

# FG-1000 - FG-2000 STOREFRONT INSTALLATION AND GLAZING MANUAL

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

# FG-1000 & FG-2000 INSTALLATION & GLAZING INSTRUCTIONS

These instructions are to be used for typical installations. Reference shop drawings for special notations on installations and glazing.

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### **GENERAL INFORMATION**

#### **PRODUCT USE**

The *FG-1000* and *FG-2000* flush glazing systems by Oldcastle BuildingEnvelope<sup>®</sup> are intended for installation by glazing professionals with appropriate experience. Subcontractors without experience should employ a qualified person to provide field instruction and project management.

Oldcastle BuildingEnvelope<sup>®</sup> does not control the application or selection of its product configurations, sealant or glazing material and assumes no responsibility thereof. It is the responsibility of the owner, architect and installer to make these selections in strict compliance with applicable laws and building codes.

## Consult sealant manufacturer for review and recommendation of sealant application. Follow sealant manufacturer's recommendations and literature for proper installation.

The air and water performance of the *FG-1000* and *FG-2000* flush glazing systems are directly related to the completeness and integrity of the installation process of both the seal installed at the horizontal to vertical connections and the glazing gaskets. To insure top performance for this system, particular attention should be given the following procedures:

- 1. Surfaces to be sealed with tacky tape should be cleaned with isopropyl alcohol or solvent and dried as recommended by sealant manufacturer to remove all dirt and cutting oils.
- 2. The glazing gaskets should be installed so as to avoid stretching, buckles or tears. Corners must be cut square, sealed and butted together. To avoid damage to gasket and corner joints during glazing, glass should be level and straight during installation.

Variations on the details shown are inevitable and are not the responsibility of Oldcastle BuildingEnvelope<sup>®</sup> when drawn by others. Oldcastle BuildingEnvelope<sup>®</sup> strongly encourages its customers to use its engineering department for calculations and shop drawings.

Consult glass manufacturer for correct setting block location and length for glass sizes in excess of 40 sq.ft.

#### **PROTECTION AND STORAGE**

Handle all material carefully. Do not drop from the truck. Stack with adequate separation so the material will not rub together. Store material off the ground, protecting against the elements and other construction hazards by using a well ventilated covering. Remove material from package if wet or located in a damp area. For further guidelines consult AAMA publication CW-10, "Care and Handling of Architectural Aluminum From Shop to Site."

#### **CHECK MATERIAL**

Check glass dimensions for overall size as well as thickness. Oldcastle BuildingEnvelope<sup>®</sup> cannot be held responsible for gaskets that are not water tight due to extreme glass tolerances. The *FG-1000* and *FG-2000* flush glazing systems are designed to accommodate glass or panels measuring ¼″ in thickness. (+/- 1/32″). Check all material upon arrival at job site for quality and to determine any shipping damage.

Using the contract documents, completely check the surrounding conditions that will receive your materials. Notify the general contractor by letter of any discrepancies before proceeding with the work. Failure to do so constitutes acceptance of work by other trades.

Check shop drawings, installation instructions, architectural drawings and shipping lists 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 sealant used must be approved by the sealant manufacturer to insure it will perform per the conditions shown on the instructions and shop drawings. The sealant must be compatible with all surfaces in which adhesion is required, including other sealant surfaces. Use primers where directed by sealant manufacturer. Properly store sealant at the recommended temperatures and check sealant for remainder of shelf life before using.

### **GENERAL INFORMATION**

#### FIELD CONDITIONS

All material to be installed must be plumb, level and true. Aluminum to be placed in direct contact with masonry or incompatible material should be isolated with a heavy coat of zinc chromate, bituminous paint or non-metallic material.

After sealant is set and a representative amount of the wall has been glazed (250 square feet or more), run a water hose test in accordance with AAMA 501.2 specifications to check installation. On large projects the hose test should be repeated during the glazing operation.

