

2970AW ShadowLine

# INSTALLATION INSTRUCTIONS

290 Humberline Drive · Toronto, ON M9W-5S2 · 416-745-4222

# 2970AW ShadowLine

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- 1. These instructions cover typical product application, fabrication, installation and standard conditions and are general in nature. They provide useful guidelines, but the final shop drawings may include additional details specific to the project. Any conflict or discrepancies must be clarified prior to execution.
- 2. Materials stored at the job site must be kept in a safe place protected from possible damage by other trades Stack with adequate separation so materials will not rub together and store off the ground. Cardboard or paper wrapped materials must be kept dry. Check arriving materials for quantity and keep a record of where various materials are stored.
- 3. All field welding must be done in accordance with AISC guidelines. All aluminum and glass should be shielded from field welding to avoid damage from weld splatter. Results will be unsightly and may be structurally unsound. Advise general contractor and other trades accordingly.
- 4. Coordinate protection of installed work with general contractor and/or other trades.
- 5. Coordinate sequence of other trades which affect framing installation with the general contractor (e.g. fire proofing, back up walls, partitions, ceilings, mechanical ducts, HVAC, etc.).
- 6. General contractor should furnish and guarantee bench marks, offset lines and opening dimensions. These items should be checked for accuracy before proceeding with erection. Make certain that all adjacent substrate construction is in accordance with the contract documents and/or approved shop drawings. If not, notify the general contractor in writing before proceeding with installation because this could constitute acceptance of adjacent substrate construction by others.
- 7. Isolate all aluminum to be placed directly in contact with masonry or other incompatible materials with a heavy coat of zinc chromate or bituminous paint. Fasteners attaching framing to building structure are typically not provided by Alumicor.
- 8. Sealant selection is the responsibility of the erector, installer and/or glazing contractor and must be approved by the sealant manufacturer with regard to application and compatibility for its intended use. All sealants must be used in strict accordance with the manufacturer's instructions and applied only by trained personnel to surfaces that have been properly prepared.
- 9. Sealant must be compatible with all materials with which they have contact, including other sealant surfaces. Consult the sealant manufacturer for recommendations relative to shelf life, compatibility, cleaning of substrate, priming, tooling adhesion, etc. Recommend sealant manufacturer perform adhesion "pull test" at "wet" glazing for quality assurance.
- 10. Drainage gutters and weep holes must be kept clean at all times. Alumicor will not accept responsibility for improper drainage as a result of clogged gutters and weep holes.
- 11. This product requires clearances at the head, sill and jambs to allow for thermal expansion and contraction as well as construction tolerances. Refer to final distribution drawings for joint sizes. Joints smaller than 1/2 " may be subject to failure. Consult the sealant manufacturer for proper sizing of joints.
- 12. All framing members, entrances and other materials are to be installed plumb, level and true with regard to established bench marks, column center lines or other working points established by the general contractor and checked by the erector, installer and/or glazing contractor.
- 13. After sealant is set and a representative amount of the wall has been glazed (500 square feet or more), run a water hose test to check installation. On large projects, a hose test should be repeated during glazing operation. This testing should be conducted in accordance with AAMA 501.2 specifications.
- 14. Cleaning of exposed aluminum surfaces should be done per AAMA recommendations.
- 15. Care must be taken when assembling aluminum framing components. Over tightening any fastener may cause stripping or fastener failure. Alumicor recommends the use of drill motors with clutches engaged to provide satisfactory tightening of the screw while preventing over torque. The use of impact drill motors is not recommended due to the absence of a clutch device.
- 16. Primary dimension are in inches and dimensions in [ ] are in millimeters. All dimensional tolerances are: .XXX±.010" [.254] , .XX±.03" [0.76], .X±.1" [2.54], angular ± .1°
- 17. Check www.alumicor.com for any installation instruction updates.

SHAPE	Part No.	DESCRIPTION	Notes		
	A297201XX	5 1/4" [134mm] 2970 DOUBLE GLAZED SILL FRAME	24 FT STOCK LENGTH		
	A297202XX	5 1/4" [134mm] 2970 DOUBLE GLAZED INTERMEDIATE MULLION	24 FT STOCK LENGTH		
	A297203XX	5 1/4" [134mm] 2970 DOUBLE GLAZED PERIMETER FRAME	24 FT STOCK LENGTH		
	A297204XX	5 1/4" [134mm] 2970 DOUBLE GLAZED SPLIT MULLION-MALE	24 FT STOCK LENGTH		
E Constitution of the cons	A297205XX	5 1/4" [134mm] 2970 DOUBLE GLAZED SPLIT MULLION-FEMALE	24 FT STOCK LENGTH		
	A297206XX	5 1/4" [134mm] 2970 DOUBLE GLAZED PERIMETER FRAME CLOSED NOSE	24 FT STOCK LENGTH		
	A297207XX	5 1/4" [134mm] 2970 DOUBLE GLAZED PERIMETER FRAME CLOSED BACK	24 FT STOCK LENGTH 45° FRAME CUT		
	A297221XX	6" [153mm] 2970 DOUBLE GLAZED SILL FRAME	24 FT STOCK LENGTH		
	A297222XX	6" [153mm] 2970 DOUBLE GLAZED INTERMEDIATE MULLION	24 FT STOCK LENGTH		
	A297223XX	6" [153mm] 2970 DOUBLE GLAZED PERIMETER FRAME	24 FT STOCK LENGTH		
	A297224XX	6" [153mm] 2970 DOUBLE GLAZED SPLIT MULLION-MALE	24 FT STOCK LENGTH		
	A297225XX	6" [153mm] 2970 DOUBLE GLAZED SPLIT MULLION-FEMALE	24 FT STOCK LENGTH		
	A297226XX	6" [153mm] 2970 DOUBLE GLAZED PERIMETER FRAME CLOSED NOSE	24 FT STOCK LENGTH		
	A297227XX	6" [153mm] 2970 DOUBLE GLAZED PERIMETER FRAME CLOSED BACK	24 FT STOCK LENGTH 45° FRAME CUT		
	A	VAII ARI E EINICHES			

(00) Mill Finish (28) Medium Bronze

(75) Light Bronze

**AVAILABLE FINISHES**(41) Clear Class 2

(76) Champagne

(42) Dark Bronze(09) Painted

(71) Clear Class 1

**(73)** Black

			Installation Instructions
	A297241XX	6 1/4" [160mm] 2970 DOUBLE GLAZED SILL FRAME w/ 2" [51mm] NOSE	24 FT STOCK LENGTH
	A297242XX	6 1/4" [160mm] 2970 DOUBLE GLAZED INTERMEDIATE MULLION w/ 2" [51mm] NOSE	24 FT STOCK LENGTH
	A297243XX	6 1/4" [160mm] 2970 DOUBLE GLAZED PERIMETER FRAME w/ 2" [51mm] NOSE	24 FT STOCK LENGTH
1. S	A297244XX	6 1/4" [160mm] 2970 DOUBLE GLAZED SPLIT MULLION-MALE w/ 2" [51mm] NOSE	24 FT STOCK LENGTH
	A297245XX	6 1/4" [160mm] 2970 DOUBLE GLAZED SPLIT MULLION-FEMALE w/ 2" [51mm] NOSE	24 FT STOCK LENGTH
	A297246XX	6 1/4" [160mm] 2970 DOUBLE GLAZED PERIMETER FRAME w/ 2" [51mm] CLOSED NOSE	24 FT STOCK LENGTH
	A297247XX	6 1/4" [160mm] 2970 DOUBLE GLAZED PERIMETER FRAME CLOSED BACK w/ 2" [51mm] NOSE	24 FT STOCK LENGTH 45° FRAME CUT
	A297261XX	7" [179mm] 2970 DOUBLE GLAZED SILL FRAME w/ 2" [51mm] NOSE	24 FT STOCK LENGTH
	A297262XX	7" [179mm] 2970 DOUBLE GLAZED INTERMEDIATE MULLION w/ 2" [51mm] NOSE	24 FT STOCK LENGTH
	A297263XX	7" [179mm] 2970 DOUBLE GLAZED PERIMETER FRAME w/ 2" [51mm] NOSE	24 FT STOCK LENGTH
	A297264XX	7" [179mm] 2970 DOUBLE GLAZED SPLIT MULLION-MALE w/ 2" [51mm] NOSE	24 FT STOCK LENGTH
	A297265XX	7" [179mm] 2970 DOUBLE GLAZED SPLIT MULLION-FEMALE w/ 2" [51mm] NOSE	24 FT STOCK LENGTH
	A297266XX	7" [179mm] 2970 DOUBLE GLAZED PERIMETER FRAME w/ 2" [51mm] CLOSED NOSE	24 FT STOCK LENGTH
	A297267XX	7" [179mm] 2970 DOUBLE GLAZED PERIMETER FRAME CLOSED BACK w/ 2" [51mm] NOSE	24 FT STOCK LENGTH 45° FRAME CUT

**AVAILABLE FINISHES** 

(00) Mill Finish (28) Medium Bronze **(73)** Black

(75) Light Bronze

(41) Clear Class 2 (76) Champagne (42) Dark Bronze (09) Painted

(71) Clear Class 1

Installation Instructions						
	A297301XX	6" [153mm] 2970 TRIPLE GLAZED SILL FRAME	24 FT STOCK LENGTH			
	A297302XX	6" [153mm] 2970 TRIPLE GLAZED INTERMEDIATE MULLION	24 FT STOCK LENGTH			
	A297303XX	6" [153mm] 2970 TRIPLE GLAZED PERIMETER FRAME	24 FT STOCK LENGTH			
[2	A297304XX	6" [153mm] 2970 TRIPLE GLAZED SPLIT MULLION-MALE	24 FT STOCK LENGTH			
	A297305XX	6" [153mm] 2970 TRIPLE GLAZED SPLIT MULLION-FEMALE	24 FT STOCK LENGTH			
	A297306XX	6" [153mm] 2970 TRIPLE GLAZED PERIMETER FRAME CLOSED NOSE	24 FT STOCK LENGTH			
	A297307XX	6" [153mm] 2970 TRIPLE GLAZED PERIMETER FRAME CLOSED BACK	24 FT STOCK LENGTH 45° FRAME CUT			
	A297321XX	6 3/4" [171mm] 2970 TRIPLE GLAZED SILL FRAME	24 FT STOCK LENGTH			
	A297322XX	6 3/4" [171mm] 2970 TRIPLE GLAZED INTERMEDIATE MULLION	24 FT STOCK LENGTH			
	A297323XX	6 3/4" [171mm] 2970 TRIPLE GLAZED PERIMETER FRAME	24 FT STOCK LENGTH			
[2. 1.e3]	A297324XX	6 3/4" [171mm] 2970 TRIPLE GLAZED SPLIT MULLION-MALE	24 FT STOCK LENGTH			
The state of the s	A297325XX	6 3/4" [171mm] 2970 TRIPLE GLAZED SPLIT MULLION-FEMALE	24 FT STOCK LENGTH			
	A297326XX	6 3/4" [171mm] 2970 TRIPLE GLAZED PERIMETER FRAME CLOSED NOSE	24 FT STOCK LENGTH			
	A297327XX	6 3/4" [171mm] 2970 TRIPLE GLAZED PERIMETER FRAME CLOSED BACK	24 FT STOCK LENGTH 45° FRAME CUT			
		VAILABLE FINISHES				
(00) Mill Finish (28) M	ladium Branza	(11) Cloar Class 2 (42) Dark Bronzo	(71) Cloor Class 1			

