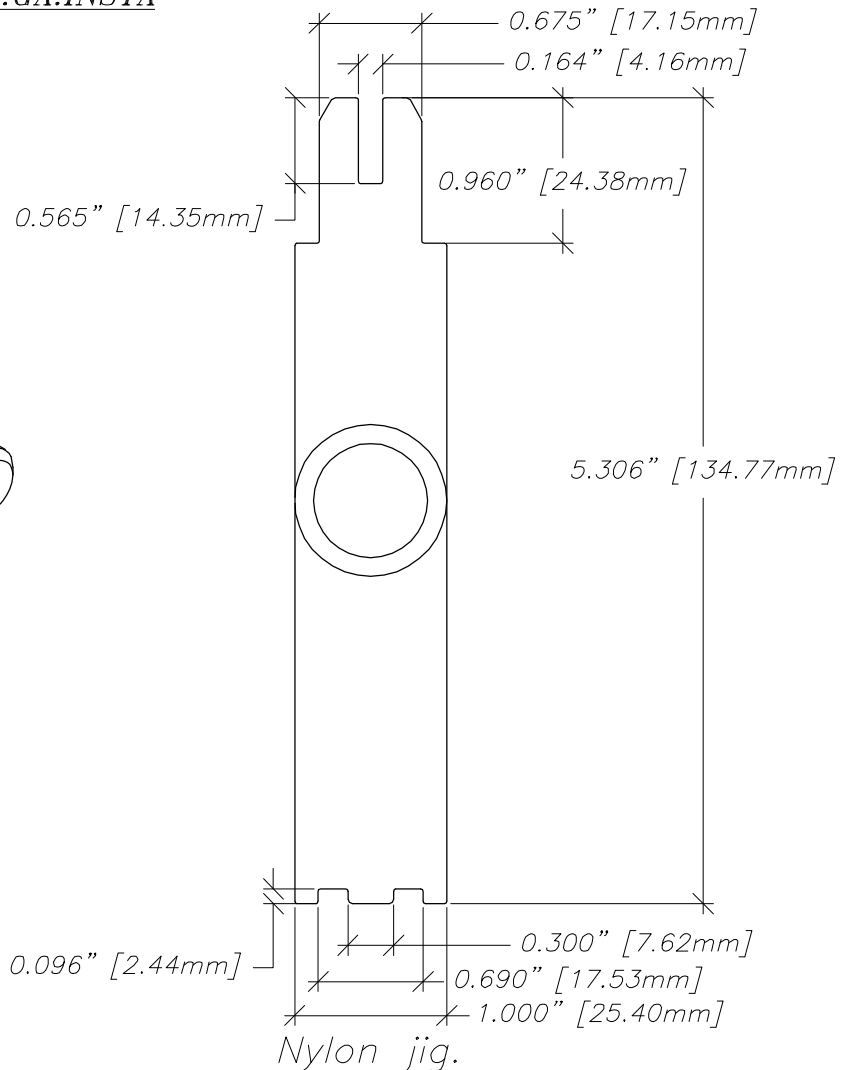
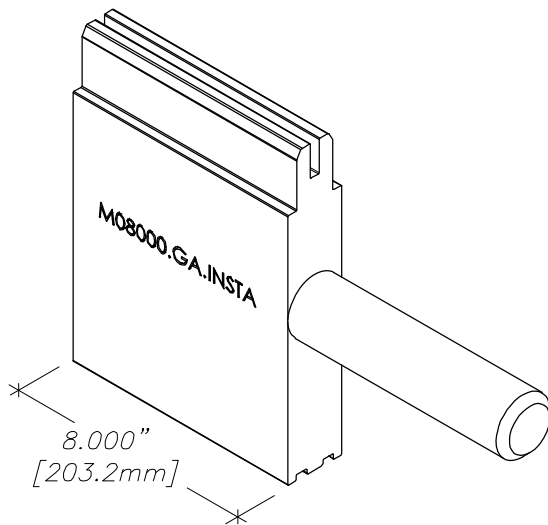
No. 9859: A = 4 3/4" [120mm]



Screen Shim Keeper (option) No. 8914



Installation JIG No. M08000.GA.INSTA



1.2 Catalog of Parts

REVISION:

PAGE:

5

1.2.3 Sealant and Staple

Sealant and Staple

<i>Description</i>	<i>Part No.</i>	<i>Manufacturer</i>
¹ Sealant PVC compatible	Variable	Variable
^{*2} Staple, 1/4", galvanized	4097	OMER

* Note : Your stapler 4097 must be modified to use with the aluminum and PVC materials.

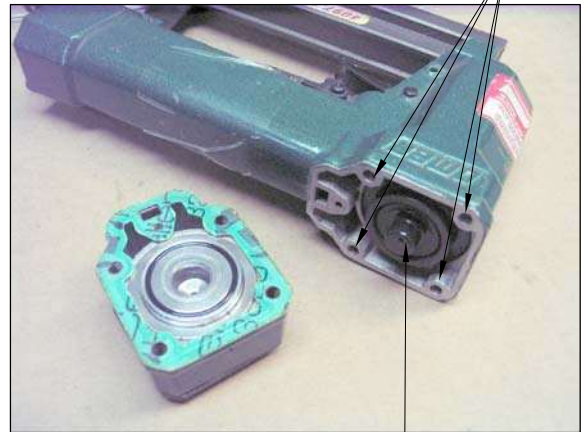
The modification is: Cut the driver equal to the nose of the stapler, when the driver is at the end of travel.

2- Unscrew the nose

1- Open the store



3- Unscrew the head

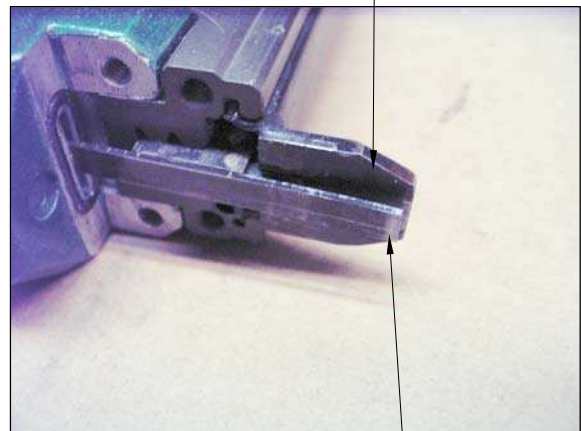


4- Push the piston

5- Close the store, trace and cut the driver equal to the nose.



Nose



Driver

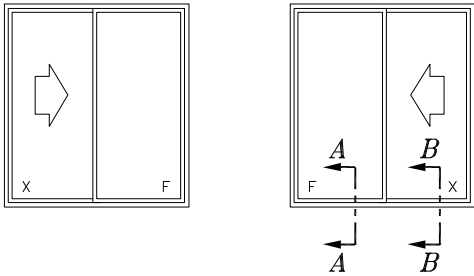
1.3 Assembly Drawings

REVISION:
2012/02/02

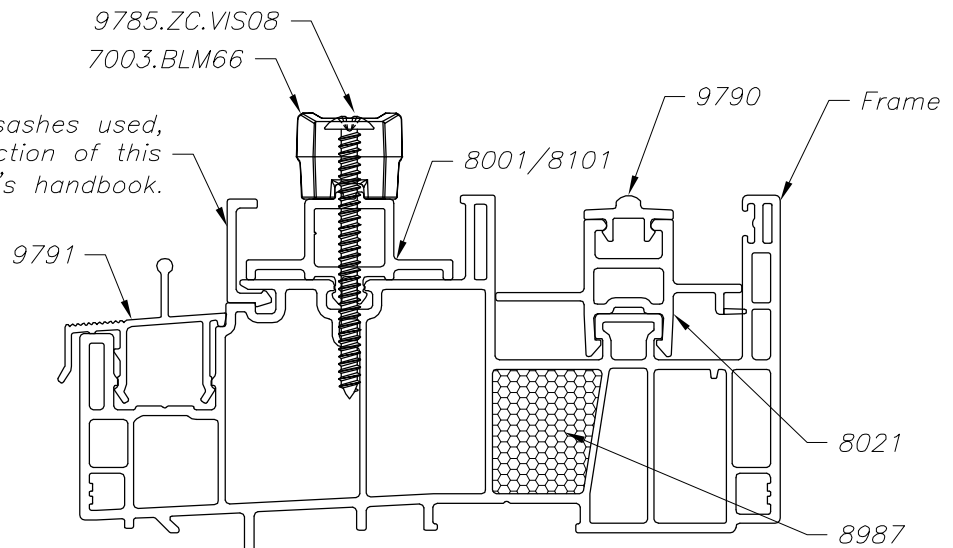
PAGE:
6

1.3.1 Sill Assembly Section

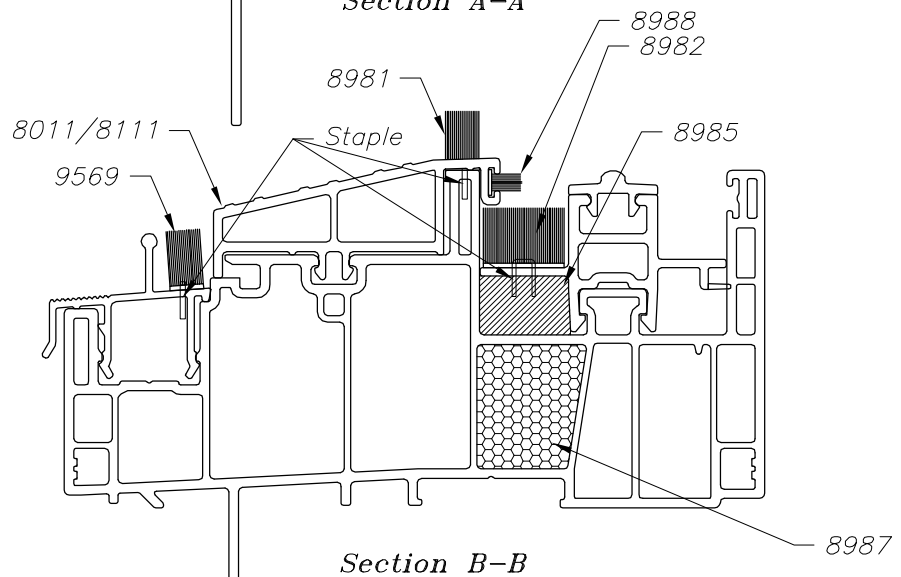
Two (2) Panel Patio Door



Depending on the sashes used,
refer to the sash section of this
manufacturer's handbook.



Section A-A



Section B-B

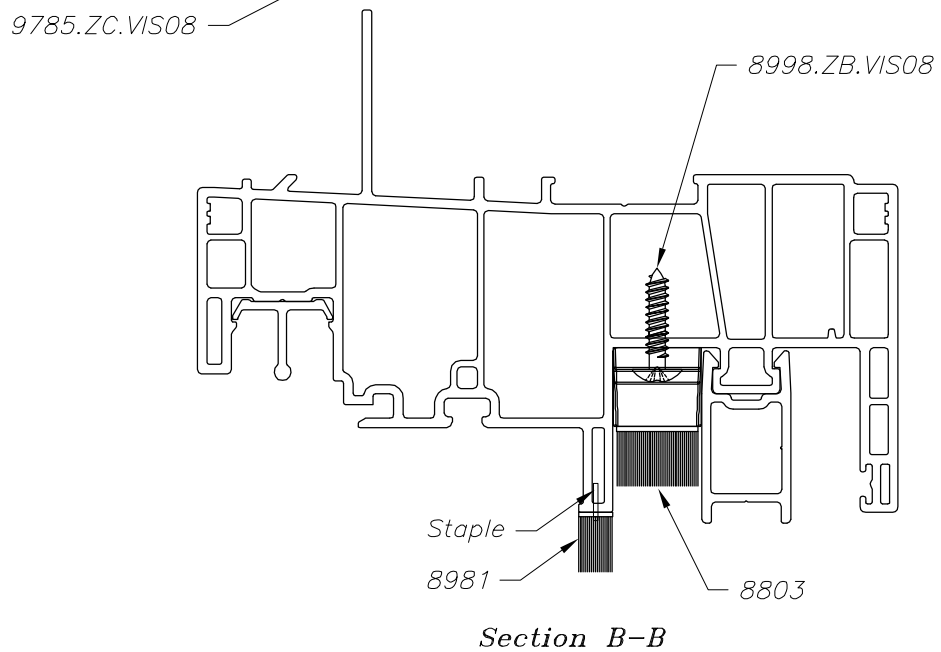
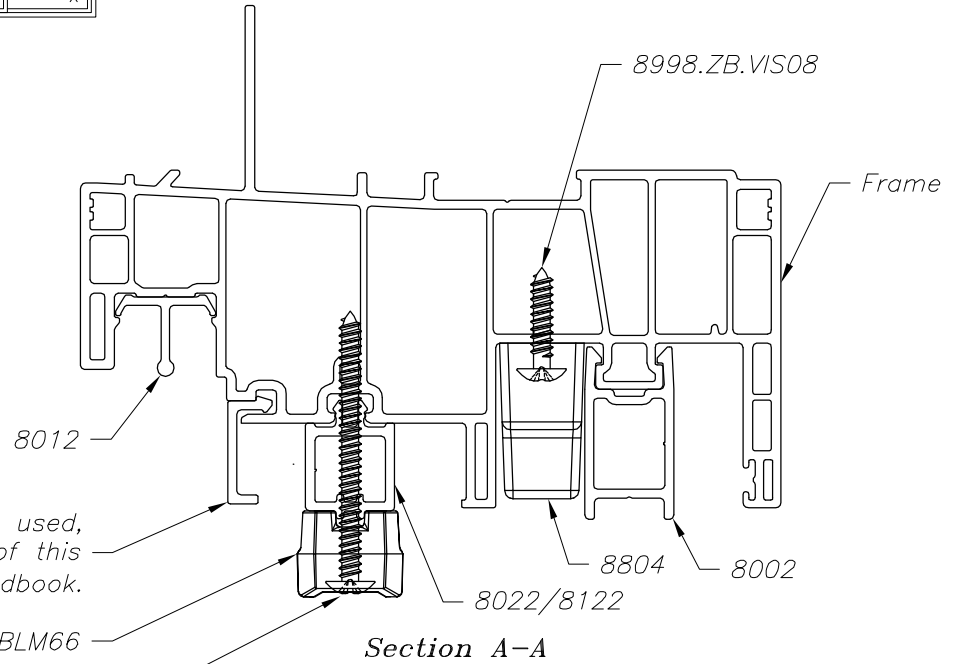
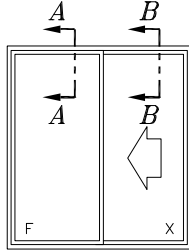
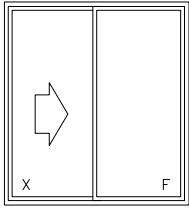
1.3 Assembly Drawings

REVISION:
2011/04/28

PAGE:
7

1.3.2 Head Assembly Section

Two (2) Panel Patio Door



1.3 Assembly Drawings

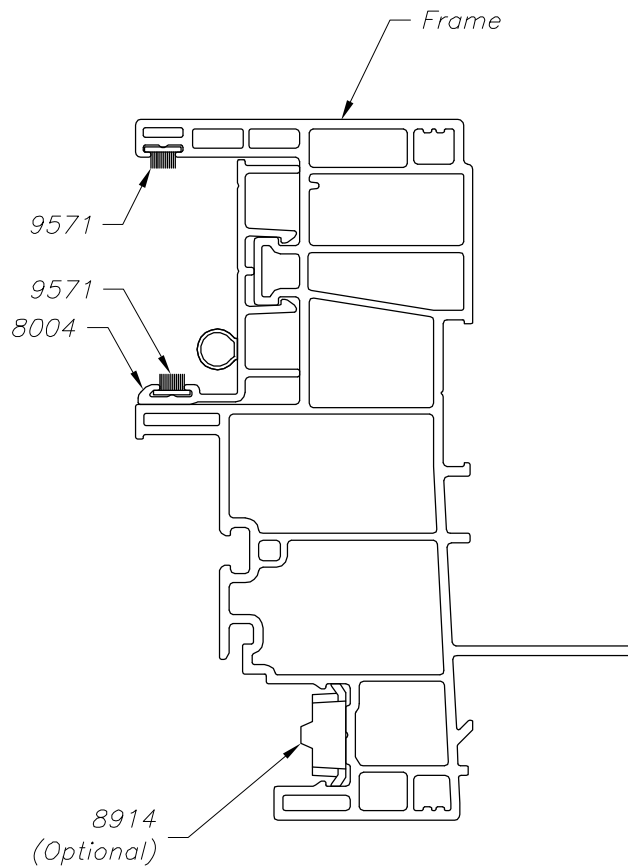
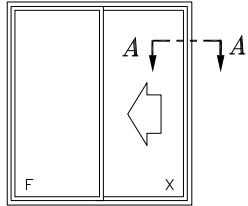
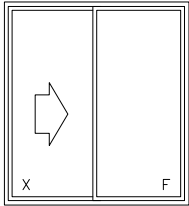
REVISION:

PAGE:

8

1.3.3 Jamb Assembly Section, Operating Panel Side

Two (2) Panel Patio Door



Section A-A

1.3 Assembly Drawings

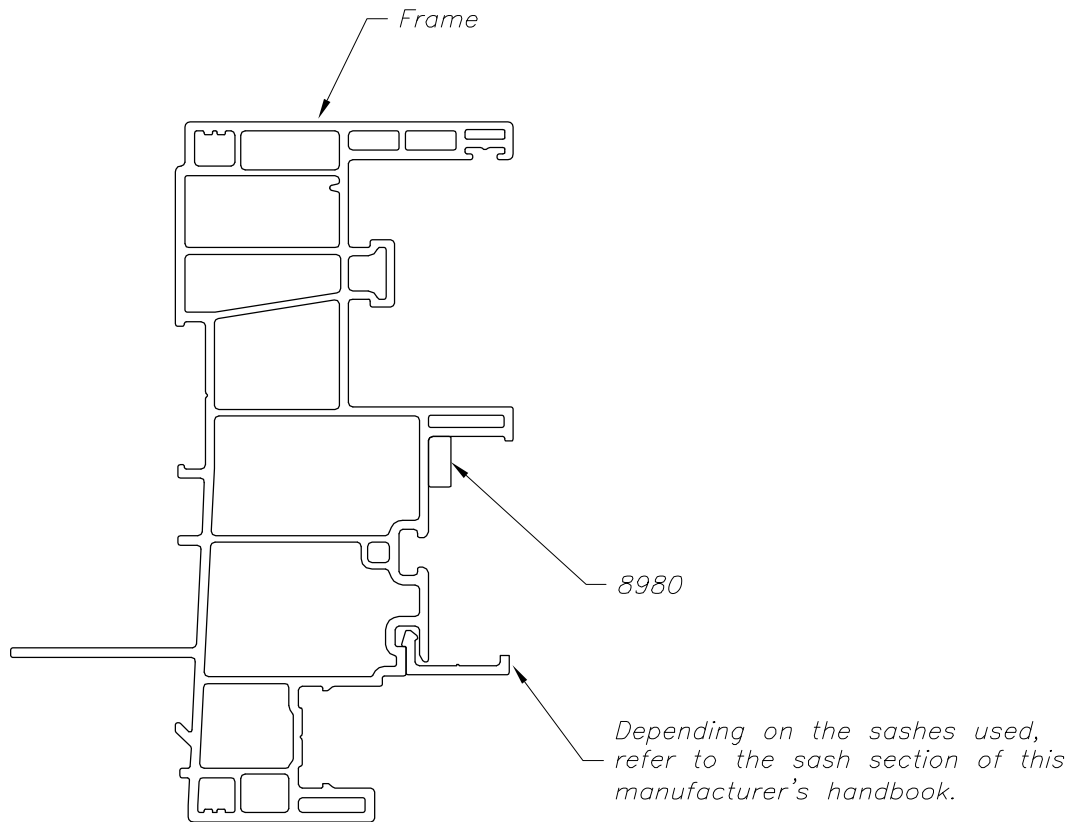
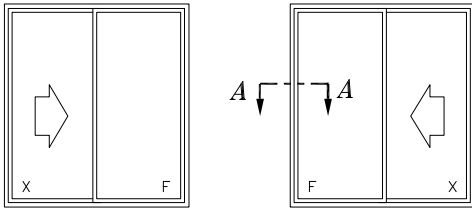
REVISION:

PAGE:

9

1.3.4 Jamb Assembly Section, Fixed Panel Side

Two (2) Panel Patio Door



Section A-A

2.1 Manufacturing

REVISION:

PAGE:

10

2.1.1 Introduction to Manufacturing Instructions

This section describes procedures, step by step, for all P.V.C. welded patio door frame manufacturing. All fabrication procedures that are different from those mentioned in this document may alter performances and/or the quality of finished product.