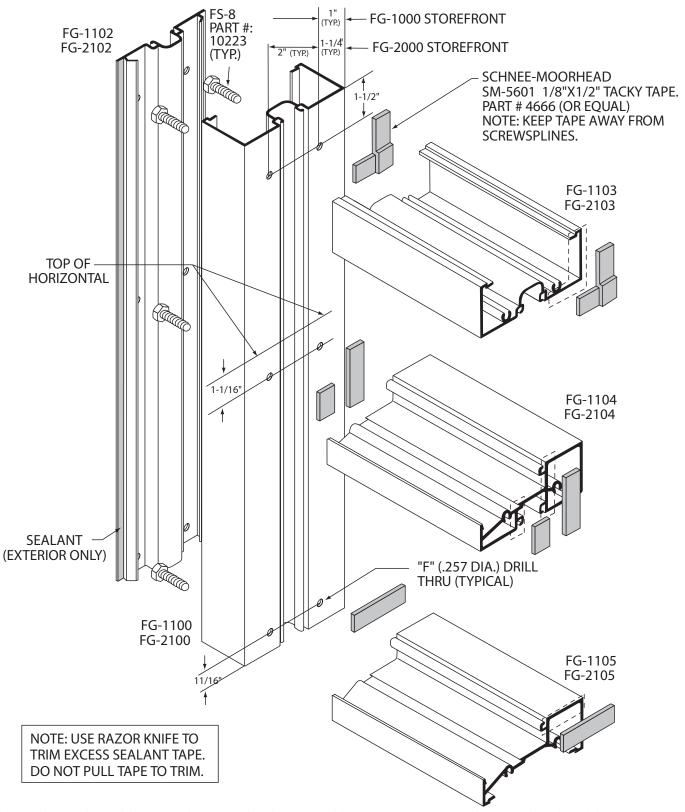
#### **CLEANING MATERIALS**

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

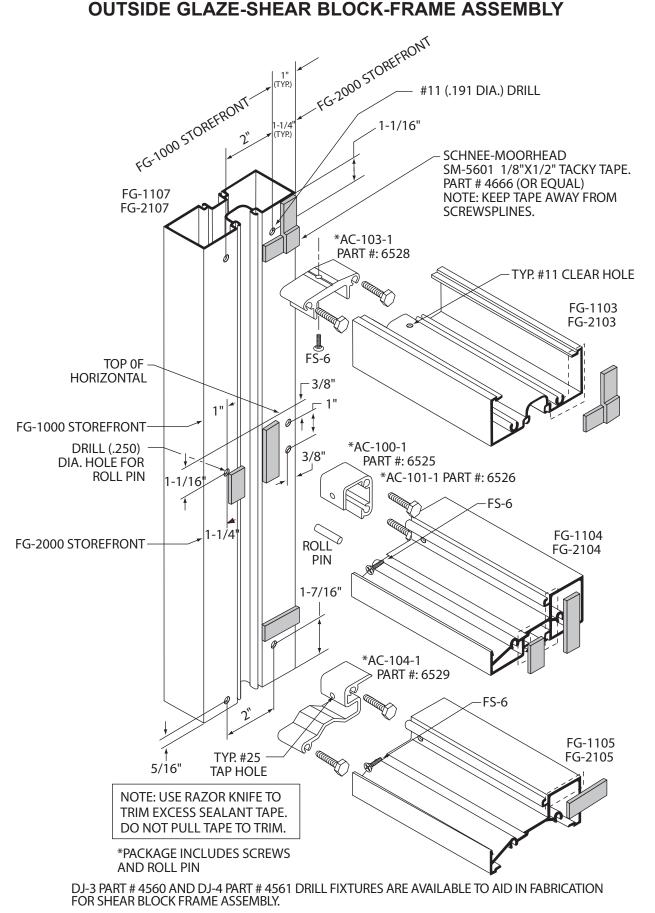
#### **EXPANSION JOINTS**

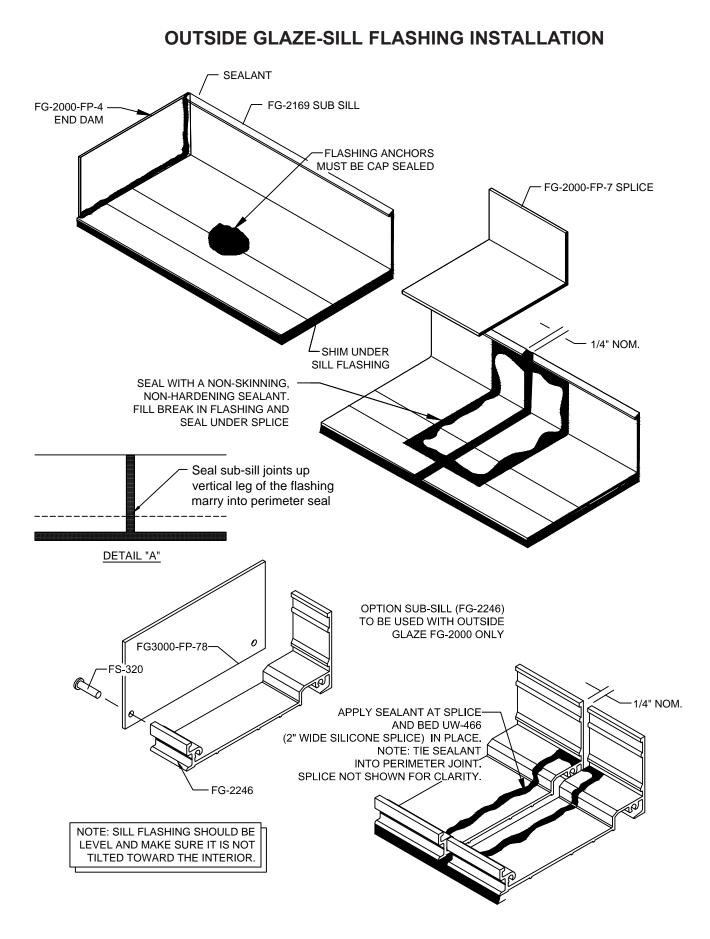
Expansion joints and perimeter joints shown in these instructions and in the shop drawings are shown at nominal size. Actual dimensions may vary due to perimeter conditions and/or differences in metal temperature between the time of fabrication and the time of installation. For example, a 12 foot unrestrained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

### OUTSIDE GLAZE-SCREW SPLINE-FRAME ASSEMBLY

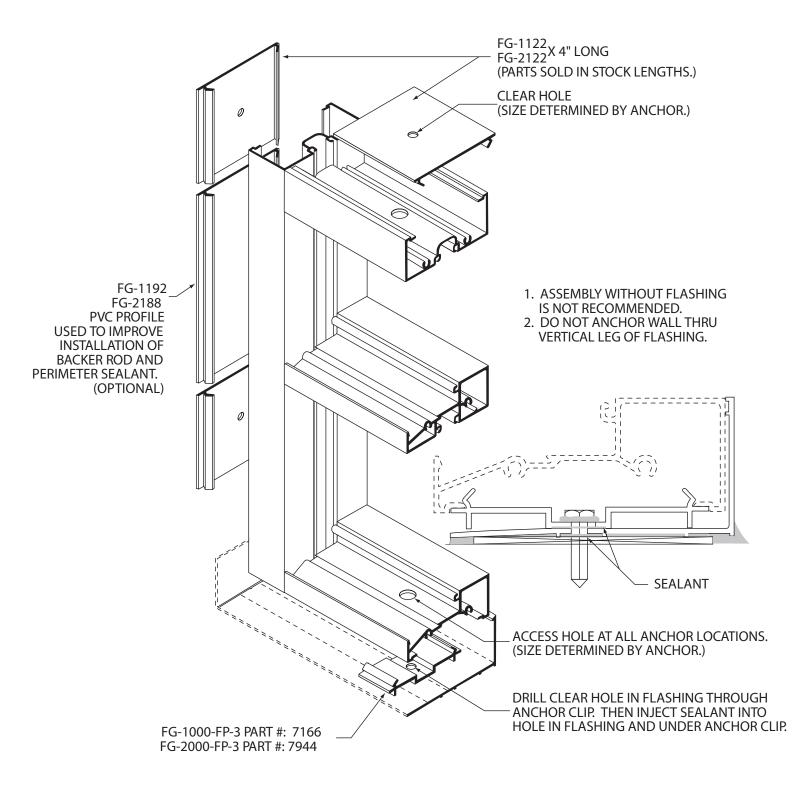


FOR FASTER, MORE ACCURATE HOLE FABRICATION, WE RECOMMEND THE EZ PUNCH FABRICATION TOOL. DJ-5 DRILL FIXTURE PART # 4562 IS ALSO AVAILABLE TO AID FABRICATION FOR SCREW SPLINE FRAME ASSEMBLY.



