

# Ultimate Casement and Ultimate Awning Push Out

## Ultimate Casement and Ultimate Awning Push Out Narrow Frame

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UCAPO UCANFPO

11708532

Architectural Detail Manual

**Unit Features**

Ultimate Casement Push Out: UCAPO

Ultimate Casement Narrow Frame Push Out: UCANFPO

Ultimate Awning Push Out: UAWNPO

Ultimate Casement Push Out Picture: UCAPOP

Ultimate Casement Narrow Frame Push Out: UCANFPO

Ultimate Awning Narrow Frame Push Out: UAWNNF

Ultimate Casement Narrow Frame Push Out Picture: UCANFPOP

**UCAPO and UCANFPO Hardware:**

- Multi-point sequential system with a single lock handle actuation.
  - Oil Rubbed Bronze plated finish handle standard
  - Stainless Steel option available
- Sequential multi-lock uses 2, 4, or 5 locking points depending on unit size
- Detachable Friction Limiter Device is used to hold sash in place and allow sash to lock open at multiple locations.
  - Stainless Steel option available.
- Hinges allow the user to slide the sash across the frame opening which causes the sash exterior to rotate towards the user for the easy wash mode.
  - Stainless Steel option available
- Units under 20" (508) width OM do not have the easy wash hinges
- Maximum sash weight is 145 lbs (66 kg)

**Factory Set Friction Sash Stop**

CN Width	Frame to Sash Opening (With Factory Set Friction Sash Stop Setting +/- 1/2")	
	in	mm
CN 30	21"	(533)
CN 32	22 1/2"	(572)
CN 36	17"	(432)
CN 40	19 1/2"	(495)

*NOTE: For Ultimate Casement Narrow Frame Push Out units, add 1 1/2" to Frame to Sash Opening*

*The friction stop is not a window opening control device and is not ASTM F2090 compliant. It is not intended to and will not reduce the risk of child falls*

**UAWNPO and UAWNNFPO Hardware:**

- Lock is a multi-point sequential lock system actuated by using lock handle
- There are two hinges that connect the stiles of the sash to the jambs of the frame. Material is steel coated with zinc finish
- Track is steel, coated with zinc finish
- The hinges are four bar hinges and include a friction adjustment set screw
- Optional Stainless Steel hardware is available
- Hinges are designed to handle up to 129lbs. (59 kg) sash

**Optional Glass:**

- Gas fill: Air or Argon
- Dual-pane insulating glass thickness: 3/4" or 1".
- Triple-pane insulating glass thickness 1".
- Insulating Glass Coatings
  - Low E1,
  - Low E2,
  - Low E3,
  - Low ERS,
  - Low ELR

**Mulling:**

- For mull performance, refer to the General Mulling chapter of the ADM.

## Unit Features

### **UAWNPO and UAWNNFPO Hardware:**

- Lock is a multi-point sequential lock system actuated by using lock handle
- There are two hinges that connect the stiles of the sash to the jambs of the frame. Material is steel coated with zinc finish
- Track is steel, coated with zinc finish
- The hinges are four bar hinges and include a friction adjustment set screw
- Optional Stainless Steel hardware is available
- Hinges are designed to handle up to 129lbs. (59 kg) sash

### **Optional Factory-installed Window Opening Control Device (WOCD)**

- The standard operation of the WOCD limits the operation of the sash to an opening of less than 4" (102)
- The sash arm detaches from the lock housing by a two-step function actuation to allow the normal operation of the unit
- The WOCD re-engages when the unit is fully closed
- Hardware meets the ASTM F2090-17
- WOCD is Coastal compliant.
- Minimum operable unit size: 20" (508) x 19 1/8" (486)
- Maximum operable unit size:
  - 44" (1118) width
  - If the width is greater than 36" (914) and less than 44" (1118), then 92" (2337) maximum height
  - If the width is less than or equal to 36" (914), then 96 1/8" (2442)
- Components:
  - The WOCD hardware is handed.
  - The Lock Housing and sash arm are comprised of multiple stainless steel, injection-molded components, and a single stainless steel spring
  - The Lock Housing fits within a pocket on the jamb.
  - The Sash Arm will fit within a pocket between the jamb/sill cover and the locking hardware.