Note:

Depending on the sash used, refer to the sash section of this manufacturer's handbook for the manufacturing instructions.

2.1 Manufacturing

REVISION:

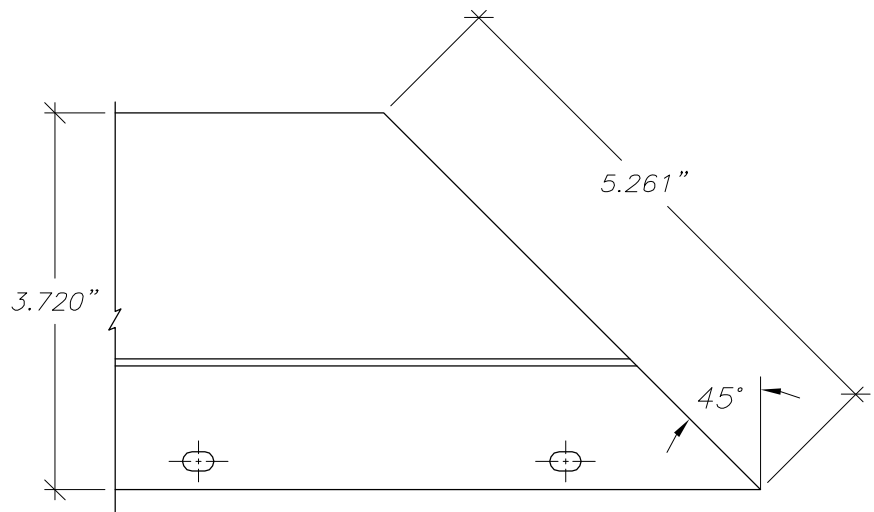
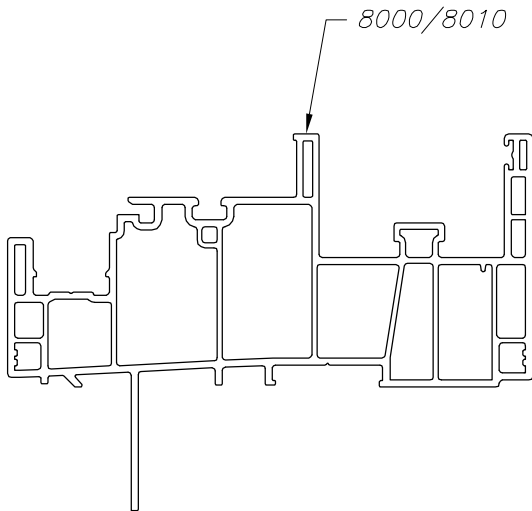
10/12/17

PAGE:

11

2.1.2 45° Miter Cut of the Frame

- Refer to the Cutting Size section of this manual. (Section 2.4.1 and 2.4.2)
- Adjust the saw to the required cutting dimension.
- Use special jigs to maintain profiles in proper position. Consult P.H. Tech Technical Department if required.
- Firmly hold profiles when cutting.
- Cut two (2) jambs (left and right) and two (2) horizontal (top and bottom) frame profiles to the required dimensions.



2.1 Manufacturing

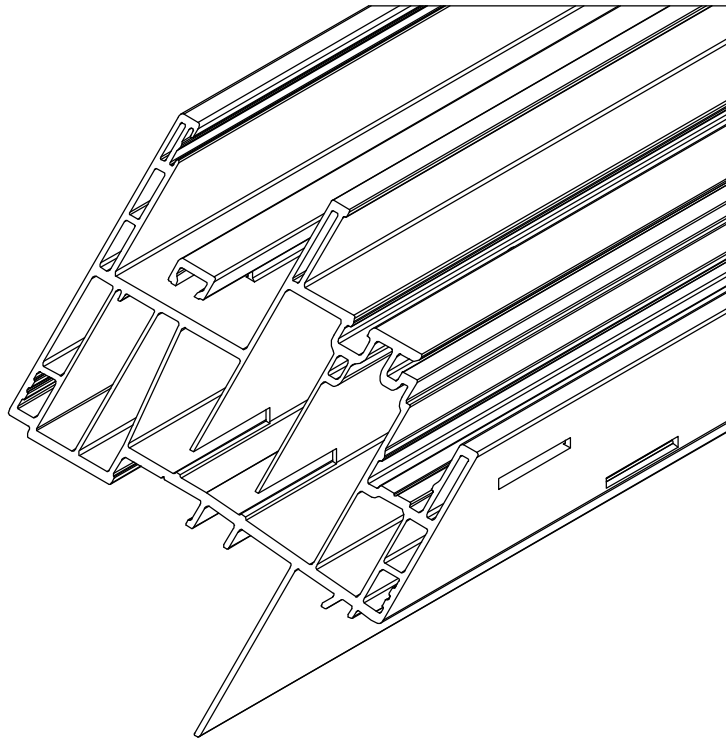
REVISION:

PAGE:

12

2.1.3 Frame Drainage

- *Only the lower profile (sill) of the frame must be machined.*
- *Machine drain holes on the frame as per drawing specifications on the two (2) next pages.*



Operation(s) to do at both ends.

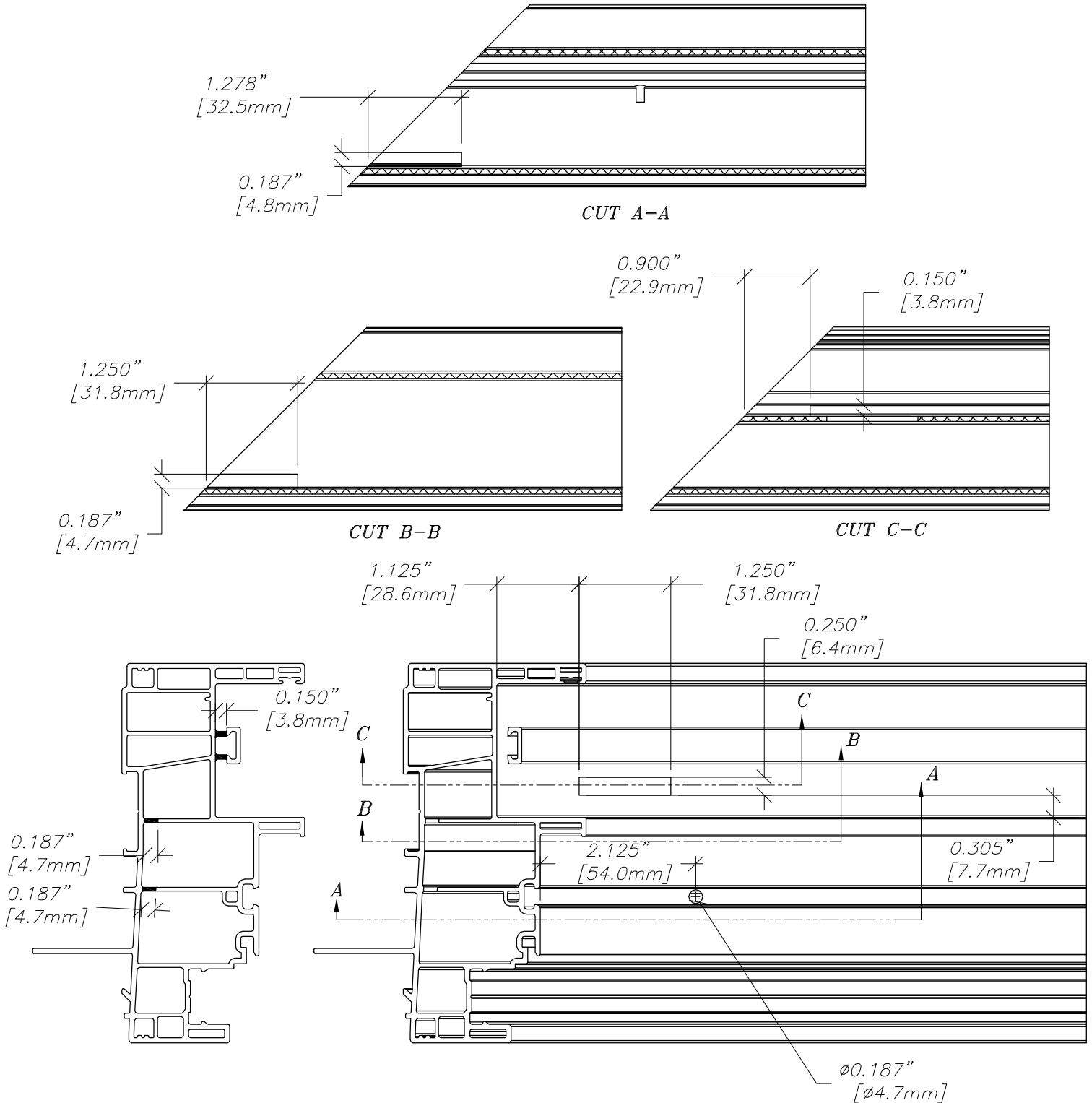
2.1 Manufacturing

REVISION:

PAGE:

13

2.1.3 Frame Drainage (Continued)



Operation(s) to do at both ends.

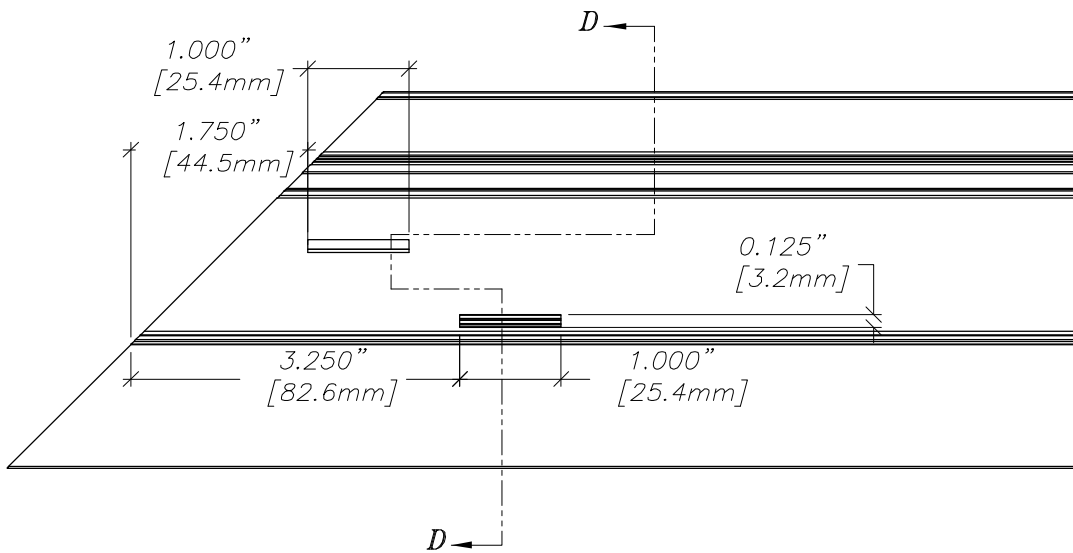
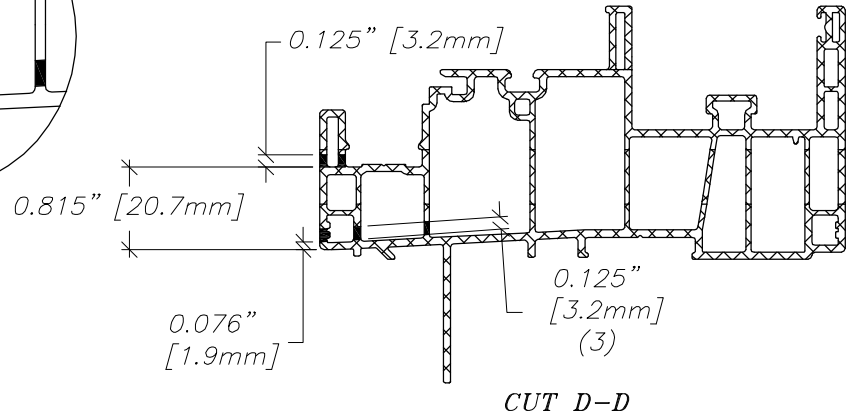
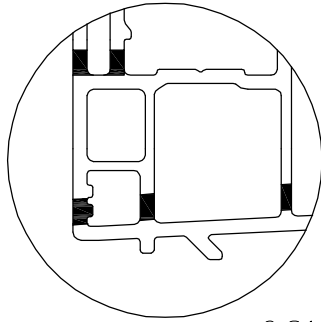
2.1 Manufacturing

REVISION:

PAGE:

14

2.1.3 Frame Drainage (Continued)



Operation(s) to do at both ends.

2.1 Manufacturing

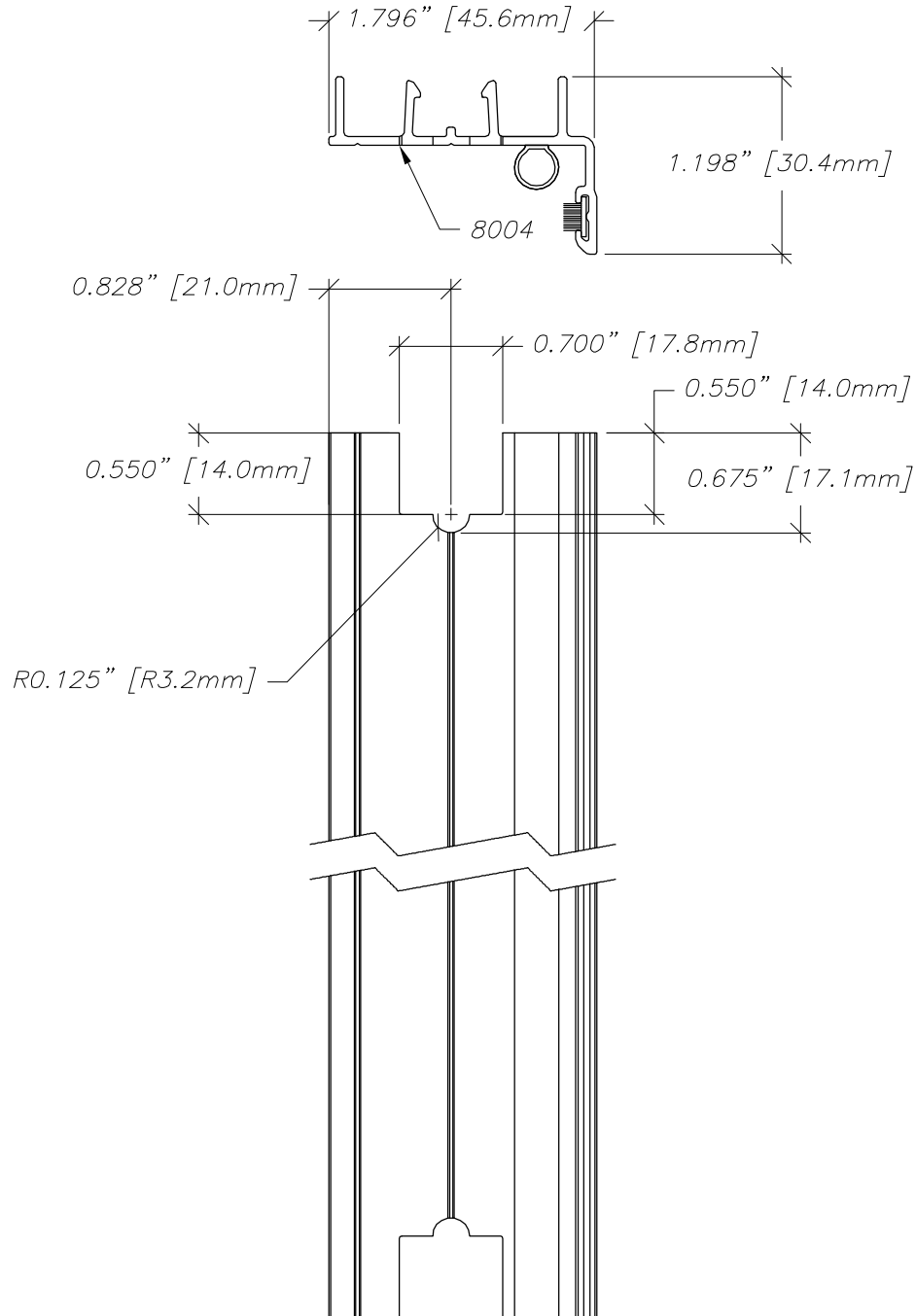
REVISION:

PAGE:

15

2.1.4 Jamb Track Cut-out

– Cut-out the jamb track as per drawing specifications.



