

Ultimate Double Hung Insert G2

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Unit Features

Ultimate Double Hung Insert G2: UDHIN G2

Ultimate Single Hung Insert G2: USHIN G2

Ultimate Double Hung Insert Picture G2: UDHIN P G2

Ultimate Double Hung Insert Transom G2: UDHIN TR G2

Frame:

- Frame depth: 3 1/4" (83) pocket depth, 4 29/32" (125) overall jamb
- Head and side jamb thickness: 11/16" (17)
- Sill thickness:
 - 0 degree: 1 13/32" (36)
 - 8 degree: 31/32" (25)
 - 14 degree: 19/32" (15)

Sash:

- Operating / Stationary Sash (Single Hung, Double Hung, Transom):
 - Sash thickness: 1 3/4" (44), corner slot and tenoned
 - Top rail height: 2 13/32" (61)
 - Stiles width: 1 21/32" (42)
 - Bottom rail height (operating): 3 1/4" (83)
 - Bottom rail height (transom): 2 3/4" (70)
- Stationary Picture Sash:
 - Sash thickness: 1 3/4" (44), corner slot and tenoned
 - Top rail height: 2 13/32" (61)
 - Stile width: 2 13/32" (61)
 - Bottom rail height: 3 1/4" (83)
- Standard exterior cope profile: Putty
- Standard interior wood cope sticking: Ogee
- Optional interior wood cope sticking: Square

Hardware:

- Locking system that provides locking, unlocking, balancing, and tilting of the sash members. Lock automatically locks when both sash are closed.
- Lock Actuator Assembly:
 - Material
 - Zinc die cast
 - Colors: Satin Taupe, White, Bronze, Matte Black, Brass, Antique Brass, Polished Chrome, Satin Chrome, Oil Rubbed Bronze, or Satin Nickel
 - Design features or components
 - To unlock the unit, turn the handle 135°
 - To lock the unit, both sash must be moved to the closed position
 - To tilt the bottom sash for wash-mode, the bottom sash must be open; push the button on top of lock handle and rotate the handle 180°
 - To tilt the top sash for wash-mode, the bottom sash must be tilted and/or removed from frame; lower the top sash to a good working height, retract the tilt latches on the top rail and tilt sash out of the frame
 - Options
 - Non-tilt hardware
 - Custodial hardware colors: satin taupe, white, bronze, matte black
- Lift Lock (Option for Single Hung Only)
 - Available with one or two locks
 - Lift lock handle assembly is integrated into the bottom rail of the sash and controls locking, unlocking and facilitates operation of the bottom sash.
 - Two locks are not available on sash less than CN26 width
 - Material
 - Zinc die-cast
 - Finishes
 - Lift and Escutcheon components - Bronze, Satin Taupe, White, Matte Black, Oil Rubbed Bronze, Antique Brass, Brass, Polished Chrome, Satin Chrome, Satin Nickel
 - Sill Strike: White, Black, Beige

Unit Features

- Latches
 - Bottom sash latch, top sash tilt latch. Color: Beige
 - Latches accommodate locking/un-locking, travel of sash in frame, and tilting into wash-mode
 - Bottom sash tilt latched operated for Lock Handle
 - Manual bottom tilt latch option - only available with Lift Lock. Color: White, Black, Beige
- Cord guide assembly
 - Injection-molded plastic and die-cast zinc
 - One cord guide inserted into bottom check rail
 - Cord guide is driven by standard check rail lock handle, accounts for cord travel to retract latches
 - Plunger drives auto-lock feature to lock position when both sash are closed
- Strike Assembly
 - Zinc die-cast strike plate and injection-molded Acetal housing and button
 - Strike assembly accommodates locking/unlocking with standard check rail lock
- Balance system
 - Block & tackle balance
 - Hybrid spiral balance

NOTE: Balance type is dependent on sash weight. Unit size, glass type, and options can all impact sash weight. General balance selection is as follows (some exceptions exist based on unit size):

Sash	Sash Weight	Balance Tube Type
Top	up to 35 lbs	Block and Tackle
	>35 lbs	Hybrid Spiral
Bottom	up to 30.6 lbs	Block and Tackle
	>30.6 lbs	Hybrid Spiral

- Sash Limiter
 - Bottom sash limiter:
 - Available on all operator configurations
 - Selectable bottom sash locations, 4", 6" or 8" Net Clear Opening (NCO)
 - Non-tilt hardware is default, and a sash removal tool is required in order to by-pass the Sash limiter for sash removal (tilt wash mode)
 - Standard application is factory applied. Available for retrofit applications.
 - Color: Will align with the Interior Weather Strip Package selection
 - Top Sash Limiter
 - Available on all operator configurations, with the exception Single Hung configurations.
 - Selectable bottom sash locations, 4", 6" or 8" Net Clear Opening (NCO)
 - Standard application is factory applied. Available for field applications
 - Color: Will align with the Exterior Weather Strip Package selection
- Optional factory applied Window Opening Control Device is available on operating units.
 - Two devices will be applied to each window and will default color match the lock handle color.
 - WOCD is a device consisting of a zinc lever housed in a zinc shell on the top sash stile of the secondary sash and an acetal stop on the bottom check rail of the primary sash.
 - Color: Satin Taupe, White, Bronze, Matte Black, Brass, Antique Brass, Polished Chrome, Satin Chrome, Oil Rubbed Bronze, and Satin Nickel.
 - This device works in accordance to ASTM F2090-10 standard specification for window fall prevention devices with emergency escape.
- Exterior Sash Lugs - Standard Option
 - Standard Profile: Ogee
 - Available on Top Sash
 - Color: Available in all exterior clad color options
 - Color shall be the same as top sash clad color
 - Standard application is factory applied. Available for field applications
- Optional Finger Pull
 - Single or double (not available on units less than Glass size 26: Frame OM 31 11/32" (796)
 - Not available with Lift Lock
- Optional Sash Lifts
 - Zinc die-cast.
 - Not available with Lift Lock
 - Color: Satin Taupe. Optional colors: Bronze, White, Brass, Antique Brass, Satin Chrome, Satin Nickel and Oil Rubbed Bronze.

