

Series 6000 MULTI-PLANE INSTALLATION AND GLAZING MANUAL

Note: Installation and Glazing Manuals are product specific. FOR REVIEW ONLY!

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GENERAL INFORMATION

The Oldcastle BuildingEnvelope[™] Series 6000 Thermal MultiPlane (2" x 6") system represents the latest in product development technology complemented by dealer on-the-job input and experience. Proper use of this system will assure optimum results in erection and long-term performance.

Oldcastle BuildingEnvelope[™] does not control the application nor selection of its product configurations, sealant, or glazing materials and assumes no responsibility thereof. It is the responsibility of the owner, architect and installer to make these selections are in strict compliance with applicable laws and building codes.

Over the years many components were added to our flush glaze systems. In addition, there are many ways to install storefront products. This manual represents recommendations for the best results.

PROTECTION AND STORAGE:

Handle the material carefully. Do not drop from the truck. Stack with adequate separation so that the material will not rub together. Store material off the ground. Protect against the elements and other construction hazards by using a well-ventilated covering. Remove material from package if it is wet or is located in a wet area.

CHECK MATERIAL:

Check all material upon arrival for quality and to assure against shipping damage. Any visible damage must be noted on the freight bill at the time of receipt. If a claim is required, then the receiving party must process a claim with the freight company.

Completely check construction, which will receive your materials against contract documents. Notify general contractor by letter of any discrepancies before proceeding with work. Failure to do so constitutes acceptance of work by other trades.

Check shop drawings and installation instructions to become familiar with the project. The shop drawings take precedence and include specific details for the project. The installation instructions are of a general nature and cover the most common conditions. Due to varying job conditions, all sealants used should be approved by the sealant manufacturer, to insure they will function for conditions shown on instructions and shop drawings. They must be compatible with all surfaces in which adhesion is required, including other sealant surfaces. Use primers where directed by manufacturer of sealant. Be sure to properly store sealants at recommended temperatures and check sealant for remainder of shelf life before using.

FIELD CONDITIONS:

Do not install wall if there is a walkway with a down slope towards an entrance or a storefront. All materials to be installed plumb, level and true. Aluminum to be placed in direct contact with the masonry or incompatible materials should be isolated with a heavy coat of zinc-chromate or bituminous paint.

After sealant is set and a representative amount of wall has been glazed (250 square feet of more), run a water hose to check installation. On large jobs, hose test should be repeated during glazing operation. Test should be conducted in accordance with AAMA 501.2 specifications. Coordinate protection of installed materials with general contractors and other trades.

GENERAL INFORMATION

CLEANING MATERIALS:

Cement, plaster, terrazzo, alkaline and acid based materials used to clean masonry are very harmful to finishes and should be removed with water and a mild soap immediately or permanent staining will occur. A spot test is recommended before any cleaning agent is used.

EXPANSION JOINTS:

Expansion joints and perimeter seals shown in these instructions and in the shop drawings are shown at normal size. Actual dimensions may vary due to perimeter conditions and/or differences in metal temperature between the time of fabrication and time of installation. For example, a 12 foot unrestrained length of aluminum extrusion can expand or contract 3/32 of an inch over a 50 degree Fahrenheit change. Any movement potential should be accounted for at time of the installation.

THERMAL IMPROVEMENT SUGGESTIONS:

To maintain or improve your wall installation, the following items should be considered:

- 1. Blinds or drapes prevent warm air from washing the window.
- 2. Warm air ventilators too far from window will not adequately wash the window with air to prevent condensation.
- 3. In extreme conditions, the fan of the heating systems should not cycle on and off, but run continuously.
- 4. Some heating systems have a water injection feature that can raise humidity levels. The higher the humidity levels the more likely condensation or frost will form. Raising the temperature and reducing humidity will usually solve this problem.
- 5. On rare occasions, an extremely cold storm may cause frost to appear on the glass or framing. A space heater and electric fan blowing along the plane of the window wall can reduce or eliminate this temporary condition.

FABRICATION SUGGESTIONS:

Oldcastle BuildingEnvelope[™] recommends the use of our EZ Punch tooling for faster and more accurate fabrication of wall systems. If hand fabricating the mullions; drill fixtures are available to improve accuracy. Fabrication instructions for use of these drill fixtures are described within this manual on pages 21 through 23.

FRAME FABRICATION (Storefront Typical Installations)

Measure ROUGH OPENING to determine FRAME WIDTH and FRAME HEIGHT dimensions. Allow 1/4" min clearance for shimming and caulking at sill and jambs. The head joint requires a min of 3/8".

Cut material to size per dimensions given below:

Frame Members:

Subsill or Sill Receptor Mullion & Mullion Fillers Horizontal, Sill & Head Horizontal Glazing Beads & Fillers

Accessories:

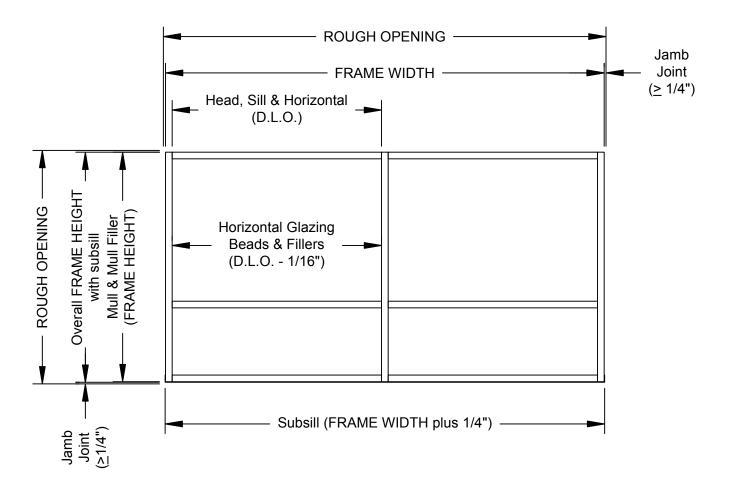
Horizontal Gaskets Vertical Gaskets

Other Members (as required):

Horizontal Glazing Adaptors Vertical Glazing Adaptors Door Jamb FRAME WIDTH plus 1/4" FRAME HEIGHT Daylight Opening (D.L.O.) D.L.O. minus 1/16"

D.L.O. plus 3/8" per foot D.L.O. plus 1" plus 3/8" per foot

D.L.O. minus 1/16" D.L.O. plus 7/8" ROUGH OPENING minus Head Joint



FRAME FABRICATION (SSG Installations)

Measure ROUGH OPENING to determine FRAME WIDTH and FRAME HEIGHT dimensions. Allow 1/4" min clearance for shimming and caulking at sill and jambs. The head joint requires a min of 3/8". Reference page 5 for elevation and terminology.

Cut material to size per dimensions given below:

Frame Members: Subsill or Sill Receptor Mullions & Jamb for Std Subsill (see Detail 'A') Mullions & Jamb for Low Profile Subsill (see Detail 'B') Head & Sill Horizontal Horizontal Glazing Beads & Fillers

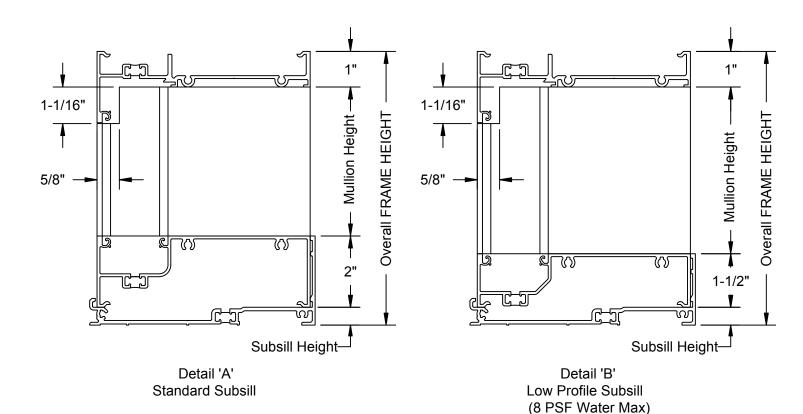
Accessories:

Head & Sill Exterior Gaskets Head & Sill Interior Gaskets Horizontal Gaskets Vertical Gaskets