Operation(s) to do at both ends.

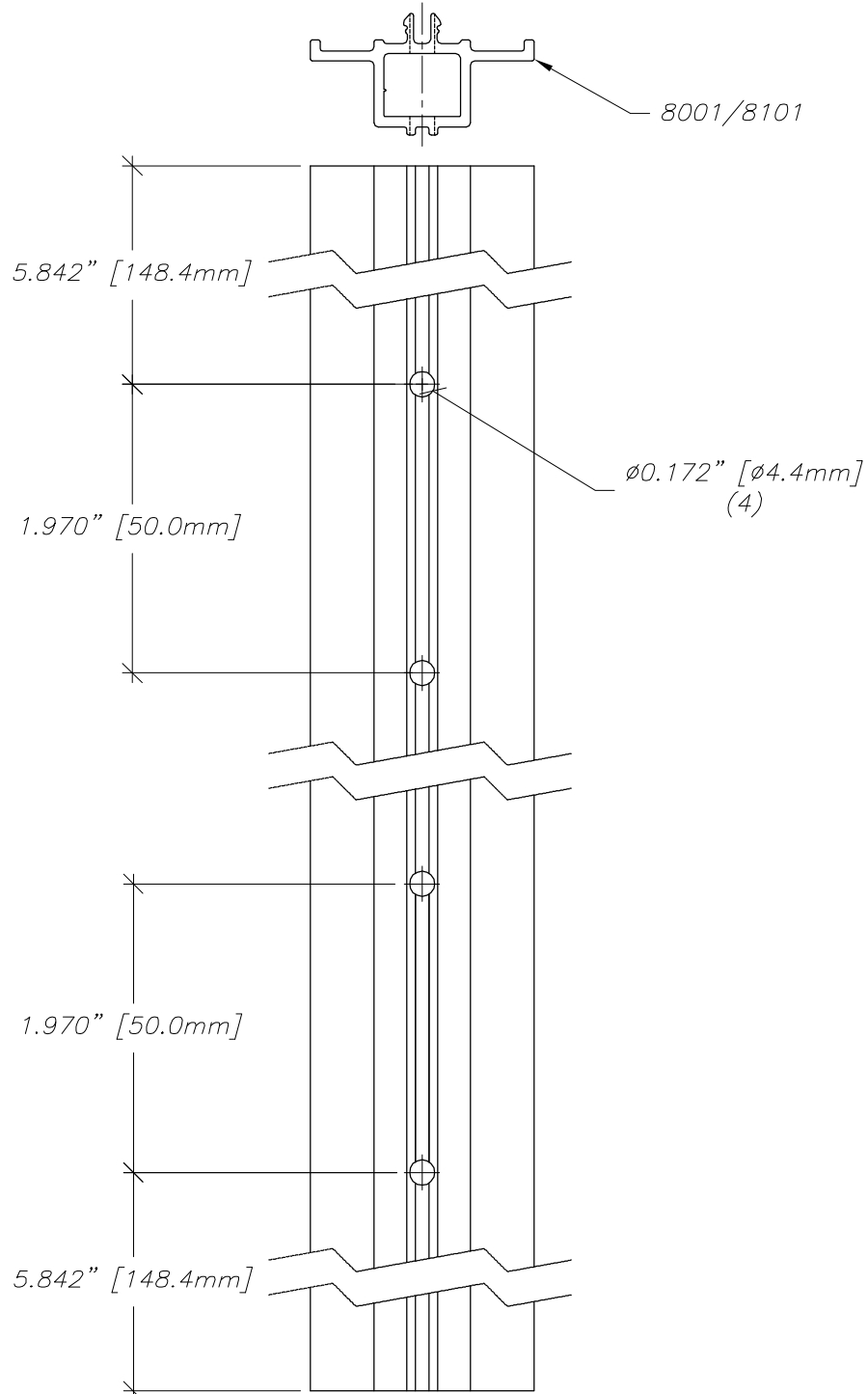
2.1 Manufacturing

REVISION:
2011/04/28

PAGE:
16

2.1.5 Bottom Fixed Support Panel Cut-out

- Cut-out bottom fixed panel support as per drawing specifications.



Operation(s) to do at both ends.

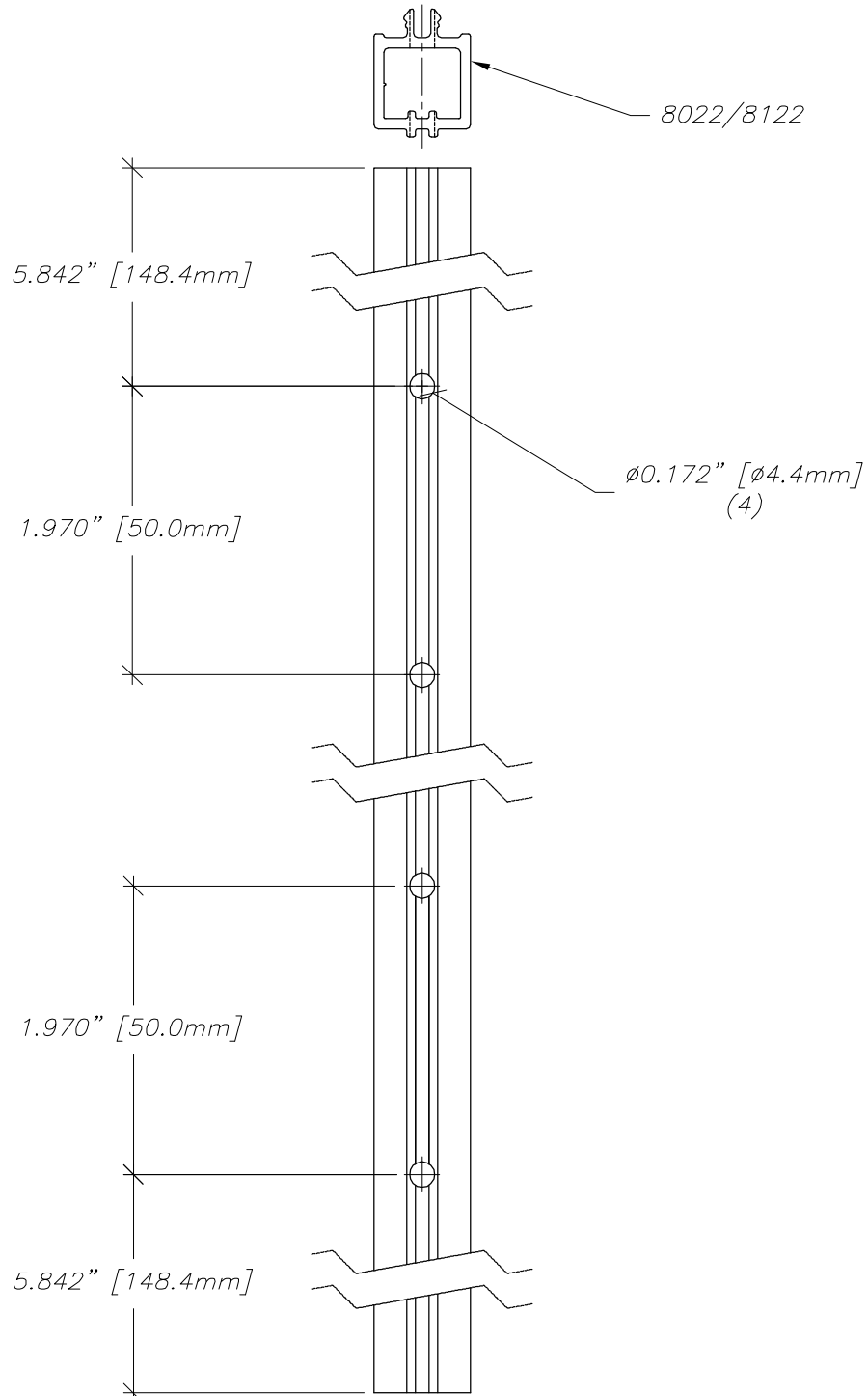
2.1 Manufacturing

REVISION:
2011/04/28

PAGE:
17

2.1.6 Top Fixed Support Panel Cut-out

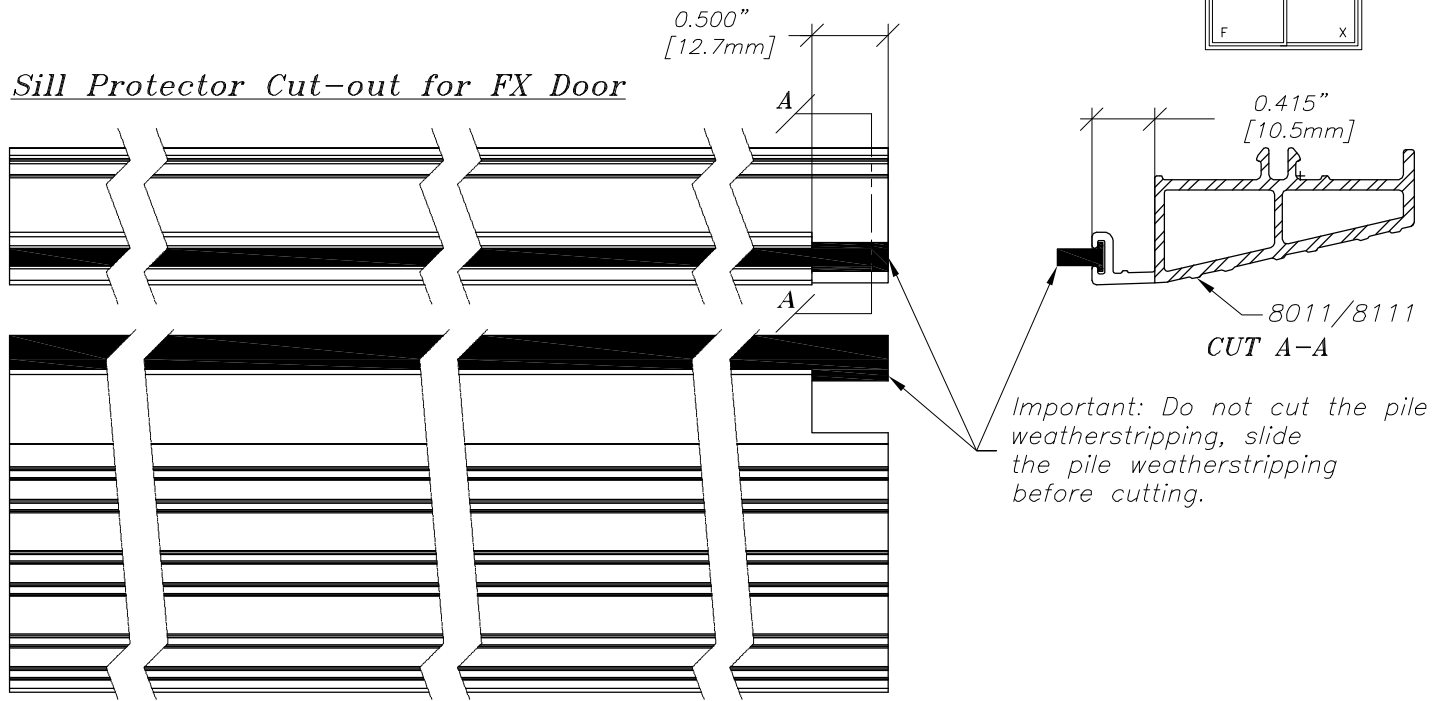
– Cut-out the top fixed panel support as per drawing specifications.



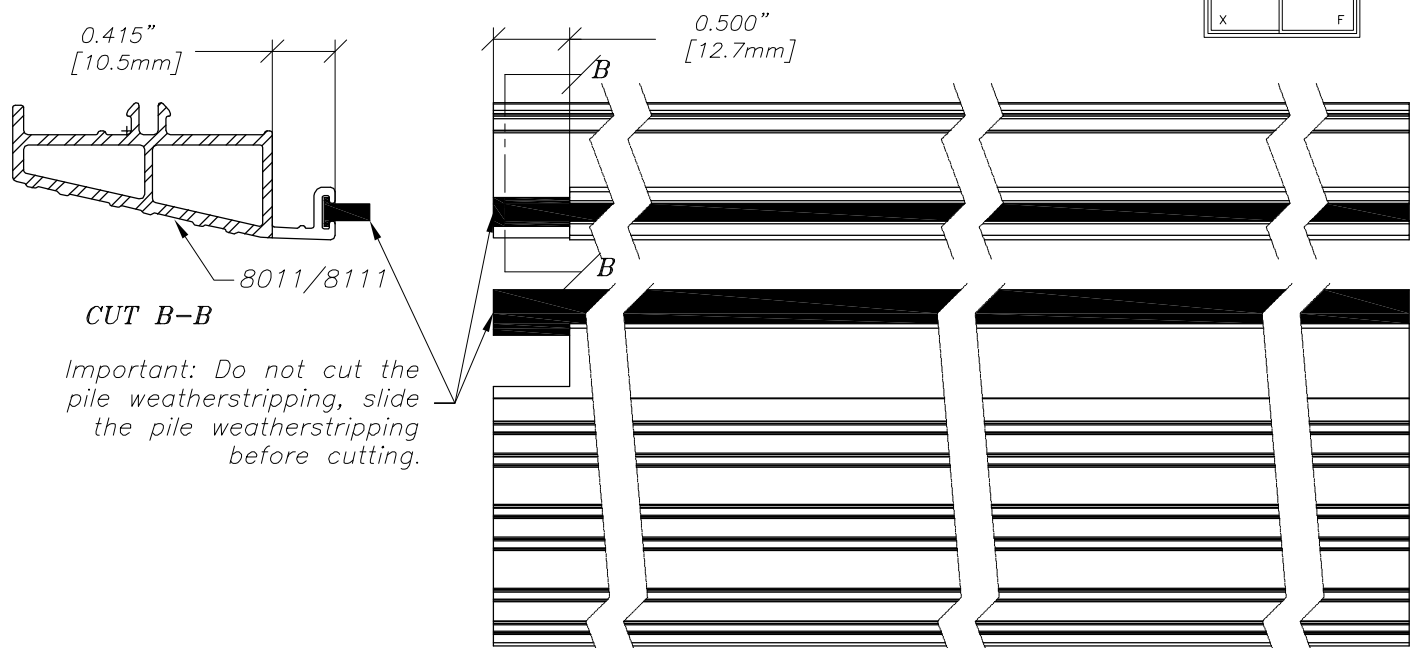
Operation(s) to do at both ends.

2.1.7 Sill Protector Cut-out

- Identify the direction of the opening of the door (XF or FX).
- Cut-out the sill protector as per drawing specifications.



Sill Protector Cut-out for XF Door



2.2 Assembly Procedure

REVISION:

PAGE:

19

2.2.1 Introduction to Assembly Procedure

This section describes procedures, step by step, for all P.V.C. welded patio door frame manufacturing. All assembly procedures that are different from those mentioned in this document may alter performances and/or the quality of finished product.

2.2 Assembly Procedure

REVISION:

PAGE:
20

2.2.2 Welding of Profiles

- High-precision jigs are necessary and we recommend using a two (2) or four (4) point welder.
- Weld all four (4) corners of the frame or sash with the inner side on the welding table.
- Remove the welded frame or sash and put it aside for curing prior to the cleaning operation.

<i>WELDING SETTINGS</i>
<i>TEMPERATURE :</i>
<i>WELDING TIME:</i>
<i>COOLING TIME:</i>
<i>PRESSURE FRONT:</i>
<i>PRESSURE REAR:</i>
<i>Note :</i> <i>The clamping pressure should not disturb or allow any slippage.</i>

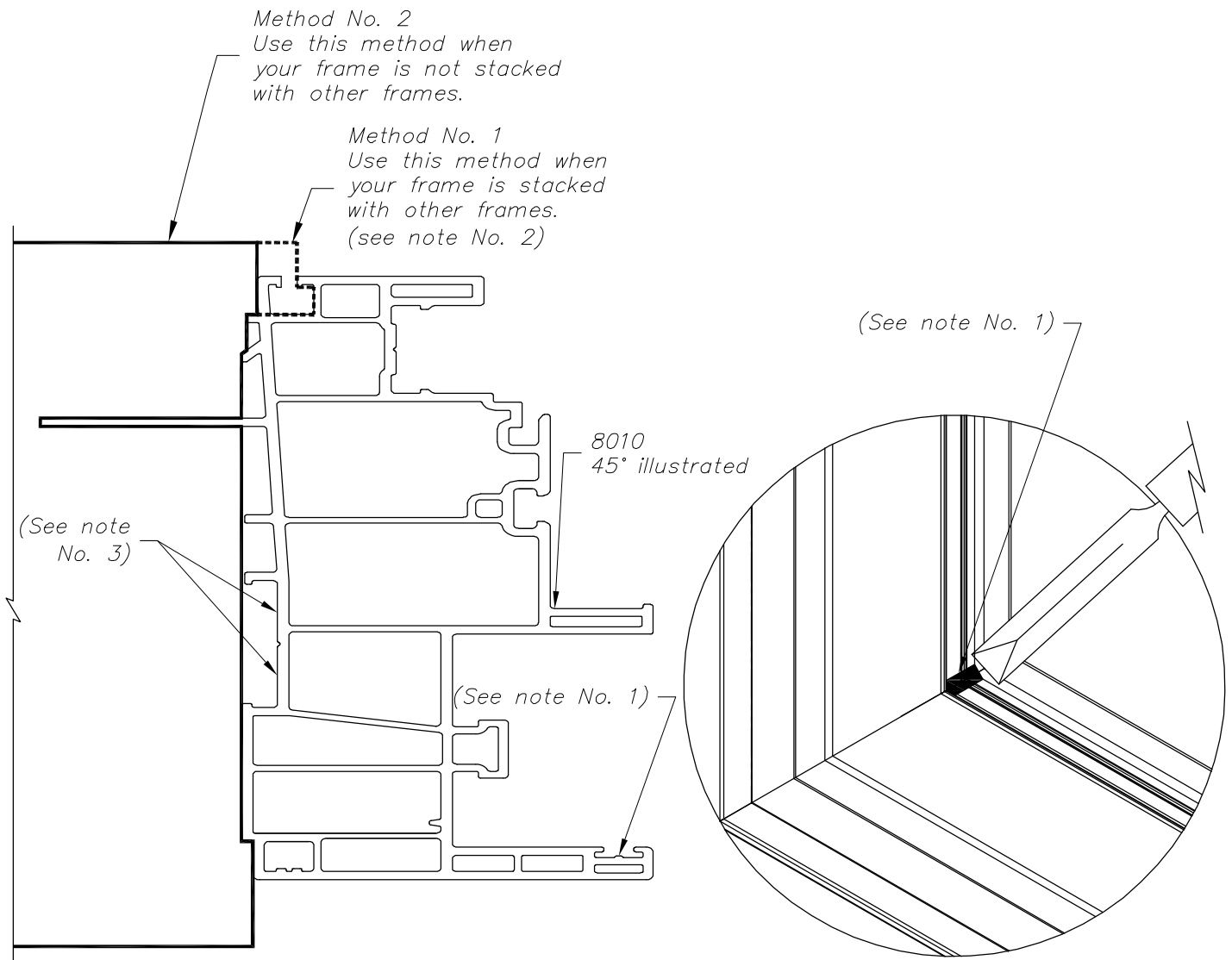
2.2 Assembly Procedure

REVISION:

PAGE:
21

2.2.3 Corner Cleaning of the Frame Profiles

- After the frame has been welded, insert it into the automatic corner cleaner equipped with a custom cutter and draw knives to remove the exterior weld burrs caused by fusion of PVC. Clean all four (4) corners.
- Internal weld burrs can be removed manually by using a hand chisel or a knife. They can also be removed with an automatic corner cleaning machine.