Unit Features

Weather Strip:

- Operating units:
 - Jambs: Foam-filled bulb
 - Color: beige, black, and white
 - Head Jamb: Continuous dual leaf
 - Color: black
 - Check rail: Hollow bulb
 - Color: beige, black, and white
 - Bottom rail: Hollow bulb
 - Color: black
- Stationary units:
 - Jambs: Foam (picture), foam-filled bulb (transom)
 - Color: beige, black, white
 - Header and bottom rail: Hollow bulb
 - Color: black

Insect Screens:

- Screen Frame
 - Window Frame height less than or equal to 54 1/2" Aluminum Screen; Option: Extruded Aluminum Screen Frame.
 - Window Frame height greater than 54 1/2" Extruded Screen Frame.
- Screen mesh:
 - Standard: Marvin Bright View™,
 - Options: Charcoal Aluminum Wire, Black Aluminum Wire, Bright Aluminum Wire, or Bright Bronze Aluminum Wire
- Aluminum surround to match exterior frame clad color
- Units with a glass height of 20" (508) or greater will have a center cross bar

Lock Status Sensor (Optional):

- Refer to **Lock Status Sensor Installation Instructions** for requirements.
- The Lock Status Sensor detects an open or closed status on Clad Ultimate Insert Double Hung - Next Generation 2.0 units and Clad Ultimate Insert Single Hung - Next Generation 2.0 units. A "locked" status is inferred from the presence of the Auto-Lock feature, which activate the locking mechanism when the operating panel is closed. It allows easy integration with home automation systems through a wired or wireless connection.
 - For wired option, check with local codes on potential contractor requirements for low voltage networking connections.
 - Wireless option available. Requires purchase of secondary transmitter for operation. Marvin will prep for this option.
- Wireless Lock Status Sensor is located within the width and height of the frame.
- Sensor Location
 - Will always be located on the right-hand side of the check rail (from the exterior) for the bottom sash. For the top sash, the sensor will be located in the header parting stop of the frame on the right side (from the exterior).
- For Wired or Wireless, Black or White Magnet Covers only visible on secondary surface. Cover color dependent upon interior finish.
 - White: Prime and White Painted Interior Finish
 - Black: Bare and all other finish options

Unit Features**Glass and Glazing:**

- Glazing seal: Silicone glazed
- Standard glass is Insulating Low E2 Argon or air
- Dual-pane insulating glass thickness: 7/8"
- Triple-pane insulating glass thickness: 7/8"
- Insulating glass coatings
 - Low E1
 - Low E2
 - Low E3
 - Low ERS
 - Low ELR
- Available glass types:
 - Laminated
 - Tempered
 - Obscure
 - Clear
- Tints
 - Bronze
 - Gray
 - Green
 - Reflective Bronze
- Decorative glass options:
 - Frost
 - 1/2 English Reed
 - Rain
 - Sandblasted
 - Glue Chip
- Glazing will be altitude adjusted for higher elevations with capillary tubes. Argon, Argon-Krypton, and Krypton gas not included
- Egress may be affected when selecting specialty glass, please contact your Marvin representative
- For additional specialty glazing options, please contact your Marvin representatives.

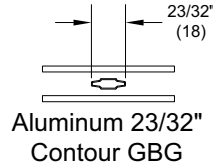
Installation Features:

- Installation Accessories
 - Factory installed vinyl sill fin
 - Integrated jamb adjustment screws
 - Six (ten for larger sizes) #8 x 3" T20 Torx pan head installation screws
 - Two (four for larger sizes) color matched clad jamb plugs (exterior)
- Aluminum Extrusions (Field-applied only)
 - Profiles: Brick mould casing, flat casing, and various special casing. Frame expander, jamb extender, mullion cover, and mullion expander, subsill, subsill end cap and lineal cap.
 - Finish: Fluoropolymer modified acrylic topcoat applied over primer. Available in all exterior aluminum clad colors. Meets AAMA 2605 requirements.

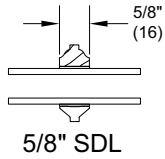
Standard Divided Lite Option



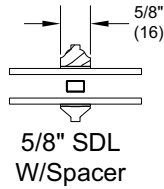
Insulating Glass



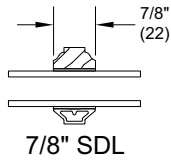
Aluminum 23/32"
Contour GBG



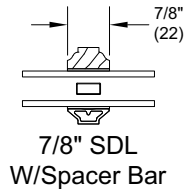
5/8" SDL



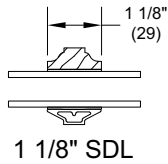
5/8" SDL
W/Spacer



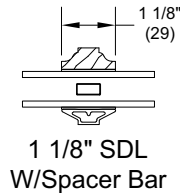
7/8" SDL



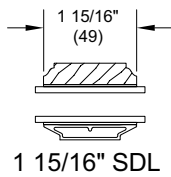
7/8" SDL
W/Spacer Bar



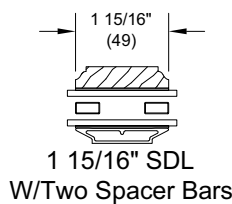
1 1/8" SDL



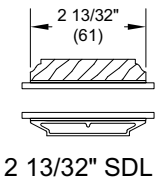
1 1/8" SDL
W/Spacer Bar



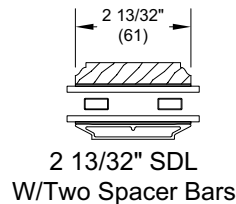
1 15/16" SDL



1 15/16" SDL
W/Two Spacer Bars



2 13/32" SDL

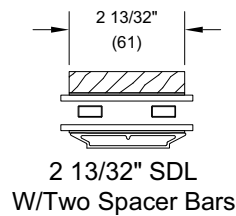
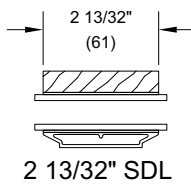
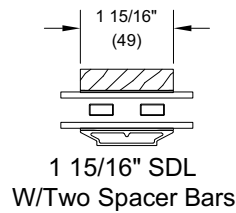
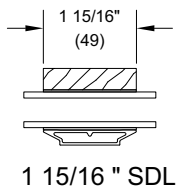
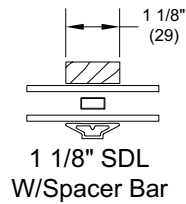
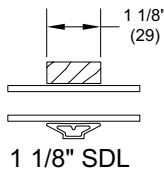
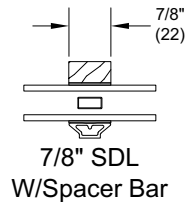
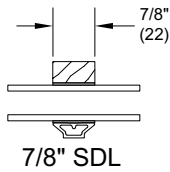
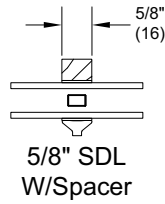
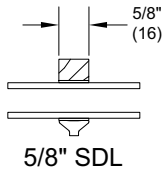


2 13/32" SDL
W/Two Spacer Bars

NOTE: Due to the inherent qualities of tempered glass, daylight gaps may be seen when using simulated divided lite bars. Daylight gaps could be visible between the internal spacer bar and surface applied bars when viewing from an acute angle to the glass on the following applications:

- Tempered glass over 72" high while using 5/8" SDL bars
- Tempered glass over 91" high while using 7/8" SDL bars.