Other Members (as required): Horizontal Glazing Adaptors Vertical Glazing Adaptors Door Jamb FRAME WIDTH plus 1/4" Overall FRAME HEIGHT minus 3 1/2" Overall FRAME HEIGHT minus 3" FRAME WIDTH Daylight Opening (D.L.O.) D.L.O. minus 1/16"

D.L.O. plus 1" plus 3/8" per foot D.L.O. plus 3/8" per foot D.L.O. plus 3/8" per foot D.L.O. plus 1" plus 3/8" per foot

D.L.O. minus 1/16" D.L.O. plus 7/8" ROUGH OPENING minus Head Joint

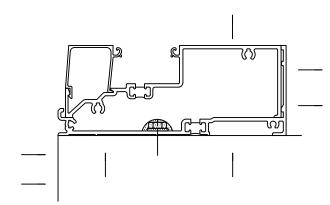


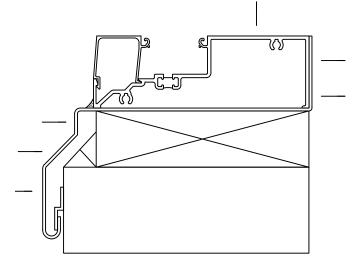
Phone: 1-866-OLDCASTLE (653-2278) Web Address: www.oldcastlebe.com

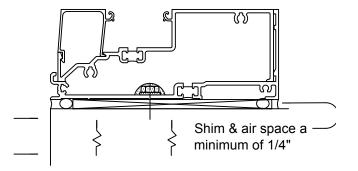
INSTALLATION FOR THERMAL PERFORMANCE

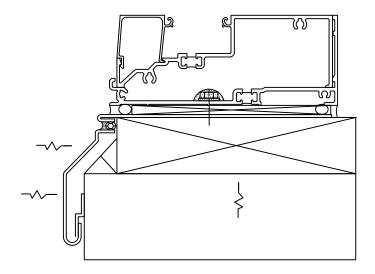


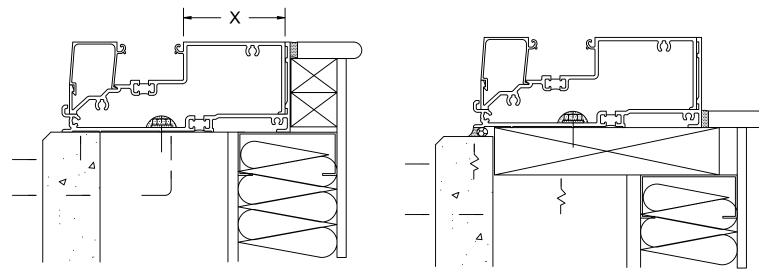
PREFERRED









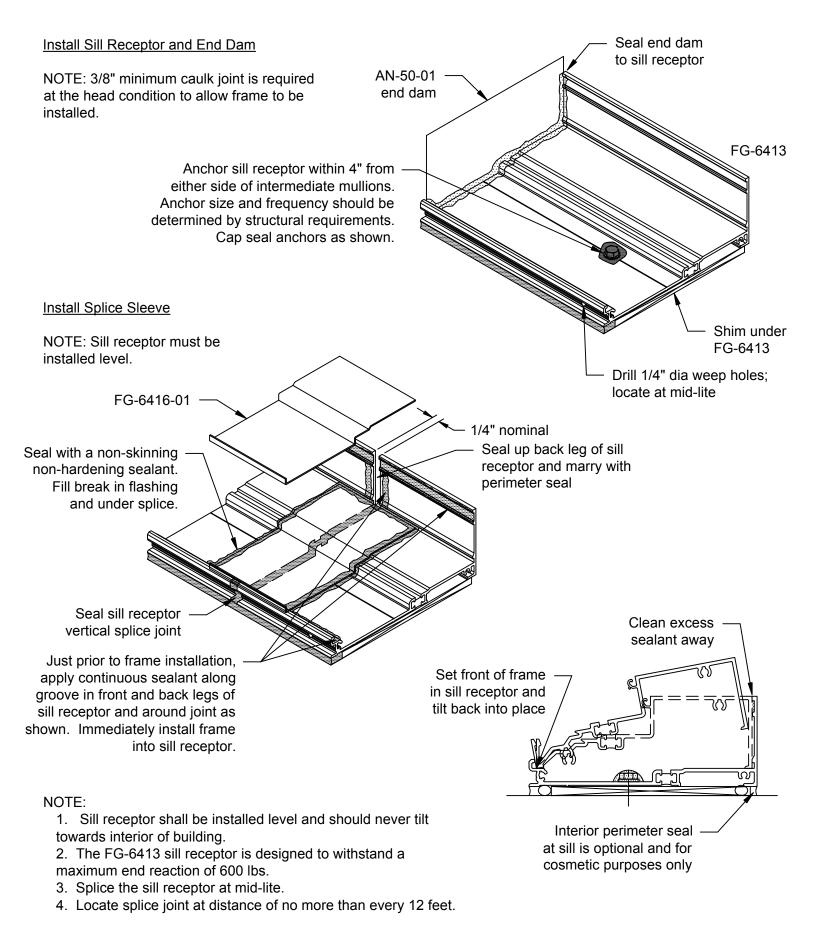


Not enough metal showing at 'X'

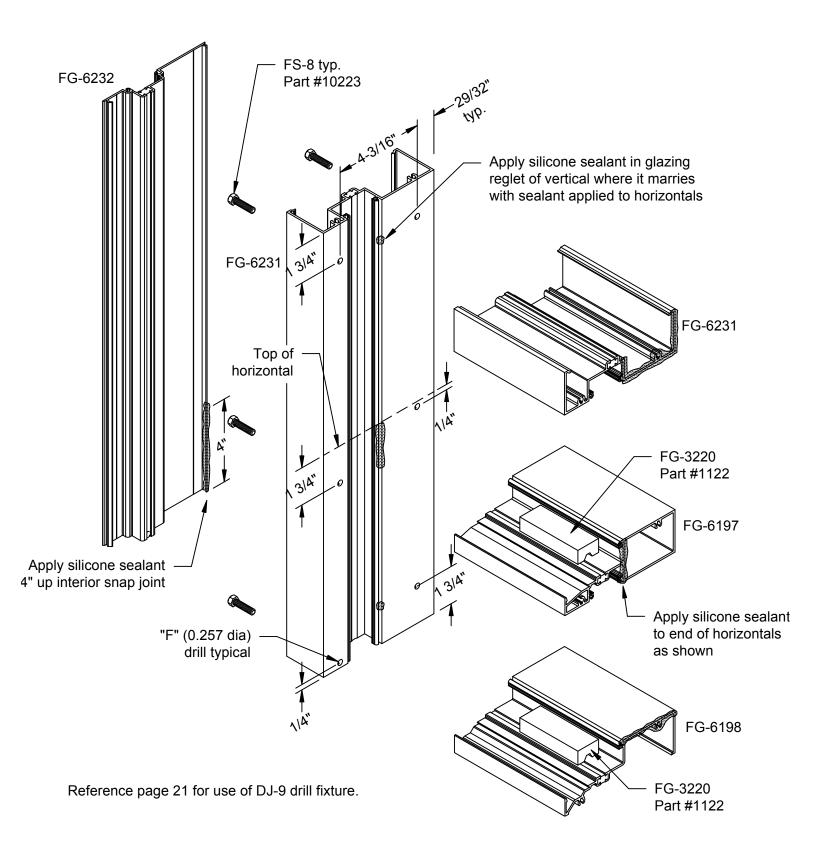
To derive the greatest benefit from your storefront installation, we recommend you review the details above.