Note No. 1: Clean the pile weatherstripping cavity corner at both ends manually (operating panel side only).

Note No. 2: This method offers more space under the accessories for the sealant application therefore creating a more adequate joint between the two frames.

Note No. 3: If necessary, manually clean with care, if need be only (Never clean bottom frame at this area).

2.2 Assembly Procedure

REVISION:
2011/07/04

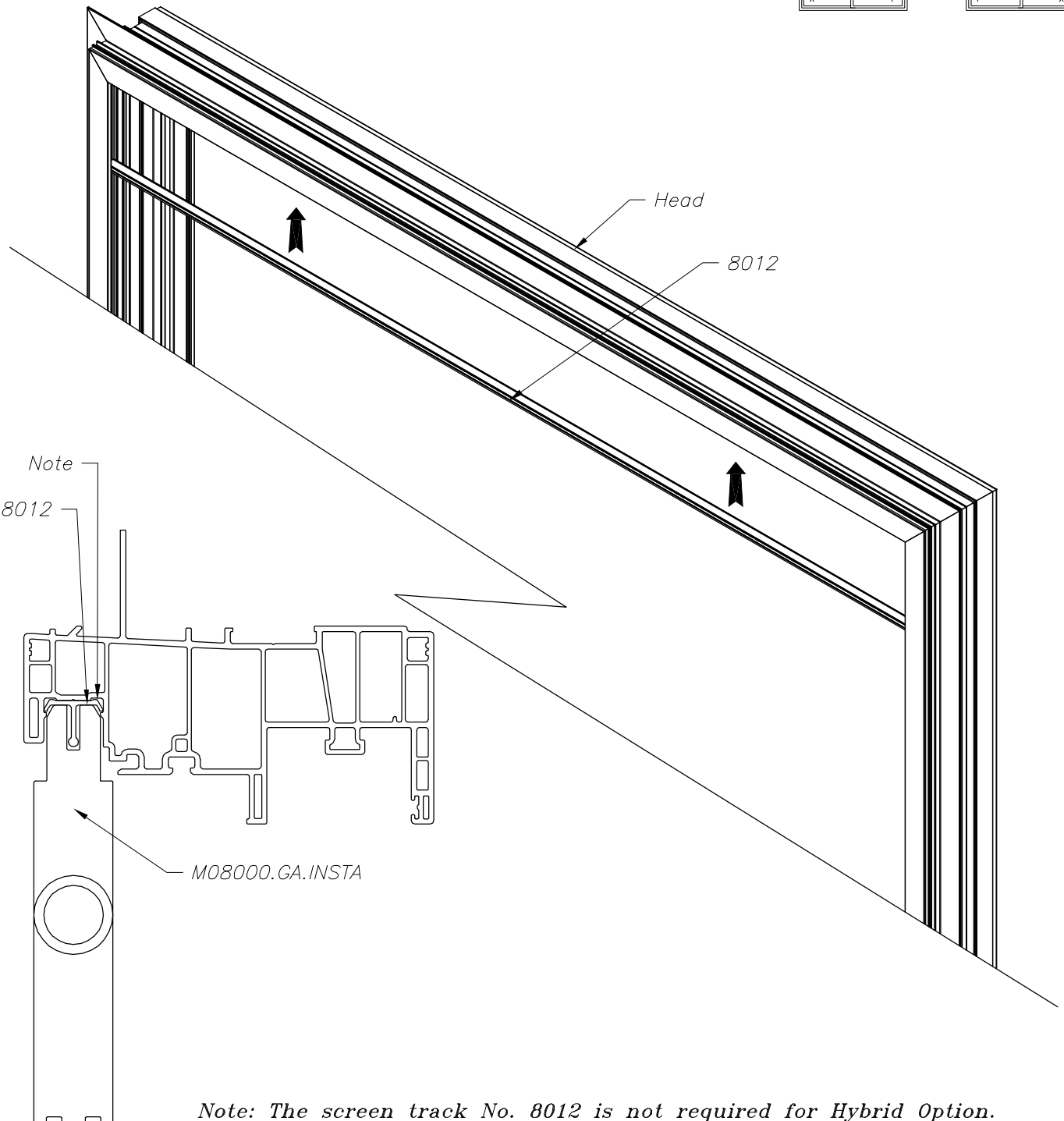
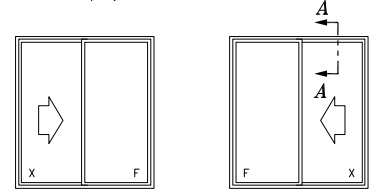
PAGE:
22

2.2.4 Head Screen Track Installation

Assembly Sequence

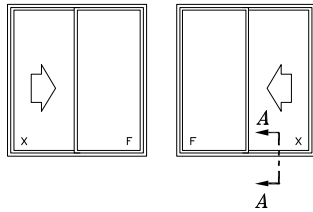
- Using a jig M08000.GA.INSTA and a rubber mallet, insert No. 8012 screen track in the head.

Two (2) Panel Patio Door



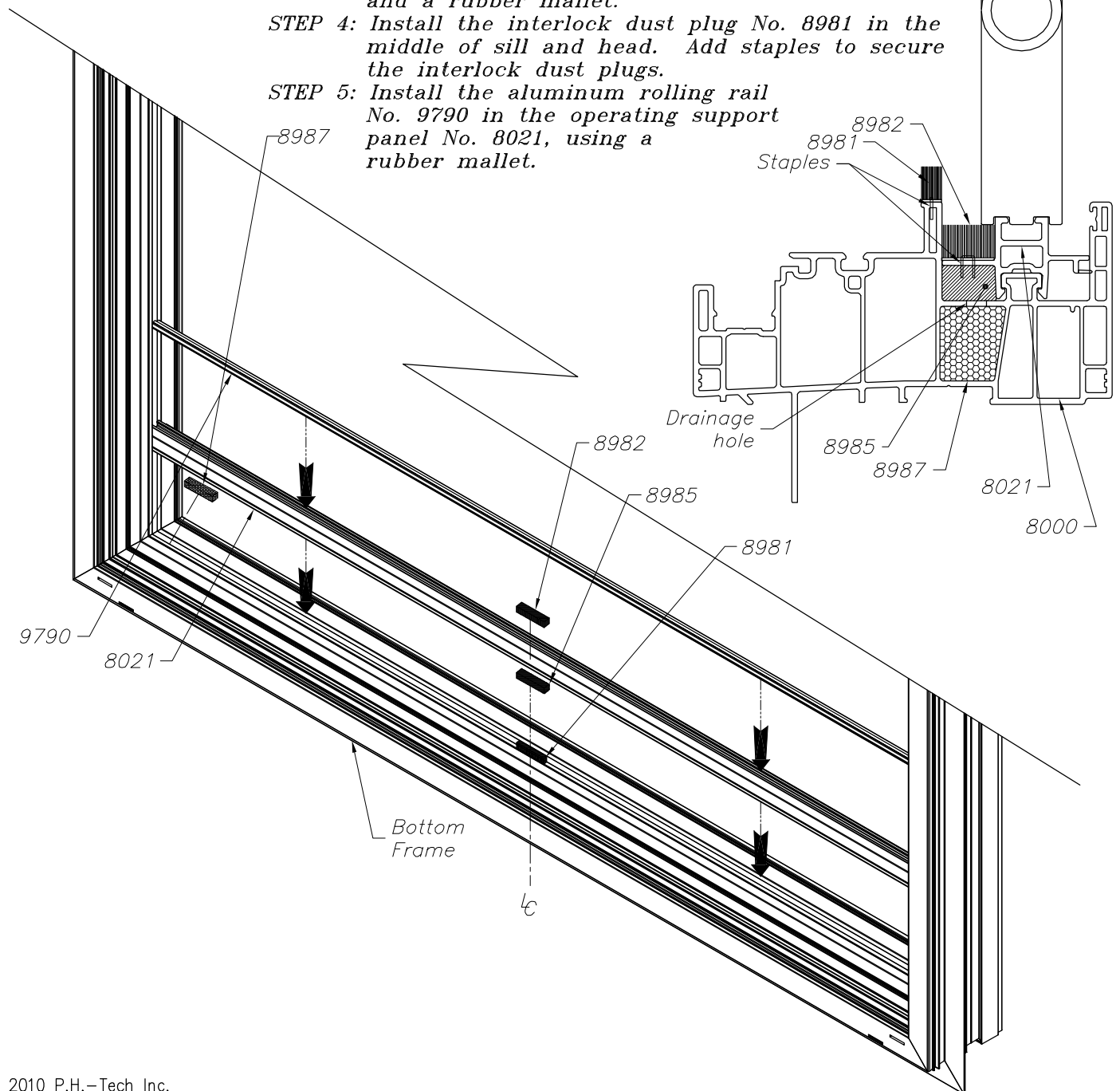
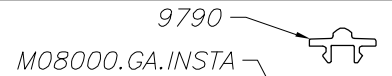
2.2.5 Operating Support Panel and Dust Plugs Installation

Two (2) Panel Patio Door



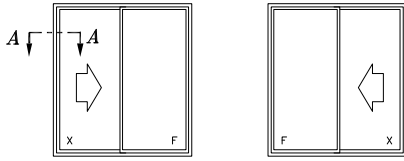
Assembly Sequence

- STEP 1: Install the sill dust plug No. 8982 in the middle of the operating support panel No. 8021. Add staples to secure the sill dust plug.
- STEP 2: Install the sill foam block No. 8985 in the middle of sill and the insect stop foam No. 8987 in the drainage hole fixed side only.
- STEP 3: Install the operating support panel No. 8021 in the sill, using a jig M08000.GA.INSTA and a rubber mallet.
- STEP 4: Install the interlock dust plug No. 8981 in the middle of sill and head. Add staples to secure the interlock dust plugs.
- STEP 5: Install the aluminum rolling rail No. 9790 in the operating support panel No. 8021, using a rubber mallet.



2.2.6 Jamb Track Installation

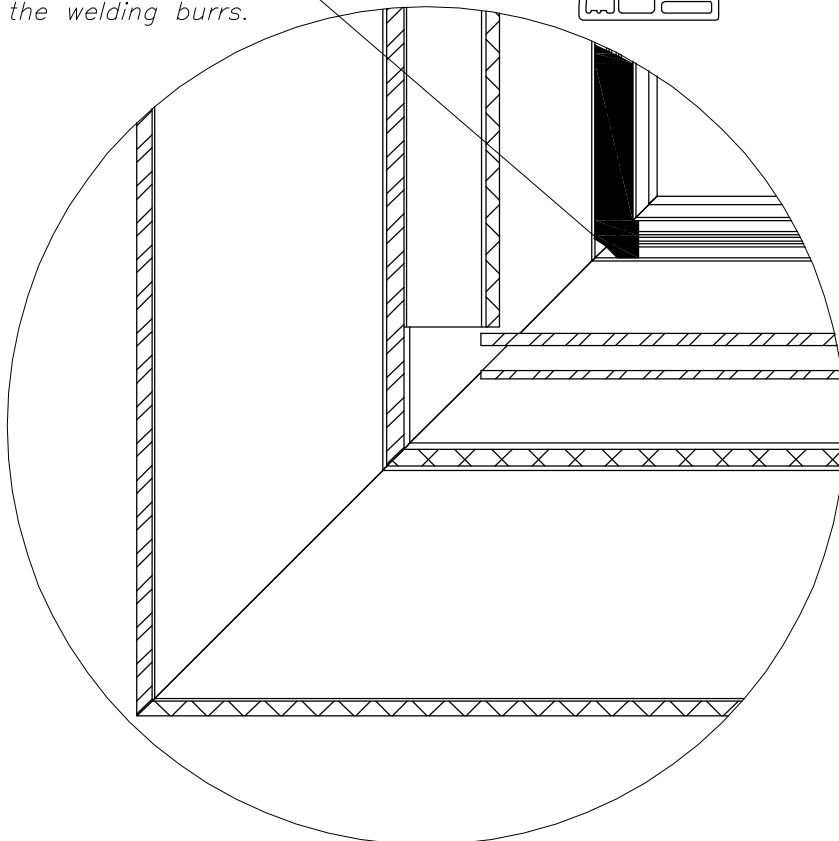
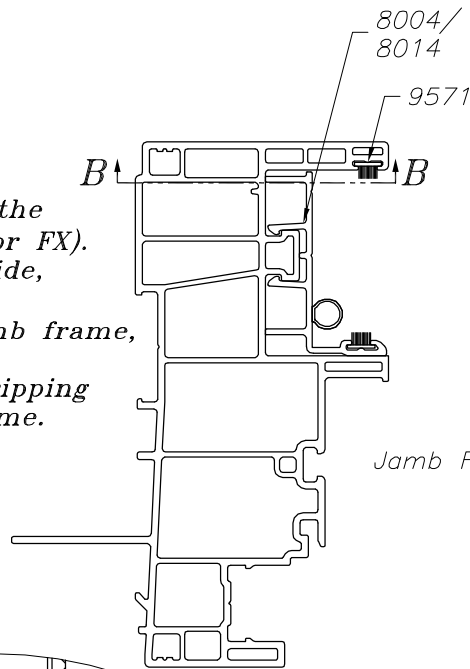
Two (2) Panel Patio Door



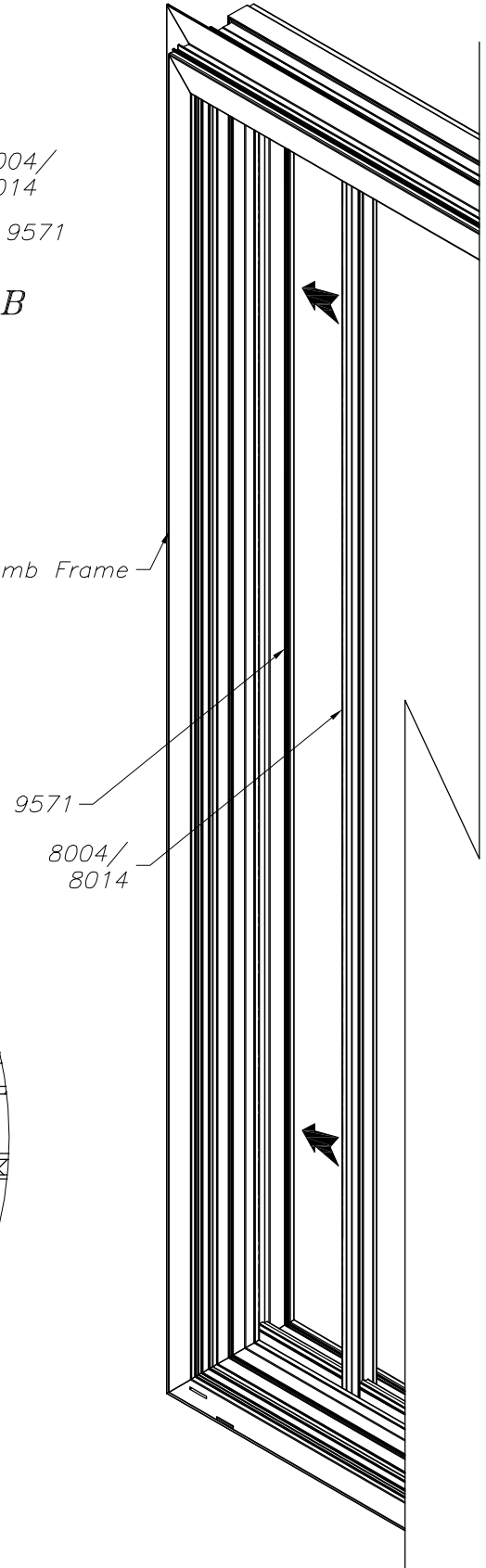
Assembly Sequence

- STEP 1:** Identify the direction of the opening of the door (XF or FX).
- STEP 2:** On the operating panel side, install the jamb track No. 8004/8014 on the jamb frame, using a rubber mallet.
- STEP 3:** Insert the pile weatherstripping No. 9571 in the jamb frame.

The pile weatherstripping No 9571, must be cut at an angle at both ends before installation to clear the welding burrs.