Optional Interior Square Simulated Divided Lite



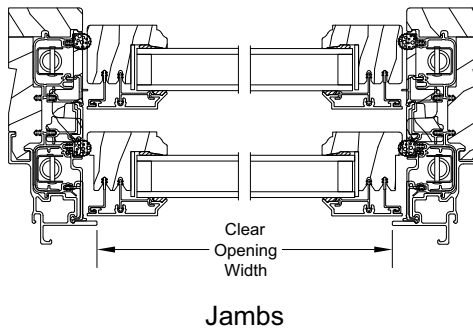
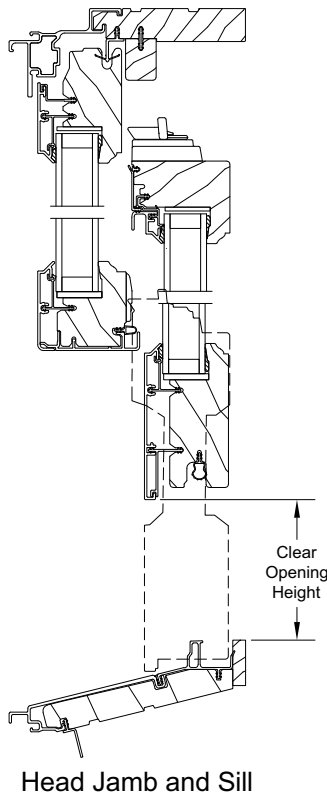
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- Tempered glass over 72" high while using 5/8" SDL bars
- Tempered glass over 91" high while using 7/8" SDL bars.

Egress and Vent Openings

Minimum Egress Requirements			
Inside Opening Width		Inside Opening Height	
in	mm	in	mm
26	(660)	85 3/16	(2164)
28	(711)	78 15/16	(2005)
30	(762)	73 11/16	(1872)
32	(813)	69 1/8	(1756)
34	(864)	65 1/4	(1657)
36	(914)	61 13/16	(1570)
38	(965)	58 3/4	(1492)

Egress Unit Minimum Openings and Conversions from Frame Size		
Desired Dimension	Formula	Minimum Value for Net Clear Opening
Egress Opening Width (inches)	= UDHIN G2 frame OM width - 3.680	20 inches
Egress Opening Height (inches)	= (UDHIN G2 frame OM height - 7.168) / 2 - 1.313 (B&T)	24 inches
	= (UDHIN G2 frame OM height - 7.168) / 2 - 1.614 (UL)	24 inches
Egress Opening Area (sq. ft.)	= (Egress Width X Egress Height) / 144	5.7 sq. ft.



NOTE: Units with an inside opening width greater than 38" wide and inside opening height greater 58 7/16" meet minimum egress requirements.

Minimum and Maximum Guidelines, Certified Sizes and Ratings

IO MEASUREMENTS												
Unit Type		Minimum				Maximum				Glass Size		
		IO Width		IO Height		IO Width		IO Height				
		in	mm	in	mm	in	mm	in	mm	Sash Glass Size Type	Sq. Ft.	Sq. Meters
USHING2 / UDHING2	Equal Sash	14 5/8	(371)	23 3/4	(603)	55 23/32	(1415)	95 27/64	(2424)	Equal	15.278	1.419
USHING2 /UDHING2	Cottage	14 5/8	(371)	23 3/4	(603)	55 23/32	(1415)	95 27/64	(2424)	Small	0.444	0.041
										Large	15.278	1.419
USHING2 / UDHING2	Reverse Cottage	14 5/8	(371)	23 3/4	(603)	55 23/32	(1415)	95 27/64	(2424)	Small	0.444	0.041
										Large	15.278	1.419
UDHINTRG2	One Sash	14 5/8	(371)	14 3/4	(375)	76	(1930)	28 1/4	(718)	Standard	11.050	1.027
UDHINPG2	One Sash	14 5/8	(371)	15 3/32	(383)	71 23/32	(1822)	85 27/64	(2170)	Standard	36.055	3.350

*NOTE: Some restrictions may apply, contact your Marvin representative with questions.
There will be no Extended units.*

Product	Air Tested to psf	Water Tested to psf	Structural Tested to psf	Certification Rating	Design Pressure (DP)	Overall Width		Overall Height	
						in	mm	in	mm
UDHING2	1.57	7.5	75	LC-PG50	50	45 11/32	(1152)	87 11/64	(2214)
UDHING2	1.57	7.5	52.5	LC-PG35	35	55 11/32	(1406)	95 11/64	(2417)
UDHING2	1.57	7.5	75	LC-PG50	50	71 11/32	(1812)	85 11/64	(2163)
UDHING2	1.57	7.5	75	LC-PG50	50	75 5/8	(1921)	28	(711)

Measurement Conversions: Operating Units

Operating Units					
Unit Measurements		Width		Height	
From	To				
Daylight Opening		in	mm	in	mm
Daylight Opening	Bottom Sash OM	+ 3 11/32	(85)	+ 4 31/32	(126)
Daylight Opening	Top Sash OM	+ 3 11/32	(85)	+ 4 1/4	(108)
Daylight Opening	Glass OM	+ 1 17/64	(32)	+ 1 1/4	(32)
Daylight Opening	Screen OM	+ 4 3/4	(121)	+ 8 15/64	(209)
Daylight Opening	Grille	Order by DLO		Order by DLO	

Operating Units - 0 Degree Sill									
Inside Opening		Width		Height					
From	To			0 Degree Bottom Sill					
Inside Opening		in	mm	in	mm		in	mm	
Inside Opening	Bottom Sash OM	-3 41/64	(93)	-7 27/64	(188)	+	2	+ 3 3/4	(95)
Inside Opening	Top Sash OM	-3 41/64	(93)	-7 27/64	(188)	+	2	+ 3	(76)
Inside Opening	Daylight Opening	-6 63/64	(177)	-9 59/64	(252)	+	2		
Inside Opening	Glass OM	-5 23/32	(145)	-7 27/64	(188)	+	2		
Inside Opening	Screen OM	-2 15/64	(57)	-1 43/64	(43)				
Inside Opening	Frame OM @ Interior	-3/8	(10)	-1/4	(06)				
Inside Opening	Frame OM @ Exterior	-3/8	(10)	-1/4	(06)				