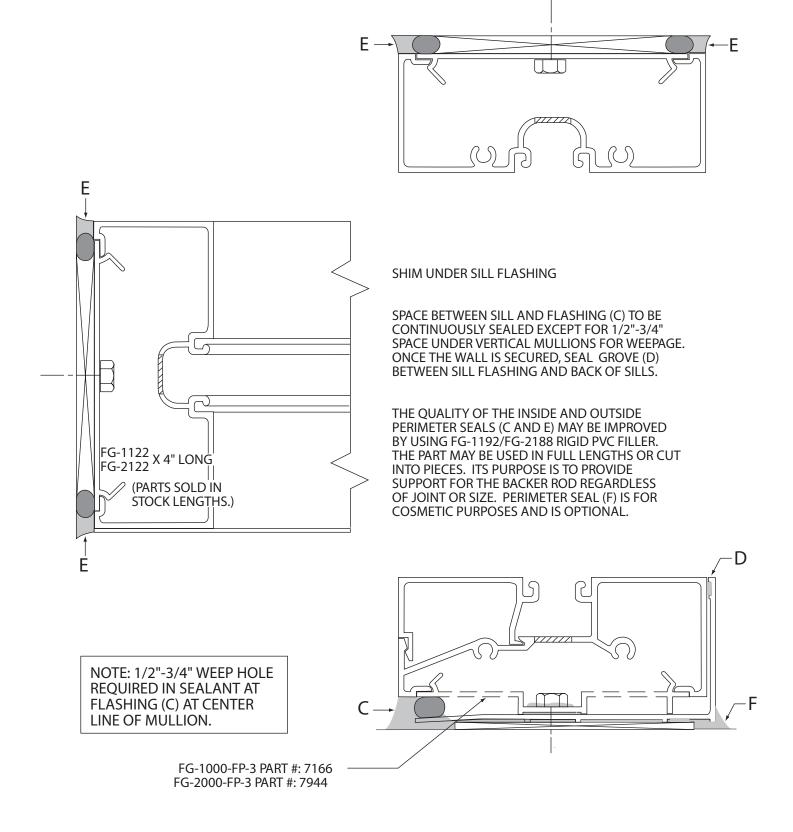


### **OUTSIDE GLAZE-FRAME INSTALLATION**

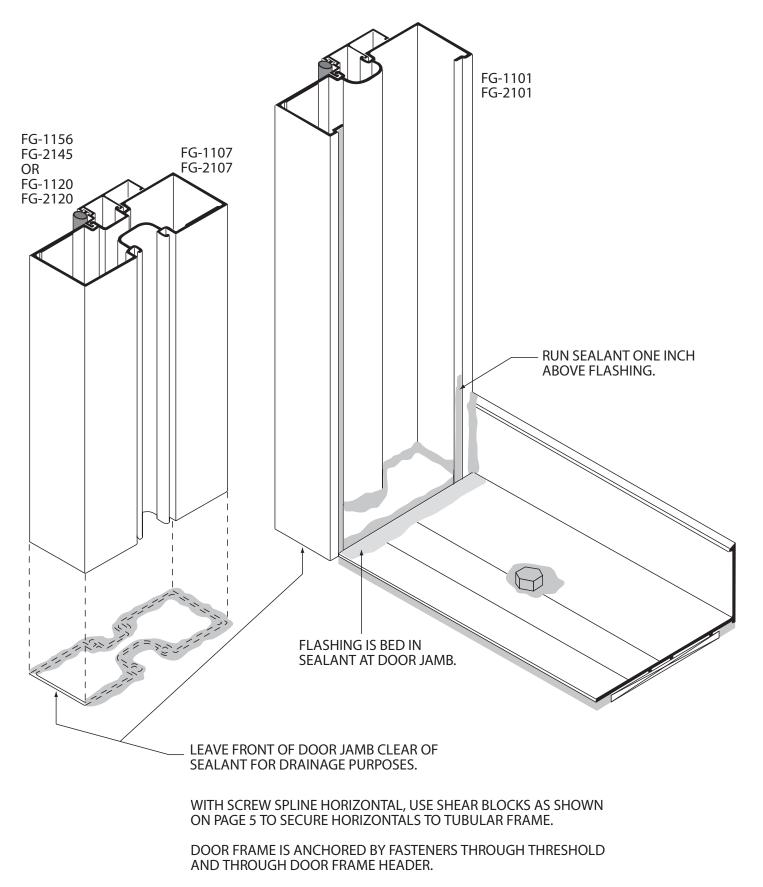


ANCHOR SIZE AND FREQUENCY SHOULD BE DETERMINED BY STRUCTURAL REQUIREMENTS. SILL ANCHORS FG-1000-FP3/FG-2000-FP-3 AND HEAD ANCHORS FG-1122/FG-2122 SHOULD BE LOCATED SO THAT THE ANCHOR IS NOT MORE THAN 4" FROM EACH SIDE OF THE MULLION.

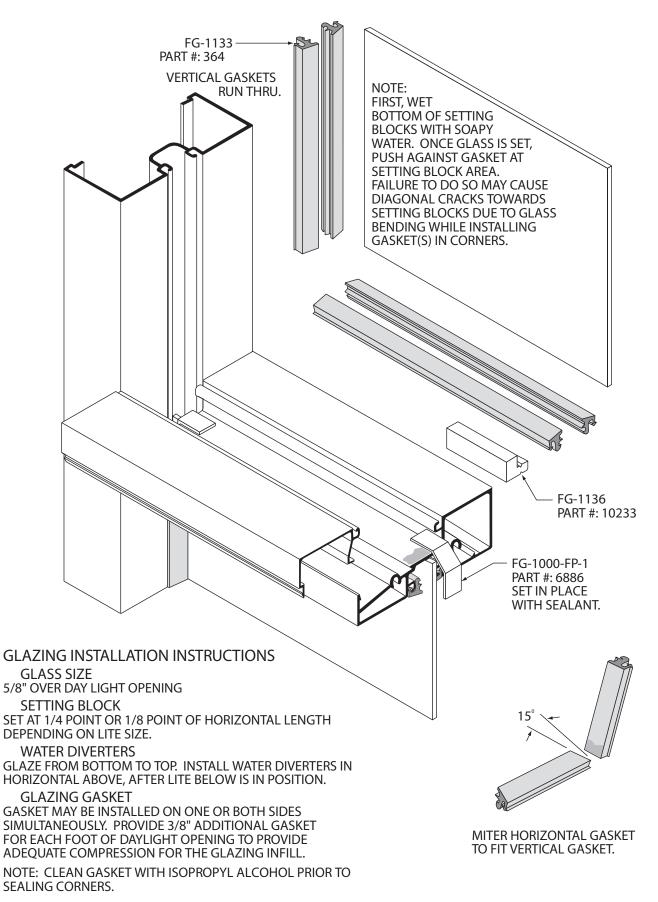
### **OUTSIDE GLAZE-SILL INSTALLATION AND PERIMETER SEAL**



### OUTSIDE GLAZE/SEALANT PROCEDURE FOR DOOR FRAME AT FLASHING







### STACK FRAME ASSEMBLY AND INSTALLATION

The assembly and sealant procedures are a part of the installation sequence because of the stacking method.