## Daylight Measurements: Casement Push Out - Full and Narrow Frame

Ultimate Casement Push Out Daylight Measurements		Width					
		CN	16	18	20	24	26
		DLO	0-10 3/16 (259)	1-0 3/16 (310)	1-2 3/16 (360)	1-6 3/16 (462)	1-8 3/16 (513)
CN	DLO Height	Square Feet (Square Meters)					
16	0-9 5/16 (237)	0.66 (0.06)	0.79 (0.07)	0.92 (0.09)	1.18 (0.11)	1.31 (0.12)	
18	0-11 5/16 (287)	0.80 (0.07)	0.96 (0.09)	1.11 (0.10)	1.43 (0.13)	1.59 (0.15)	
20	1-1 5/16 (338)	0.94 (0.09)	1.13 (0.10)	1.31 (0.12)	1.68 (0.16)	1.87 (0.17)	
24	1-5 5/16 (440)	1.22 (0.11)	1.47 (0.14)	1.71 (0.16)	2.19 (0.20)	2.43 (0.23)	
28	1-9 5/16 (541)	1.51 (0.14)	1.80 (0.17)	2.10 (0.20)	2.69 (0.25)	2.99 (0.28)	
32	2-1 5/16 (643)	1.79 (0.17)	2.14 (0.20)	2.49 (0.23)	3.20 (0.30)	3.55 (0.33)	
36	2-5 5/16 (745)	2.07 (0.19)	2.48 (0.23)	2.89 (0.27)	3.70 (0.34)	4.11 (0.38)	
40	2-9 5/16 (846)	2.36 (0.22)	2.82 (0.26)	3.28 (0.30)	4.21 (0.39)	4.67 (0.43)	
44	3-1 5/16 (948)	2.64 (0.25)	3.16 (0.29)	3.68 (0.34)	4.71 (0.44)	5.23 (0.49)	
48	3-5 5/16 (1049)	2.92 (0.27)	3.50 (0.32)	4.07 (0.38)	5.22 (0.48)	5.79 (0.54)	
54	3-11 5/16 (1202)	3.35 (0.31)	4.00 (0.37)	4.66 (0.43)	5.98 (0.56)	6.63 (0.62)	
56	4-1 5/16 (1253)	3.49 (0.32)	4.17 (0.39)	4.86 (0.45)	6.23 (0.58)	6.91 (0.64)	
60	4-5 5/16 (1354)	3.77 (0.35)	4.51 (0.42)	5.25 (0.49)	6.73 (0.63)	7.47 (0.69)	
64	4-9 5/16 (1456)	4.05 (0.38)	4.85 (0.45)	5.65 (0.52)	7.24 (0.67)	8.03 (0.75)	
72	5-5 5/16 (1659)	4.62 (0.43)	5.53 (0.51)	6.43 (0.60)	8.25 (0.77)	9.16 (0.85)	
78	5-11 5/16 (1811)	5.04 (0.47)	6.04 (0.56)	7.03 (0.65)	9.01 (0.84)	10.00 (0.93)	
84	6-5 5/16 (1964)	5.47 (0.51)	6.54 (0.61)	7.62 (0.71)	9.76 (0.91)	10.84 (1.01)	
92	7-1 5/16 (2167)	6.04 (0.56)	7.22 (0.67)	8.41 (0.78)	10.77 (1.00)	11.96 (1.11)	