Operating Units - 8 Degree Sill									
Inside Opening		Width		Height					
From	To			8 Degree Bottom Sill					
Inside Opening		in	mm	in	mm		in	mm	
Inside Opening	Bottom Sash OM	-3 41/64	(93)	-6 29/32	(175)	+	2	+ 3 3/4	(95)
Inside Opening	Top Sash OM	-3 41/64	(93)	-6 29/32	(175)	+	2	+ 3	(76)
Inside Opening	Daylight Opening	-6 63/64	(177)	-9 13/32	(239)	+	2		
Inside Opening	Glass OM	-5 23/32	(145)	-6 29/32	(175)	+	2		
Inside Opening	Screen OM	-2 15/64	(57)	-1 11/64	(30)				
Inside Opening	Frame OM @ Interior	-3/8	(10)	-1/4	(06)				
Inside Opening	Frame OM @ Exterior	-3/8	(10)	+ 17/64	(07)				

Operating Units - 14 Degree Sill									
Inside Opening		Width		Height					
From	To			14 Degree Bottom Sill					
Inside Opening		in	mm	in	mm		in	mm	
Inside Opening	Bottom Sash OM	-3 41/64	(93)	-6 33/64	(166)	+	2	+ 3 3/4	(95)
Inside Opening	Top Sash OM	-3 41/64	(93)	-6 33/64	(166)	+	2	+ 3	(76)
Inside Opening	Daylight Opening	-6 63/64	(177)	-9 1/64	(229)	+	2		
Inside Opening	Glass OM	-5 23/32	(145)	-6 33/64	(166)	+	2		
Inside Opening	Screen OM	-2 15/64	(57)	-25/32	(20)				
Inside Opening	Frame OM @ Interior	-3/8	(10)	-1/4	(06)				
Inside Opening	Frame OM @ Exterior	-3/8	(10)	+ 41/64	(16)				

Measurement Conversions: Transom and Picture

Transoms					
Unit Measurements		Width		Height (not affected by sill)	
From	To				
Daylight Opening		in	mm	in	mm
Daylight Opening	Sash OM	+ 3 11/32	(85)	+5 2/16	(131)
Daylight Opening	Glass OM	+ 1 17/64	(32)	+1 4/16	(32)
Daylight Opening	Grille	order by DLO		Order by DLO	

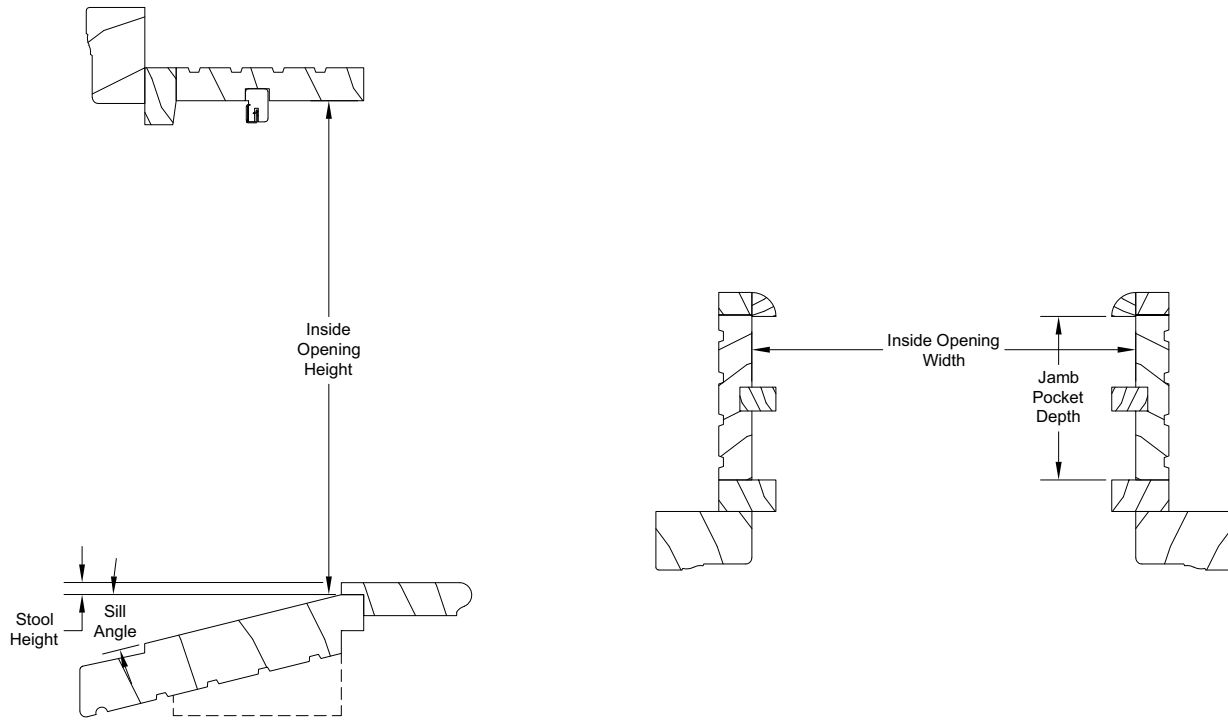
Unit Measurements		Width		Height					
From	To			0 Degree Bottom Sill		8 Degree Bottom Sill		14 Degree Bottom Sill	
Inside Opening		in	mm	in	mm	in	mm	in	mm
Inside Opening	Sash OM	-3 41/64	(93)	-1 23/32	(44)	-1 13/64	(31)	-13/16	(21)
Inside Opening	Daylight Opening	-6 63/64	(177)	-6 55/64	(174)	-6 11/32	(161)	-5 61/64	(151)
Inside Opening	Glass OM	-5 23/32	(145)	-5 39/64	(142)	-5 3/32	(129)	-4 45/64	(120)
Inside Opening	Frame OM @ Interior	-3/8	(10)	-1/4	(06)	-1/4	(06)	-1/4	(06)
Inside Opening	Frame OM @ Exterior	-3/8	(10)	-1/4	(06)	+ 17/64	(07)	+ 41/64	(16)

Pictures					
Unit Measurements		Width		Height (not affected by sill type)	
From	To				
Daylight Opening		in	mm	in	mm
Daylight Opening	Sash OM	+ 4 51/64	(122)	+ 5 41/64	(143)
Daylight Opening	Glass OM	+ 1 17/64	(32)	+ 1 1/4	(32)
Daylight Opening	Grille	order by DLO		order by DLO	