Cut View "B"



2.2 Assembly Procedure

REVISION:

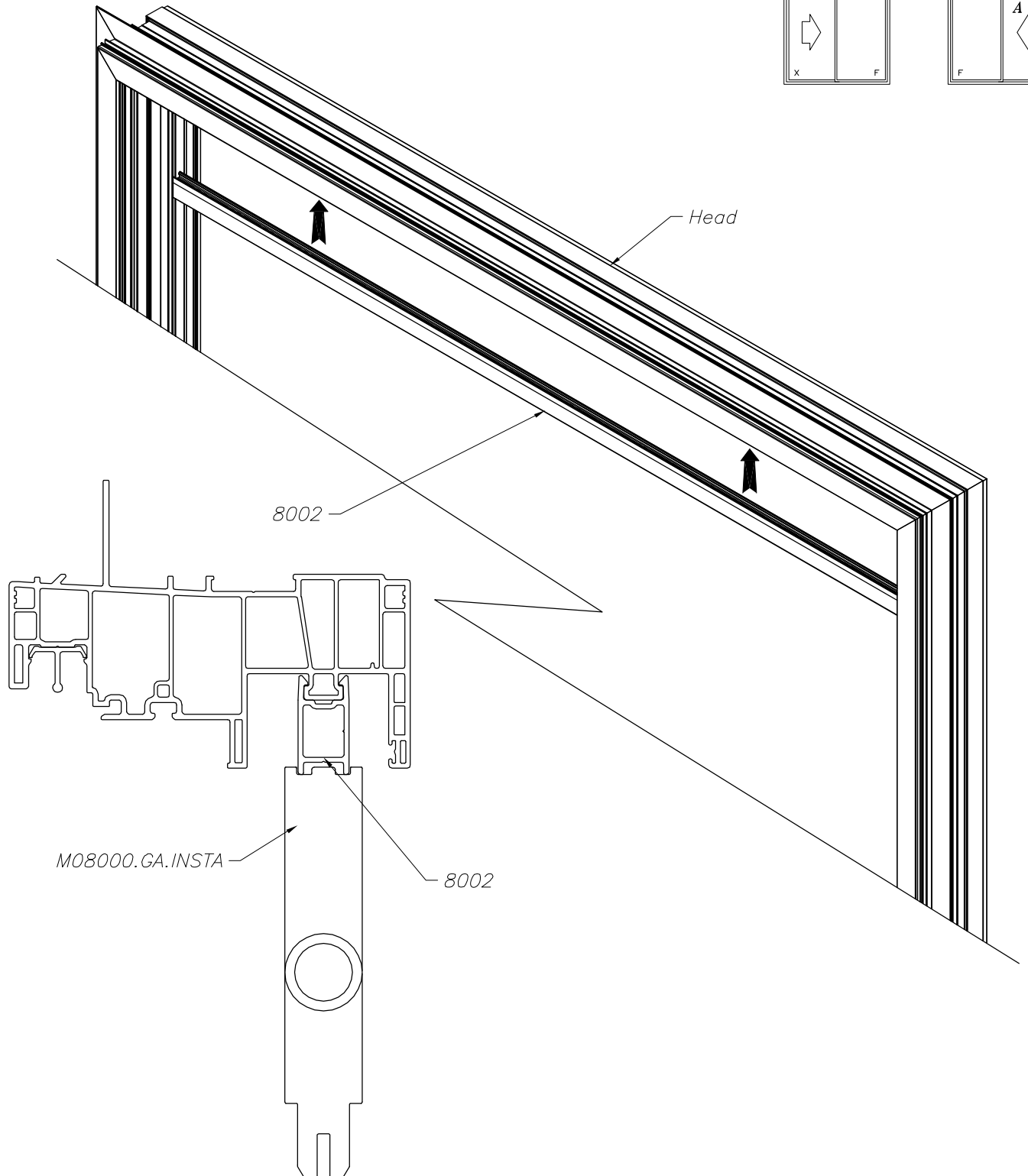
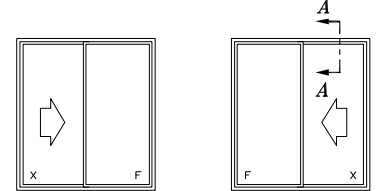
PAGE:
25

2.2.7 Head Track Installation

Assembly Sequence

- Insert No. 8002 head track in the head, using a jig M08000.GA.INSTA and a rubber mallet

Two (2) Panel Patio Door



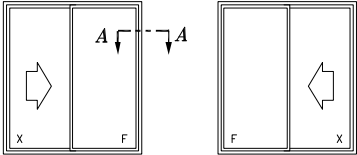
2.2 Assembly Procedure

REVISION:

PAGE:
26

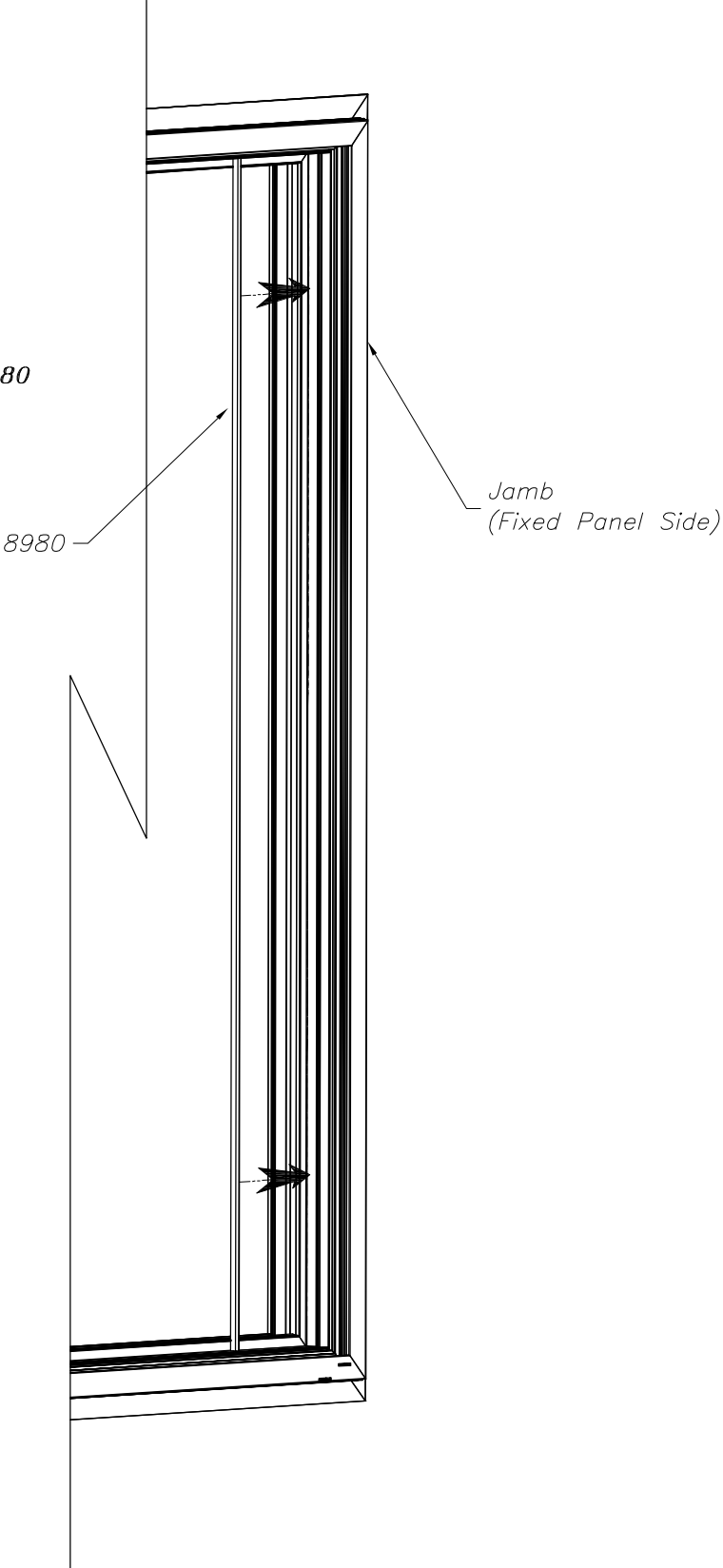
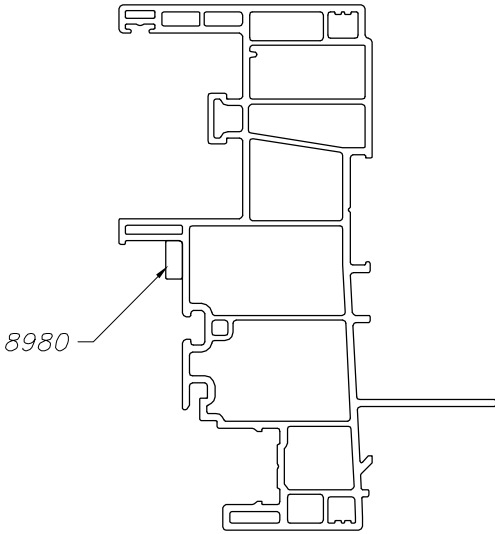
2.2.8 Foam Tape Installation

Two (2) Panel Patio Door



Assembly Sequence

- On the fixed panel side, install No. 8980 foam tape on the jamb at full height.



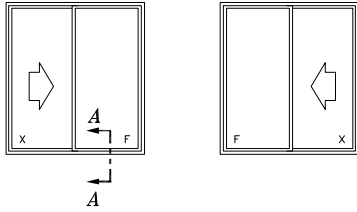
2.2 Assembly Procedure

REVISION:
2011/04/28

PAGE:
27

2.2.9 Bottom Fixed Support Panel Installation

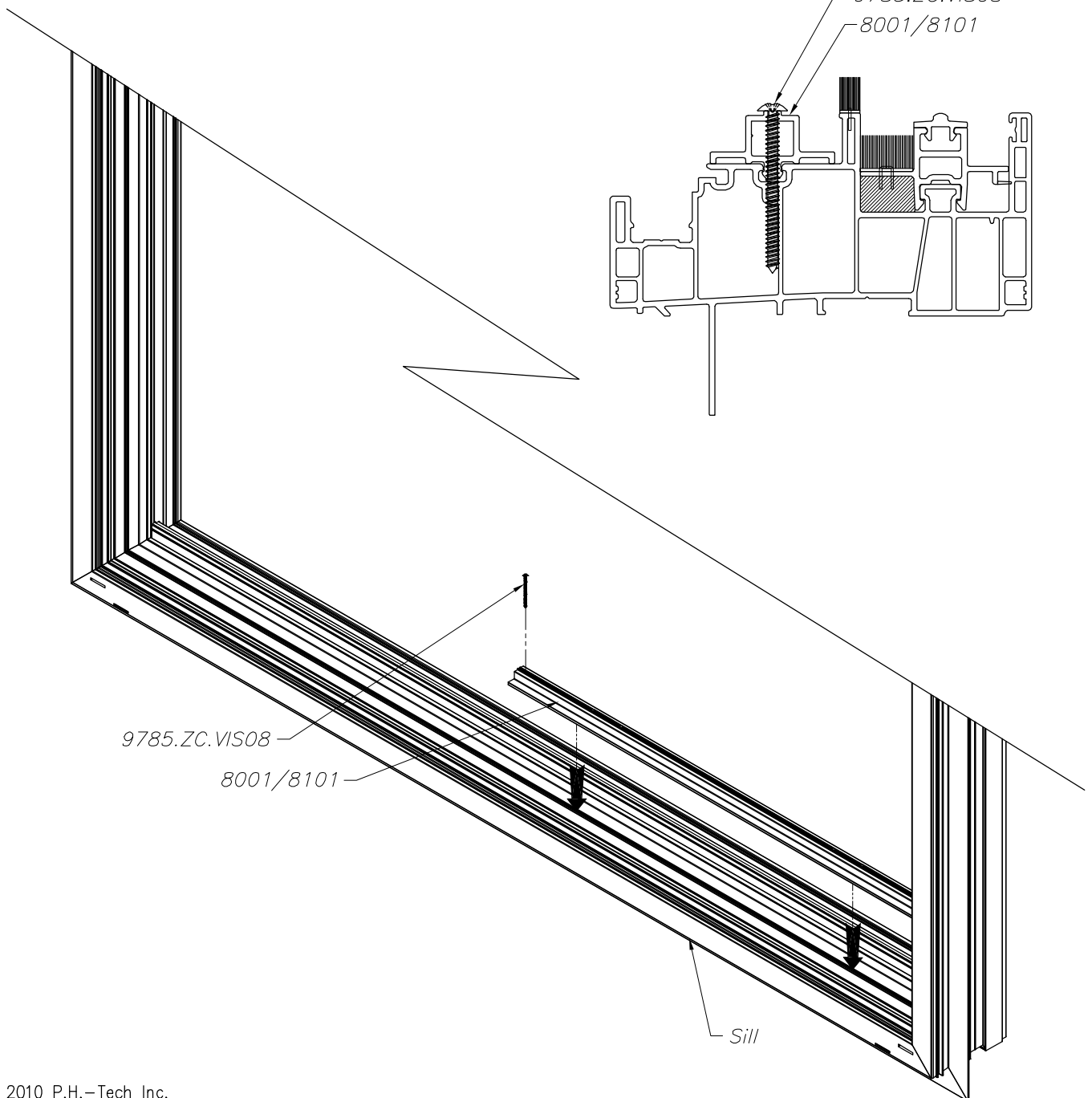
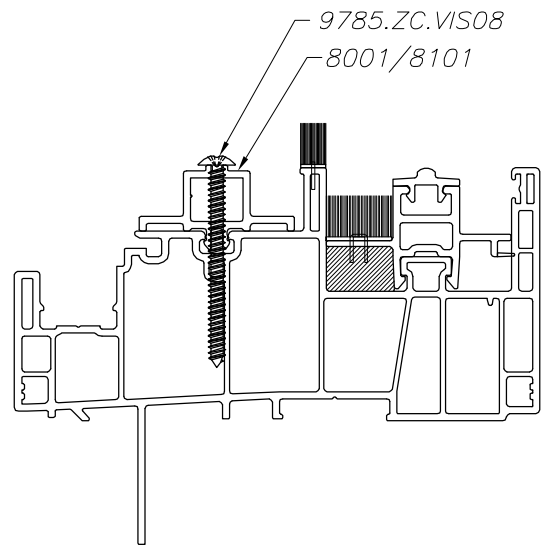
Two (2) Panel Patio Door



Assembly Sequence

STEP 1: On the fixed panel side, install No. 8001 bottom fixed panel support, using a rubber mallet.

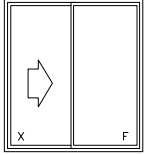
STEP 2: Add 1 (one) screw No. 9785.ZC.VIS08 to fasten the bottom fixed support panel No. 8001 to 3/4" [19mm] of the end.



2.2.10 Fixed Panel Installation

Two (2) Panel Patio Door

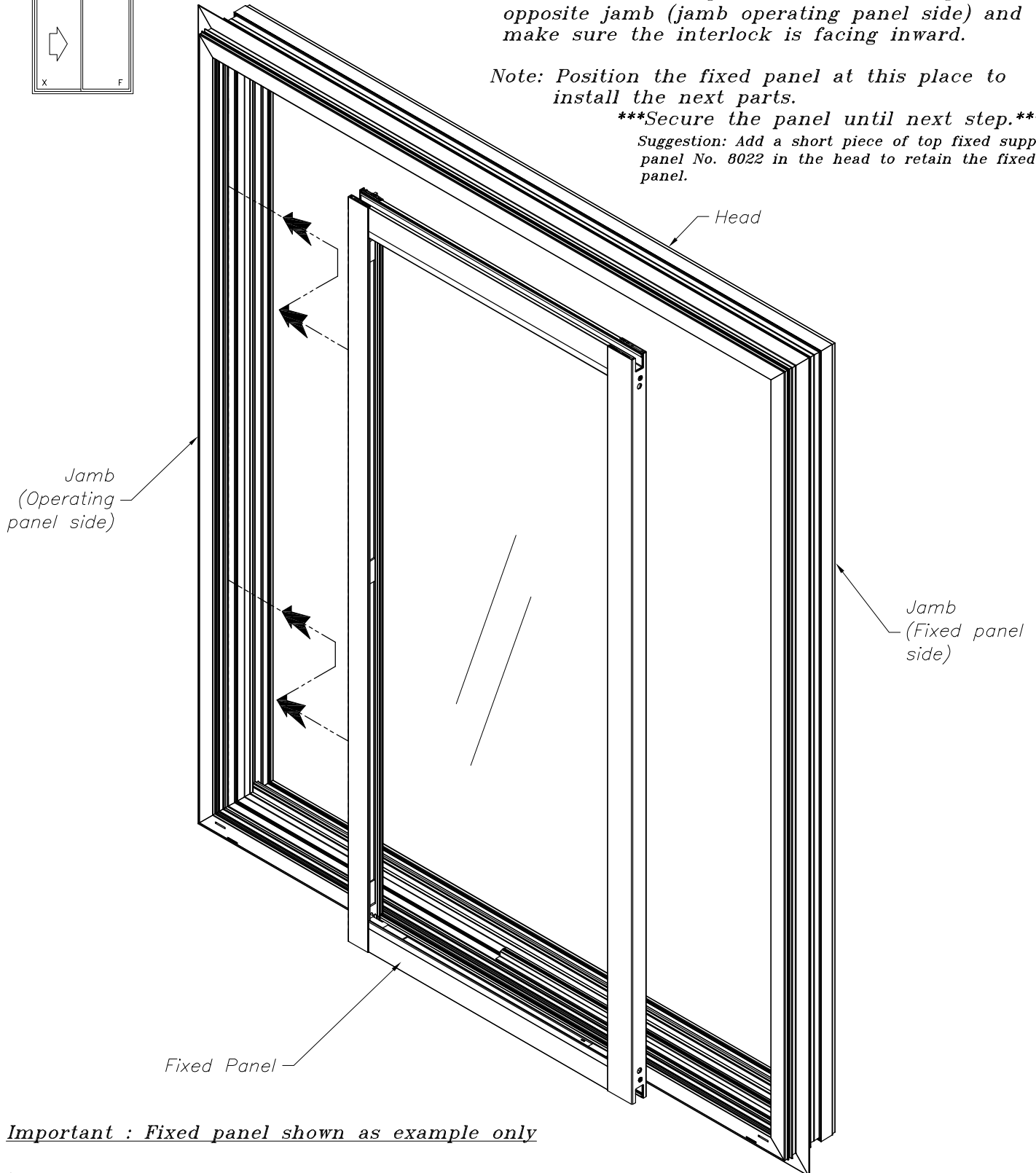
Assembly Sequence



- Position the fixed panel in the frame against the opposite jamb (jamb operating panel side) and make sure the interlock is facing inward.