96	7-5 5/16 (2269)	6.32 (0.59)	7.56 (0.70)	8.80 (0.82)	11.28 (1.05)	12.52 (1.16)	
Tall Bottom Rail							
16	0-8 59/64 (227)	0.55 (0.05)	0.66 (0.06)	0.77 (0.07)	0.99 (0.09)	1.10 (0.10)	
18	0-10 59/64 (277)	0.69 (0.06)	0.83 (0.08)	0.97 (0.09)	1.24 (0.12)	1.38 (0.13)	
20	1-0 59/64 (328)	0.84 (0.08)	1.00 (0.09)	1.16 (0.11)	1.49 (0.14)	1.66 (0.15)	
24	1-4 59/64 (430)	1.12 (0.10)	1.34 (0.12)	1.56 (0.14)	2.00 (0.19)	2.22 (0.21)	
28	1-8 59/64 (531)	1.40 (0.13)	1.68 (0.16)	1.95 (0.18)	2.50 (0.23)	2.78 (0.26)	
32	2-0 59/64 (633)	1.68 (0.16)	2.02 (0.19)	2.35 (0.22)	3.01 (0.28)	3.34 (0.31)	
36	2-4 59/64 (735)	1.97 (0.18)	2.35 (0.22)	2.74 (0.25)	3.51 (0.33)	3.90 (0.36)	
40	2-8 59/64 (836)	2.25 (0.21)	2.69 (0.25)	3.13 (0.29)	4.02 (0.37)	4.46 (0.41)	
44	3-0 59/64 (938)	2.53 (0.24)	3.03 (0.28)	3.53 (0.33)	4.52 (0.42)	5.02 (0.47)	
48	3-4 59/64 (1039)	2.82 (0.26)	3.37 (0.31)	3.92 (0.36)	5.03 (0.47)	5.58 (0.52)	
54	3-10 59/64 (1192)	3.24 (0.30)	3.88 (0.36)	4.51 (0.42)	5.79 (0.54)	6.42 (0.60)	
56	4-0 59/64 (1243)	3.38 (0.31)	4.05 (0.38)	4.71 (0.44)	6.04 (0.56)	6.70 (0.62)	
60	4-4 59/64 (1344)	3.67 (0.34)	4.38 (0.41)	5.10 (0.47)	6.54 (0.61)	7.26 (0.67)	
64	4-8 59/64 (1446)	3.95 (0.37)	4.72 (0.44)	5.50 (0.51)	7.05 (0.65)	7.82 (0.73)	
72	5-4 59/64 (1649)	4.51 (0.42)	5.40 (0.50)	6.29 (0.58)	8.06 (0.75)	8.95 (0.83)	
78	5-10 59/64 (1801)	4.94 (0.46)	5.91 (0.55)	6.88 (0.64)	8.82 (0.82)	9.79 (0.91)	
84	6-4 59/64 (1954)	5.36 (0.50)	6.42 (0.60)	7.47 (0.69)	9.57 (0.89)	10.63 (0.99)	
92	7-0 59/64 (2157)	5.93 (0.55)	7.09 (0.66)	8.26 (0.77)	10.59 (0.98)	11.75 (1.09)	
96	7-4 59/64 (2259)	6.21 (0.58)	7.43 (0.69)	8.65 (0.80)	11.09 (1.03)	12.31 (1.14)	