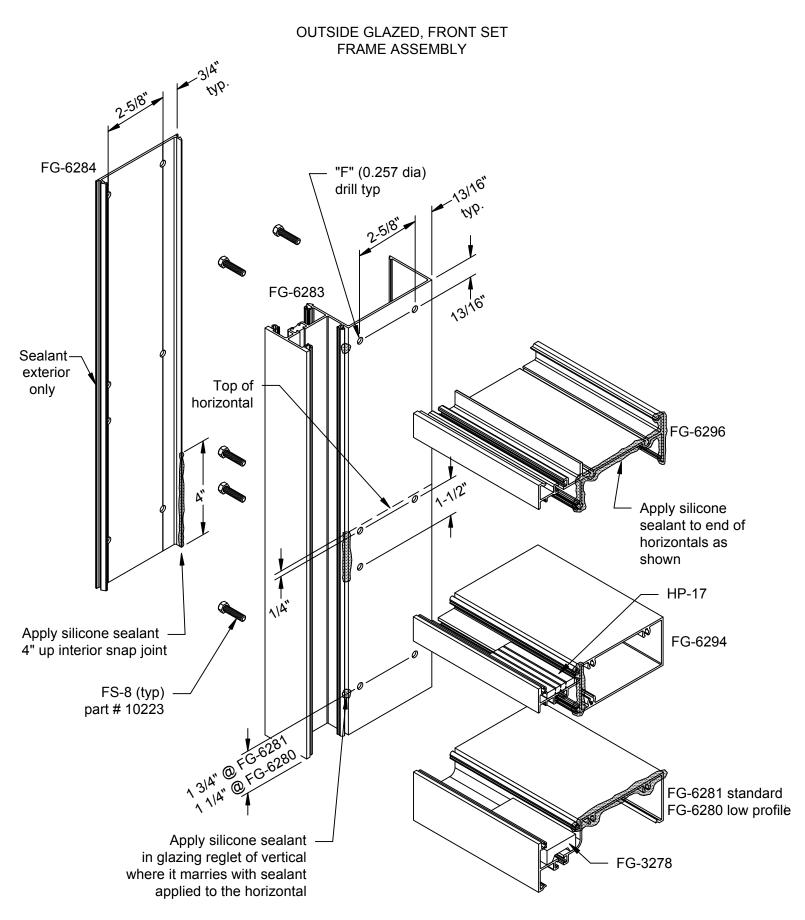
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INSTALLATION INSTRUCTIONS FOR SILL RECEPTOR

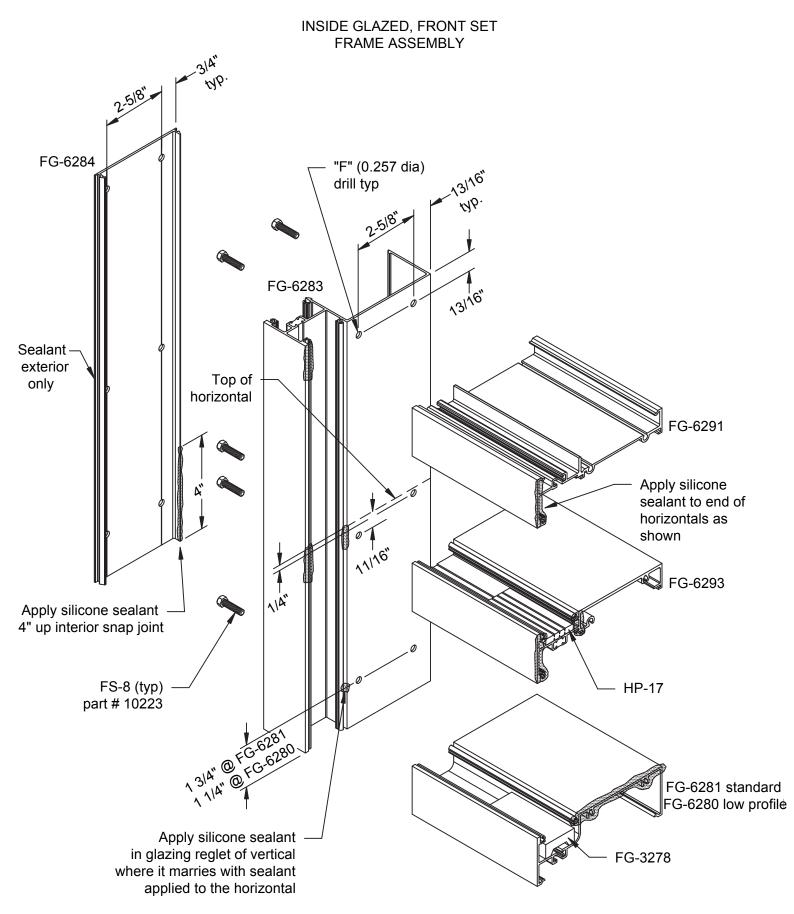


OUTSIDE GLAZED, CENTER SET FRAME ASSEMBLY

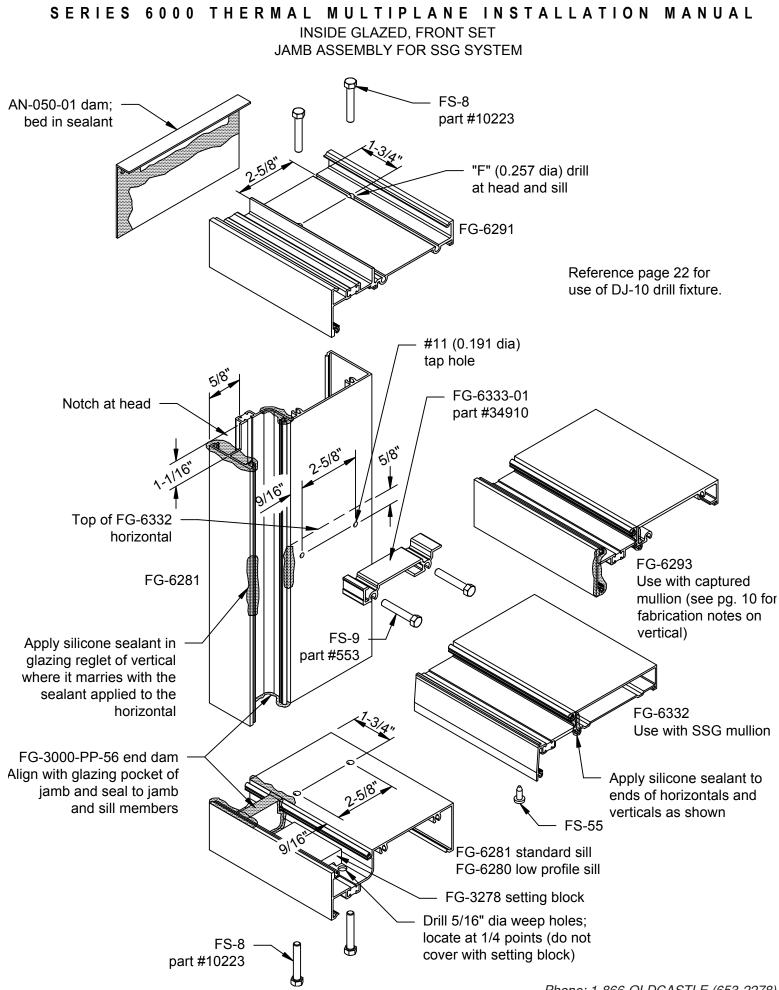




Reference page 22 for use of DJ-10 drill fixture.



Reference page 22 for use of DJ-10 drill fixture.



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INSIDE GLAZED, FRONT SET JAMB ASSEMBLY FOR SSG SYSTEM Reference page 23 for use of DJ-10 drill fixture. null centerline FS-8 part #10223 "F" (0.257 dia) drill at head and sill 11 FG-6291 FG-6334 #11 (0.191 dia) tap hole FG-6333-01 part #34910 gl) FS-9 part #553 Top of horizontal Mull centerline FG-6332 9116 Apply silicone sealant to ends of horizontals and verticals as shown FS-55 FG-6281 standard sill FG-3278 FG-6280 low profile sill setting block Drill 5/16" dia weep holes; FS-8 locate at 1/4 points (do not part #10223 cover with setting block) H

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OUTSIDE GLAZING GUIDELINES

1. Remove gaskets from roll and allow to relax overnight. All gaskets to be cut per sizing on page 4 plus 3/8" per foot.

2. Vertical gaskets run through horizontal gaskets. Horizontal gaskets should be mitered on ends as shown in Detail "A".

3. Install interior gaskets prior to glazing. Corners of interior gaskets to be set in sealant (Detail "B) and sealed just prior to setting glass (Detail "A"). NOTE: Clean gaskets and surfaces with isopropyl alcohol prior to sealing corners.

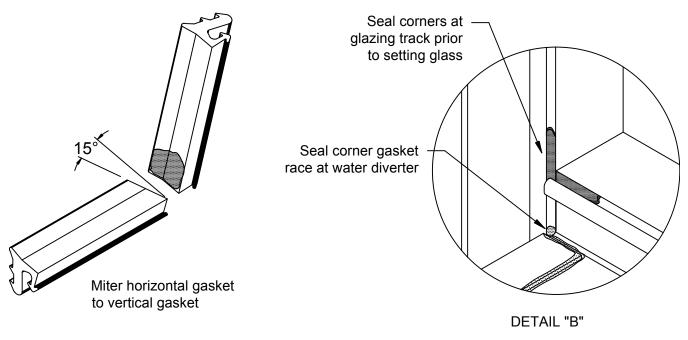
4. Locate setting blocks at either 1/4 points or 1/8 points, dependent on the size of the glass.