Note: Position the fixed panel at this place to install the next parts.

*****Secure the panel until next step.*****
Suggestion: Add a short piece of top fixed support panel No. 8022 in the head to retain the fixed panel.



Important : Fixed panel shown as example only

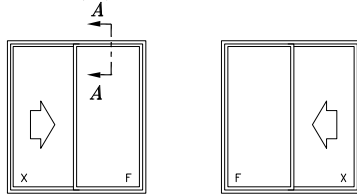
2.2 Assembly Procedure

REVISION:
2012/02/02

PAGE:
29

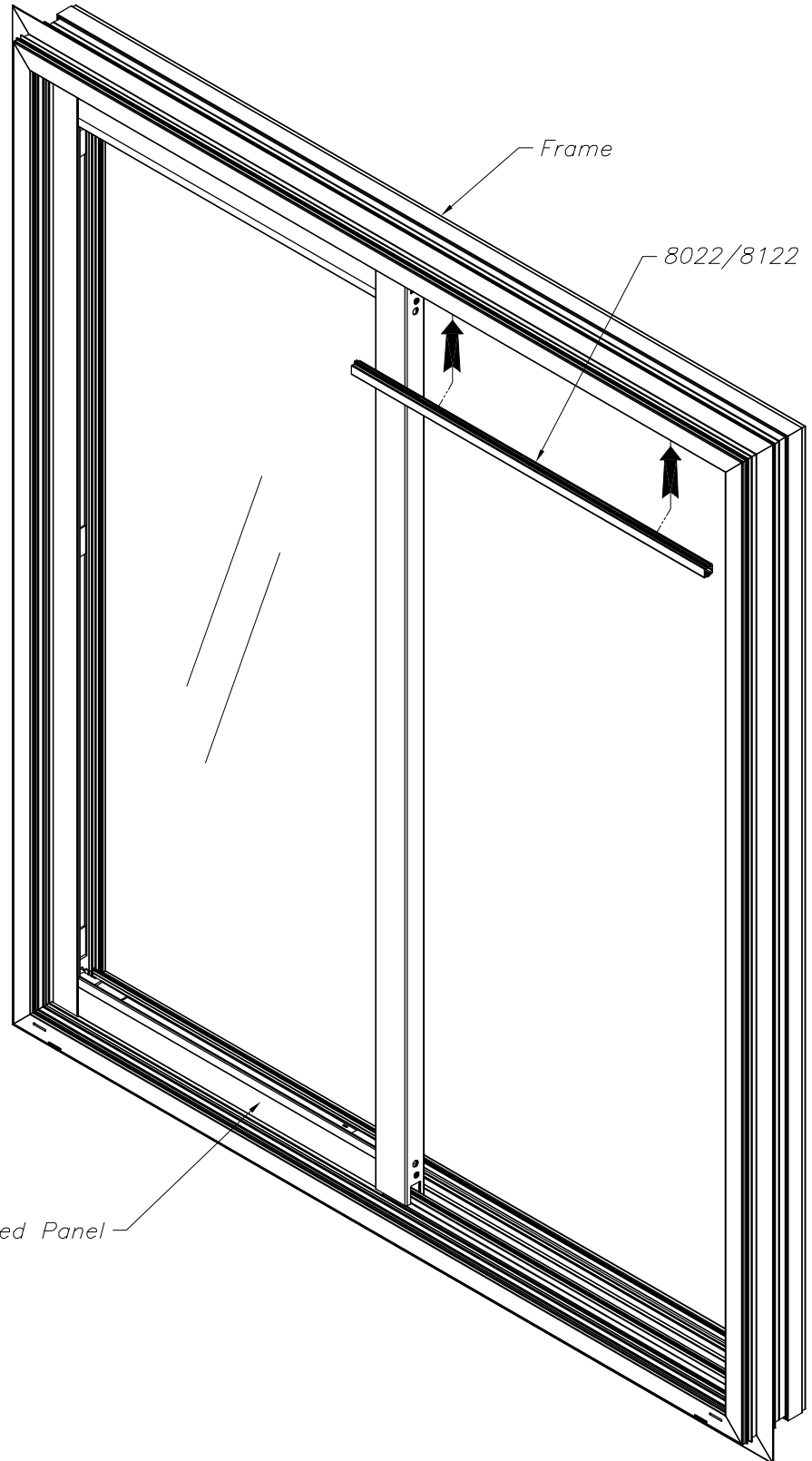
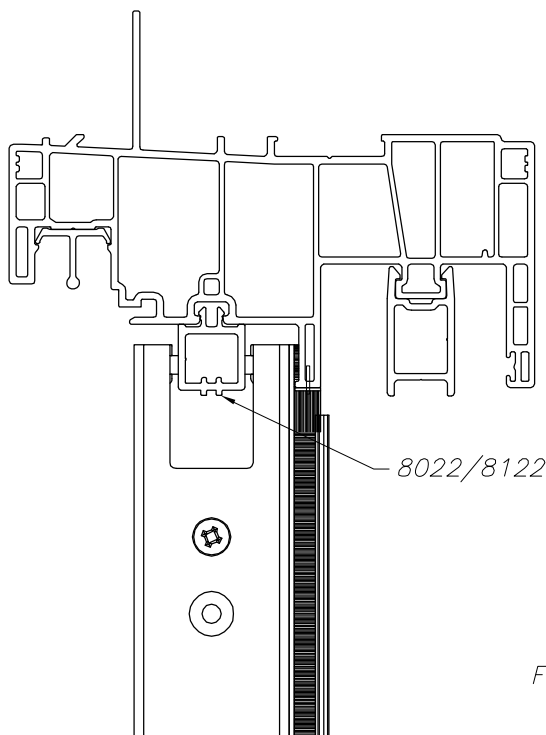
2.2.11 Top Fixed Support Panel Installation

Two (2) Panel Patio Door



Assembly Sequence

- On the fixed panel side, install No. 8022 top fixed panel support, using a rubber mallet.

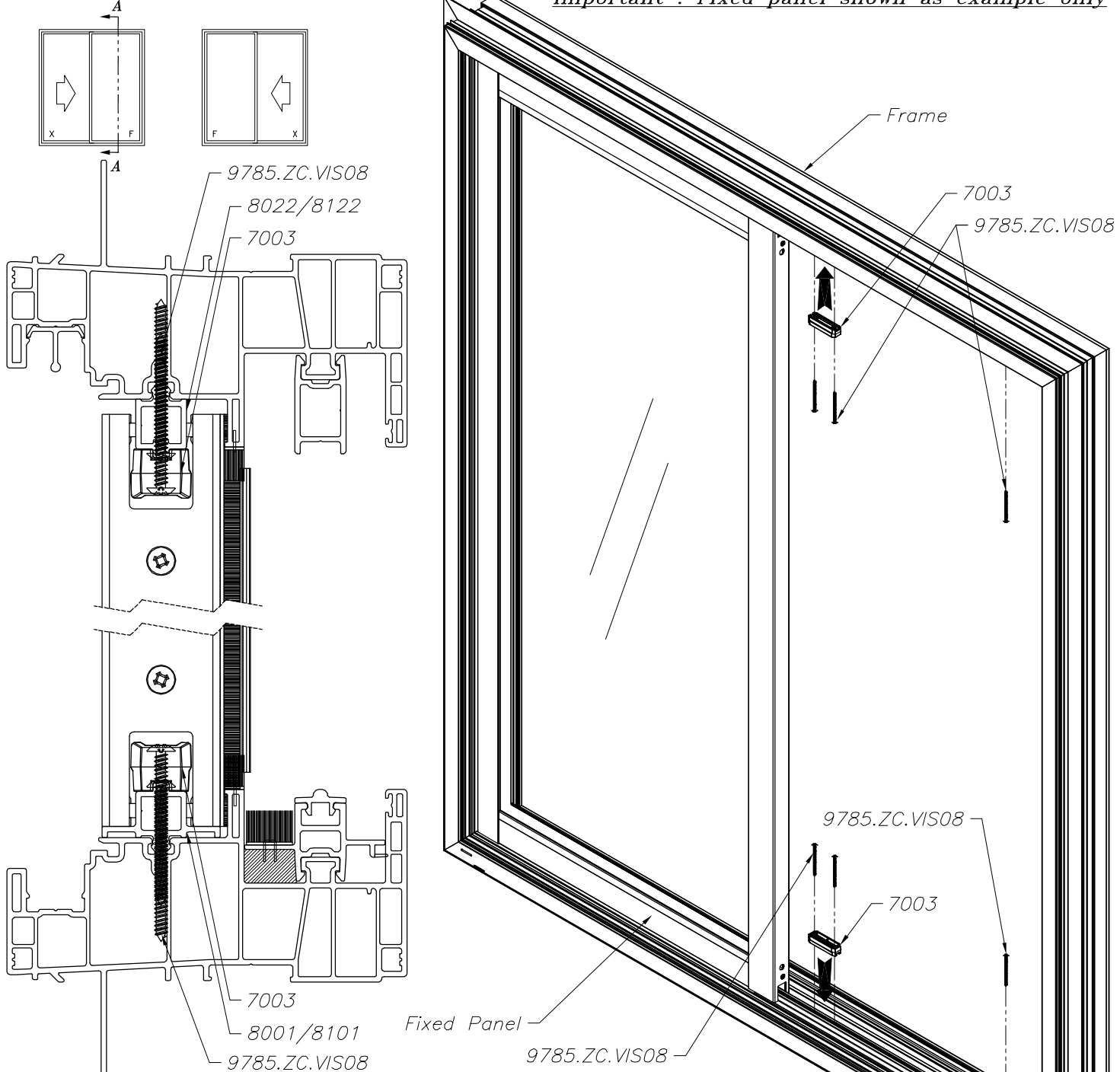


Important : Fixed panel shown as example only

2.2.12 Molded Fixed Panel Anchor Block Installation

Two (2) Panel Patio Door

Important : Fixed panel shown as example only

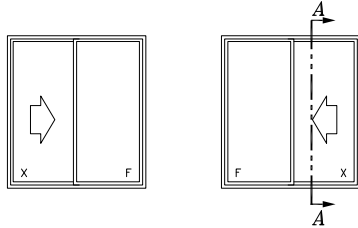


Assembly Sequence

- STEP 1**– Fix the anchor block No. 7003.BLM66 to the bottom fixed panel support No. 8001/8101 and to the top fixed panel support No. 8022/8122 with two (2) No. 9785.ZC.VIS08 screws in the holes provided.
- STEP 2**– Add one (1) No. 9785.ZC.VIS08 screw in the holes not used at the bottom fixed panel support No. 8001/8101 and top fixed panel support No. 8022, near of jamb.

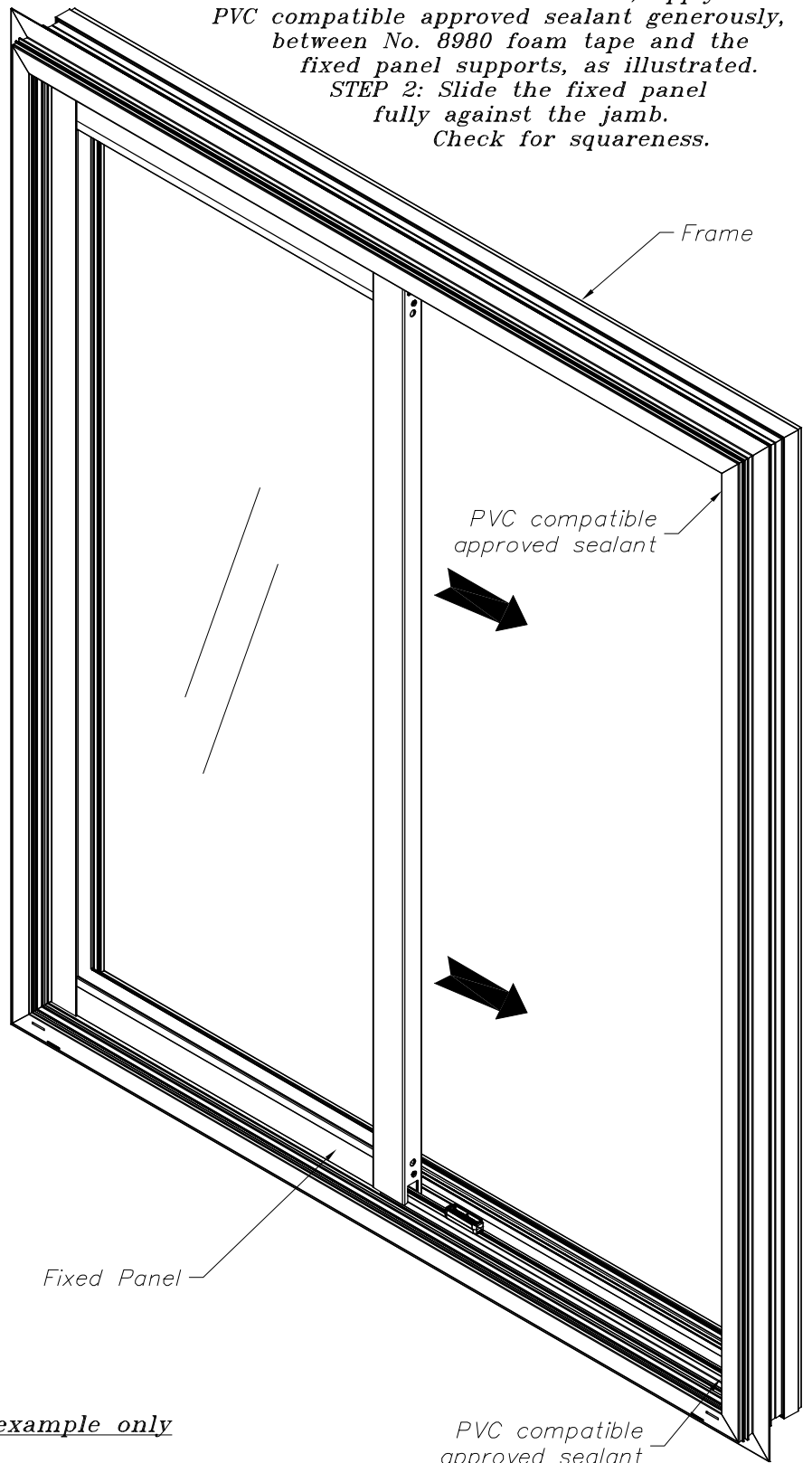
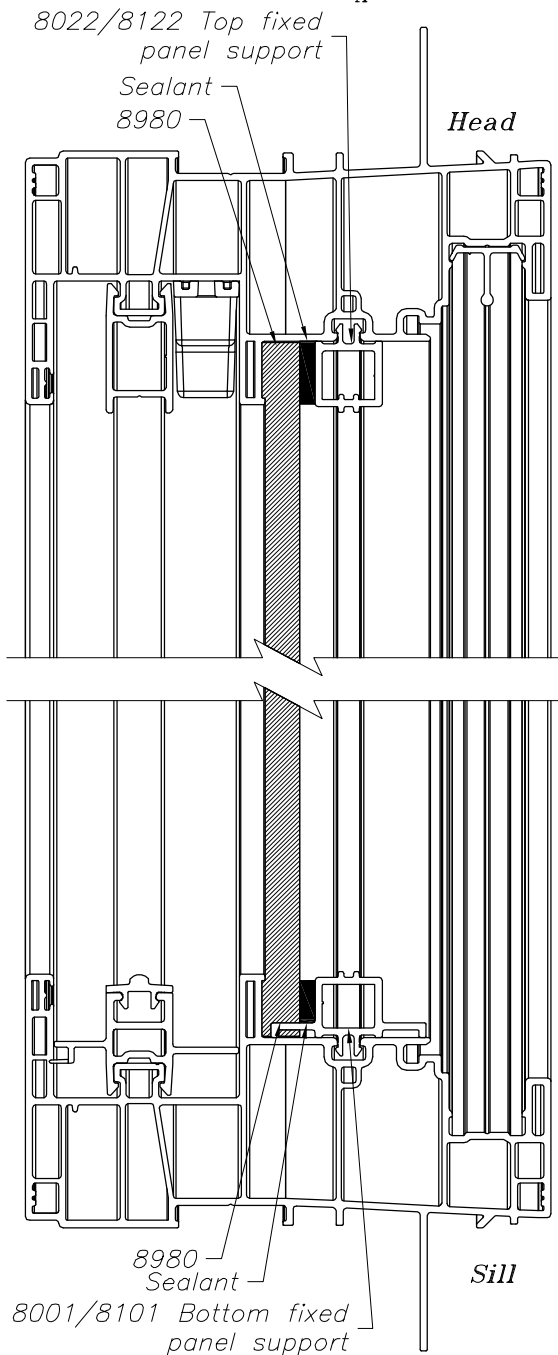
2.2.13 Sealing Jamb, Fixed Panel Side

Two (2) Panel Patio Door



Assembly Sequence

STEP 1: At the sill and at the head, apply some PVC compatible approved sealant generously, between No. 8980 foam tape and the fixed panel supports, as illustrated.
STEP 2: Slide the fixed panel fully against the jamb. Check for squareness.



Important : Fixed panel shown as example only

2.2 Assembly Procedure

REVISION:

PAGE:

32

2.2.14 Fixed Panel, Final Installation

Note:

Depending on the sash used, refer to the sash section of this manufacturer's handbook for this step.