## Daylight Measurements: Casement Push Out - Full and Narrow Frame

Ultimate Casement Push Out Daylight Measurements		Width					
		CN	28	30	32	36	40
		DLO	1-10 3/16 (564)	2-0 3/16 (614)	2-2 3/16 (665)	2-6 3/16 (767)	2-10 3/16 (868)
CN	DLO Height	Square Feet (Square Meters)					
Standard Bottom Rail							
16	0-9 5/16 (237)	1.43 (0.13)	1.56 (0.15)	1.69 (0.16)	1.95 (0.18)	2.21 (0.21)	
18	0-11 5/16 (287)	1.74 (0.16)	1.90 (0.18)	2.06 (0.19)	2.37 (0.22)	2.69 (0.25)	
20	1-1 5/16 (338)	2.05 (0.19)	2.24 (0.21)	2.42 (0.22)	2.79 (0.26)	3.16 (0.29)	
24	1-5 5/16 (440)	2.67 (0.25)	2.91 (0.27)	3.15 (0.29)	3.63 (0.34)	4.11 (0.38)	
28	1-9 5/16 (541)	3.28 (0.31)	3.58 (0.33)	3.88 (0.36)	4.47 (0.42)	5.06 (0.47)	
32	2-1 5/16 (643)	3.90 (0.36)	4.25 (0.39)	4.60 (0.43)	5.31 (0.49)	6.01 (0.56)	
36	2-5 5/16 (745)	4.52 (0.42)	4.92 (0.46)	5.33 (0.50)	6.14 (0.57)	6.96 (0.65)	
40	2-9 5/16 (846)	5.13 (0.48)	5.60 (0.52)	6.06 (0.56)	6.98 (0.65)	7.91 (0.73)	
44	3-1 5/16 (948)	5.75 (0.53)	6.27 (0.58)	6.79 (0.63)	7.82 (0.73)	8.86 (0.82)	
48	3-5 5/16 (1049)	6.37 (0.59)	6.94 (0.64)	7.51 (0.70)	8.66 (0.80)	9.81 (0.91)	
54	3-11 5/16 (1202)	7.29 (0.68)	7.95 (0.74)	8.60 (0.80)	9.92 (0.92)	11.23 (1.04)	
56	4-1 5/16 (1253)	7.60 (0.71)	8.28 (0.77)	8.97 (0.83)	10.34 (0.96)	11.71 (1.09)	
60	4-5 5/16 (1354)	8.21 (0.76)	8.95 (0.83)	9.70 (0.90)	11.18 (1.04)	12.66 (1.18)	
64	4-9 5/16 (1456)	8.83 (0.82)	9.63 (0.89)	10.42 (0.97)	12.01 (1.12)	13.61 (1.26)	
72	5-5 5/16 (1659)	10.06 (0.93)	10.97 (1.02)	11.88 (1.10)	13.69 (1.27)	15.51 (1.44)	
78	5-11 5/16 (1811)	10.99 (1.02)	11.98 (1.11)	12.97 (1.20)	14.95 (1.39)	16.93 (1.57)	
84	6-5 5/16 (1964)	11.91 (1.11)	12.99 (1.21)	14.06 (1.31)	16.21 (1.51)	18.35 (1.71)	