5. Glass bite at typical members is 7/16". At SSG verticals glass bite is 3/4".

6. Glaze openings from bottom to top. Install water diverters in horizontal above after lite below is in position.

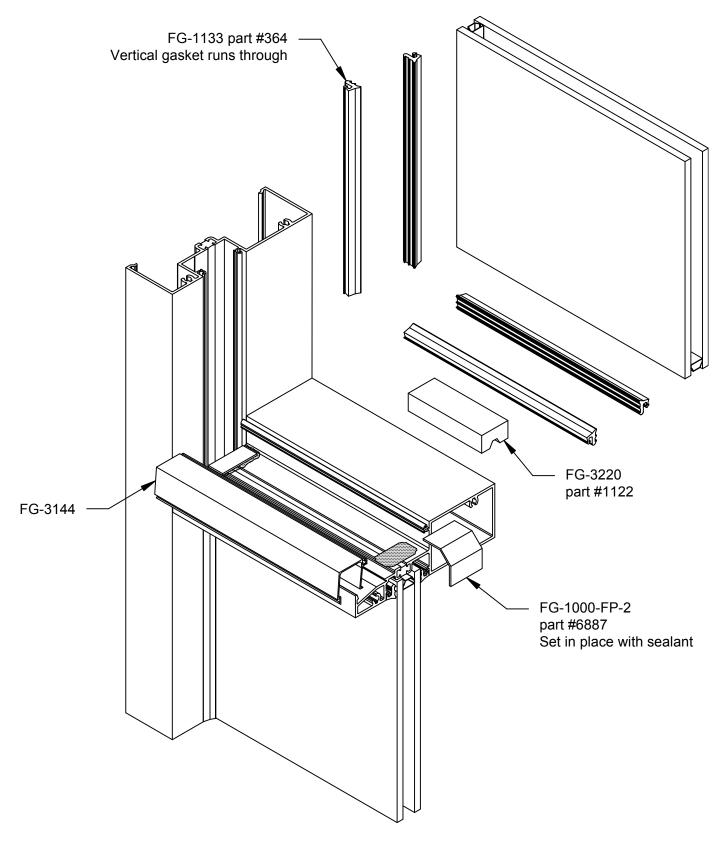
7. Water diverters (FG-1000-FP-2) must be located on each end of horizontals and set in sealant.

8. When installing glass, first wet the top of the setting blocks with soapy water. Once glass is set in place, push glass against interior gasket at the setting block locations. Failure to do so may cause diagonal cracks towards setting blocks due to glass bending while installing the gaskets in the corners.

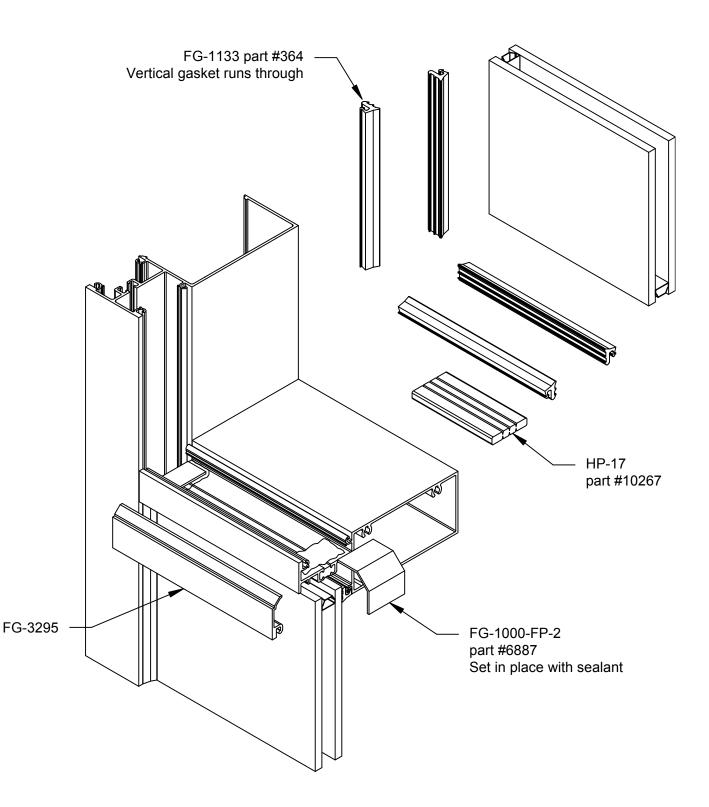


DETAIL "A"

OUTSIDE GLAZED, CENTER SET GLAZING DETAIL



OUTSIDE GLAZED, FRONT SET GLAZING DETAIL



INSIDE GLAZING GUIDELINES

1. Remove gaskets from roll and allow to relax overnight. All gaskets to be cut per sizing on page 4 plus 3/8" per foot.

2. Vertical gaskets run through horizontal gaskets. Horizontal gaskets should be mitered on ends as shown in Detail "A".

3. Install exterior gaskets prior to glazing. Corners of exterior gaskets to be set in sealant (Detail "B) and sealed just prior to setting glass (Detail "A"). NOTE: Clean gaskets and surfaces with isopropyl alcohol prior to sealing corners.

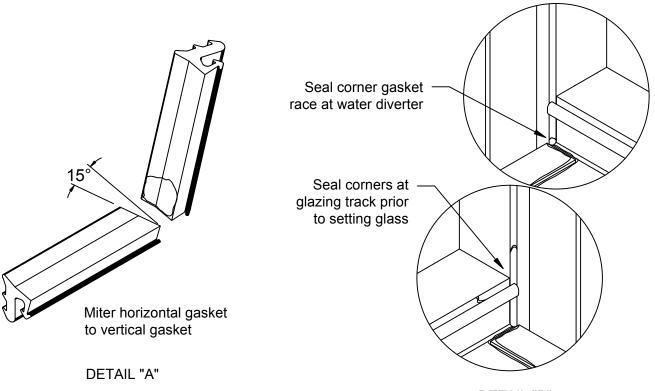
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6. Glaze openings from bottom to top. Install water diverters in horizontal above after lite below is in position.