Unit Measurements		Width		Height					
From	To			0 Degree Bottom Sill		8 Degree Bottom Sill		14 Degree Bottom Sill	
Inside Opening		in	mm	in	mm	in	mm	in	mm
Inside Opening	Sash OM	-2 3/16	(56)	-2 23/64	(60)	-1 27/32	(47)	-1 29/64	(37)
Inside Opening	Daylight Opening	-6 63/64	(177)	-8	(203)	-7 31/64	(190)	-7 7/64	(180)
Inside Opening	Glass OM	-5 23/32	(145)	-6 3/4	(172)	-6 15/64	(159)	-5 55/64	(149)
Inside Opening	Frame OM @ Interior	-3/8	(10)	-1/4	(06)	-1/4	(06)	-1/4	(06)

Measurement Conversions: Field Measurement

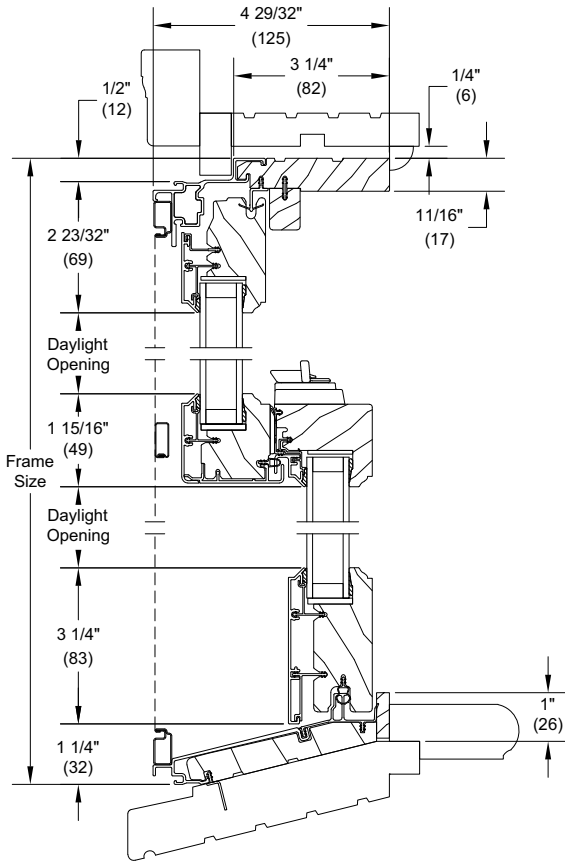
Conversion from Field Measurement to Frame OM		
Width		
Condition	Formula	
If blind stop width is 1/2 inch or less	CINDH-NG 2.0 frame OM width = inside opening width - 0.375	
Height		
Condition	Type of Sill	Formula
If old sill angle is less than 8 degrees	0 degree bottom Sill	UDHIN G2 frame OM height = inside opening height - 0.250
If old sill angle is 8 degrees or more but less than 14 degrees	8 degree bottom sill	UDHIN G2 frame OM height = inside opening height + 0.261 (frame OM height has a .250 clearance)
If old sill angle is 14 degrees or more	14 degree bottom sill	UDHIN G2 frame OM height = inside opening height + 0.648 (frame OM height has a .250 clearance)



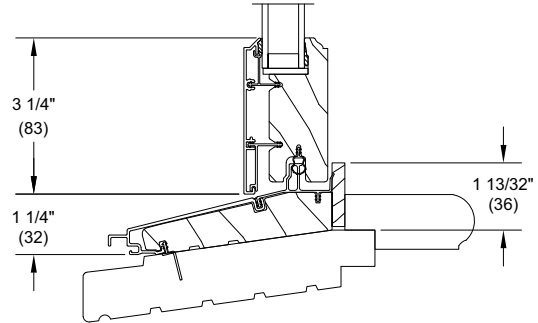
NOTE: For additional measuring instructions see Marvin Insert Window Measuring Instructions.

Section Details: Operating

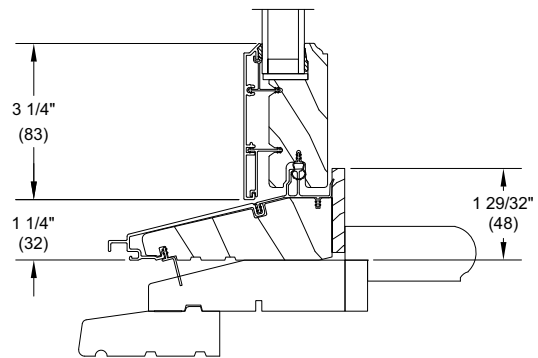
Scale: 3" = 1' 0"



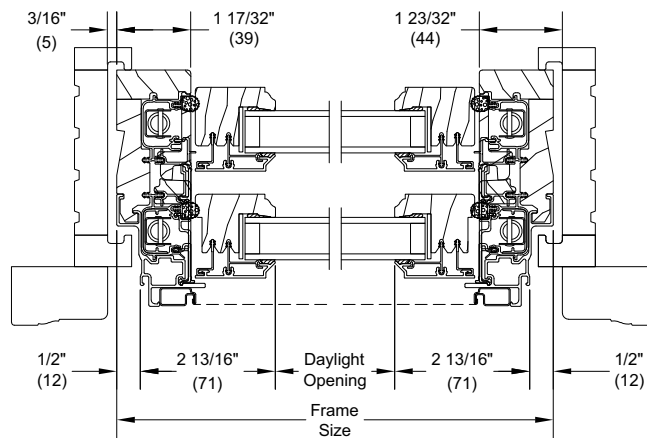
14 Degree Bevel Sill Option
Installed in existing frame



8 Degree Bevel Sill Option
Installed in existing frame



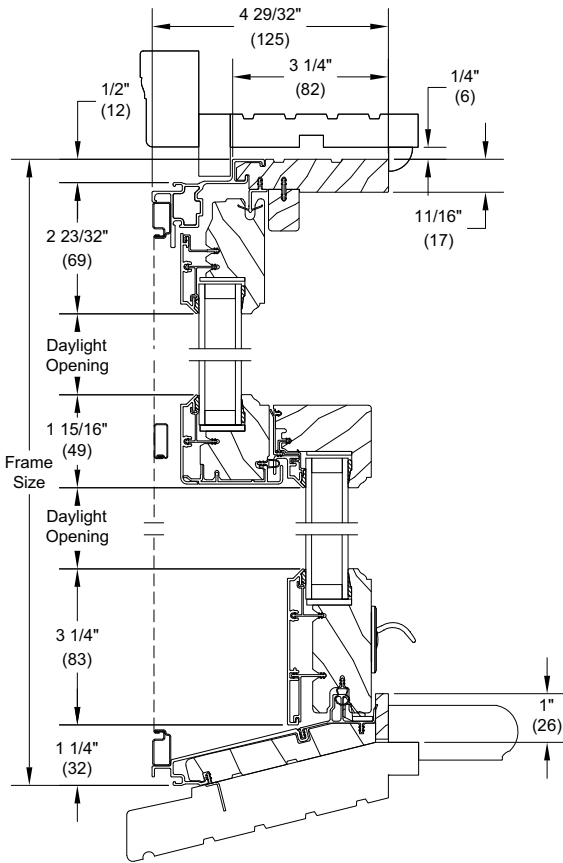
0 Degree Bevel Sill Option
Installed in existing frame