(00) Mill Finish (73) Black (28) Medium Bronze

(75) Light Bronze

(41) Clear Class 2

(76) Champagne (09) Painted

(42) Dark Bronze

(71) Clear Class 1

			installation instructions
	A297341XX	7" [179mm] 2970 TRIPLE GLAZED SILL FRAME	24 FT STOCK LENGTH
	A297342XX	7" [179mm] 2970 TRIPLE GLAZED INTERMEDIATE MULLION	24 FT STOCK LENGTH
	A297343XX	7" [179mm] 2970 TRIPLE GLAZED PERIMETER FRAME	24 FT STOCK LENGTH
Es. As a sel	A297344XX	7" [179mm] 2970 TRIPLE GLAZED SPLIT MULLION-MALE	24 FT STOCK LENGTH
	A297345XX	7" [179mm] 2970 TRIPLE GLAZED SPLIT MULLION-FEMALE	24 FT STOCK LENGTH
	A297346XX	7" [179mm] 2970 TRIPLE GLAZED PERIMETER FRAME CLOSED NOSE	24 FT STOCK LENGTH
	A297347XX	7" [179mm] 2970 TRIPLE GLAZED PERIMETER FRAME CLOSED BACK	24 FT STOCK LENGTH 45° FRAME CUT
	A297361XX	7 3/4" [197mm] 2970 TRIPLE GLAZED SILL FRAME	24 FT STOCK LENGTH
	A297362XX	7 3/4" [197mm] 2970 TRIPLE GLAZED INTERMEDIATE MULLION	24 FT STOCK LENGTH
	A297363XX	7 3/4" [197mm] 2970 TRIPLE GLAZED PERIMETER FRAME	24 FT STOCK LENGTH
Es. Jas. 2. es.	A297364XX	7 3/4" [197mm] 2970 TRIPLE GLAZED SPLIT MULLION-MALE	24 FT STOCK LENGTH
	A297365XX	7 3/4" [197mm] 2970 TRIPLE GLAZED SPLIT MULLION-FEMALE	24 FT STOCK LENGTH
	A297366XX	7 3/4" [197mm] 2970 TRIPLE GLAZED PERIMETER FRAME CLOSED NOSE	24 FT STOCK LENGTH
	A297367XX	7 3/4" [197mm] 2970 TRIPLE GLAZED PERIMETER FRAME CLOSED BACK	24 FT STOCK LENGTH 45° FRAME CUT

# **AVAILABLE FINISHES**

(00) Mill Finish (73) Black (28) Medium Bronze (75) Light Bronze (41) Clear Class 2(76) Champagne

(42) Dark Bronze(09) Painted

(71) Clear Class 1

	A294201XX	5 1/4" [134mm] DUAL GLAZED SILL RECEPTOR	24 FT STOCK LENGTH				
	A294202XX	5 1/4" [134mm] DUAL GLAZED JAMB & HEAD RECEPTOR	24 FT STOCK LENGTH				
	A294221XX	6" [153mm] DUAL & TRIPLE GLAZED SILL RECEPTOR	24 FT STOCK LENGTH				
	A294222XX	6" [153mm] DUAL & TRIPLE GLAZED JAMB & HEAD RECEPTOR	24 FT STOCK LENGTH				
	A294231XX	6 1/4" [159mm] DUAL GLAZED SILL RECEPTOR	24 FT STOCK LENGTH				
	A294232XX	6 1/4" [159mm] DUAL GLAZED JAMB & HEAD RECEPTOR	24 FT STOCK LENGTH				
	A294321XX	6 3/4" [171mm] TRIPLE GLAZED SILL RECEPTOR	24 FT STOCK LENGTH				
	A294322XX	6 3/4" [171mm] DUAL & TRIPLE GLAZED JAMB & HEAD RECEPTOR	24 FT STOCK LENGTH				
	A294241XX	7" [178mm] TRIPLE GLAZED SILL RECEPTOR	24 FT STOCK LENGTH				
	A294242XX	7" [178mm] DUAL & TRIPLE GLAZED JAMB & HEAD RECEPTOR	24 FT STOCK LENGTH				
	A294341XX	7 3/4" [197mm] TRIPLE GLAZED SILL RECEPTOR	24 FT STOCK LENGTH				
	A294342XX	7 3/4" [197mm] TRIPLE GLAZED JAMB & HEAD RECEPTOR	24 FT STOCK LENGTH				
	EA293001XX	GLASS STOP	24 FT STOCK LENGTH				
<b>₩</b> ₩	EA29400100	VERTICAL INTERMEDIATE REINFORCEMENT	24 FT STOCK LENGTH MILL FINISH				
25.	E9410XX	RECEPTOR DRIVE-ON STOP	24 FT STOCK LENGTH				
AVAILABLE FINISHES							