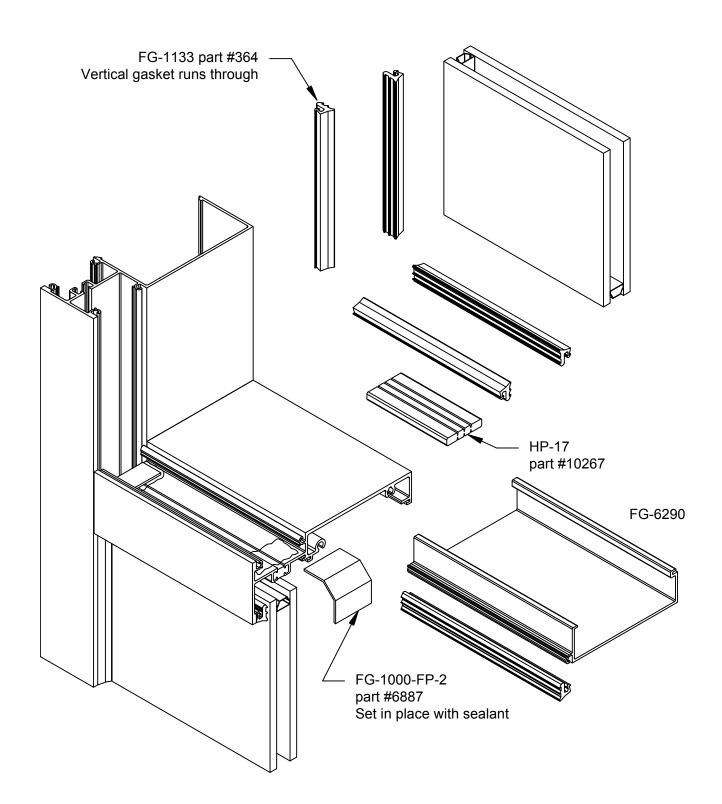
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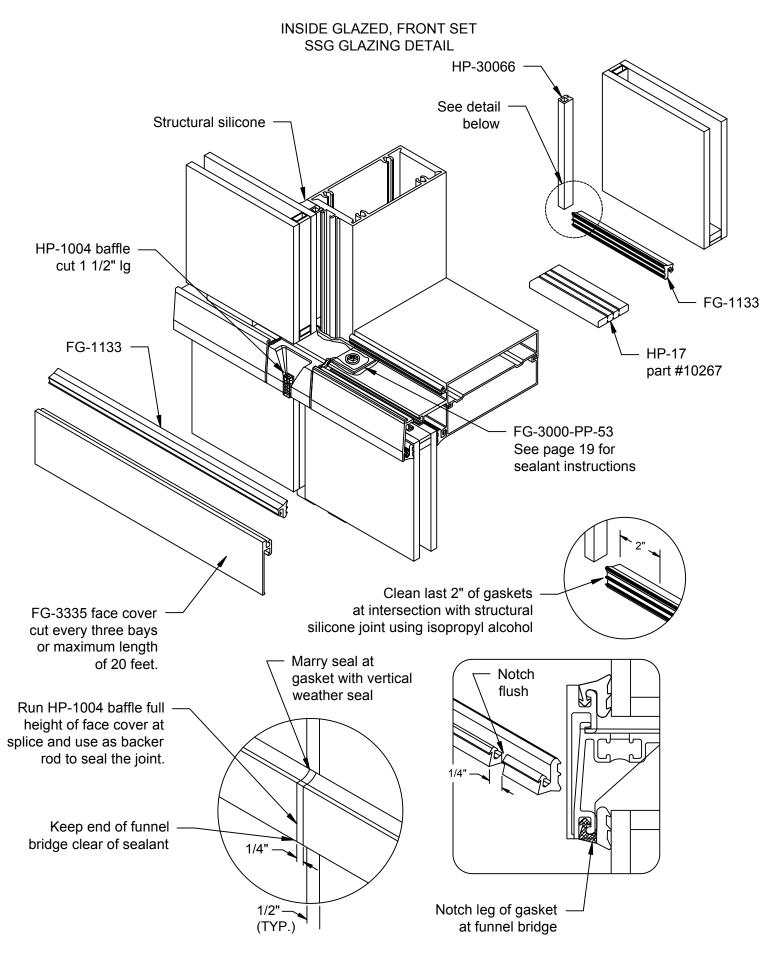
8. When installing glass, first wet the top of the setting blocks with soapy water. Once glass is set in place, push glass against interior gasket at the setting block locations. Failure to do so may cause diagonal cracks towards setting blocks due to glass bending while installing the gaskets in the corners.



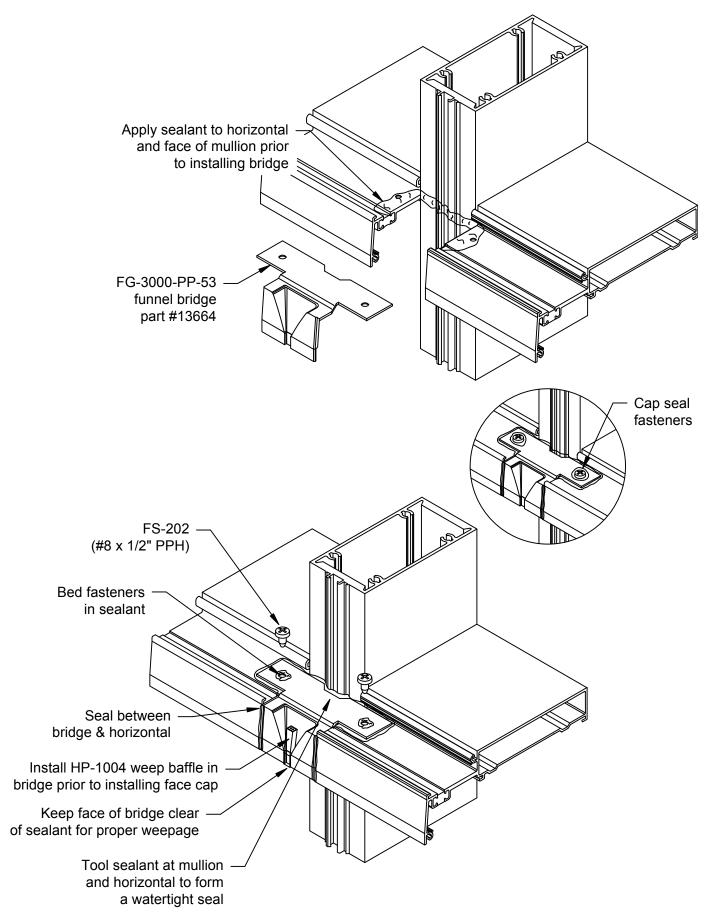
DETAIL "B"