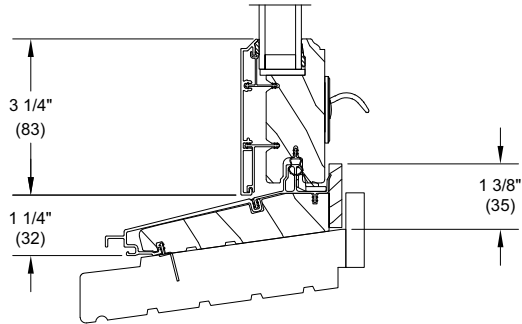
Jamb
Installed in existing frame

Section Details: Operating (with Optional Lift Lock Hardware)

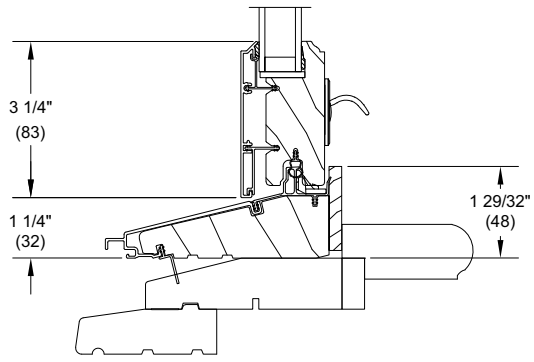
Scale: 3" = 1' 0"



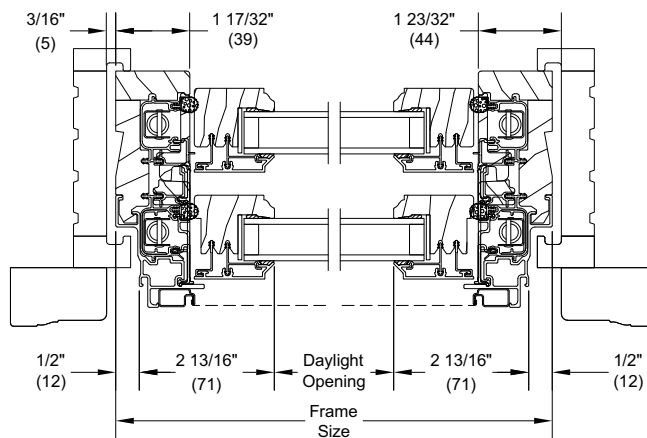
**14 Degree Bevel Sill Option
Installed in existing frame**



**8 Degree Bevel Sill Option
Installed in existing frame**



**0 Degree Bevel Sill Option
Installed in existing frame**

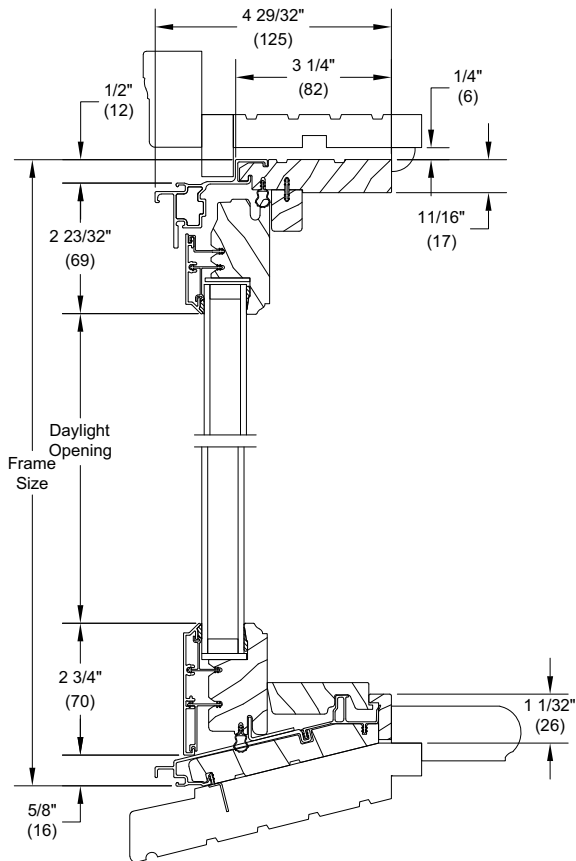


**Jamb
Installed in existing frame**

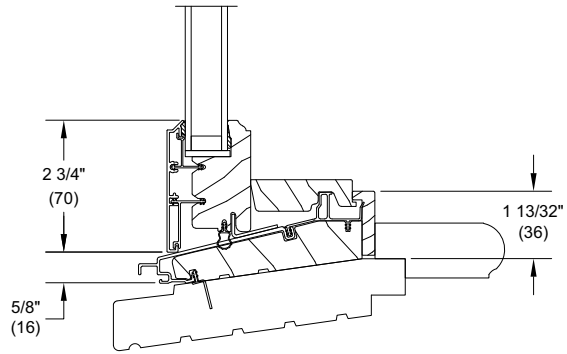
NOTE: Shown with Traditional Design Lift Lock. Also available with a Contemporary Design Lift Lock.