#### HFAD CAN:

Anchor screws should be within 4" of each side of the intended mullion location. Head anchors (AC-109-1 PART #: 6554) should be used if the height x width x design load is 500 lbs. or more at the top of the mullion. Normally one anchor screw at the middle of the lite or 24" O.C. is adequate for securing the header. For unusual conditions, consult Oldcastle BuildingEnvelope™ engineering department.

#### SILL CAN:

Shim can a minimum 1/4". Anchor sill can 24" O.C. and no more than 4" on each side of intended mullion locations. Be sure weeps are located under center line of mullion. Seal both sides of can.

HORIZONTAL HEAD AND SILL INSERTS:

Members are cut 1/16" less than daylight opening to allow for incremental expansion.

#### JAMB MEMBERS:

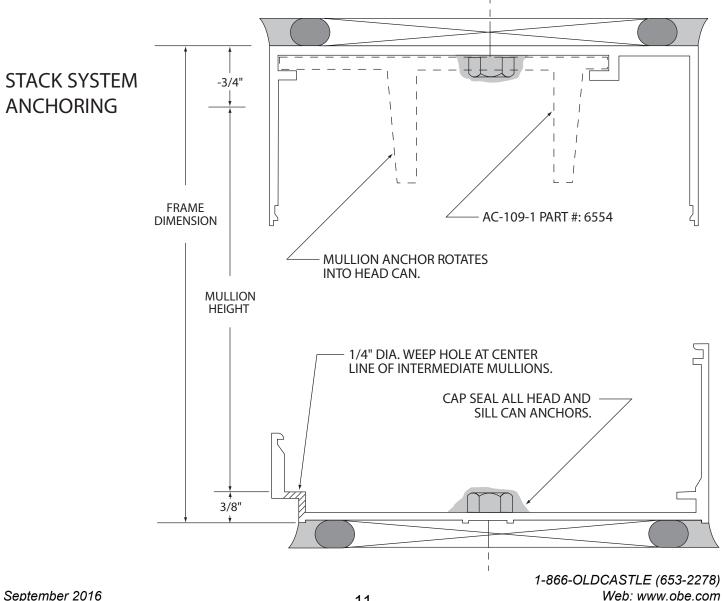
Remember all horizontals are cut 1/16" short. Do not over shim between jamb and structure.

#### **MULLIONS:**

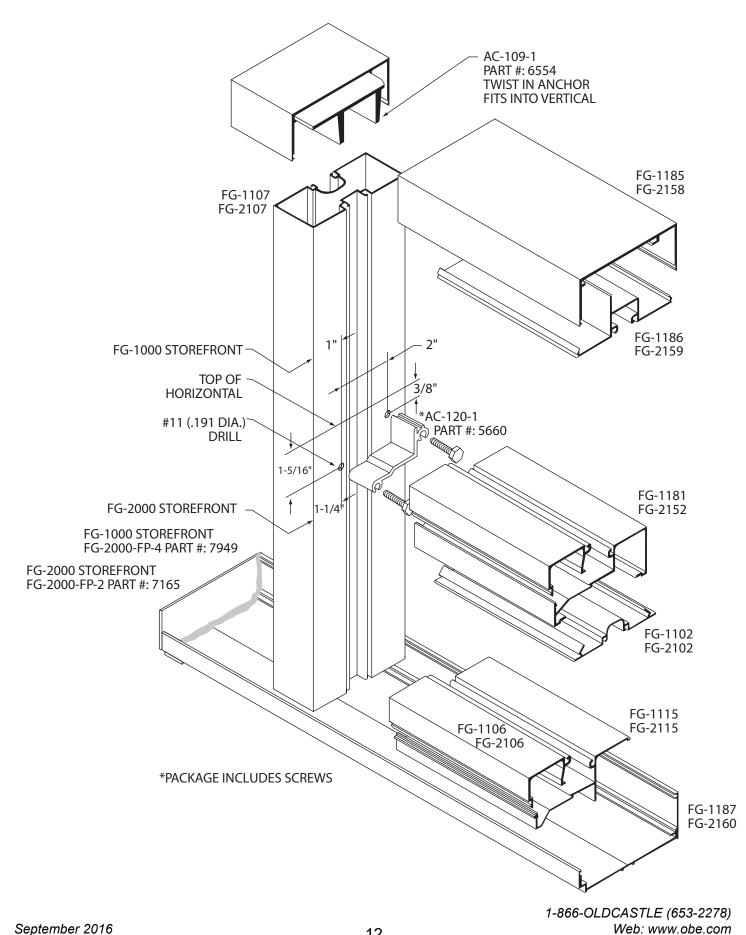
Cut mullion length outside frame dimension minus 1-1/8" Install mulls by sliding top end over anchor and rotating bottom into position.

#### **RECOMMENDATION:**

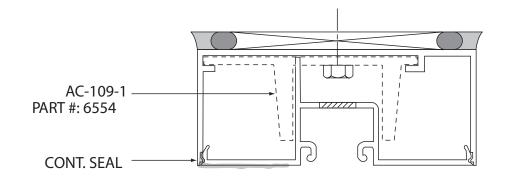
Prior to glazing, fill sill cavity with water to assure that end dams and anchors are sealed.