(00) Mill Finish

(28) Medium Bronze

(75) Light Bronze

(41) Clear Class 2(76) Champagne

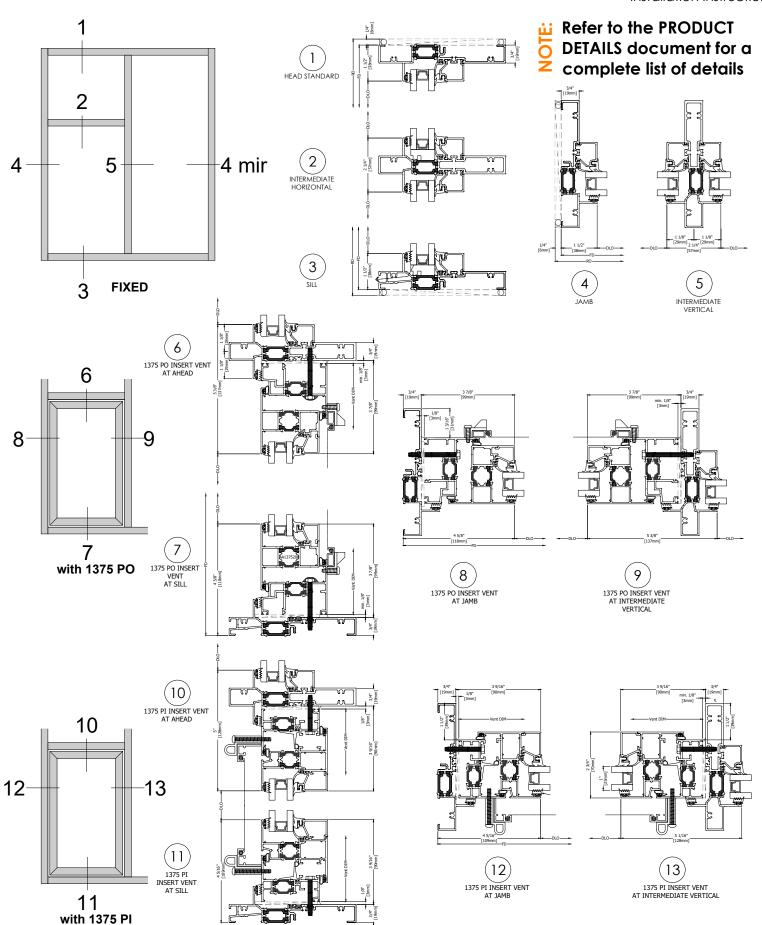
(42) Dark Bronze(09) Painted

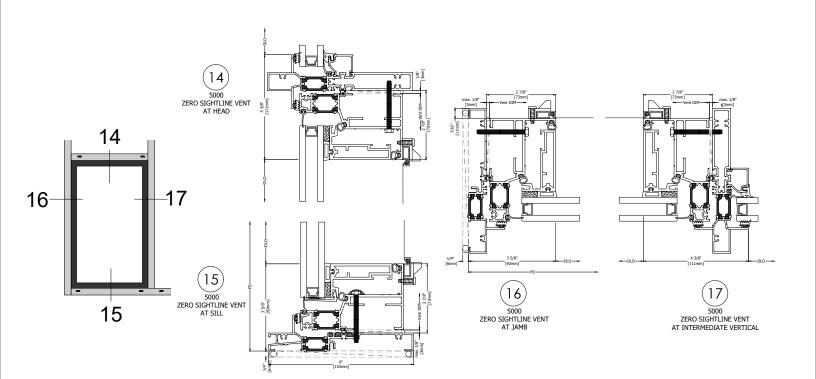
**(71)** Clear Class 1

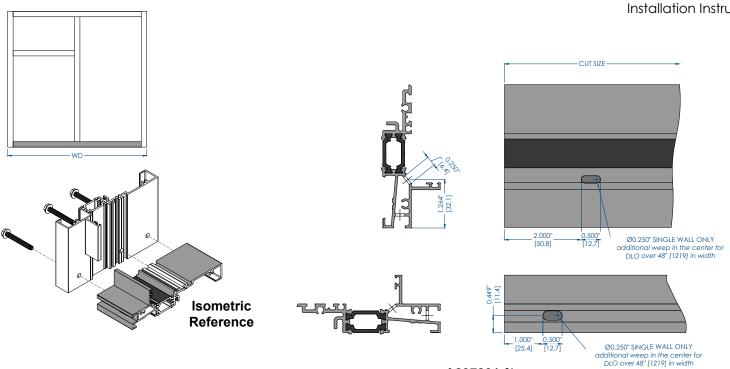
**(73)** Black

Installation Instruc					
SHAPE	Part No.	DESCRIPTION	Notes		
	1476203	EPDM SETTING BLOCK 1" x <sup>26</sup> / <sub>64</sub> " x4"	SOLD PER PIECE		
	2250603	EDGE BLOCKING	SOLD PER PIECE		
	\$290001	FRAME ASSEMBLY SCREW 10-24 x 1 1/2" HEX WASHER HEAD SELF TAPPING	SOLD PER PIECE		
	S290004	VENT ANCHOR FASTENER 10-24 x 2" HEX WASHER HEAD SELF TAPPING	SOLD PER PIECE		
	S196	END CAP ATTACHMENT SCREW $8 \times \frac{3}{8}$ Pan Head Type A, Stainless Steel	SOLD PER PIECE		
	S441	ATTACHMENT OF HOR. MULLION SCREW TO SHEAR BLOCK $10\text{-}16 \times \tfrac{3}{4} \text{ HEX WASHER HEAD} $ SELF DRILLING	SOLD PER PIECE		
<u>v</u>	P2918	ANCHOR SLIDE-IN AT RECEPTOR, 6in	SOLD PER PIECE		
0 0	P294201	5 1/4" SILL RECEPTOR END CAP	SOLD PER PIECE		
o o	P294211	6" SILL RECEPTOR END CAP	SOLD PER PIECE		
0 0 0	P294231	6 1/4" SILL RECEPTOR END CAP	SOLD PER PIECE		
0 0	P294321	6 3/4" SILL RECEPTOR END CAP	SOLD PER PIECE		
0 0 0	P294241	7" SILL RECEPTOR END CAP	SOLD PER PIECE		
0 0 0	P294341	7 3/4" SILL RECEPTOR END CAP	SOLD PER PIECE		

Installation In						
SHAPE	Part No.	DESCRIPTION	Notes			
	1342103	EXTERIOR GLAZING GASKET EPDM	500 FEET ROLL			
	1343003	PRIME SEAL GASKET EPDM	500 FEET PER ROLL 1000 FEET PER BOX			
FOR	1840903	LIGHT GLAZING GASKET 1 1/16in [27mm] DBL GLAZED 1 3/4in [44.5mm] TRPL GLAZED	500 FEET ROLL			
	1841003	STANDARD GLAZING GASKET  1 in [25.5mm] DBL GLAZED  1 11/16in [43mm] TRPL GLAZED	250 FEET ROLL			
	1841103	HEAVY GLAZING GASKET 15/16in [24.5mm] DBL GLAZED 1 5/8in [41.5mm] TRPL GLAZED	500 FEET ROLL			
	P6296	FRAME RECEPTOR BULB GASKET	500 FEET ROLL			
	P9076	INTERIOR RECEPTOR WEDGE GASKET	500 FEET ROLL			
	P290001	PLASTIC WEEP HOLE COVER - BLACK	SOLD PER PIECE			
	P290002	PLASTIC WEEP HOLE COVER - WHITE	SOLD PER PIECE			
	P290003	VERTICAL SPLIT MULLION GASKET (OPTIONAL)				
	P290005	OPEN CELL BAFFLE $1 \frac{1}{2} \times \frac{3}{8} \times \frac{1}{4}$	SOLD PER PIECE			
	P290006	BUCKLING CLUB 6in	SOLD PER PIECE			
	P290007	SHEAR BLOCK 1in	SOLD PER PIECE			
	P290010	2970 & 2990 BULL NOSE MULLION ALIGNMENT CLIP	SOLD PER PIECE			
250	P290011	2900 FLUSH NOSE MULLION ALIGNMENT CLIP	SOLD PER PIECE			
	1476203	EPDM SETTING BLOCK 1" x <sup>26</sup> / <sub>64</sub> " x4"	SOLD PER PIECE			
<u>v</u>	P2918-0R	ANCHOR SLIDE-IN AT RECEPTOR, 6in	SOLD PER PIECE			

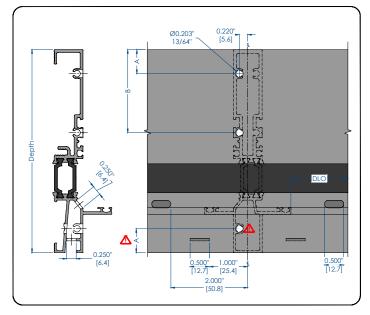




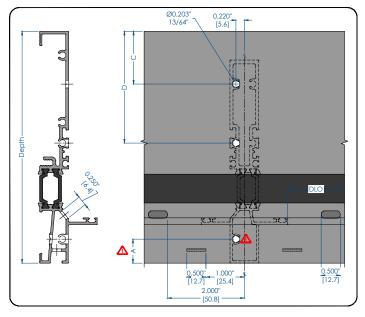


**A297201** Shown A297221, A297301, A297321 Similar

CUT SIZE (90° cut)						
MEMBER	DEPTH	CUT SIZE	'A'	'B'	'C'	'D'
A297201 (DG 5 ½")	5.289" [134]	WD - 1.5" [25.4]			NA	NA
A297221 (DG 6.00")	6.039" [153]	WD - 1.5" [25.4]	0.625"	2.163"	1.375" [34.9]	2.912" [74]
A297301 (TG 6.00")	6.000" [152]	WD - 1.5" [25.4]	[15.9]	[54.9]	NA	NA
A297321 (TG 6 3")	6.748" [171]	WD - 1.5" [25.4]			1.375" [34.9]	2.912" [74]



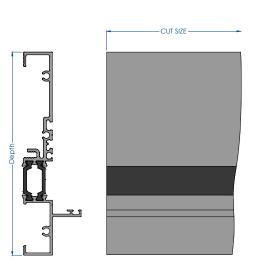
**PREP for Vertical Intermediate** using same depth frame & intermediate

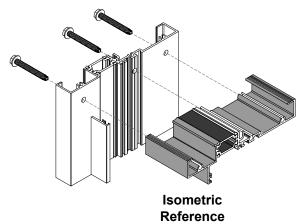


**PREP for Vertical Intermediate** using deep frame with shallow intermediate



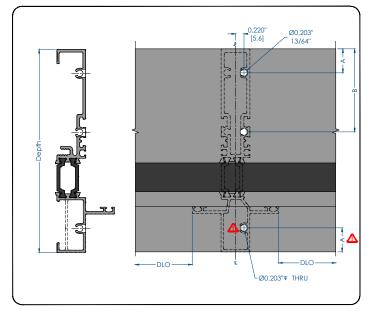




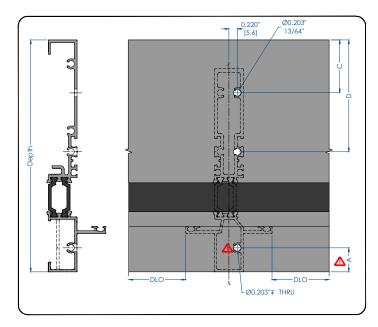


A297203 Shown A297206, A297207, A297223, A297226, A297227 A297303, A297306, A297307, A297323, A297326, A297327 Similar

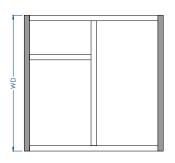
CUT SIZE (90° cut)						
MEMBER	DEPTH	CUT SIZE	'A'	'B'	,C,	'D'
(DG 5 ½") A297203 A297206 A297207	5.289" [134]	WD - 1.5" [25.4]			NA	NA
(DG 6.00") A297223 A297226 A297227	6.039" [153]	WD - 1.5" [25.4]	0.625"	2.163"	1.375" [34.9]	2.912" [74]
(TG 6.00") A297303 A297306 A297307	6.000" [152]	WD - 1.5" [25.4]	[15.9]	[54.9]	NA	NA
(TG 6 ¾") A297323 A297326 A297327	6.748" [171]	WD - 1.5" [25.4]			1.375" [34.9]	2.912" [74]

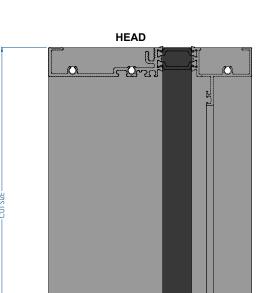


PREP for Vertical Intermediate using same depth frame & intermediate

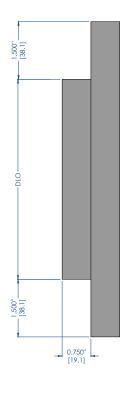


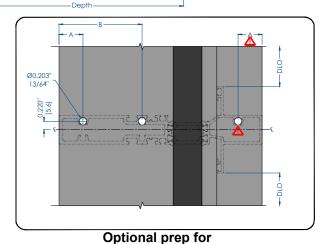
PREP for Vertical Intermediate using deep frame with shallow intermediate



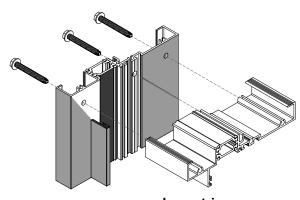


SILL



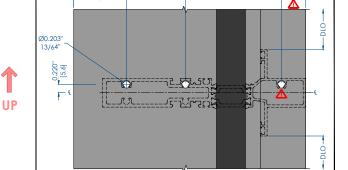


Horizontal Intermediate
using same depth frame & intermediate



Isometric Reference

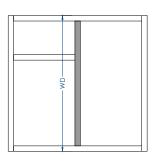
CUT SIZE (90° cut)							
MEMBER	DEPTH	CUT SIZE	'A'	'B'	.c.	'D'	
(DG 5 ½") A297203 A297206 A297207	5.289" [134]	WD	0.625" 2.163" [15.9] [54.9]		NA	NA	
(DG 6.00") A297223 A297226 A297227	6.039" [153]	WD		2.163"	1.375" [34.9]	2.912" [74]	
(TG 6.00") A297303 A297306 A297307	6.000" [152]	WD		[54.9]	NA	NA	
(TG 6 <sup>3</sup> ") A297323 A297326 A297327	6.748" [171]	WD			1.375" [34.9]	2.912" [74]	