92	7-1 5/16 (2167)	13.14 (1.22)	14.33 (1.33)	15.51 (1.44)	17.88 (1.66)	20.25 (1.88)	
96	7-5 5/16 (2269)	13.76 (1.28)	15.00 (1.39)	16.24 (1.51)	18.72 (1.74)	N/A	
Tall Bottom Rail							
16	0-8 59/64 (227)	1.20 (0.11)	1.31 (0.12)	1.42 (0.13)	1.64 (0.15)	1.85 (0.17)	
18	0-10 59/64 (277)	1.51 (0.14)	1.65 (0.15)	1.78 (0.17)	2.06 (0.19)	2.33 (0.22)	
20	1-0 59/64 (328)	1.82 (0.17)	1.98 (0.18)	2.15 (0.20)	2.48 (0.23)	2.80 (0.26)	
24	1-4 59/64 (430)	2.44 (0.23)	2.66 (0.25)	2.88 (0.27)	3.31 (0.31)	3.75 (0.35)	
28	1-8 59/64 (531)	3.05 (0.28)	3.33 (0.31)	3.60 (0.33)	4.15 (0.39)	4.70 (0.44)	
32	2-0 59/64 (633)	3.67 (0.34)	4.00 (0.37)	4.33 (0.40)	4.99 (0.46)	5.65 (0.53)	
36	2-4 59/64 (735)	4.29 (0.40)	4.67 (0.43)	5.06 (0.47)	5.83 (0.54)	6.60 (0.61)	
40	2-8 59/64 (836)	4.90 (0.46)	5.34 (0.50)	5.79 (0.54)	6.67 (0.62)	7.55 (0.70)	
44	3-0 59/64 (938)	5.52 (0.51)	6.02 (0.56)	6.51 (0.61)	7.51 (0.70)	8.50 (0.79)	
48	3-4 59/64 (1039)	6.13 (0.57)	6.69 (0.62)	7.24 (0.67)	8.35 (0.78)	9.45 (0.88)	
54	3-10 59/64 (1192)	7.06 (0.66)	7.69 (0.71)	8.33 (0.77)	9.60 (0.89)	10.88 (1.01)	
56	4-0 59/64 (1243)	7.37 (0.68)	8.03 (0.75)	8.69 (0.81)	10.02 (0.93)	11.35 (1.05)	
60	4-4 59/64 (1344)	7.98 (0.74)	8.70 (0.81)	9.42 (0.88)	10.86 (1.01)	12.30 (1.14)	
64	4-8 59/64 (1446)	8.60 (0.80)	9.37 (0.87)	10.15 (0.94)	11.70 (1.09)	13.25 (1.23)	
72	5-4 59/64 (1649)	9.83 (0.91)	10.72 (1.00)	11.60 (1.08)	13.38 (1.24)	15.15 (1.41)	
78	5-10 59/64 (1801)	10.76 (1.00)	11.73 (1.09)	12.70 (1.18)	14.63 (1.36)	16.57 (1.54)	
84	6-4 59/64 (1954)	11.68 (1.09)	12.73 (1.18)	13.79 (1.28)	15.89 (1.48)	18.00 (1.67)	
92	7-0 59/64 (2157)	12.91 (1.20)	14.08 (1.31)	15.24 (1.42)	17.57 (1.63)	19.90 (1.85)	
96	7-4 59/64 (2259)	13.53 (1.26)	14.75 (1.37)	15.97 (1.48)	18.41 (1.71)	N/A	