Section Details: Transom

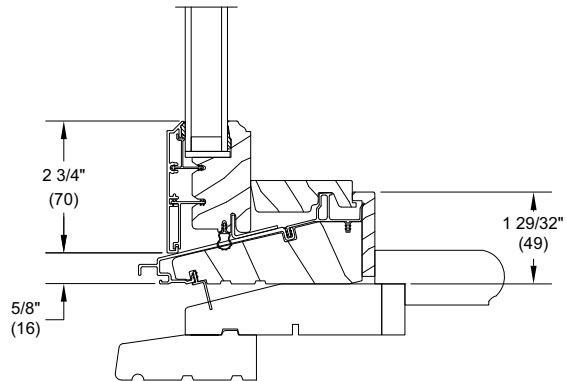
Scale: 3" = 1' 0"



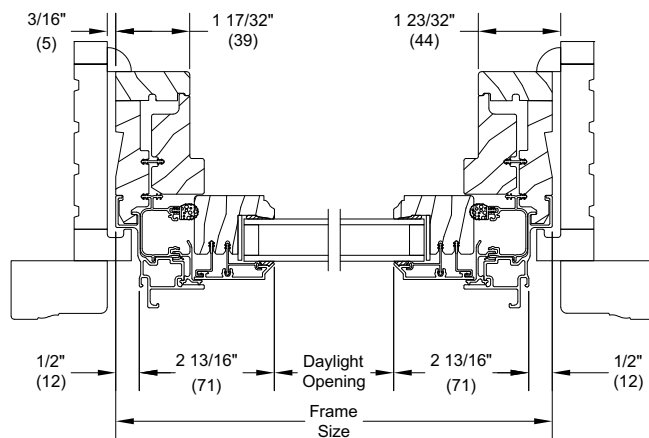
**14 Degree Bevel Sill Option
Installed in existing frame**



**8 Degree Bevel Sill Option
Installed in existing frame**



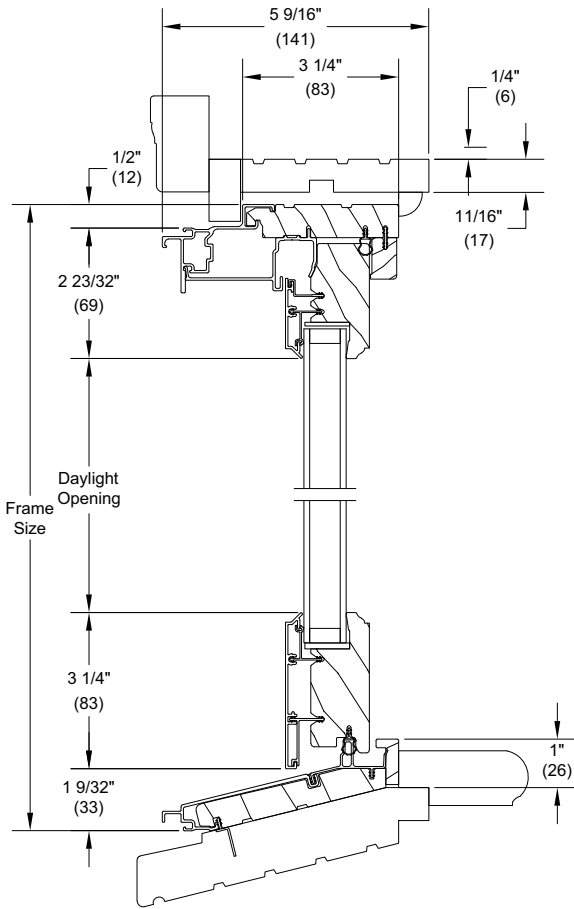
**0 Degree Bevel Sill Option
Installed in existing frame**



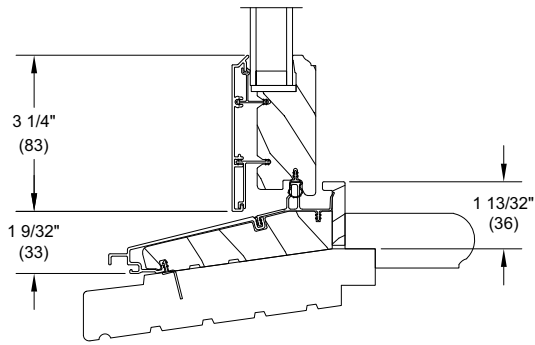
**Jamb
Installed in existing frame**

Section Details: Picture

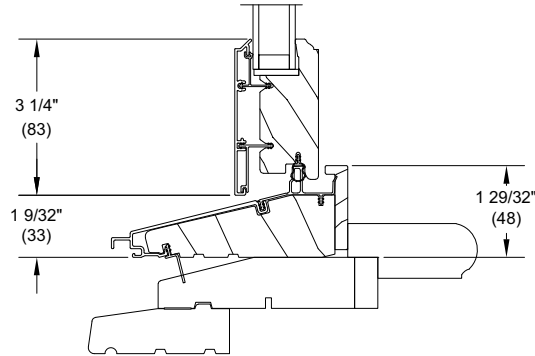
Scale: 3" = 1' 0"



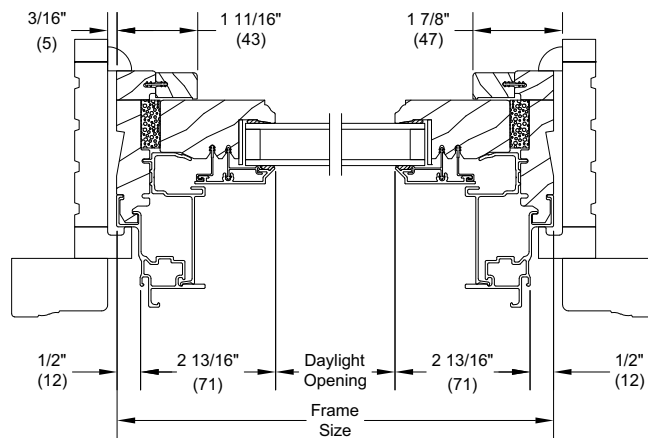
**14 Degree Bevel Sill Option
Installed in existing frame**



**8 Degree Bevel Sill Option
Installed in existing frame**



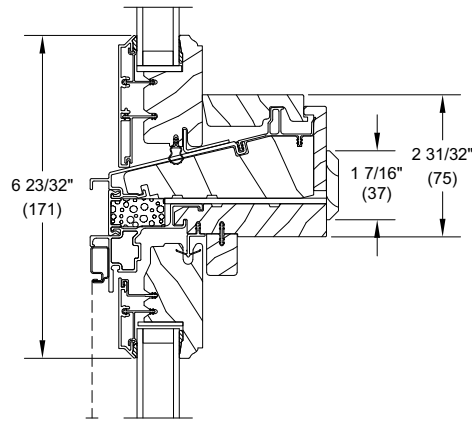
**0 Degree Bevel Sill Option
Installed in existing frame**