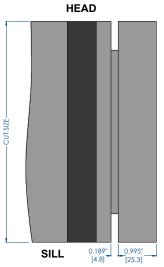


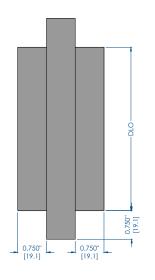
Optional prep for
Horizontal Intermediate
using deep frame with shallow intermediate

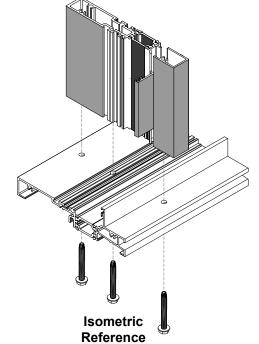
DO NOT PREP 'A' FOR FLUSH NOSE INTERMEDIATE: A290202 A290204 A290302 A290304

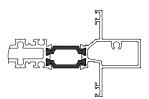
Ø0.203''





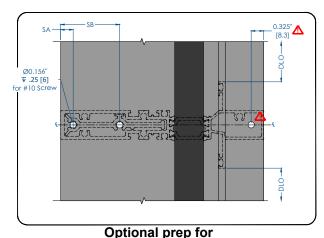




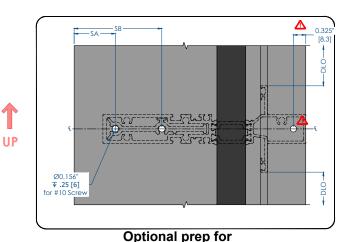


**A297202** Shown **A297222, A297302, A297322** Similar

CUT SIZE (90° cut)							
MEMBER	DEPTH	CUT SIZE	'SA'	'SB'			
(DG 5 ½)	5.289"	WD - 1.5"	0.325"	1.537"			
A297202	[134]	[25.4]	[8.3]	[39]			
(DG 6.00")	6.039"	WD - 1.5"	1.040"	2.250"			
A297222	[153]	[25.4]	[26.4]	[57]			
(TG 6.00")	6.000"	WD - 1.5"	0.325"	1.537" [39]			
A297302	[152]	[25.4]	[8.3]				
(TG 6 <sup>3</sup> / <sub>4</sub> ")	6.748"	WD - 1.5"	1.040"	2.250"			
A297322	[171]	[25.4]	[26.4]	[57]			

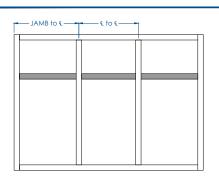


Horizontal Intermediate using same depth frame & intermediate

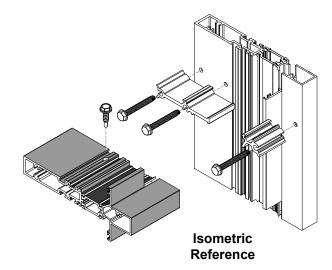


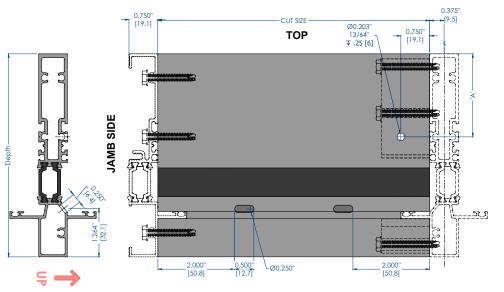
Horizontal Intermediate
using deep frame with shallow intermediate

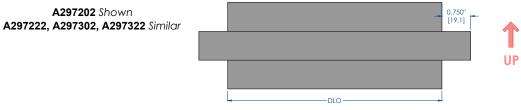
VERTICAL INTERMEDIATE SIDE

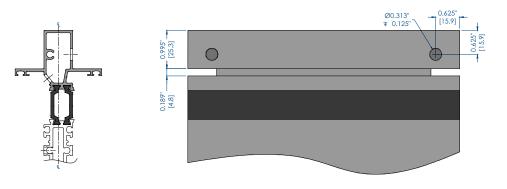


	CU	T SIZE (90° cut)	
MEMBER	DEPTH	CUT SIZE	'A'
A297202 (DG 4 ½")	5.289" [134]		2.163" [55]
A297222 (DG 5.00")	6.039" [153]	JAMB to CL - 1.125" [28.6] CL to CL - 0.750" [19.1]	2.912" [74]
A297302 (TG 5.00")	6.000" [152]		2.163" [55]
A297322 (TG 5 3/4")	6.748" [171]		2.912" [74]

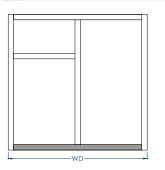


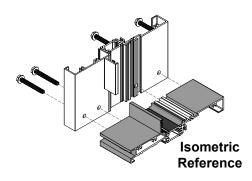


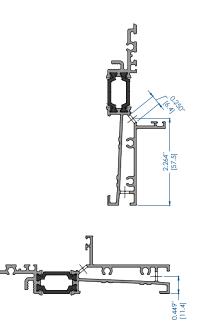


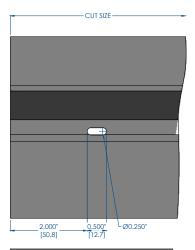


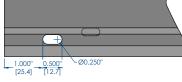
воттом





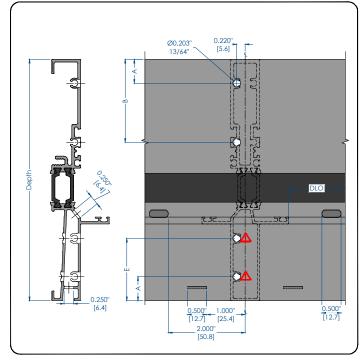




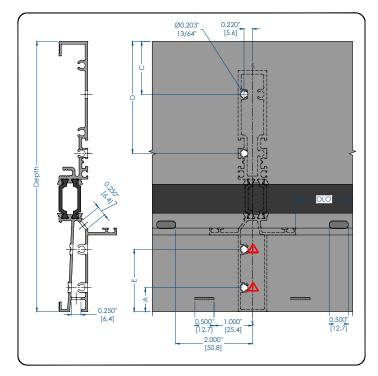


	CUT SIZE (90° cut)										
MEMBER	DEPTH	CUT SIZE	'A'	'B'	'C'	'D'	'E'				
A297241 (DG 6 ½")	6.289" [156]	WD - 1.5" [25.4]			NA	NA					
A297261 (DG 7.00")	7.039" [179]	WD - 1.5" [25.4]	0.625"	2.163"	1.375" [34.9]	2.912" [74]	1.625" [41]				
A297341 (TG 7.00")	7.000" [178]	WD - 1.5" [25.4]	[15.9]	[54.9]	NA	NA					
A297361 (TG 7 3")	7.750" [197]	WD - 1.5" [25.4]			1.375" [34.9]	2.912" [74]					

**A297241** Shown **A297261**, **A297341**, **A297361** Similar



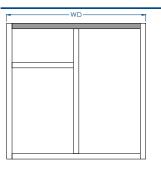
PREP for Vertical Intermediate using same depth frame & intermediate

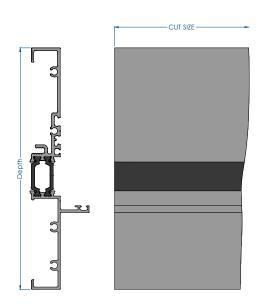


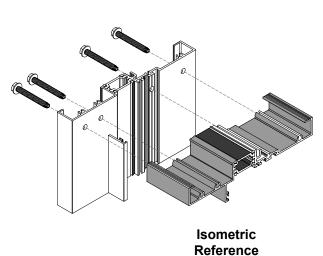
PREP for Vertical Intermediate using deep frame with shallow intermediate

DO NOT PREP 'A' & 'E' FOR FLUSH NOSE INTERMEDIATE: A290202 A290204 A290302 A290304



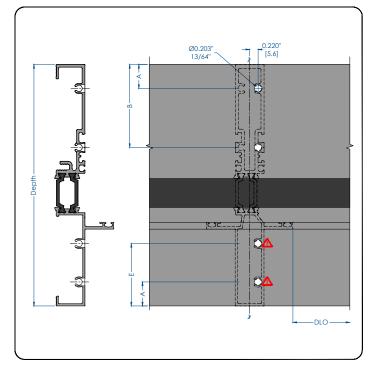




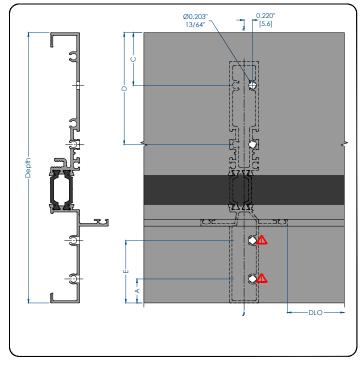


A297243 Shown A297246, A297247, A297263, A297266, A297267 A297343, A297346, A297347, A297363, A297366, A297367 Similar

	(	CUT SIZE (90	)° cut)				
MEMBER	DEPTH	CUT SIZE	'A'	'B'	'C'	'D'	'E'
(DG 6 ½") A297243 A297246 A297247	6.289" [156]	WD - 1.5" [25.4]			NA	NA	
(DG 7.00") A297263 A297266 A297267	7.039" [1 <i>7</i> 9]	WD - 1.5" [25.4]	0.625"	2.163"	1.375" [34.9]	2.912" [74]	1.625"
(TG 7.00") A297343 A297346 A297347	7.000" [1 <i>7</i> 8]	WD - 1.5" [25.4]	[15.9]	[54.9]	NA	NA	[41]
(TG 7 ¾") A297363 A297366 A297367	7.750" [197]	WD - 1.5" [25.4]			1.375" [34.9]	2.912" [74]	



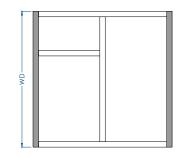
PREP for Vertical Intermediate using same depth frame & intermediate

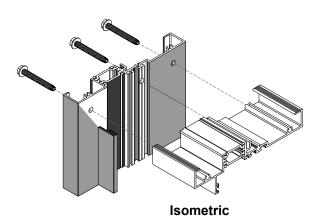


PREP for Vertical Intermediate using deep frame with shallow intermediate

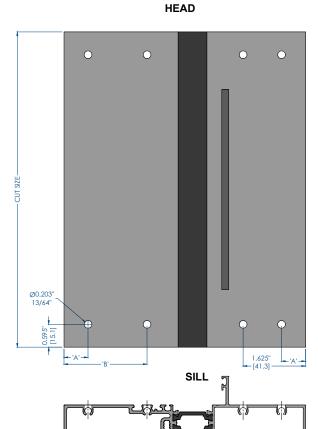
100 NOT PREP 'A' & 'E' FOR FLUSH NOSE INTERMEDIATE: A290202 A290204 A290302 A290304