**Daylight Measurements: Awning Push Out - Full and Narrow Frame**

Ultimate Awning Push Out Daylight Measurements		Width					
		CN	16	18	20	24	26
		DLO	0-10 3/16 (259)	1-0 3/16 (310)	1-2 3/16 (360)	1-6 3/16 (462)	1-8 3/16 (513)
CN	DLO Height		Square Feet (Square Meters) Standard Bottom Rail				
14	0-7 21/64 (186)		0.52 (0.05)	0.62 (0.06)	0.72 (0.07)	0.93 (0.09)	1.03 (0.10)
16	0-9 21/64 (237)		0.66 (0.06)	0.79 (0.07)	0.92 (0.09)	1.18 (0.11)	1.31 (0.12)
18	0-11 21/64 (288)		0.80 (0.07)	0.96 (0.09)	1.12 (0.10)	1.43 (0.13)	1.59 (0.15)
20	1-1 21/64 (339)		0.94 (0.09)	1.13 (0.10)	1.31 (0.12)	1.68 (0.16)	1.87 (0.17)
24	1-5 21/64 (440)		1.23 (0.11)	1.47 (0.14)	1.71 (0.16)	2.19 (0.20)	2.43 (0.23)
28	1-9 21/64 (542)		1.51 (0.14)	1.81 (0.17)	2.10 (0.20)	2.69 (0.25)	2.99 (0.28)
32	2-1 21/64 (643)		1.79 (0.17)	2.14 (0.20)	2.50 (0.23)	3.20 (0.30)	3.55 (0.33)
36	2-5 21/64 (745)		2.08 (0.19)	2.48 (0.23)	2.89 (0.27)	3.70 (0.34)	4.11 (0.38)
40	2-9 21/64 (847)		2.36 (0.22)	2.82 (0.26)	3.28 (0.31)	4.21 (0.39)	4.67 (0.43)
44	3-1 21/64 (948)		2.64 (0.25)	3.16 (0.29)	3.68 (0.34)	4.72 (0.44)	5.23 (0.49)
48	3-5 21/64 (1050)		2.92 (0.27)	3.50 (0.32)	4.07 (0.38)	5.22 (0.48)	5.79 (0.54)
Tall Bottom Rail							
14	0-5 53/64 (148)		0.41 (0.04)	0.49 (0.05)	0.57 (0.05)	0.74 (0.07)	0.82 (0.08)
16	0-7 53/64 (199)		0.55 (0.05)	0.66 (0.06)	0.77 (0.07)	0.99 (0.09)	1.10 (0.10)
18	0-9 53/64 (250)		0.70 (0.06)	0.83 (0.08)	0.97 (0.09)	1.24 (0.12)	1.38 (0.13)
20	0-11 53/64 (301)		0.84 (0.08)	1.0 (0.09)	1.17 (0.11)	1.49 (0.14)	1.66 (0.15)
24	1-3 53/64 (402)		1.12 (0.10)	1.34 (0.12)	1.56 (0.14)	2. 0 (0.19)	2.22 (0.21)
28	1-7 53/64 (504)		1.40 (0.13)	1.68 (0.16)	1.95 (0.18)	2.50 (0.23)	2.78 (0.26)
32	1-11 53/64 (605)		1.69 (0.16)	2.02 (0.19)	2.35 (0.22)	3.01 (0.28)	3.34 (0.31)
36	2-3 53/64 (707)		1.97 (0.18)	2.36 (0.22)	2.74 (0.25)	3.52 (0.33)	3.90 (0.36)
40	2-7 53/64 (809)		2.25 (0.21)	2.69 (0.25)	3.14 (0.29)	4.02 (0.37)	4.46 (0.41)
44	2-11 53/64 (910)		2.53 (0.24)	3.03 (0.28)	3.53 (0.33)	4.53 (0.42)	5.02 (0.47)
48	3-3 53/64 (1012)		2.82 (0.26)	3.37 (0.31)	3.92 (0.36)	5.03 (0.47)	5.58 (0.52)