INSIDE GLAZED, FRONT SET GLAZING DETAIL



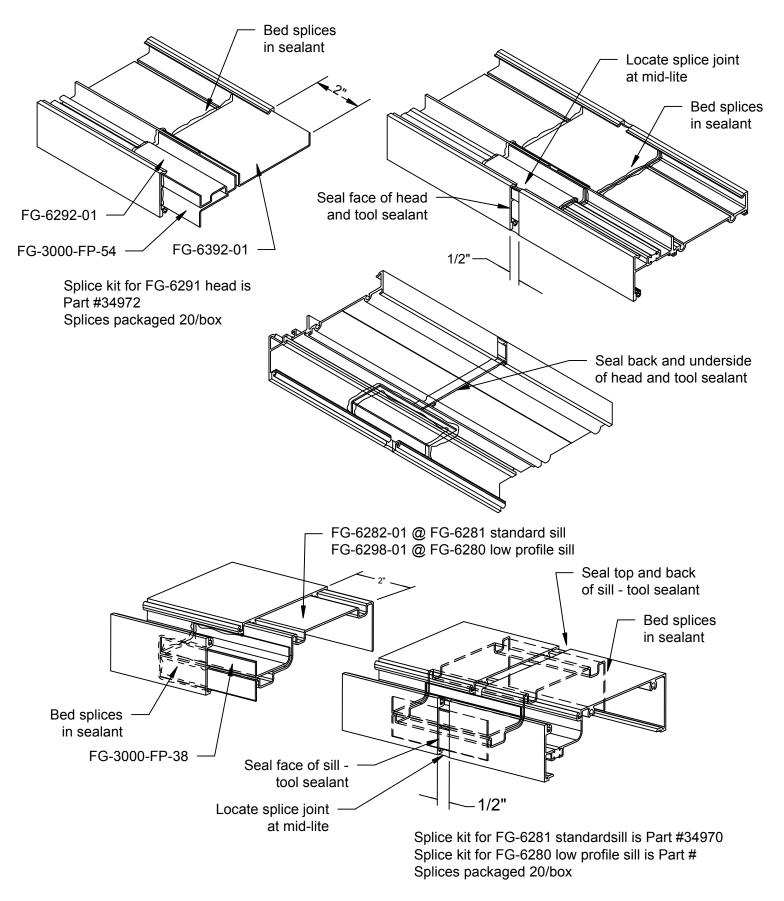


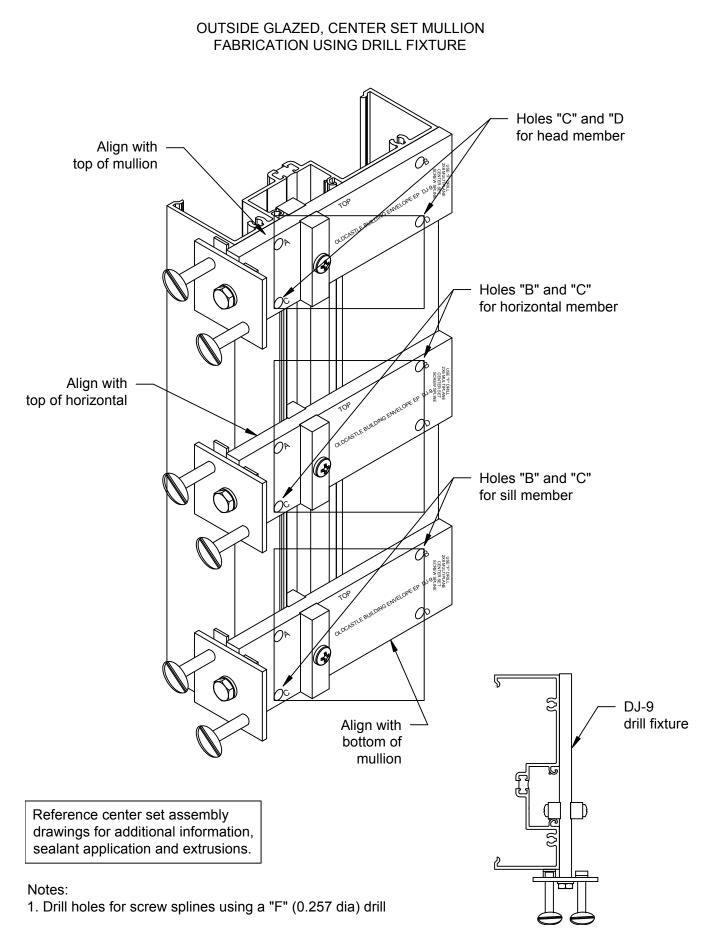
BRIDGE INSTALLATION FOR MULTIPLANE SSG



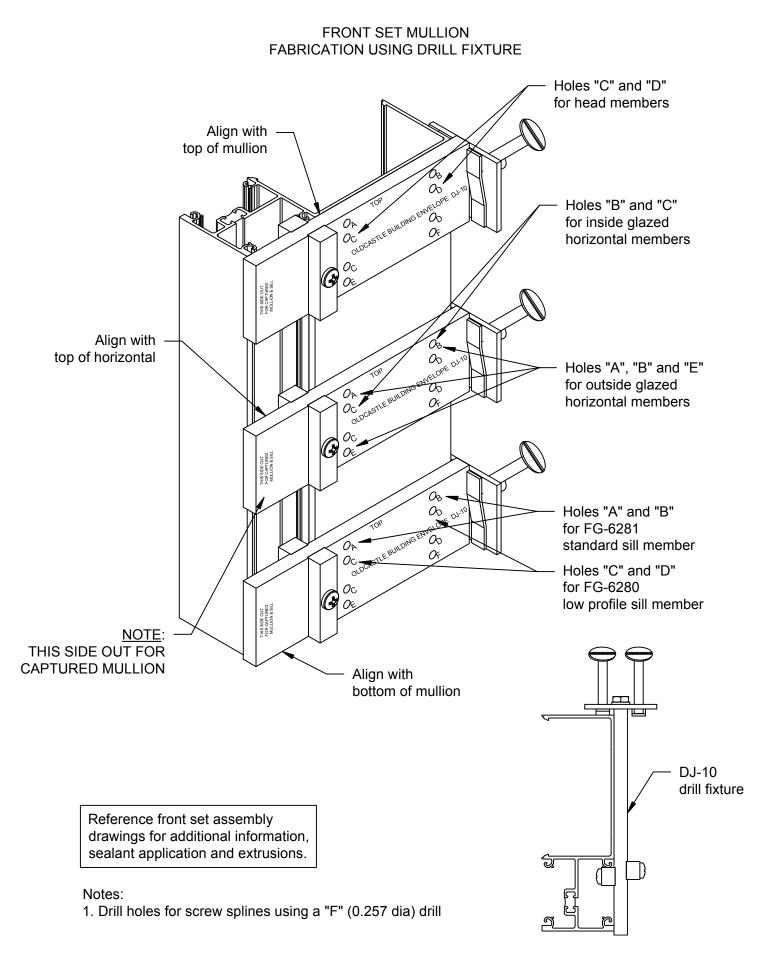
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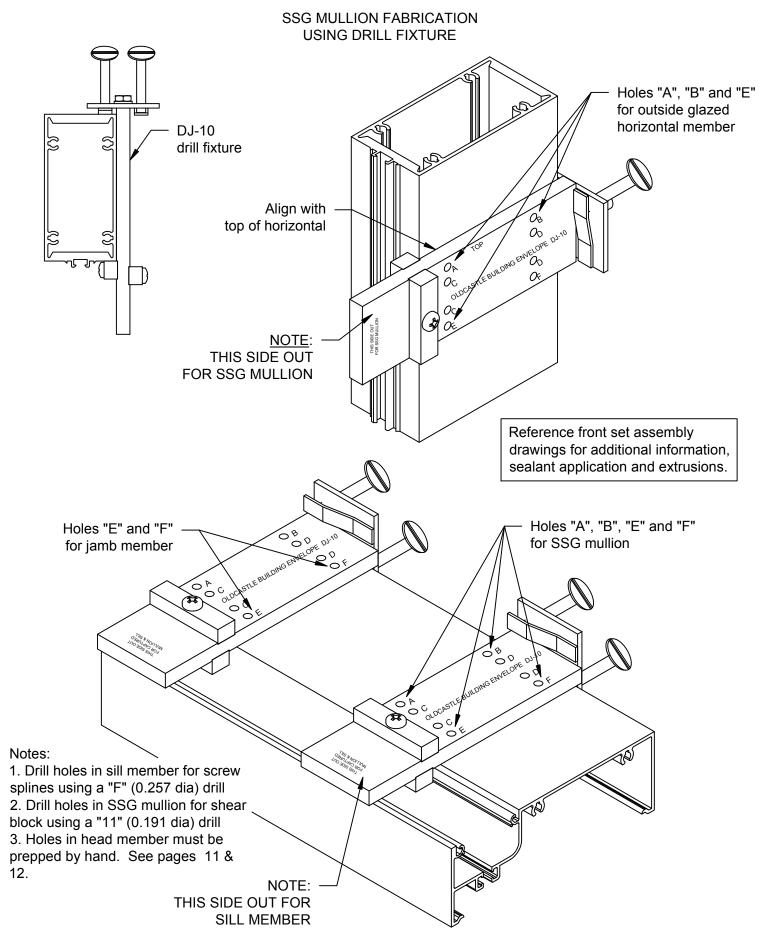
HEAD & SILL SPLICE INSTALLATION FOR SSG SYSTEM

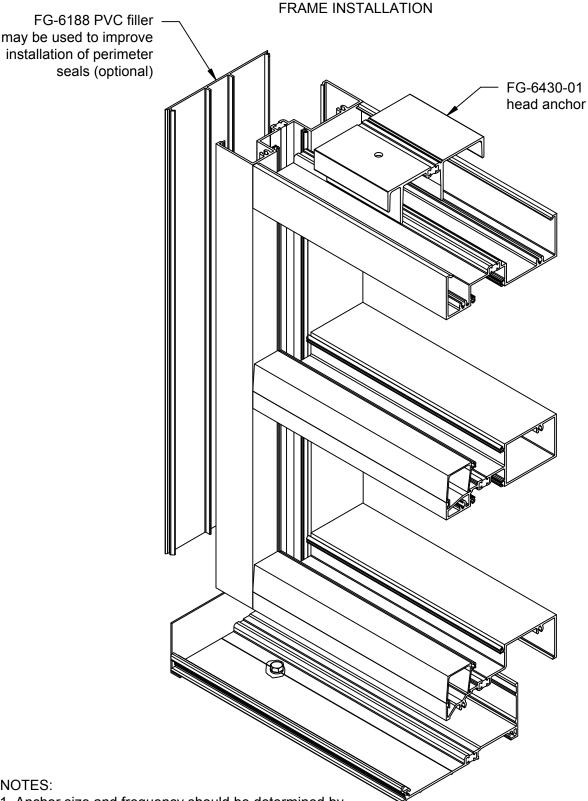




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NOTES:

1. Anchor size and frequency should be determined by structural requirements.

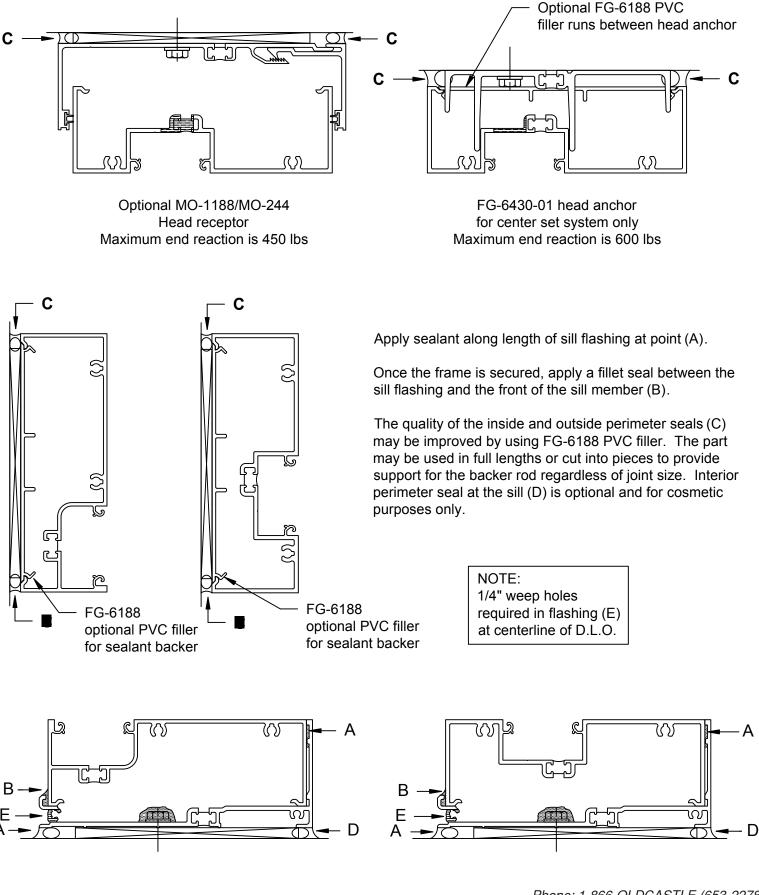
2. Sill and head anchors should be located so that the anchor is not more than 4" away from each side of vertical mullion.

3. Assembly of frames without flashing is not recommended.

4. Assembly of frames using a non-thermal or sheet metal flashing will result in loss of thermal continuity and is not recommended.

5. Do not anchor frame through the vertical leg of subsill.

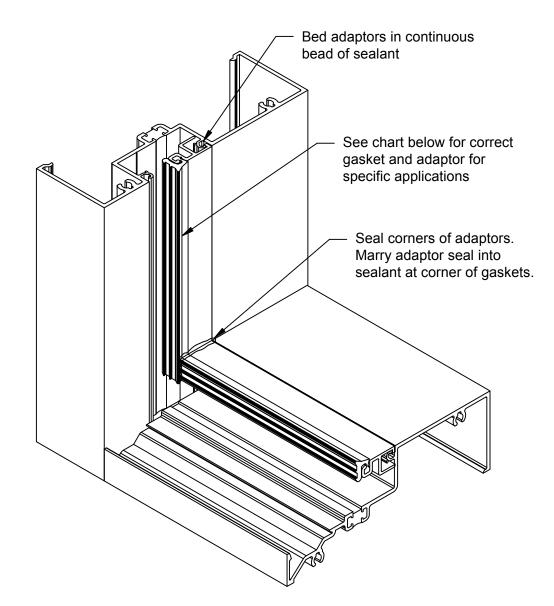
OUTSIDE GLAZED ANCHORAGE & PERIMETER SEAL



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GLAZING ADAPTOR INSTALLATION



NOTE: Adaptors should be installed on interior side of all glazing options.

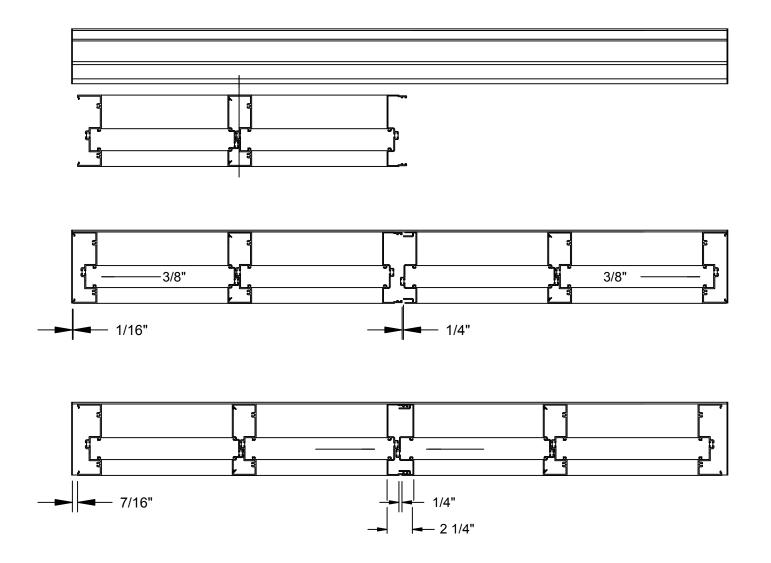
Glass	Adaptor	Gaskets	Glass	Adaptor	Gaskets
1/4"	FG-3194 (FG-3594 for FG-3514)	FG-1133 Both Sides	5/8"	FG-3237 (FG-3537 for FG-3514)	FG-1133 Both Sides
5/16"	FG-3236 (FG-3536 for FG-3514)	FL-66 Both Sides	11/16"	FG-3237 (FG-3537 for FG-3514)	FG-1133 & FG-1134
3/8"	FG-3236 (FG-3536 for FG-3514)	FG-1133 & FL-66	3/4"	FG-3237 (FG-3537 for FG-3514)	FG-1134 Both Sides
7/401	FG-3236	FG-1133 Both Sides	13/16"	None	FG-1133 & FG-3129
7/16"	(FG-3536 for FG-3514)	1 O-1155 Dotti Sides	7/8"	None	FL-66 Both Sides
4.101	FG-3237		15/16"	None	FG-1133 & FL-66
1/2"	(FG-3537 for FG-3514)	FL-66 Both Sides	1"	None	FG-1133 Both Sides
0/40	FG-3237	FG-1133 & FL-66	1-1/16"	None	FG-1133 & FG-1134
9/16"	(FG-3537 for FG-3514)	FG-1133 & FL-00	1-1/8"	None	FG-1134 Both Sides

EXPANSION MULLION INSTALLATION

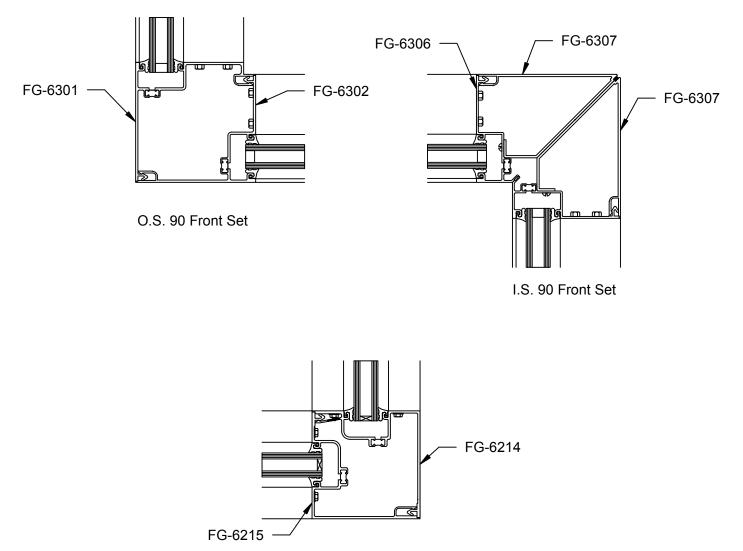
The example below shows installation of the center set system, options for front or back set are also available. Please reference price catalog for specific extrusions and anchors required for your installation. Please note the locations of various seals and insure proper locations of these seals when installing typical runs and expansion sections of each of these systems. These seals are shown in the sub-sill installation and assembly sections of this manual.

The sub-sills for these products are designed so that sill anchors may be properly sealed prior to frame installation. The frame is either installed over the hook-in anchors or dropped into the sill receptor. This prevents any additional fasteners from penetrating the sill and potentially causing leaks from under the sill. Be sure to properly cap seal all sill anchors prior to beginning installation of frames.

Multiple units may require the use of an expansion mullion if total run exceeds 24 feet in length. When elevation exceeds the 24 foot limit, locate thermal mullions at a distance of no more than every 20 feet. Locate splice in sub-sill at a distance of no more than every 12 feet. A minimum of 7/16" clearance between the jamb and sill end dam must be provided at each end of units when using expansion mullions. This will allow the minimum 3/8" clearance to move the units sideways so that the second unit may be rotated into position and interlocked into first unit. Once in position units should be centered into opening to provide equal joints at the jambs. Oldcastle BuildingEnvelope[™] recommends the use of the FG-6188 PVC filler in the jambs and head to improve the perimeter seal.