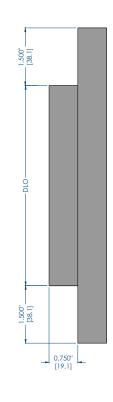




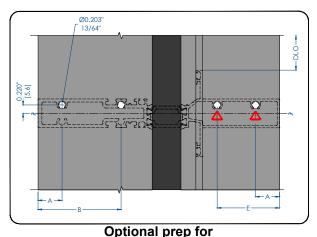


Reference

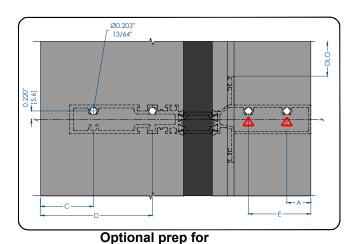




CUT SIZE (90° cut)								
MEMBER	DEPTH	CUT SIZE	'A'	'B'	'C'	'D'	'E'	
(DG 6 ½") A297243 A297246 A297247	6.289" [156]	WD		2.163" [54.9]	NA	NA	1.625" [41]	
(DG 7.00") A297263 A297266 A297267	7.039" [179]	WD	0.625"		1.375" [34.9]	2.912" [74]		
(TG 7.00") A297343 A297346 A297347	7.000" [178]	WD	[15.9]		NA	NA		
(TG 7 ¾") A297363 A297366 A297367	7.750" [197]	WD			1.375" [34.9]	2.912" [74]		



Horizontal Intermediate
using same depth frame & intermediate

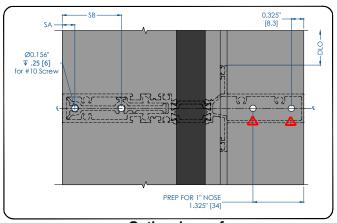


Horizontal Intermediate
using deep frame with shallow intermediate

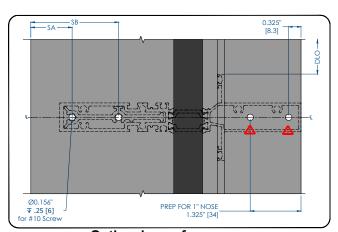
DO NOT PREP 'A' & 'E' FOR FLUSH NOSE INTERMEDIATE: A290202 A290204 A290302 A290304



Cl	JT SIZE (90°	cut)		
MEMBER	DEPTH	CUT SIZE	'SA'	'SB'
(DG 6 ½")	6.289"	WD - 1.5"	0.325"	1.537"
A297242	[156]	[25.4]	[8.3]	[39]
(DG 7.00")	7.039"	WD - 1.5"	1.040"	2.250"
A297262	[179]	[25.4]	[26.4]	[57]
(TG 7.00")	7.000"	WD - 1.5"	0.325"	1.537"
A297342	[178]	[25.4]	[8.3]	
(TG 7 <sup>3</sup> / <sub>4</sub> ")	7.750"	WD - 1.5"	1.040"	2.250"
A297362	[197]	[25.4]	[26.4]	[57]



Optional prep for Horizontal Intermediate using same depth frame & intermediate

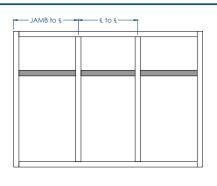


A297262, A297342, A297362 Similar

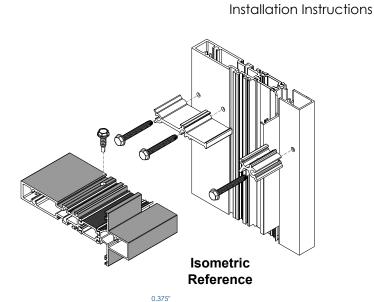
Optional prep for
Horizontal Intermediate
using deep frame with shallow intermediate

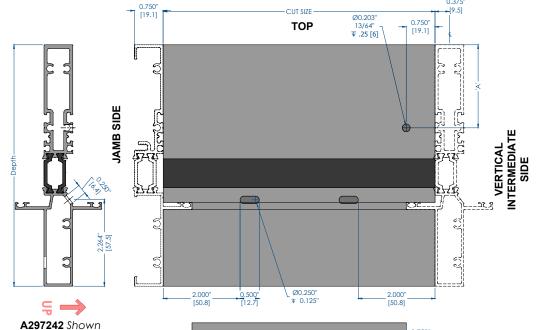


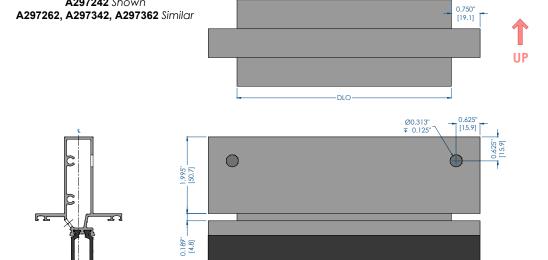
DO NOT PREP FOR FLUSH NOSE: A290202 A290204 A290302 A290304



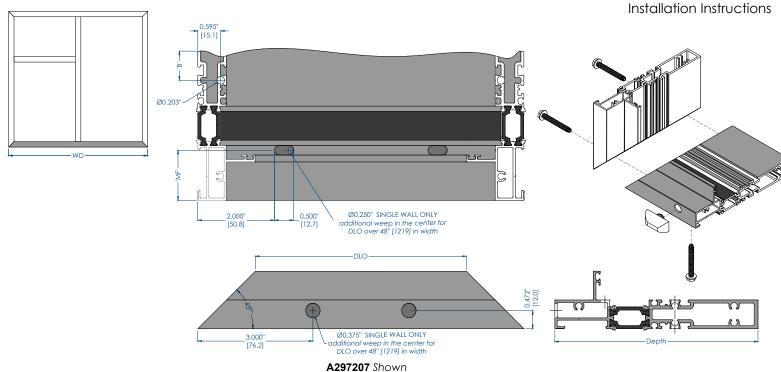
	CU	T SIZE (90° cut)	
MEMBER	DEPTH	CUT SIZE	'A'
(DG 6 ½") A297242	6.289" [156]		2.163" [55]
(DG 7.00") A297262	7.039" [179]	JAMB to CL - 1.125" [28.6]	2.912" [74]
(TG 7.00") A297342	7.000" [178]	CL to CL - 0.750" [19.1]	2.163" [55]
(TG 7 <sup>3</sup> / <sub>4</sub> ") A297362	7.750" [197]		2.912" [74]







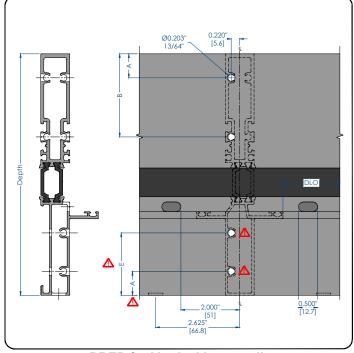
воттом



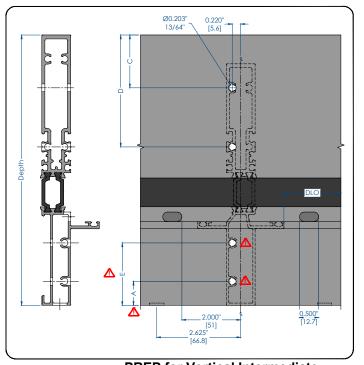
**A297207** Snown A297227, A297247, A297267 A297307, A297327, A297347, A297367 Similar

	1" NOSE CUT SIZE (45° miter cut)											
MEMBER	DEPTH	CUT SIZE	'MF'	'A'	'B'	'C'	.D.					
(DG 5 ½") A297207	5.289" [134]	WD				NA	NA					
(DG 6.00") A297227	6.039" [153]	WD	1.304"	0.625"	2.163"	1.375" [34.9]	2.912" [74]					
(TG 6.00") A297307	6.000" [152]	WD	[33]	[15.9]	[54.9]	NA	NA					
(TG 6 ¾") A297327	6.748" [171]	WD				1.375"	2.912" [74]					

	2" NOSE CUT SIZE (45° miter cut)										
MEMBER	DEPTH	CUT SIZE	'MF'	'A'	'B'	'C'	'D'	'E'			
(DG 6 ½") A297247	6.289" [160]	WD				NA	NA				
(DG 7.00") A297267	7.039" [179]	WD	2.304"	0.625" 2	2.163"	1.375" [34.9]	2.912" [74]	1.625" [41]			
(TG 6.00") A297347	7.000" [178]	WD	[59]	[15.9]	[54.9]	NA	NA				
(TG 6 <sup>3</sup> / <sub>4</sub> ") A297367	7.750" [197]	WD				1.375" [34.9]	2.912" [74]				

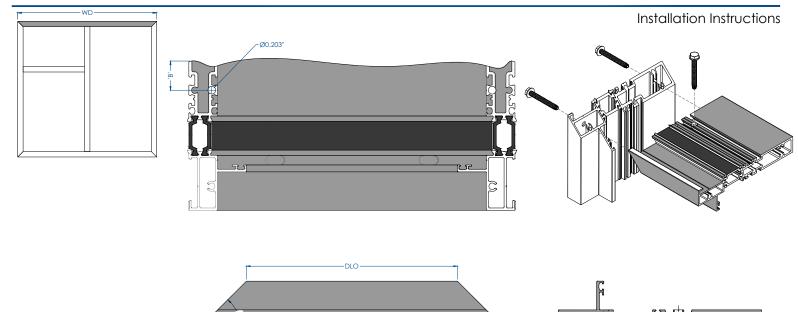


PREP for Vertical Intermediate using same depth frame & intermediate



PREP for Vertical Intermediate using deep frame with shallow intermediate

DO NOT PREP 'A' & 'E' FOR FLUSH NOSE INTERMEDIATE: A290202 A290204 A290302 A290304



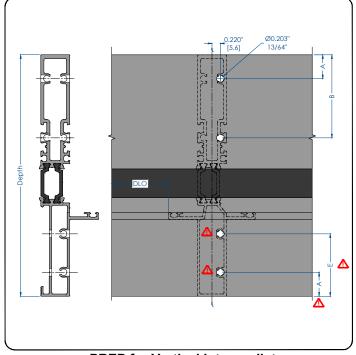
**A297207** Shown A297227, A297247, A297267 A297307, A297327, A297347, A297367 Similar