**Daylight Measurements: Awning Push Out - Full and Narrow Frame**

Ultimate Awning Push Out Daylight Measurements		Width					
		CN	28	30	32	36	40
		DLO	1-10 3/16 (564)	2-0 3/16 (614)	2-2 3/16 (665)	2-6 3/16 (767)	2-10 3/16 (868)
CN	DLO Height	Square Feet (Square Meters) Standard Bottom Rail					
14	0-7 21/64 (186)	1.13 (0.10)	1.23 (0.11)	1.33 (0.12)	1.54 (0.14)	1.74 (0.16)	
16	0-9 21/64 (237)	1.44 (0.13)	1.57 (0.15)	1.70 (0.16)	1.96 (0.18)	2.22 (0.21)	
18	0-11 21/64 (288)	1.75 (0.16)	1.90 (0.18)	2.06 (0.19)	2.38 (0.22)	2.69 (0.25)	
20	1-1 21/64 (339)	2.05 (0.19)	2.24 (0.21)	2.42 (0.23)	2.80 (0.26)	3.17 (0.29)	
24	1-5 21/64 (440)	2.67 (0.25)	2.91 (0.27)	3.15 (0.29)	3.63 (0.34)	4.12 (0.38)	
28	1-9 21/64 (542)	3.29 (0.31)	3.58 (0.33)	3.88 (0.36)	4.47 (0.42)	5.06 (0.47)	
32	2-1 21/64 (643)	3.90 (0.36)	4.26 (0.40)	4.61 (0.43)	5.31 (0.49)	6.01 (0.56)	
36	2-5 21/64 (745)	4.52 (0.42)	4.93 (0.46)	5.33 (0.50)	6.15 (0.57)	6.96 (0.65)	
40	2-9 21/64 (847)	5.14 (0.48)	5.60 (0.52)	6.06 (0.56)	6.99 (0.65)	7.91 (0.74)	
44	3-1 21/64 (948)	5.75 (0.53)	6.27 (0.58)	6.79 (0.63)	7.83 (0.73)	8.86 (0.82)	
48	3-5 21/64 (1050)	6.37 (0.59)	6.94 (0.64)	7.52 (0.70)	8.66 (0.80)	9.81 (0.91)	
Tall Bottom Rail							
14	0-5 53/64 (148)	0.90 (0.08)	0.98 (0.09)	1.06 (0.10)	1.22 (0.11)	1.38 (0.13)	
16	0-7 53/64 (199)	1.21 (0.11)	1.32 (0.12)	1.42 (0.13)	1.64 (0.15)	1.86 (0.17)	
18	0-9 53/64 (250)	1.52 (0.14)	1.65 (0.15)	1.79 (0.17)	2.06 (0.19)	2.33 (0.22)	
20	0-11 53/64 (301)	1.82 (0.17)	1.99 (0.18)	2.15 (0.20)	2.48 (0.23)	2.81 (0.26)	
24	1-3 53/64 (402)	2.44 (0.23)	2.66 (0.25)	2.88 (0.27)	3.32 (0.31)	3.76 (0.35)	
28	1-7 53/64 (504)	3.06 (0.28)	3.33 (0.31)	3.61 (0.34)	4.16 (0.39)	4.71 (0.44)	
32	1-11 53/64 (605)	3.67 (0.34)	4.0 (0.37)	4.33 (0.40)	5.0 (0.46)	5.66 (0.53)	
36	2-3 53/64 (707)	4.29 (0.40)	4.67 (0.43)	5.06 (0.47)	5.83 (0.54)	6.61 (0.61)	
40	2-7 53/64 (809)	4.90 (0.46)	5.35 (0.50)	5.79 (0.54)	6.67 (0.62)	7.56 (0.70)	
44	2-11 53/64 (910)	5.52 (0.51)	6.02 (0.56)	6.52 (0.61)	7.51 (0.70)	8.51 (0.79)	
48	3-3 53/64 (1012)	6.14 (0.57)	6.69 (0.62)	7.24 (0.67)	8.35 (0.78)	9.46 (0.88)	