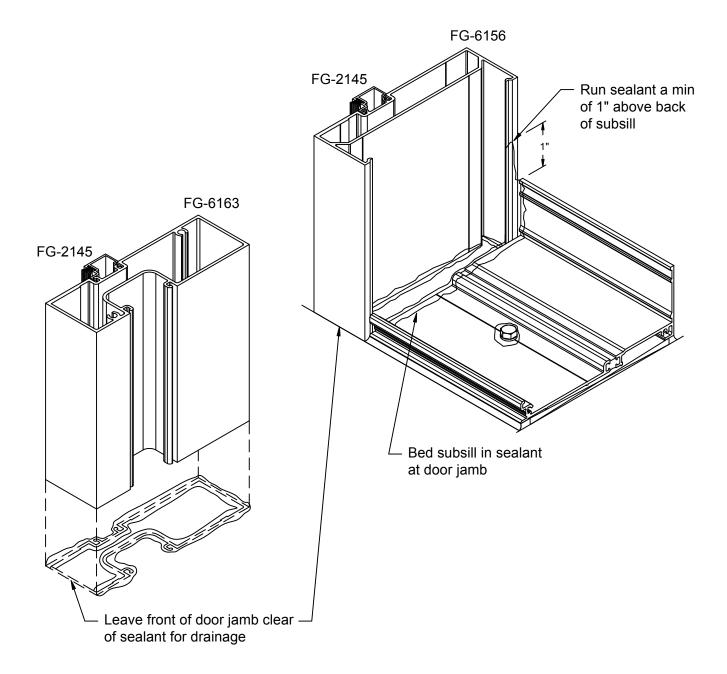


CORNER DETAILS



O.S. 90 or I.S. 90 Center Set

DOOR FRAME INSTALLATION



NOTES:

1. Use shear blocks as shown in frame assembly section of this manual to secure horizontals to tubular frames as required.

2. Door frame is anchored by fasteners through threshold and door frame header.

3. When using the center set system, the two-piece or tubular framing options are available as shown above. When using the front set system only the tubular option is available. The vertical for the front set option is FG-6287.

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PARTS LIST

Center Set

FG-6231	Open Back Head/Jamb/Mullion
FG-6313	Heavy Vertical Mullion
FG-6328	Expansion Mullion (Requires FG-6329)
ل الجام ال FG-6329	Expansion Mullion (Requires FG-6328)
 FG-6232	Open Back Filler
FG-6197	Intermediate Horizontal
FG-6198	Sill
Г FG-3144	Glass Stop for FG-6197 and FG-6198
ر المراجع (FG-6413	Sill Receptor

Front Set

FG-6380	Open Back Jamb
FG-6283	Open Back Mullion

Front Set

Front Set	
FG-6297	Heavy Vertical Mullion
FG-6326	Expansion Mullion (Requires FG-6327)
الاتار الاتار FG-6327	Expansion Mullion (Requires FG-6326)
ہے۔۔۔۔ FG-6284	Open Back Filler (Mullion)
آستا FG-6296	Outside Glazed Head
FG-6294	Outside Glazed Horizontal
FG-6280	Low Profile Sill (8 PSF Water Max)
ب وت المعالم المحالم محالم المحالم محالم محالم محالم محالم محالم محالم محالم محالم محالم محالم محالم محالم محا	Standard Sill (10 PSF Water Max)
F G-3295	Face Stop for FG-6294 & FG-6296
بی آپ FG-6293	Inside Glazed Horizontal
<u>ج</u> FG-6413	Standard Sill Receptor (10 PSF Water Max) Use with FG-6281 Sill
<u>بہ</u> FG-6513	Low Profile Sill Receptor (8 PSF Water Max) Use with FG-6280 Sill

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PARTS LIST

Front Set SSG

FG-6281	Jamb
FG-6334	SSG Mullion
FG-6291	SSG Head
FG-6332	SSG Horizontal
ا FG-3335	Face Stop for FG-6332 Horizontal
الے ا FG-6290	Glass Stop for FG-6291 & FG-6332

Front Set SSG Accessories

៤ក្រាភ្នា FG-6333-01	Shear Block for FG-6332 (Screws Included)
FG-6188	PVC Flat Filler at Jamb & Head 12'-0" long
لحرا لــــــــــــــــــــــــــــــــــــ	Splice Package for FG-6291 Head
FG-3000-PP-53	Funnel Bridge for FG-6332
FG-6100-01	Anchor for FG-6291 Head

Front Set SSG Accessories

FG-6381	Splice Package for FG-6281 Standard Sill
ہے۔ FG-6382	Splice Package for FG-6280 Low Profile Sill

Auxiliary Extrusions

FG-6214	Center Set 90° Inside Corner (Requires FG-6215)
۲ FG-6215	Center Set 90° Inside Corner (Requires FG-6214)
FG-6216	Center Set 90° Outside Corner (Requires FG-6217)
ا FG-6217	Center Set 90° Outside Corner (Requires FG-6216)
FG-6301	Front Set 90° Outside Corner (Requires FG-6302)
FG-6302	Front Set 90° Outside Corner (Requires FG-6301)
f , FG-6306	Front Set 90° Inside Corner (2 Per Corner)
FG-6307	Front Set 90° Inside Corner (Requires FG-6306)
FG-3126	Snap-In Pocket Filler
Ц FG-3194	Pocket Reducer for 1/4" Glass

PARTS LIST

Auxiliary Extrusions

Ų	FG-3236	Pocket Reducer for 7/16" Glass
Ę	FG-3237	Pocket Reducer for 5/8" Glass

Door Frame Components

FG-6287	6" Front Set Door Jamb (Use FG-6284 Filler)	
FG-6156	6" Center Set Door Jamb (Use FG-6232 Filler)	
 F-24	6" Door Jamb Common Mullion	
بوری اور اور اور اور اور اور اور اور اور اور	6" Door Header Center Set	
FG-6387	6" Door Header Front Set	
FG-6160	6" Door Header OHCC	
یے۔ FG-3324	Front Set Transom Sash (Use with FG-6163)	
₽. FG-3325	Front Set Transom Sash (Use with FG-3324)	
சூரி FG-3157	Center Set Transom Sash (Use with FG-6163)	

Door Frame Components

Г 3	Center Set Transom Sash
FG-3158	(Use with FG-3157)
بت FG-2145	Door Stop

Door Frame Accessories

	Shear Block for
	FG-6160
	Door Header
AC-107-1	(Screws Included)
	Shear Block for
	FG-6387 Door
ູພູທ	Header
FG-3000-FP-48	(Screws Included)

Accessories

FG-6188	PVC Flat Filler Caulk Stop 12'-0" long
FG-3218	Vinyl Pocket Filler for Window Applications 12'-0" long
FG-1000-FP-2	Water Diverter for Center Set Outside Glaze & All Front Set
HP-1004	Weep Baffle
FG-6416-01	Splice for FG-6413
AN-50-01	End Dam for FG-6413

PARTS LIST

Accessories

FG-6430-01	Anchor for FG-6231 Head
DJ-7	Drill Fixture for Front Set Shear Block (4 1/2" Door Headers)
DJ-8	Drill Fixture for Center Set Shear Block (4 1/2" Door Headers)
DJ-9	Drill Fixture for Center Set (6" Members)
DJ-10	Drill Fixture for Front Set (6" Members)
F G-1133	1" Glazing Gasket
F G-1134	Light Gasket
FG-3129	5/8" Glazing Gasket
FL-66	Heavy Gasket
HP-92	Setting Block for FG-3155, FG-3163 Door Headers
FG-3342	Setting Block for FG-3324 Adaptor
	Setting Block for FG-6197, FG-6198 & FG-6280

FG-3278	Setting Block for FG-3287 Door Header
HP-17	Setting Block for FG-6293, FG-6294 & FG-3157
FS-6	#10 x 3/4" PPH Attachment of Shear Blocks at Door Headers
FS-7 (Clear)	#10 x 3/4" PFH Attachment of Shear Blocks at Door Headers
FS-8	#14 x 1" HH STS Assembly Screw
FS-55	#10 x 1/2" PPH Attachment of Shear Blocks at Horizontals
1 FS-320	#10 x 1/2" U-Drive Attach End Dam to FG-6413 Sub-Sill