	1" NOSE CUT SIZE (45° miter cut)											
MEMBER	DEPTH	CUT SIZE	'MF'	'A'	'B'	'C'	'D'					
(DG 5 ½") A297207	5.289" [134]	WD				NA	NA					
(DG 6.00") A297227	6.039" [153]	WD	1.304"	0.625"	2.163"	1.375" [34.9]	2.912" [74]					
(TG 6.00") A297307	6.000" [152]	WD	[33]	[15.9]	[54.9]	NA	NA					
(TG 6 <sup>3</sup> ") A297327	6.748" [171]	WD				1.375"	2.912" [74]					

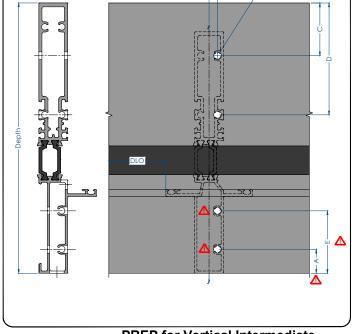
	2" NOSE CUT SIZE (45° miter cut)										
MEMBER	DEPTH	CUT SIZE	'MF'	. <b>v</b> .	'B'	'C'	.D.	'E'			
(DG 6 ¼") A297247	6.289" [160]	WD				NA	NA				
(DG 7.00") A297267	7.039" [179]	WD	2,304"	0.625" 2.163"	2.163"	1.375" [34.9]	2.912" [74]	1.625" [41]			
(TG 6.00") A297347	7.000" [178]	WD	[59]	[15.9]	[54.9]	NA	NA				
(TG 6 ¾") A297367	7.750" [197]	WD				1.375" [34.9]	2.912" [74]				

Ø0.203" 13/64"

0.220"

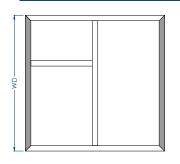


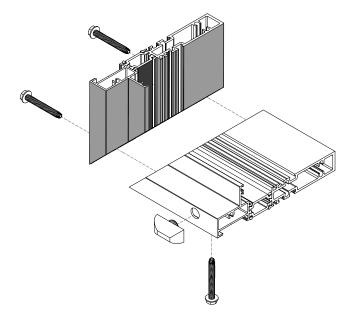
PREP for Vertical Intermediate using same depth frame & intermediate



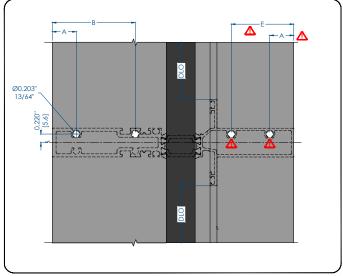
PREP for Vertical Intermediate using deep frame with shallow intermediate

DO NOT PREP 'A' & 'E' FOR FLUSH NOSE INTERMEDIATE: A290202 A290204 A290302 A290304



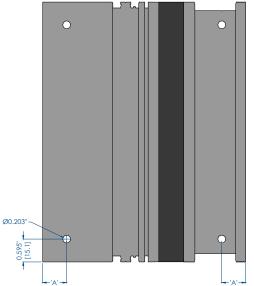


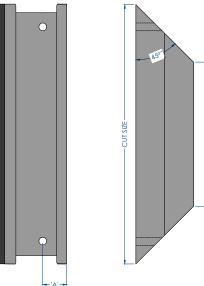
	1" NOSE CUT SIZE (45° miter cut)											
MEMBER	DEPTH	CUT SIZE	'A'	'B'	'C'	'D'						
(DG 5 ½") A297207	5.289" [134]	WD			NA	NA						
(DG 6.00") A297227	6.039" [153]	WD	0.625"	2.163" [54.9]	1.375" [34.9]	2.912" [74]						
(TG 6.00") A297307	6.000" [152]	WD	[15.9]		NA	NA						
(TG 6 \frac{3}{4}")	6.748"	WD			1.375"	2.912" [74]						

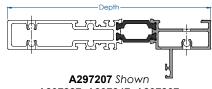


PREP for Vertical Intermediate using same depth frame & intermediate

DO NOT PREP 'A' & 'E' FOR FLUSH NOSE INTERMEDIATE: A290202 A290204 A290302 A290304

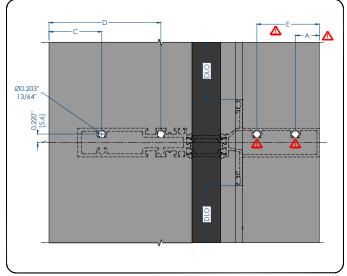






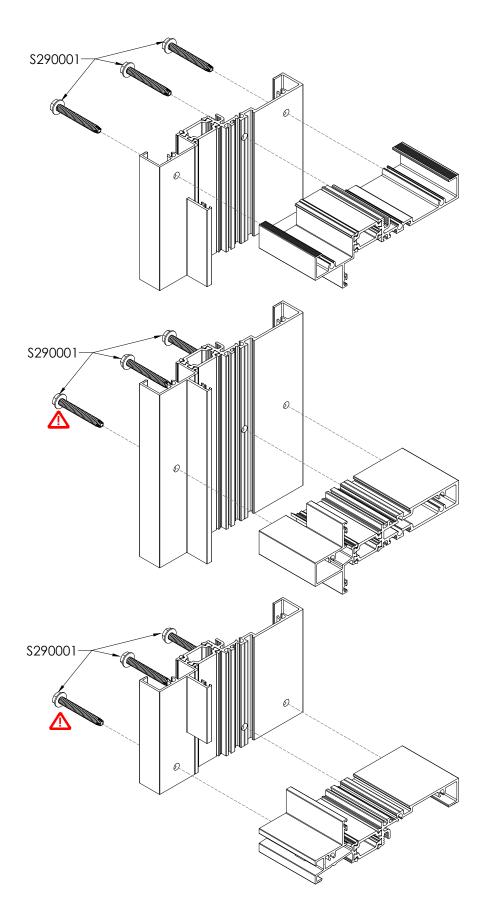
A297227, A297247, A297267 A297307, A297327, A297347, A297367 Similar

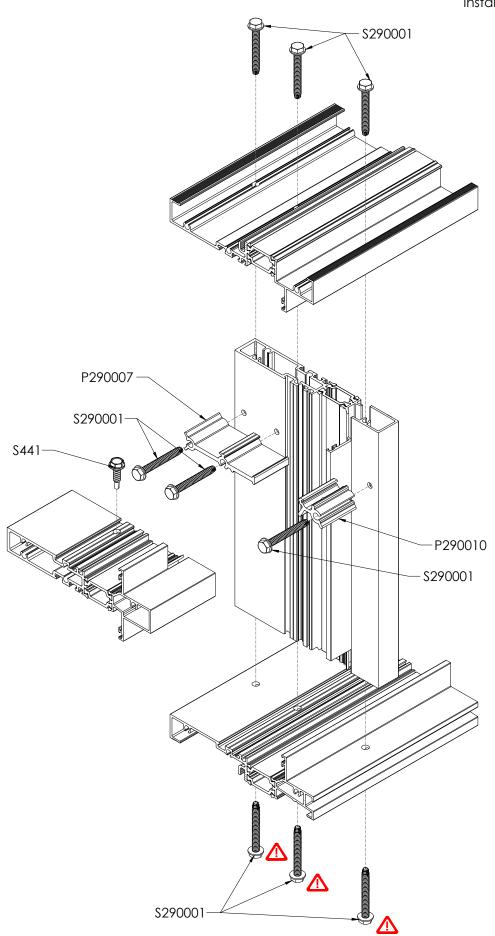
	2" NOSE CUT SIZE (45° miter cut)										
MEMBER	DEPTH	CUT SIZE	'MF'	'A'	'B'	'C'	'D'	'E'			
(DG 6 ½") A297247	6.289" [160]	WD				NA	NA				
(DG 7.00") A297267	7.039" [179]	WD	2.304"	0.625"	2.163"	1.375" [34.9]	2.912" [74]	1.625"			
(TG 6.00") A297347	7.000" [178]	WD	[59]	[15.9]	[54.9]	NA	NA	[41]			
(TG 6 <sup>3</sup> / <sub>4</sub> ") A297367	7.750" [197]	WD				1.375" [34.9]	2.912" [74]				