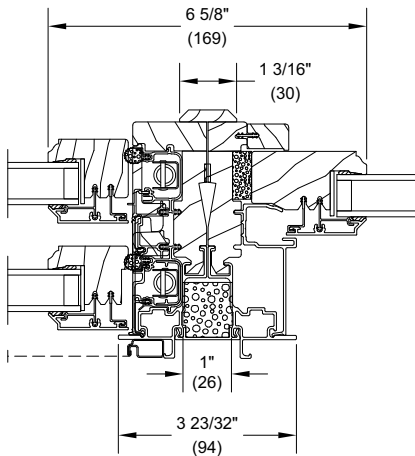
**Jamb
Installed in existing frame**

Mullions

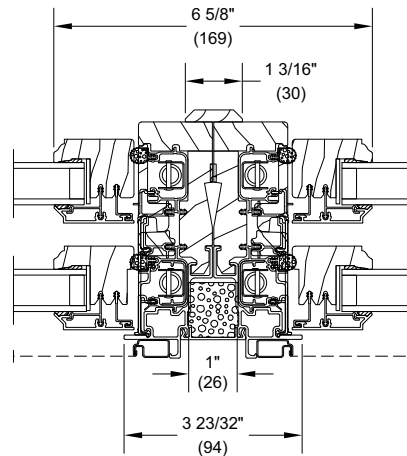
Scale: 3" - 1' 0"



Transom/Operator
Horizontal Mullion



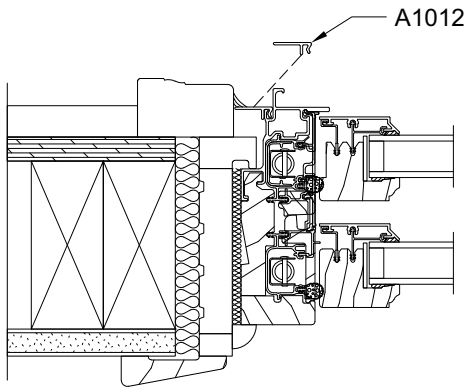
Operator/Picture
Vertical Mullion



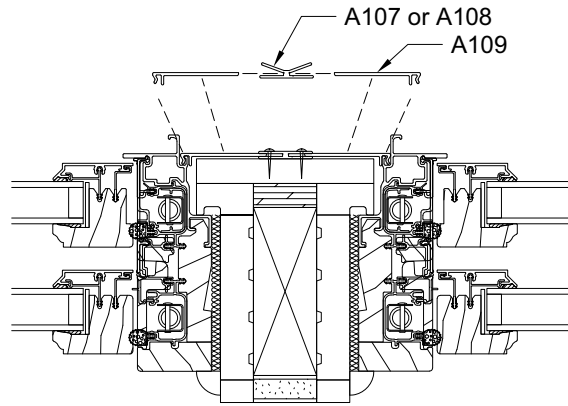
Operator/Operator
Vertical Mullion

Clad Application

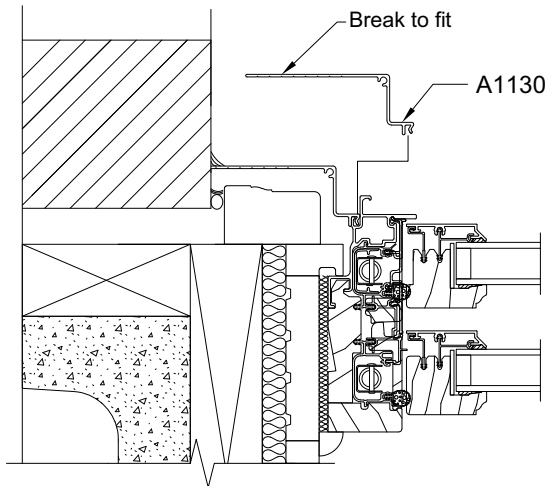
Scale: 3" - 1' 0"



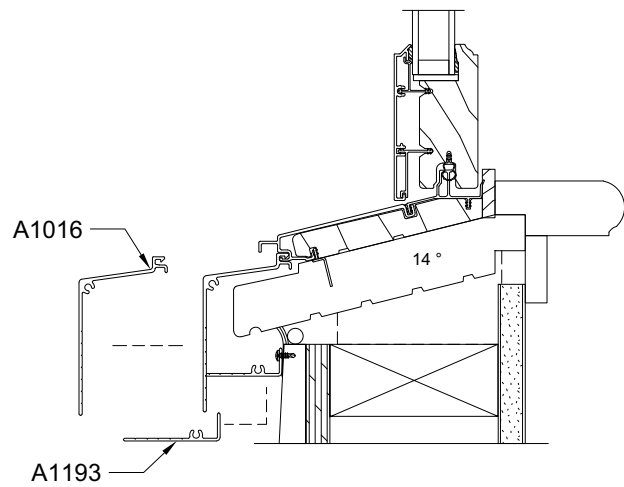
Frame Expander



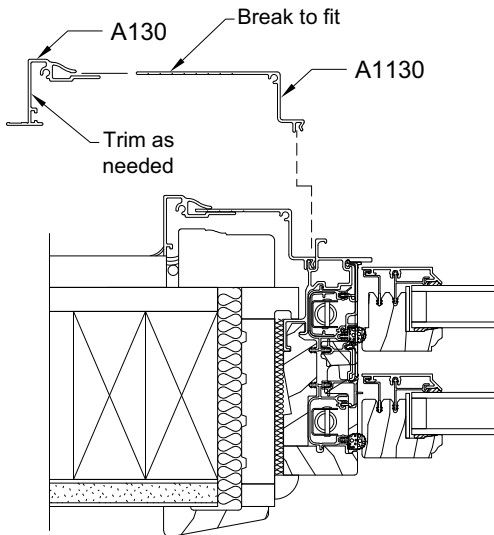
Frame Expander With Mullion Expander



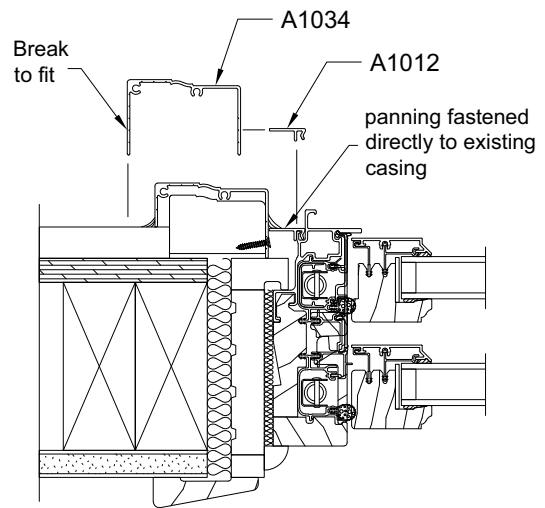
Panning-(Masonry shown)



Sill Panning



Clad Adjustable Brick Mould Casing



Panning-(BMC shown)