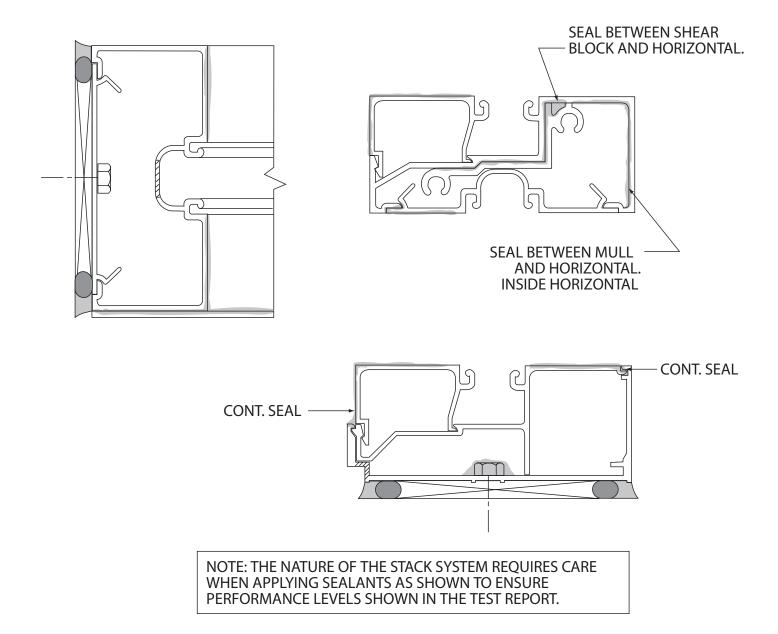


### STACK SYSTEM FRAME ASSEMBLY AND INSTALLATION

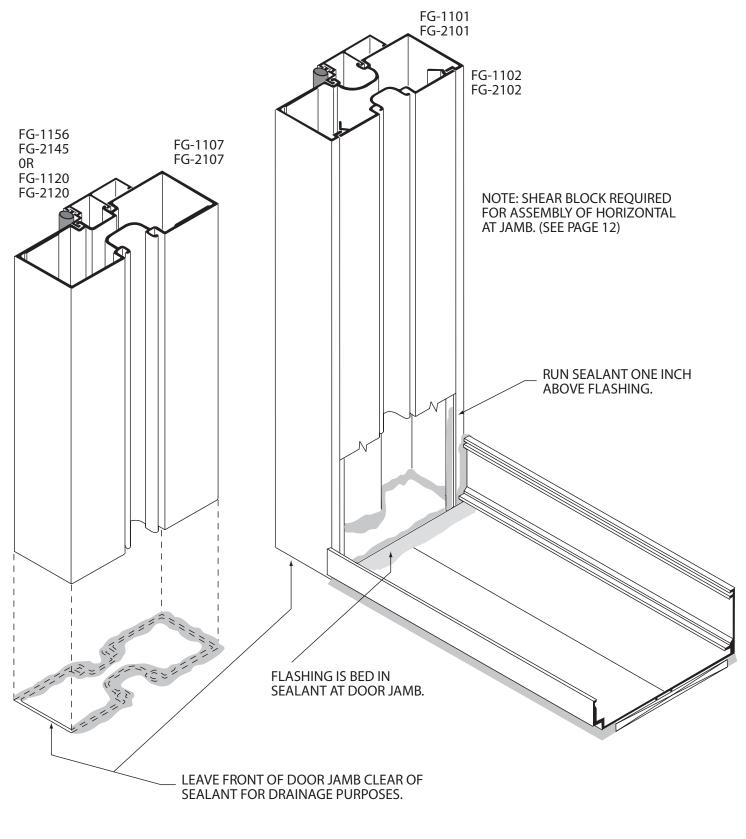


### STACK SYSTEM SEALANT PROCEDURES



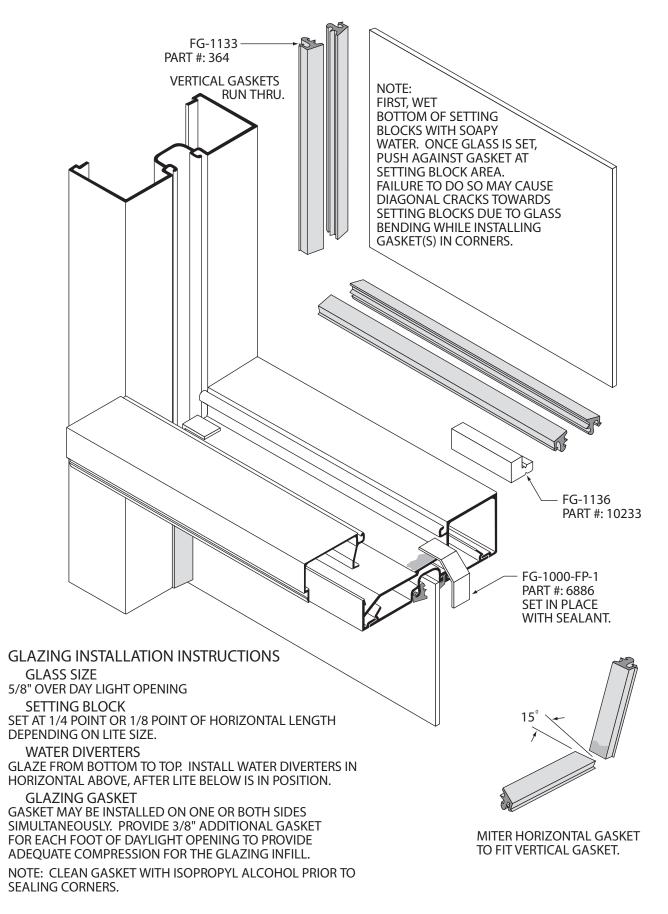


### STACK SYSTEM SEALANT PROCEDURE FOR DOOR FRAME AT FLASHING



DOOR FRAME IS ANCHORED BY FASTENERS THROUGH THRESHOLD AND THROUGH DOOR FRAME HEADER.