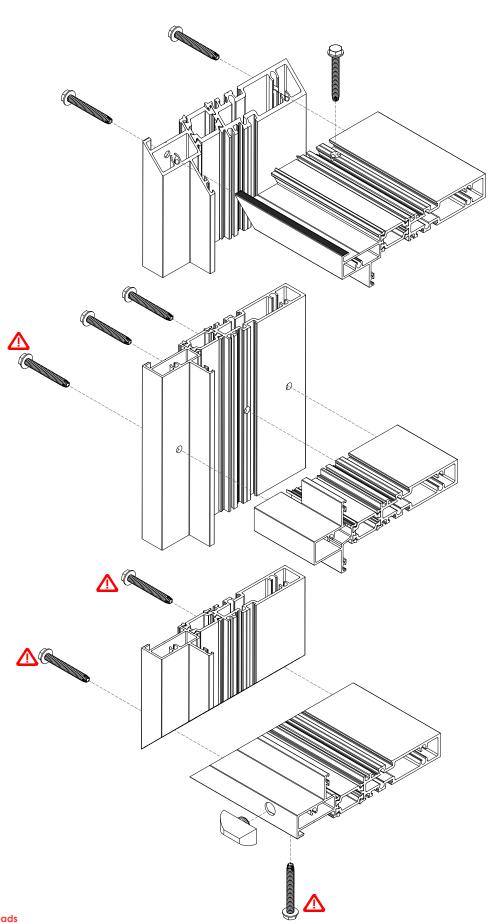


PREP for Vertical Intermediate using same depth frame & intermediate





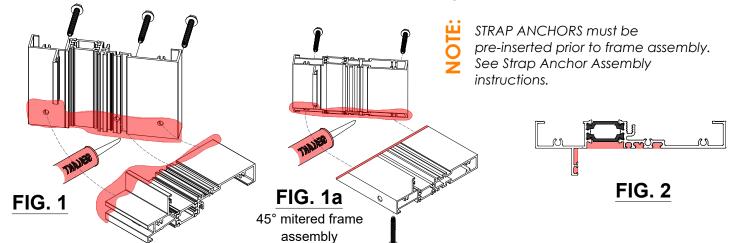




SILL & HEAD TO JAMB ASSEMBLY

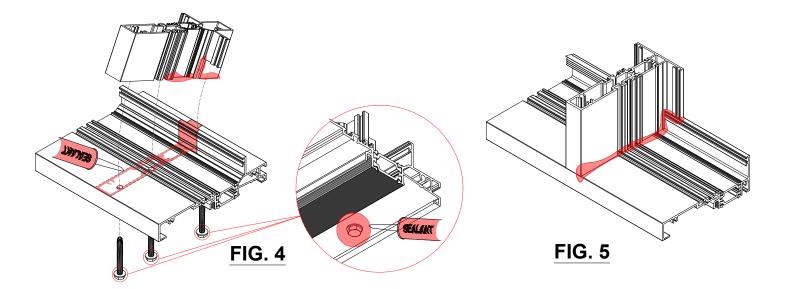
Installation Instructions

- a. De-bur and clean all the mating surfaces using IPA 2 method.
- b. Apply sealant to the both ends if the profile. See FIG 1.
- c. Pump the sealant across the gutter area slightly higher then the voids in section profile. See FIG 2.
- d. Carefully set the vertical section into the sill lining up the assembly holes and installing appropriate fasteners.
- g. Check to ensure the exterior leg is flush with the adjacent sections. Loosen the screws and readjust if necessary.
- h. Using a tooling stick (popsicle stick) tool all the excess sealant on the interior portion of the corner flat to the horizontal section.
- i. Tool the back of the vertical and sill section in the the manner being sure all the section voids are sealed.

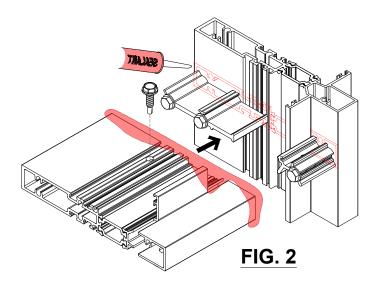


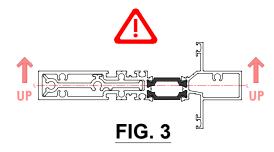
#### INTERMEDIATE MULLION TO PERIMETER FRAME ASSEMBLY

- a. Determine the location of vertical intermediate by using a cut off piece.
- b. De-bur and clean all the mating surfaces using IPA 2 method.
- c. Apply sealant to the both ends of the profile. See FIG 4
- d. Pump the sealant across the gutter area slightly higher then the voids in section profile. See FIG 4.
- e. Carefully set the vertical section onto the sill lining up the assembly holes and installing appropriate fasteners and lock screw. **See FIG 4.**
- Check to ensure the exterior leg is flush with the adjacent sections. Loosen the screws and readjust if necessary.
- g. Cap seal screw heads.
- h. Using a tooling stick (popsicle stick) tool all the excess sealant on the interior portion of the corner flat to the horizontal section. **See FIG 5.**



- a. Install Shear Block using appropriate fastener listed on INTERMEDIATE MULLION COMPONENTS. See FIG 2
- b. Apply sealant to the both ends of the profile. See FIG 2.
- c. ENSURE horizontal mullions are oriented and assembled with gutter facing upward. See FIG 3
- d. Check to ensure the exterior leg is flush with the adjacent sections. Loosen the screws and readjust if necessary.
- e. Using a tooling stick (popsicle stick) tool all the excess sealant on the interior portion of the corner flat to the horizontal section.

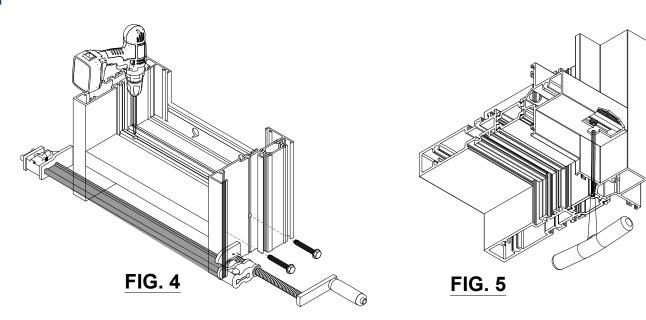




### INTERMEDIATE VERTICAL MULLION TO HORIZONTAL MULLION ASSEMBLY

- a. Carefully set the horizontal section onto the shear block lining up the assembly holes and match drill pilot hole for #10 Screw through the Shear Block. **See FIG 4**
- b. Using  $\frac{3}{32}$ " Hex Key Lock tighten the set screw between vertical and horizontal mullions. **See FIG 5**

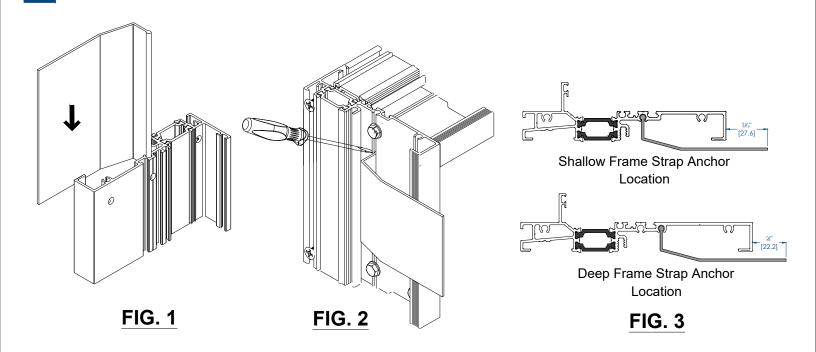




2970AW ShadowLine

#### OPTIONAL STRAP ANCHOR ASSEMBLY

- Refer to approved shop drawings to determine whether the application requires Strap Anchors.
- Pre slide Strap Anchors into the frame and assemble frames as per FRAME ASSEMBLY Instructions. See FIG 1. & FIG. 3.
- Position Strap anchors as per approved Shop Drawings along the frame. To prevent the movement of Strap Anchors crimp from both sides using flat head screw driver. See FIG 2.



#### OPTIONAL MULLION REINFORCEMENT

- a. Refer to approved shop drawings to determine whether the application required optional reinforcement.
- b. Full length reinforcement is required, cut reinforced same as vertical mullion.
- Slide the reinforcement into the vertical mullion from one end. See FIG 4.
- Using V-Groove indicator drill no larger than #12 pilot holes through one side of the vertical mullion and reinforcement at 16" O.C. or according to project specifications. See FIG 5.
- Attach reinforcement using #10 Fasteners. See FIG 5.

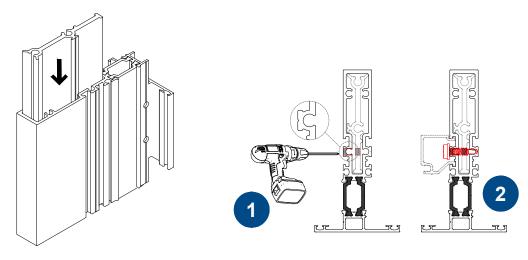


FIG. 4

FIG. 5

## 2970AW ShadowLine

window

Installation Instructions

# STEP 1

# IEP 2





- Determine anchoring method as per approved shop drawings and establish exterior/interior reference lines. Use the established reference points to determine the installation points for each window opening around the perimeter.
- b. Ensure the rough opening is 1/2" larger than the window.
- c. For window frames assembled with 45° frame cuts the rough opening must be  $\frac{3}{4}$ " larger than the window.
- d. Verify structure framing is plumb, straight.

#### ANCHORING THROUGH THE FRAME

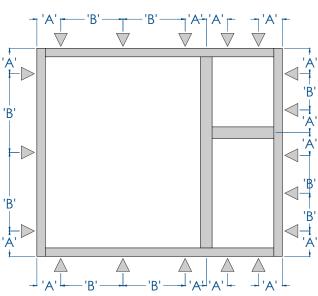
- a. FASTENERS MUST NOT EXCEED # 12 size.
- b. Drill clearance holes using V-groove as a guide. See FIG 2.
- c. Drill location to be 3" from the corner of the frames and maximum 18" O.C. **See FIG 4.**
- d. Refer to approved shop drawings to determine fastener spacing.
- e. Shim solidly between window and building substrate. See FIG 3.
- f. Fasten with appropriate screw, DO NOT OVER-TORQUE the anchoring fasteners. **See FIG 3. and FIG 4.**
- g. Clean perimeter of the frame where seal will be applied using IPA 2 METHOD.
- h. Apply Interior/Exterior seal around the frame and tool.

#### ANCHORING USING STRAP ANCHORS

- Refer to OPTIONAL STRAP ANCHOR ASSEMBLY and approved shop drawing to locate STRAP ANCHORS.
- b. Shim solidly between window and building substrate. See FIG 3.
- c. Fasten with appropriate screw. See FIG 3.
- d. Clean perimeter of the frame where seal will be applied using IPA 2 METHOD
- e. Apply Interior/Exterior seal around the frame and tool.

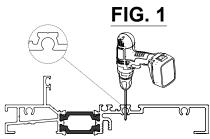
### USING TREMCO's Proglaze ETA SYSTEM

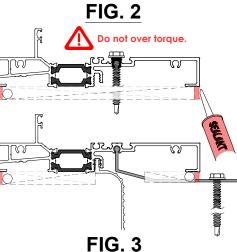
- Building conditions requiring Proglaze ETA membrane may be used around the perimeter of the window.
- b. Consult TREMCO for Sealing of ETA membrane.