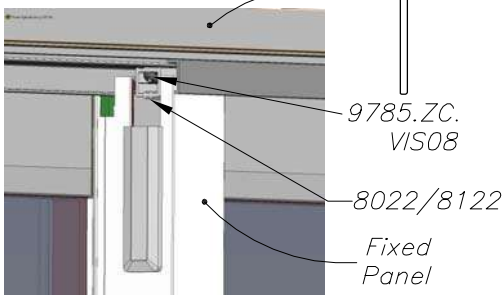
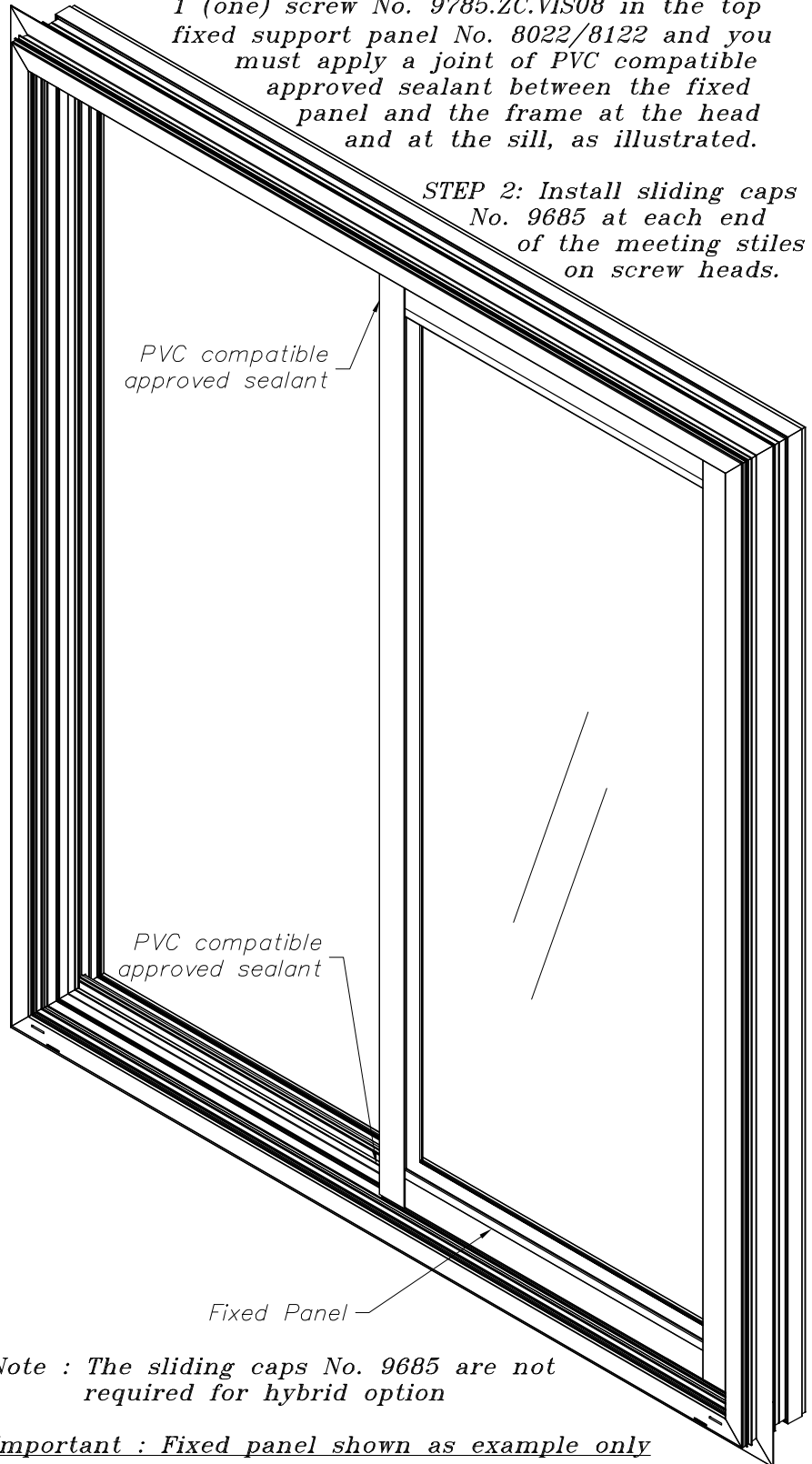
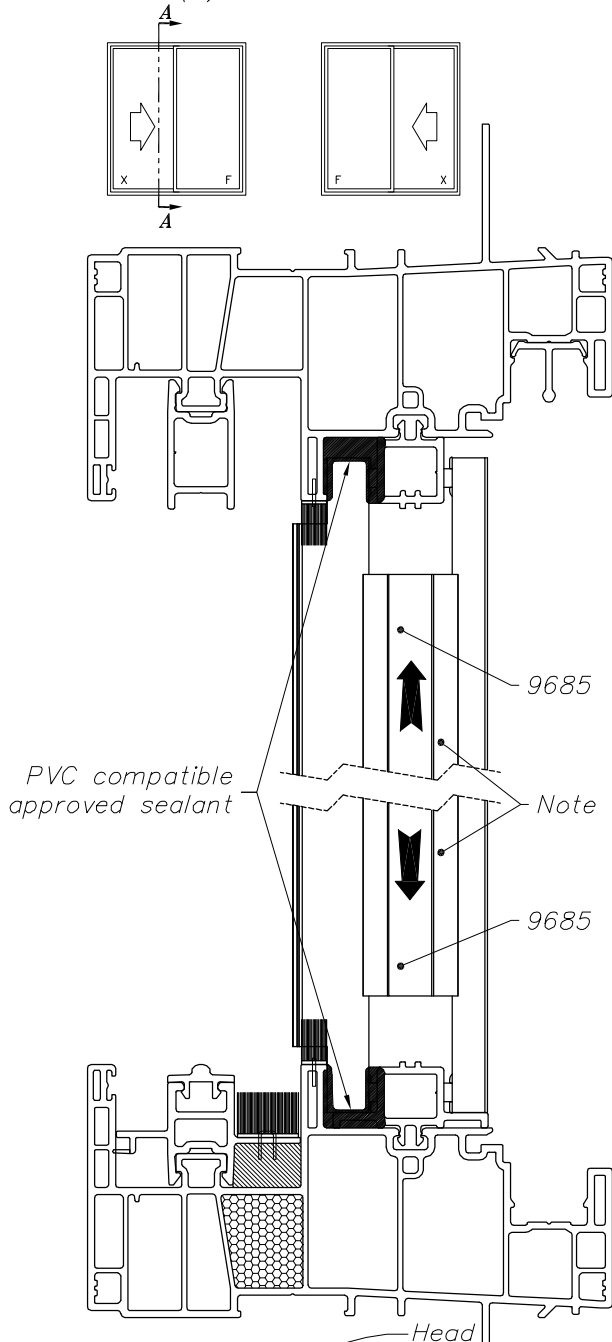
2.2.15 Sealing Fixed Panel

Two (2) Panel Patio Door

Assembly Sequence

STEP 1: After having fixed the fixed panel, Add 1 (one) screw No. 9785.ZC.VIS08 in the top fixed support panel No. 8022/8122 and you must apply a joint of PVC compatible approved sealant between the fixed panel and the frame at the head and at the sill, as illustrated.

STEP 2: Install sliding caps No. 9685 at each end of the meeting stiles on screw heads.



Note : The sliding caps No. 9685 are not required for hybrid option

Important : Fixed panel shown as example only

2.2 Assembly Procedure

REVISION:

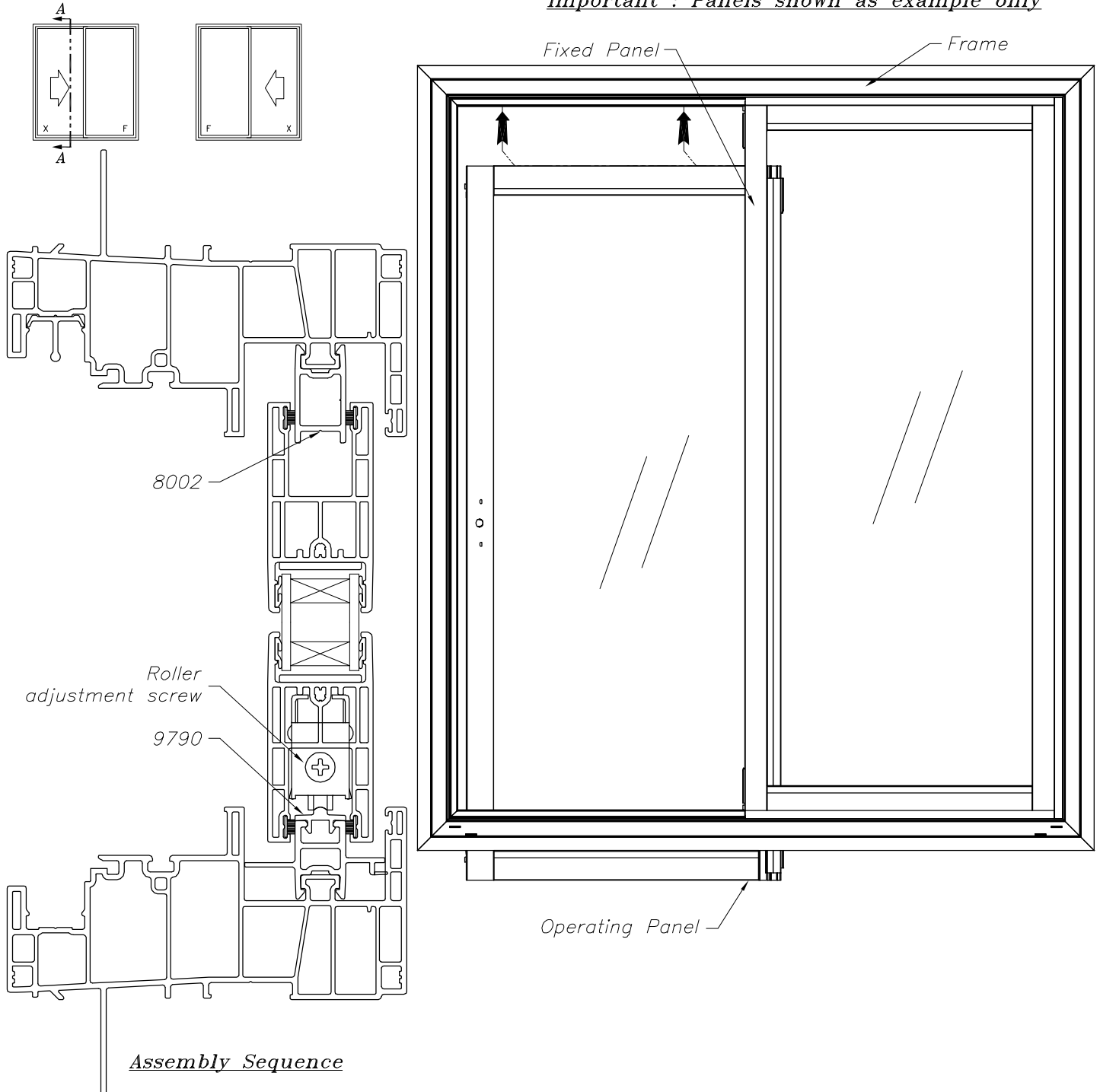
PAGE:

34

2.2.16 Operating Panel Installation

Two (2) Panel Patio Door

Important : Panels shown as example only



Assembly Sequence

- STEP 1:** From the inside, insert the top of the operating panel into the head track No. 8002 making sure the interlock is facing outward.
- STEP 2:** Set operating panel onto the rolling rail No. 9790.
- STEP 3:** If necessary, adjust height and squareness of the operating panel with adjustment screws (Clockwise to raise /Counter-clockwise to lower).

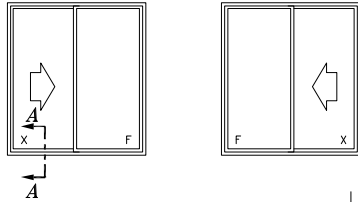
2.2 Assembly Procedure

REVISION:
2011/04/28

PAGE:
35

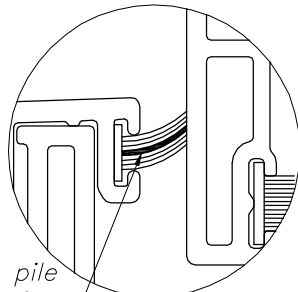
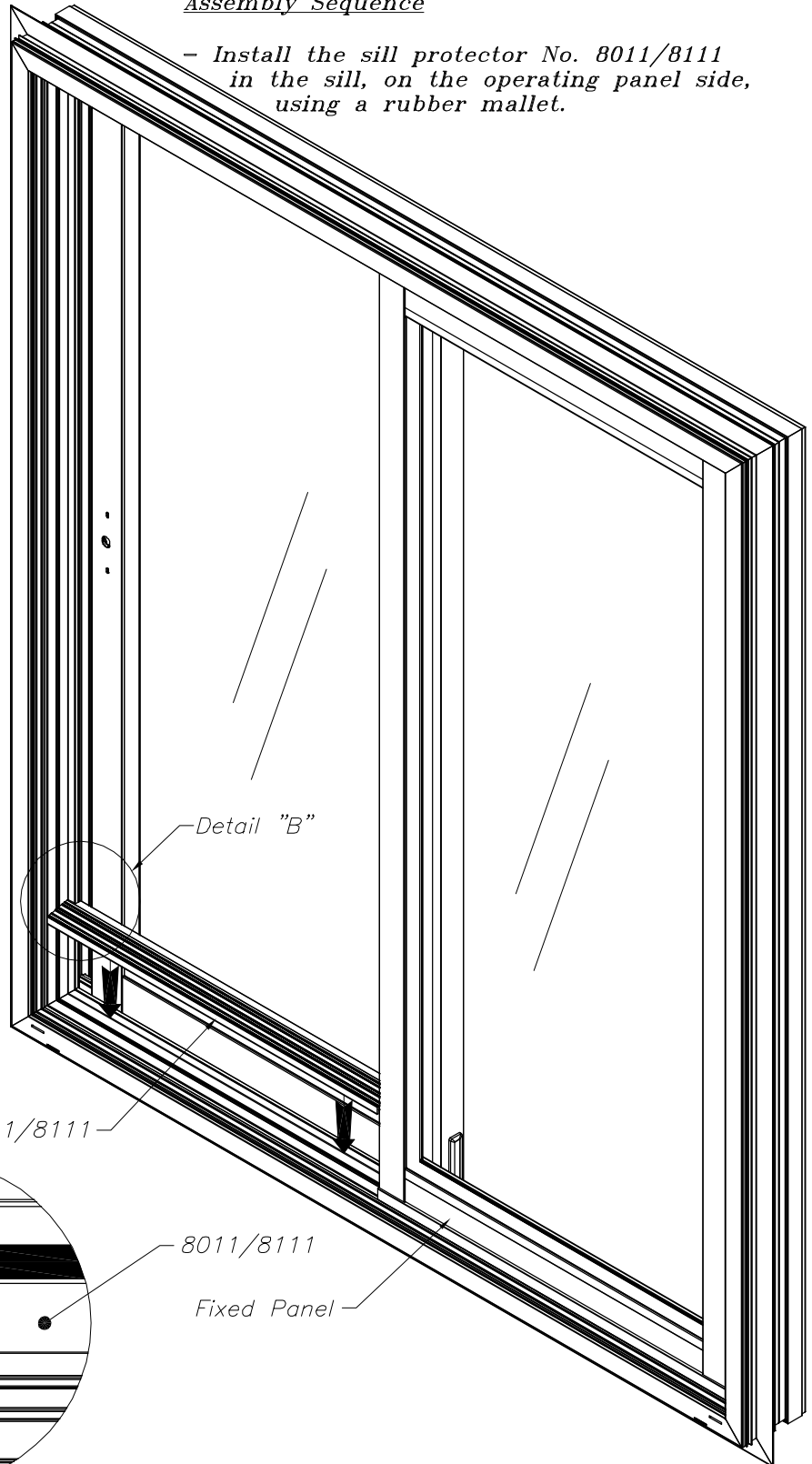
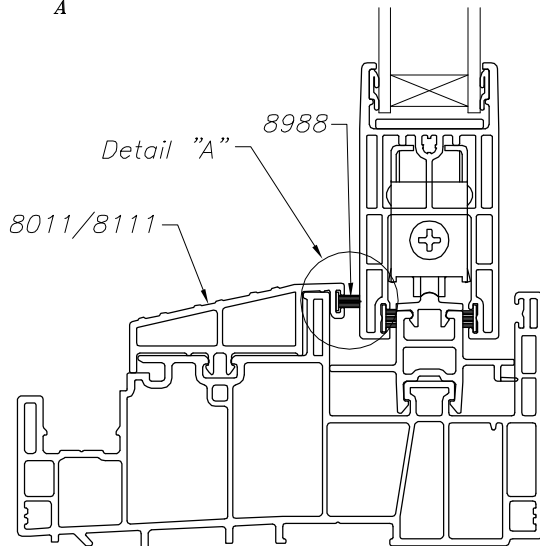
2.2.17 Sill Protector Installation

Two (2) Panel Patio Door



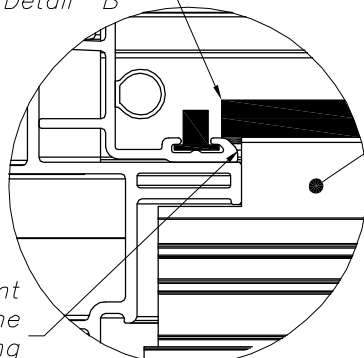
Assembly Sequence

- Install the sill protector No. 8011/8111 in the sill, on the operating panel side, using a rubber mallet.