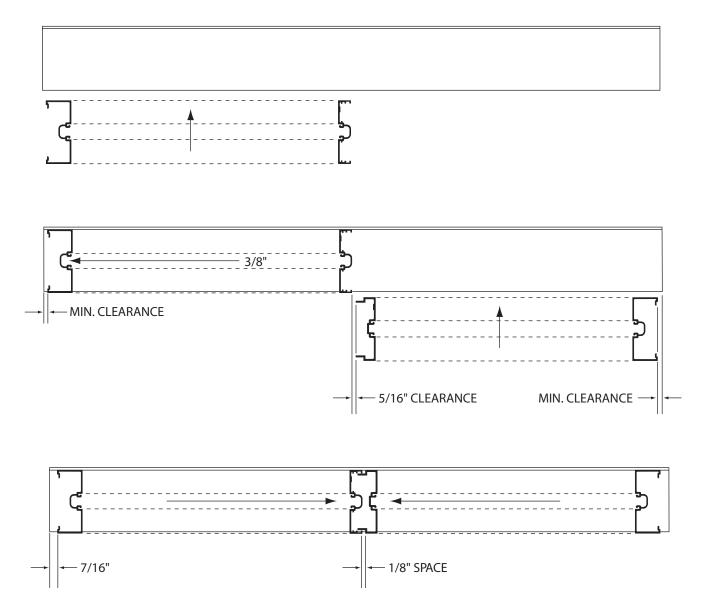
### STACK SYSTEM GLAZING PROCEDURE



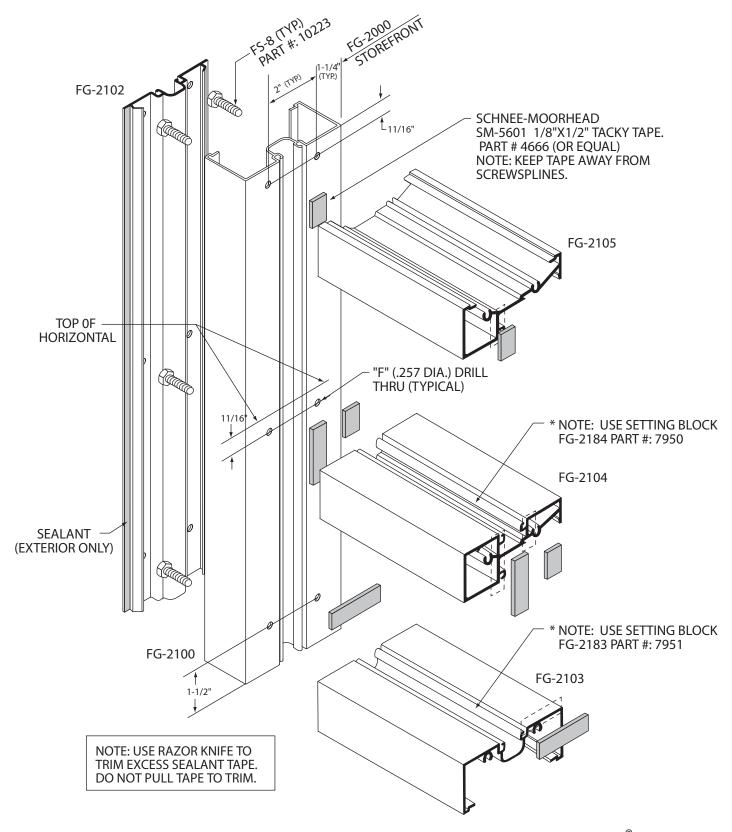
### FG-2000: INSIDE GLAZE, SCREW SPLINE FRAME ASSEMBLY

Most of the extrusions in this system are the same, only the sill and its anchors are different. Notice also, that the tapes used for sealing the horizontals to mullions are located in a different manner.

The sill is designed so that the sill anchors may be cap sealed before the frame is installed. The frame is installed over the sill twist-in anchors. This prevents any additional screws from penetrating the sill and causing leaks under the sill. Multiple units require the use of split mullions. A minimum of 7/16" clearance between the jamb and sill end dam must be provided. This will provide a minimum of 3/8" clearance to move first unit sideways to the second unit with the same clearance will clear interlocking legs of the expansion mull. Adjust frame locations before running perimeter seals. Oldcastle BuildingEnvelope<sup>®</sup> recommends using FG-2188 vinyl filler to improve the perimeter seal.

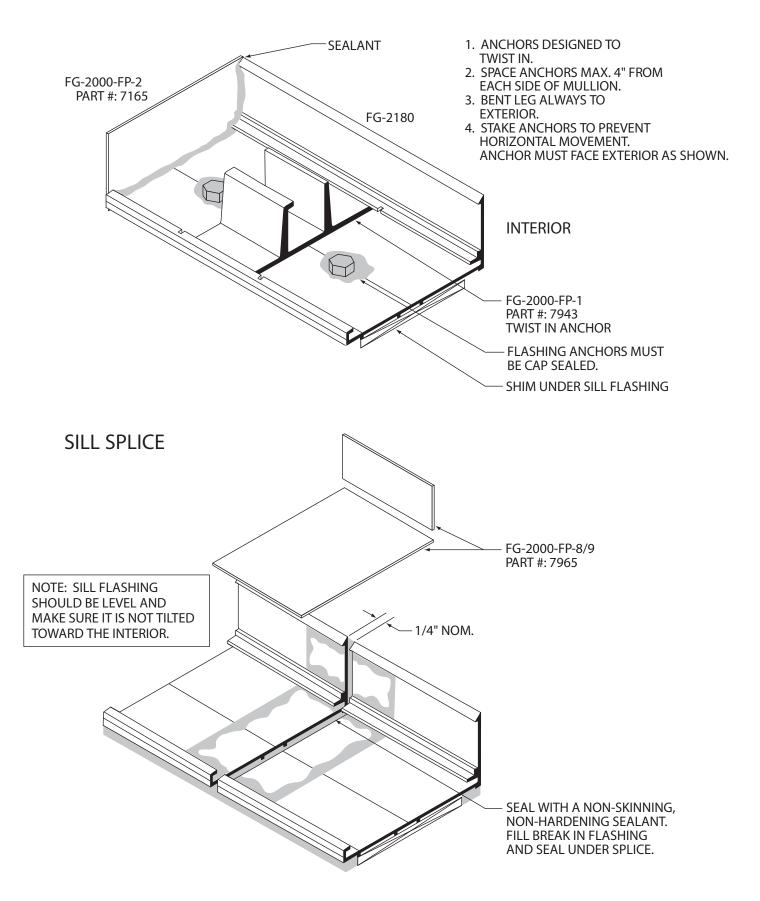


### FG-2000 INSIDE GLAZE SCREW SPLINE FRAME ASSEMBLY

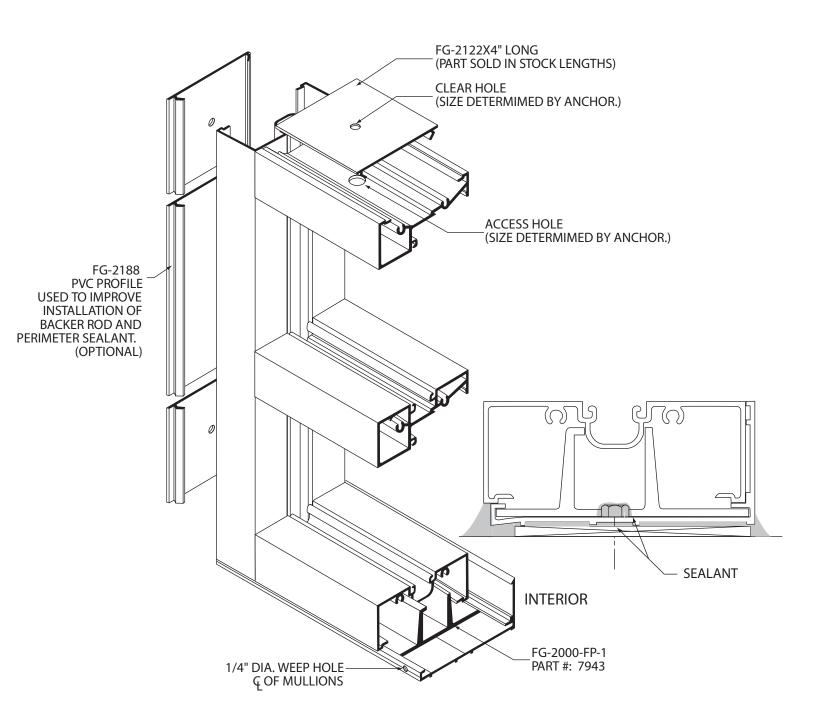


FOR FASTER, MORE ACCURATE HOLE FABRICATION, WE RECOMMEND THE OLDCASTLE BUILDING ENVELOPE<sup>®</sup> EZ PUNCH FABRICATION TOOL. DJ-5 DRILL FIXTURE PART # 4562 IS ALSO AVAILABLE TO AID FABRICATION FOR SCREW SPLINE FRAME ASSEMBLY.