A= max. 3" [76mm] B= max 18" O.C [457mm]

FIG. 4





 $\mathcal{O}$ 

NN

[17.7]

Insert Vent Frame Size

Use #10 x 2, Type F Fasteners

Zinc Plated or Stainless Steel

INSTALL OPEN CELL BAFFLES

FIG. 1

Page 35, FIG 1

- Ensure Window Frame is secured and anchored as per approved shop drawings. See Steps 1-4 on Page 36.
- Ensure Frame Openina is 1/4" [6.5mm] larger than the INSERT VENT frame size. See FIG 1
- CRITICAL: Install two OPEN CELL BAFFLES from both sides at the head of each opening. See PAGE 35, FIG 1
- Install glazing gasket #1342103, ensure gasket is not wavy. See FIG 2
- d. Apply a continuous sealant at the sill filling all 3 cavities. See FIG 2, item 1
- Seal Anchor Fasteners Heads, See FIG 2, item 2
- Apply a bed of sealant in all 4 corners from exterior glazing fin to the interior plane of the INSERT VENT. See FIG 2, item 3
- Apply a dab of sealant to the glazing gasket joint See FIG 2, item 4 g.
- Push the INSERT VENT into the opening tight to the glazing gasket. See
- Place  $\frac{1}{8}$ " [3mm] Plastic Horseshoe shims at the sill corners, push the shims until exterior glazing fin. See FIG. 5
- Center the INSERT VENT and place appropriate horseshoe shims between the vent and the fixed framing. See FIG. 3
- Drill #10 Pilot holes  $\frac{11}{16}$  [18mm] from the interior surface though the INSERT VENT and the window frame, 3" [76mm] from inside corner and 18" [457] O.C.
- Drill Clearance Holes thought the INSERT VENT only.
- Install #10 x 2" Long TYPE F fasteners. f.
- If the INSERT VENT is equipped with MPL Tire Bar, #10 x 2" Flat Head TF fasteners must be used in this location. See FIG. 4
- Remove the clamps and close the sash.

	1375 PI 1 1/2" [39mm] 2 1/4" [58mm]	1 1/2" [39mm]
4 3	1375 PI 11/2 [39mm] 21/4 [58mm]	11/2 [39mm]
Use Flat Head fasteners if Frame		<b>=</b>
Opening is $\frac{1}{4}$ " [6.5mm] smaller than	Use #10 x 2 Hex Head, Type	e F

Use #10 x 2 Hex Head, Type F Zinc Plated or Stainless Steel

DIM 'A 5.00

Deep Frame

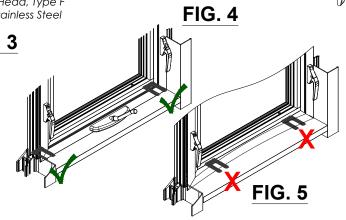
1 1/4" [32mm] 1 15/16" [50mm]

Deep Frame

FIG. 2

Operable Frame Size

- FIG. 3
- Cut horseshoe shims flush to interior/exterior frame surface.
- Clean perimeter of the frame where seal will be applied using IPA 2 METHOD.
- Apply Interior/Exterior seal around the frame and tool.
- Seal all the screw heads.



Anchoring Through MPL Tie-Bar Use #10 x 2 Flat Head, Type F Zinc Plated or Stainless Steel

- Ensure Window Frame is secured and anchored as per approved shop drawings. See Steps 1-4 on Page 36. CRITICAL: Install two OPEN CELL BAFFLES from both sides at the head of
- each opening. See PAGE 35, FIG 1
- Install glazing gasket #1342103, ensure gasket is not wavy. See FIG 2
- IF ANCHORING THROUGH THE FRAME FLAT HEAD FASTENERS MUST BE USED TO ALLOW THE VENT INSERTION. See FIG 1
- e. Apply a continuous sealant at the sill filling all 3 cavities. See FIG 2, item 1
- Seal Anchor Fasteners Heads, See FIG 1, item 2
- Apply a bed of sealant in all 4 corners from exterior glazing fin to the interior plane of the INSERT VENT. See FIG 2, item 3
- Apply a dab of sealant to the glazing gasket joint See FIG 2, item 4
- Push the INSERT VENT into the opening tight to the glazing gasket. See FIG. 3
- Place  $\frac{1}{8}$  [3mm] Plastic Horseshoe shims at the sill corners, push the shims until outer perimeter bulb gasket. See FIG. 3
- c. Center the INSERT VENT and place appropriate horseshoe shims between the vent and the fixed framing. Adjustable clamps may be used to assist with installation. See FIG. 3
- Drill #10 Pilot holes  $\frac{11}{16}$  [18mm] from the interior surface though the INSERT VENT and the window frame, 3" [76mm] from inside corner and 18" [457] O.C.
- Drill Clearance Holes thought the INSERT VENT only.
- Install #10 x 2" Long TYPE F fasteners. f.
- If the INSERT VENT is equipped with MPL Tire Bar, #10 x 2" Flat Head TF fasteners must be used in this location. See FIG. 4
- Remove the clamps and close the sash.

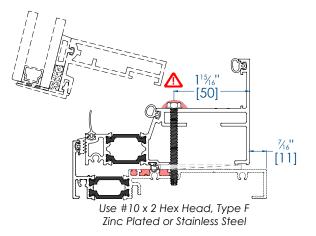


FIG. 3

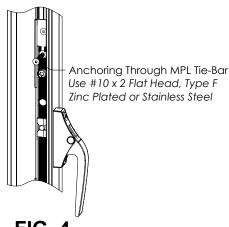
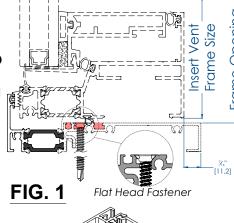
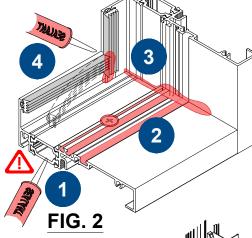
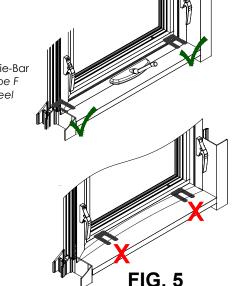


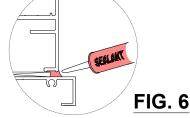
FIG. 4

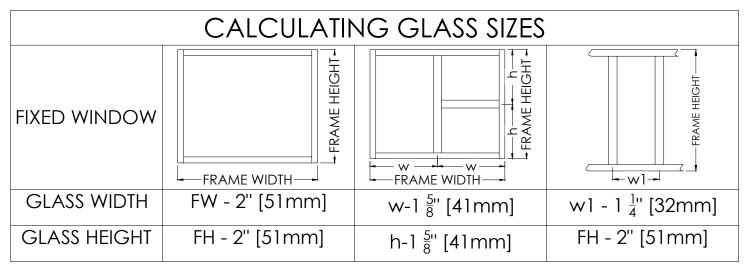
- Cut horseshoe shims flush to interior/exterior frame surface.
- Clean perimeter of the frame where seal will be applied using IPA 2 METHOD.
- Apply Interior seal around the frame and tool. See FIG. 6
- Seal all the screw heads.









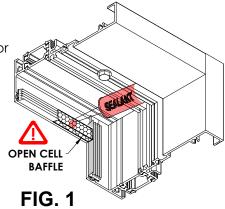


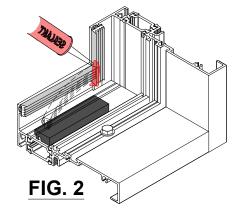
STEP 1

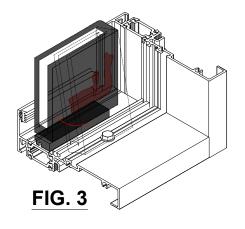
- **a. CRITICAL:** Install two OPEN CELL BAFFLES from both sides at the head of each opening. Use dab of sealant to hold it in place. **See FIG 1.**
- b. Install glazing gasket #1342103, ensure gasket is not wavy. Ensure exterior gasket is not wavy. **See FIG 1.**
- c. Apply a dab of sealant to the glazing gasket joint. See FIG 1.

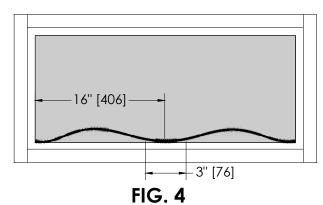


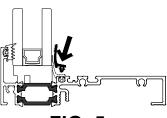
- Place setting blocks at each corner, 6" [150mm] inches from the corner. Dab of sealant can be used to hold it in place. DO NOT BLOCK WEEP HOLES. See FIG 2.
- b. Set the glass onto the Setting Blocks and center the glass in the opening. **See FIG. 3**
- c. Temporarily install a small piece of glass stop at the head, to prevent glass from falling out.
- a. Cut airseal gasket 1/4" [6] longer per foot to avoid shrinkage at a later stage. See FIG. 4
- b. Starting at the sill, insert airseal gasket starting from one end, repeat this every 16 inches. Ensure opposite end of the gasket is inserted before rolling remaining gasket. **See FIG. 5.**









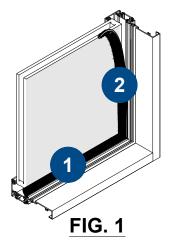


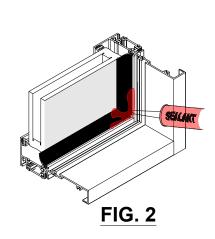
**FIG.** 5

NEXT PAGE

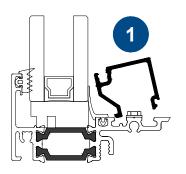
STEP 4

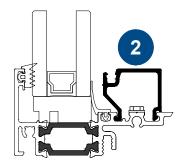
- a. Repeat step 3 by inserting vertical airseal gasket ensuring it overlaps the gasket at the sill. Finally insert gasket at the head overlapping gaskets at both side. **See FIG. 1**
- c. Clean gasket corners with IPA2 method.
- c. Using a tooling stick peel back overlapping gasket and apply sealant in-between gaskets, and around the corner to prevent air leakage. See **FIG. 2**

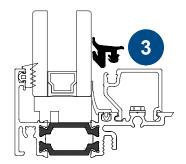




- STEP 5
- a. Reinstall Glass Stops, starting with horizontals first. See FIG. 3, STEPS 1-2
- b. Cut glazing gasket 1/4" [6] inch longer per foot to avoid any shrinkage. See FIG. 4
- c. Insert glazing gasket starting from one end, repeat this every 16" [406]. Ensure opposite end of the gasket is inserted before rolling remaining gasket. **See FIG. 3, STEPS 3**
- d. Ensure glazing gasket is pressing against airseal gasket. See FIG. 3, STEPS 4







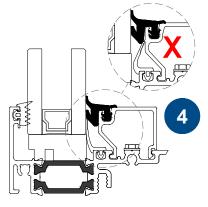


FIG. 3