Install the fin of pile weatherstripping No. 8988 to the top. Detail "A"

Adjust the pile weatherstripping No. 8988 of sill protector No. 8011/8111 as shown at Detail "B"



Add either PVC cement or silicone to hold the pile weatherstripping in this position. Detail "B"

Important : Fixed panel shown as example only

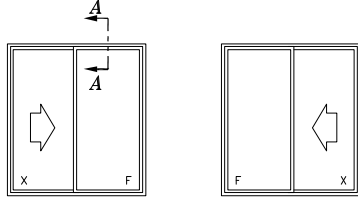
2.2 Assembly Procedure

REVISION:
2012/02/02

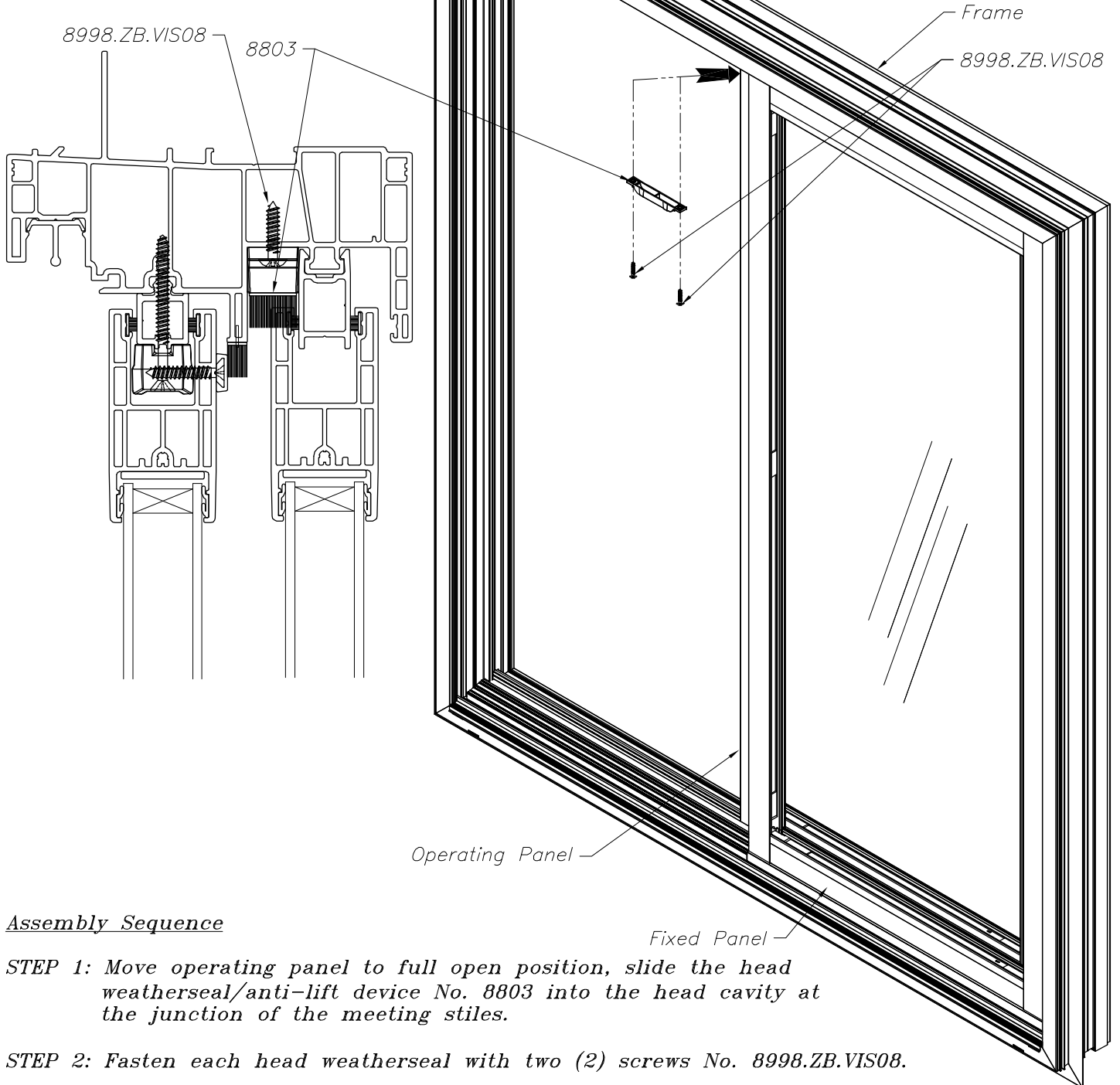
PAGE:
37

2.2.19 Head Weatherseal Installation

Two (2) Panel Patio Door



Important : Panel shown as example only



Assembly Sequence

STEP 1: Move operating panel to full open position, slide the head weatherseal/anti-lift device No. 8803 into the head cavity at the junction of the meeting stiles.

STEP 2: Fasten each head weatherseal with two (2) screws No. 8998.ZB.VIS08.

2.2 Assembly Procedure

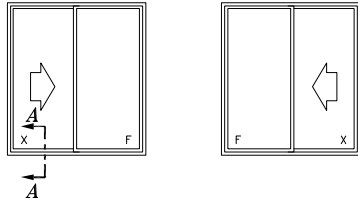
REVISION:
2011/07/04

PAGE:
36

2.2.18 Aluminum Outside Sill Cladding Installation

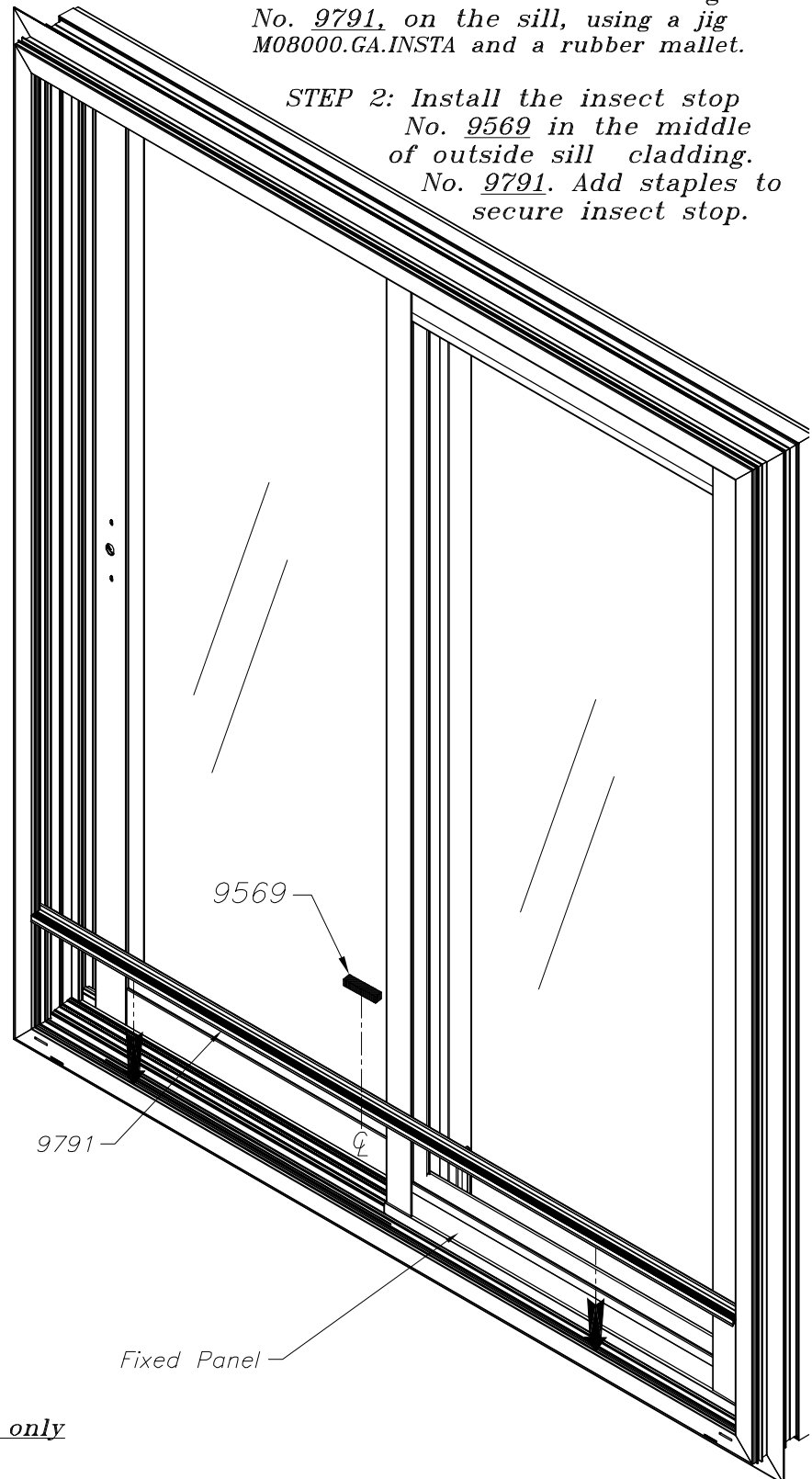
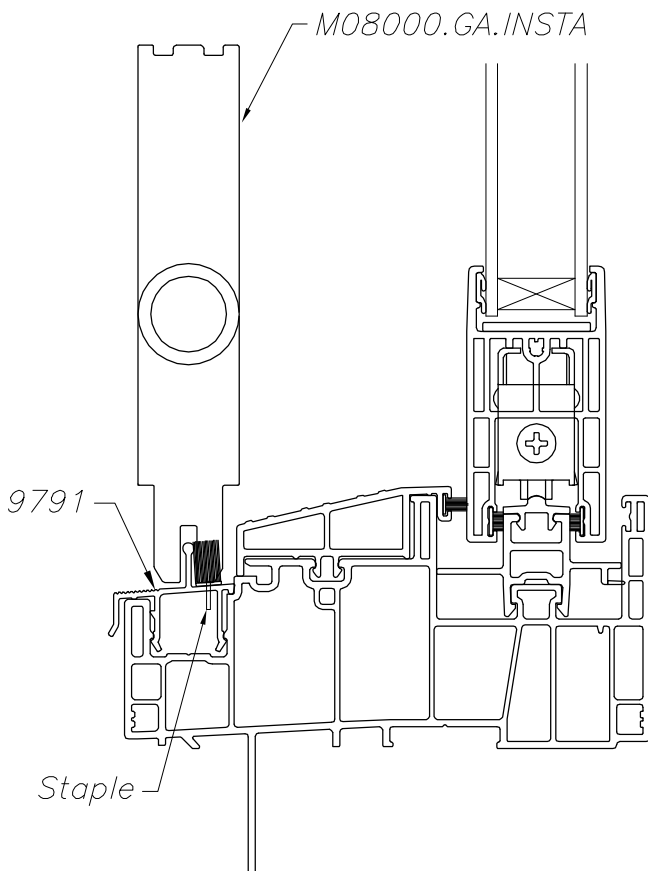
Two (2) Panel Patio Door

Assembly Sequence



STEP 1: Install the outside sill cladding No. 9791, on the sill, using a jig M08000.GA.INSTA and a rubber mallet.

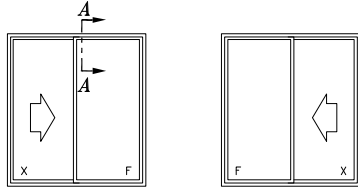
STEP 2: Install the insect stop No. 9569 in the middle of outside sill cladding. No. 9791. Add staples to secure insect stop.



Important : Panel shown as example only

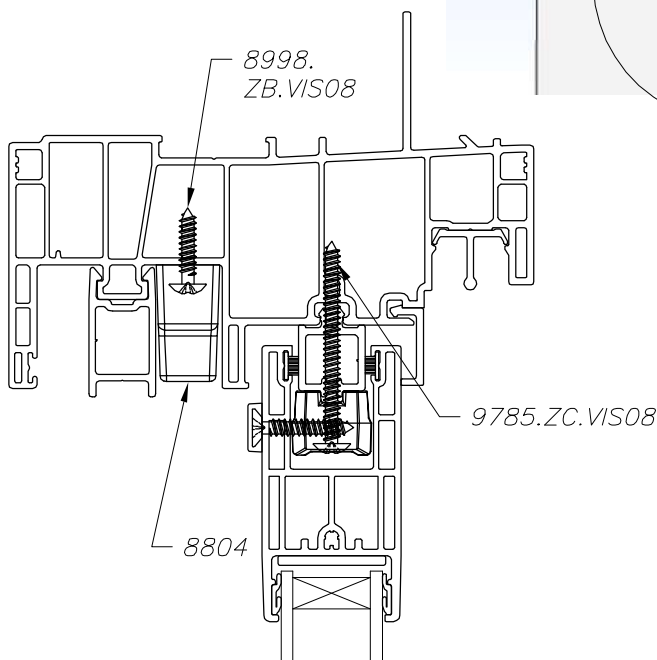
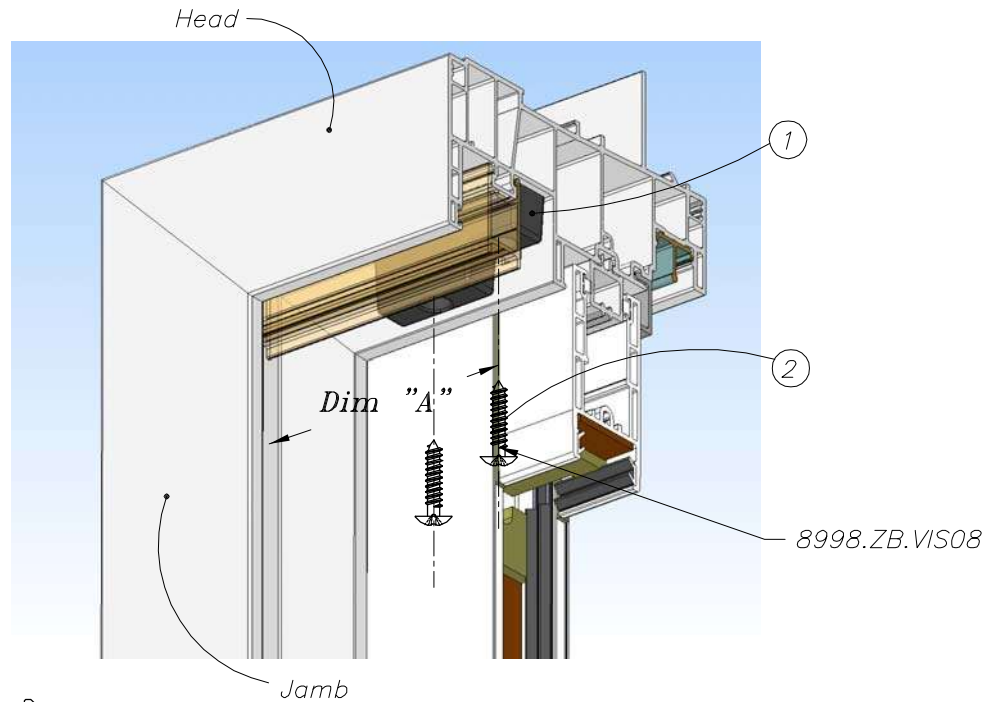
2.2.20 Sash Stopper Installation

Two (2) Panel Patio Door



Important : Panel shown as example only

Note : Depending on the sashes used, refer to the sash section of the technical manual for installation details regarding the handle.



Mortise lock	Dim "A"
With exterior straight pull handle	3 3/4" [95 mm]
With exterior "C" handle (white or black)	5 1/4" [133 mm]
With exterior brass, black nickel and brushed chrome handle.	4 7/8" [124 mm]

Assembly Sequence

- STEP 1:** Locate sash stopper depending on the type of handle chosen. (See table above)
- STEP 2:** On the fixed panel side, place the sash stopper at the indicated place.
(See drawings above).
- STEP 3:** Fasten the sash stopper with (2) screws No. 8998.ZB.VIS08.

2.2 Assembly Procedure

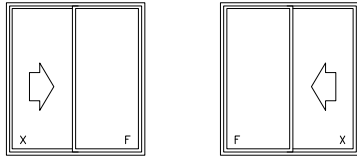
REVISION:

PAGE:

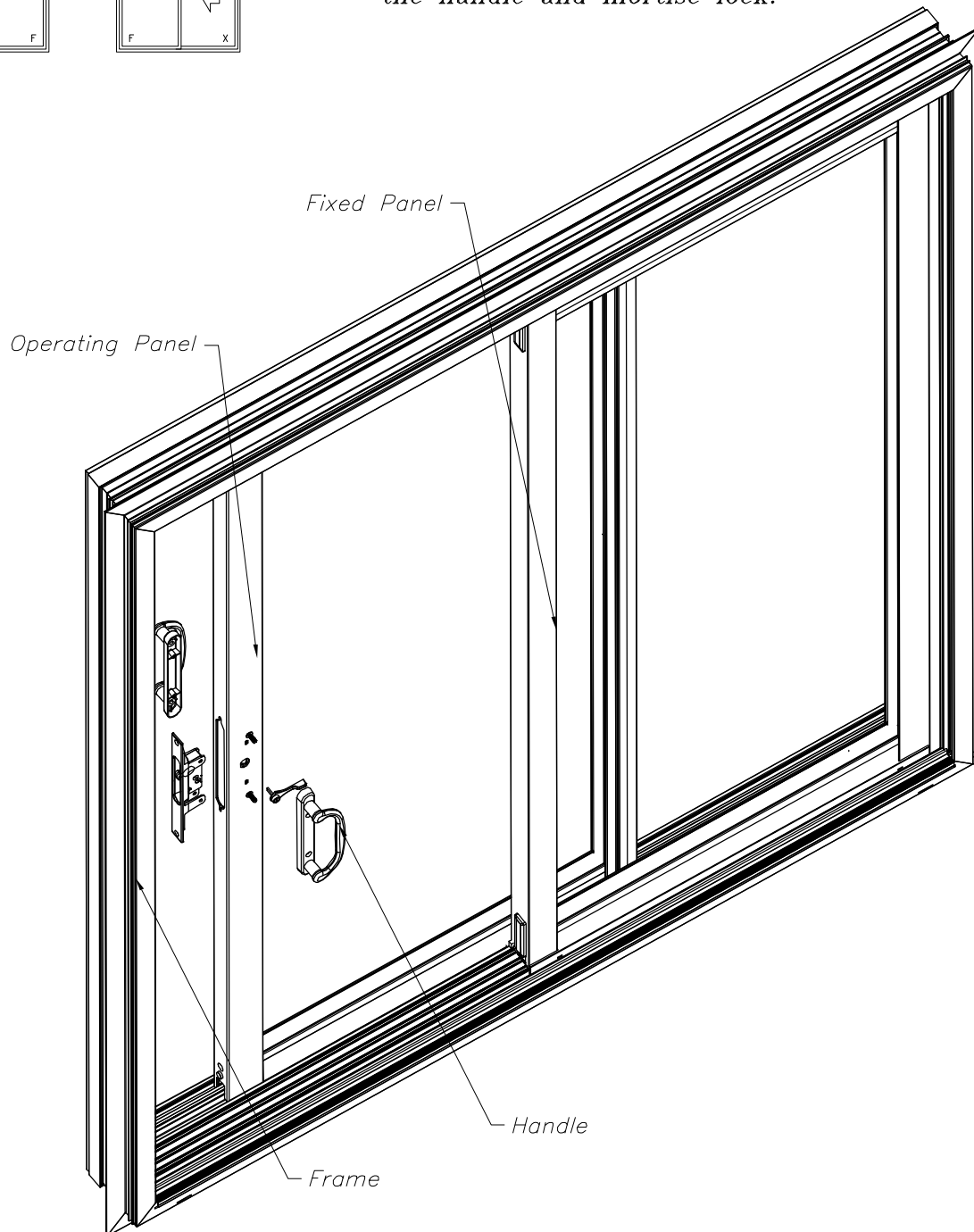
39

2.2.21 Handle and Mortise Lock Installation

Two (2) Panel Patio Door



Note : Depending on the sashes used, refer to the sash section of the technical manual for installation details regarding the handle and mortise lock.



Important : Panel shown as example only