### **INSIDE GLAZE SILL FLASHING INSTALLATION**

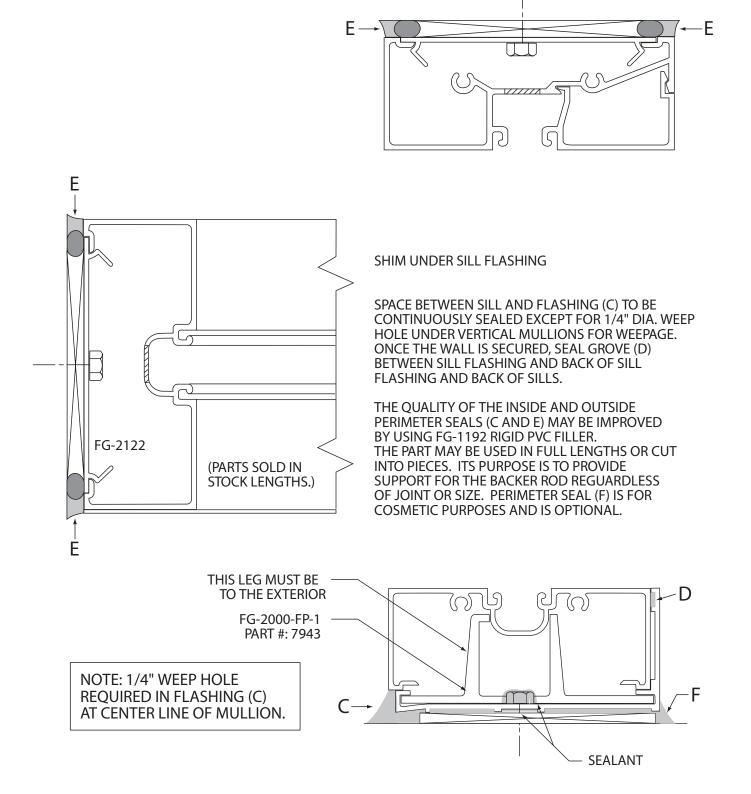


**INSIDE GLAZE FRAME INSTALLATION** 

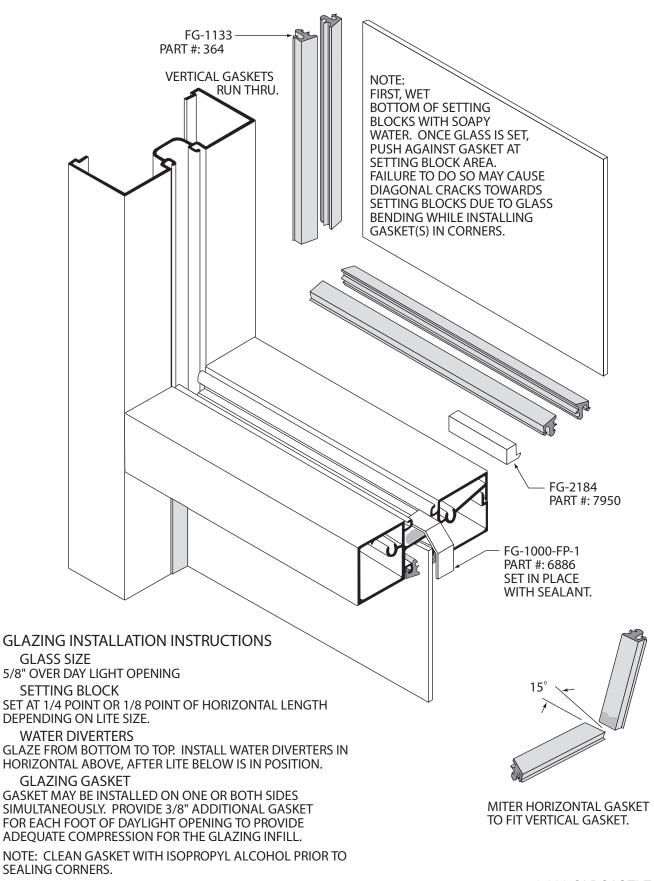


ANCHOR SIZE AND FREQUENCY SHOULD BE DETERMINED BY STRUCTURAL REQUIREMENTS. SILL ANCHORS FG-2000-FP-1 AND HEAD ANCHORS FG-2122 SHOULD BELOCATED SO THAT THE ANCHOR IS NOT MORE THAN 4" FROM EACH SIDE OF THE MULLION.

### INSIDE GLAZE SILL INSTALLATION AND PERIMETER SEAL



### **INSIDE GLAZE GLAZING PROCEDURE**



# FG-1000 / FG-2000 STOREFRONT INSTALLATION MANUAL FG-1000 PARTS LIST

ITEM	DESCRIPTION		
FG-1100	Open back mullion/jamb		
FG-1101	Heavy open back mullion		
<b>جری ہ</b>	Open back filler		
FG-1103	Open back head/mullion		
FG-1104	Intermediate horizontal		
FG-1105	Open back sill/horizontal		
FG-1106	Glass stop		
FG-1108	Expansion mullion/jamb (requires FG-1109)		
FG-1109	Expansion mullion (requires FG-1108)		
<b>FG-1176</b>	Adjustable mullion 2°to 10° mates with FG-1177		
<b>کمل</b> FG-1177	Adjustable mullion 2°to 10° mates with FG-1176		
FG-1122	Open back flat filler		
<b>ریات</b> ۱ FG-1110	Self mating 180° post		

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ITEM	DESCRIPTION
<b>ری ج</b> ۲ ۲ ۴ <sub>6-1111</sub>	90° Corner mates with FG-1112
FG-1112	Self mating flat corner post
FG-1142	135° / 45° Corner use FG-1102 filler
MO-242	4" Head receptor V-11 weathering not included
Г. MO-244	Head receptor face V-11 weathering not included
FG-1143	Head receptor V-11 weathering not included
FG-2169	Sub-sill (high back)
FG-1190	Snap-in pocket filler
RS-3	Steel reinforcement painted finish

1	1		
ITEM	DESCRIPTION		
FG-1185	Head receptor		
FG-1186	Head insert		
<b>FG-1115</b>	Sill insert		
FG-1187	Sill receptor		
FG-1181	Open back horizontal (use AC-120-1 clip)		
FG-1107	Mullion		

FG-1000 PARTS LIST

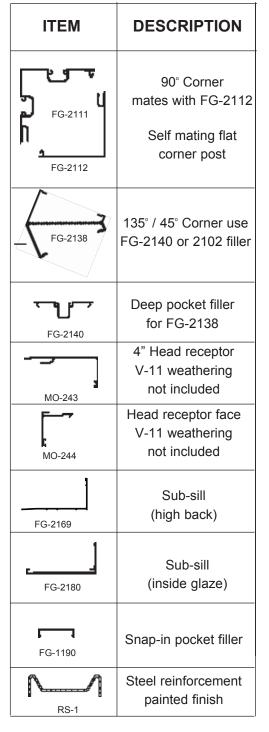
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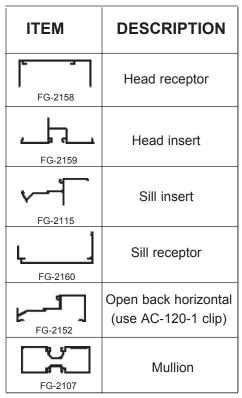
ITEM	DESCRIPTION
FG-1118	Open back door jamb weathering not included
FG-1119	Open back tube
FG-1124	Door header
<b>FG-1060</b>	Screw spline door header for FG-1118 weathering not included
F-1	1-3/4" X 4" Tube
FG-1156	Standard door stop nominal 1/2" X 1/2" with weathering
<b>ر آر</b> ج FG-1120	1/2" X 1-3/8" Snap-in door stop with weathering
DS-1	1/2" X 1-5/8" Door stop with weathering (use SC-1 clip)
<b>5</b> DS-108	3/4" X 1-5/8" Door stop with weathering (use SC-1 clip)
DS-104	1-3/16" X 1-5/8" Door stop with weathering. Uses SC-1 Clip (plus FS-201 @ pairs)

ITEM	DESCRIPTION
FG-1123	Slide in pocket filler (required for lock cutouts)
S-52	Glass stop for S-53 sash
S-53	1-3/4" X 1-1/8" Sash

FG-2000 PARTS LIST

ITEM	DESCRIPTION	
FG-2100	Open back mullion/jamb	
FG-2101	Heavy open back mullion	
<b>دے؟۔</b> FG-2102	Open back filler	
FG-2103	Open back head/mullion	
FG-2104	Intermediate horizontal	
FG-2105	Open back sill/horizontal	
FG-2106	Glass stop	
FG-2108	Expansion mullion/jamb (requires FG-2109)	
FG-2109	Expansion mullion (requires FG-2108)	
FG-2154	Adjustable mullion 2°to 10° mates with FG-1177	
FG-2155	Adjustable mullion 2°to 10° mates with FG-1176	
FG-2122	Open back flat filler	
FG-2110	Self mating 180° post	





FG-2000 PARTS LIST

FG-1000 & 2000 ACCESSORIES

ITEM	DESCRIPTION	<b>FG-1133</b>	1/4" Glazing gasket (Black)		Joint sealant tape 1/8" X 1/2"
FG-2118	Open back door jamb weathering not included	FG-1134	3/8" Glazing gasket (Black)	SM5601	FG-1000 Vinyl filler for caulk stop 12'1"
FG-2119	Open back tube	FG-1134	Heavy Gasket	<u> </u>	FG-2000 Vinyl filler for caulk stop 12'1"
FG-2021	Door header Screw spline door header with fin for FG-2118 weathering not included	V-11	Spacer gasket for expansion mullion & head receptors	FG-2188	Shear block for FG-1104 horizontal (Screws included)
F-16	1-3/4" X 4-1/2" Tube	<b>D</b> -125	Weathering gasket for Air Tight applications	AC-101-1	Shear block for FG-2104 horizontal (Screws included)
FG-2128	Open back header for OHCC	WP-084	Weathering for door stops	AC-103-1	Shear block for head member (Screws included)
FG-1129	Snap-in filler for FG-2128 Snap-in filler for FG-2128	WP-083	Weathering for double acting headers	AC-104-1	Shear block for FG-1105/2105 sill (Screws included)
FG-1184	with weathering Standard door stop nominal 1/2" X 7/8"	FG-1136	Standard 1000 & 2000 setting blocks	AC-106-1	Shear block for FG-1124/2124 header (Screws included)
FG-2145	with weathering 1/2" X 1-5/8" Snap-in door stop with weathering	FG-2184	Inside glaze setting block for FG-2104	AC-120-1	Shear block for FG-1181/2152 horizontal (Screws included)
DS-1	1/2" X 1-5/8" Door stop with weathering (use SC-1 clip) 3/4" X 1-5/8" Door stop	FG-2183	Inside glaze setting block for FG-2103	AC-109-1	Mullion anchor at head for FG-1185/2158
DS-108	with weathering (use SC-1 clip) 1-3/16" X 1-5/8" Door Stop with weathering	FG-1000-FP-1	Water diverter for flush glaze horizontals	FG-1000-FP-3	Sill anchor For FG-1000
DS-104	Uses SC-1 Clip (plus FS-201 @ pairs) Slide in pocket filler (required for lock cutouts)	FG-2000-FP-7	Splice for FG-2169	FG-2000-FP-3	Sill anchor For FG-2000
FG-1123	Glass stop for S-53 sash	FG-2000-FP-8/9	Splices for FG-2180	FG-2000-FP-1	Sill anchor for inside glazed with FG-2180
<b></b> S-53	1-3/4" X 1-1/8" Sash	FG-2000-FP-4	End dam for FG-2169		
		FG-2000-FP-2	End dam for FG-2180		

FG-1000 & 2000 ACCESSORIES

ITEM	DESCRIPTION
<u>\$</u> SC-1	Spring clip for DS-1 and DS-108
FS-2	#8 X 1/2" P.F.H.S.M.S. anchors S-53
FS-8	#14 X 1" H.H.S.T.S. FG assembly screw
FS-10	#14 X 1-3/4" P.F.H.W.S. anchors FG thru pocket
FS-11	#14 X 3" FS-11 P.F.H.W.S. CLR. anchors FS-11 tubes BRZ.
<b>E</b> S-12	#14 X 1" plastic plug
FS-15	3/16" dia. X 7/16" Drive rivet anchors SC-1 clip
FS-201	#10 X 2" FS-201 PFH CLR. attaches FS-201 DS-104 BRZ.
DJ-3	Drill fixture for AC-100-1 & AC-101 horizontal shear blocks
© 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Drill fixture for AC-103-1 & AC-104-1 head & sill shear blocks
© 0 © 0 DJ-5	Drill fixture for screw spline assembly