**Daylight Measurements: Awning Push Out - Full and Narrow Frame**

Ultimate Awning Push Out Daylight Measurements		Width					
		CN	48	56	60	64	72
		DLO	3-6 3/16 (1072)	4-2 3/16 (1275)	4-6 3/16 (1376)	4-10 3/16 (1478)	5-6 3/16 (1681)
CN	DLO Height		Square Feet (Square Meters) Standard Bottom Rail				
14	0-7 21/64 (186)		2.15 (0.20)	2.56 (0.24)	2.76 (0.26)	2.96 (0.28)	3.37 (0.31)
16	0-9 21/64 (237)		2.73 (0.25)	3.25 (0.30)	3.51 (0.33)	3.77 (0.35)	4.29 (0.40)
18	0-11 21/64 (288)		3.32 (0.31)	3.95 (0.37)	4.26 (0.40)	4.58 (0.43)	5.21 (0.48)
20	1-1 21/64 (339)		3.91 (0.36)	4.65 (0.43)	5.02 (0.47)	5.39 (0.50)	6.13 (0.57)
24	1-5 21/64 (440)		5.08 (0.47)	6.04 (0.56)	6.52 (0.61)	7. 0 (0.65)	7.97 (0.74)
28	1-9 21/64 (542)		6.25 (0.58)	7.43 (0.69)	8.03 (0.75)	8.62 (0.80)	9.81 (0.91)
32	2-1 21/64 (643)		7.42 (0.69)	8.83 (0.82)	9.53 (0.89)	10.24 (0.95)	11.64 (1.08)
36	2-5 21/64 (745)		8.59 (0.80)	10.22 (0.95)	11.04 (1.03)	11.85 (1.10)	13.48 (1.25)
40	2-9 21/64 (847)		9.77 (0.91)	11.62 (1.08)	12.54 (1.17)	13.47 (1.25)	15.32 (1.42)
44	3-1 21/64 (948)		10.94 (1.02)	13.01 (1.21)	14.05 (1.31)	15.09 (1.40)	17.16 (1.59)
48	3-5 21/64 (1050)		12.11 (1.12)	14.41 (1.34)	15.55 (1.44)	16.70 (1.55)	19. 0 (1.76)
Tall Bottom Rail							
14	0-5 53/64 (148)		1.71 (0.16)	2.03 (0.19)	2.19 (0.20)	2.36 (0.22)	2.68 (0.25)
16	0-7 53/64 (199)		2.29 (0.21)	2.73 (0.25)	2.95 (0.27)	3.17 (0.29)	3.60 (0.33)
18	0-9 53/64 (250)		2.88 (0.27)	3.43 (0.32)	3.70 (0.34)	3.97 (0.37)	4.52 (0.42)
20	0-11 53/64 (301)		3.47 (0.32)	4.12 (0.38)	4.45 (0.41)	4.78 (0.44)	5.44 (0.51)
24	1-3 53/64 (402)		4.64 (0.43)	5.52 (0.51)	5.96 (0.55)	6.40 (0.59)	7.28 (0.68)
28	1-7 53/64 (504)		5.81 (0.54)	6.91 (0.64)	7.46 (0.69)	8.01 (0.74)	9.12 (0.85)
32	1-11 53/64 (605)		6.98 (0.65)	8.31 (0.77)	8.97 (0.83)	9.63 (0.89)	10.95 (1.02)
36	2-3 53/64 (707)		8.15 (0.76)	9.70 (0.90)	10.47 (0.97)	11.25 (1.04)	12.79 (1.19)
40	2-7 53/64 (809)		9.33 (0.87)	11.09 (1.03)	11.98 (1.11)	12.86 (1.20)	14.63 (1.36)
44	2-11 53/64 (910)		10.50 (0.98)	12.49 (1.16)	13.48 (1.25)	14.48 (1.35)	16.47 (1.53)
48	3-3 53/64 (1012)		11.67 (1.08)	13.88 (1.29)	14.99 (1.39)	16.10 (1.50)	18.31 (1.70)

## Daylight Measurements: Picture - Full and Narrow Frame

CN	DLO Height	Square Feet (Square Meters)					
		Standard Bottom Rail					
12	0-5 5/16 (135)	1.26 (0.12)	1.56 (0.14)	1.85 (0.17)	2.00 (0.19)	2.15 (0.20)	
14	0-7 5/16 (186)	1.74 (0.16)	2.14 (0.20)	2.55 (0.24)	2.75 (0.26)	2.95 (0.27)	
16	0-9 5/16 (237)	2.21 (0.21)	2.73 (0.25)	3.25 (0.30)	3.50 (0.33)	3.76 (0.35)	
18	0-11 5/16 (287)	2.69 (0.25)	3.31 (0.31)	3.94 (0.37)	4.26 (0.40)	4.57 (0.42)	
20	1-1 5/16 (338)	3.16 (0.29)	3.90 (0.36)	4.64 (0.43)	5.01 (0.47)	5.38 (0.50)	
24	1-5 5/16 (440)	4.11 (0.38)	5.07 (0.47)	6.03 (0.56)	6.51 (0.61)	7.00 (0.65)	
28	1-9 5/16 (541)	5.06 (0.47)	6.24 (0.58)	7.43 (0.69)	8.02 (0.75)	8.61 (0.80)	
32	2-1 5/16 (643)	6.01 (0.56)	7.42 (0.69)	8.82 (0.82)	9.53 (0.88)	10.23 (0.95)	
36	2-5 5/16 (745)	6.96 (0.65)	8.59 (0.80)	10.22 (0.95)	11.03 (1.02)	11.84 (1.10)	
40	2-9 5/16 (846)	7.91 (0.73)	9.76 (0.91)	11.61 (1.08)	12.54 (1.16)	13.46 (1.25)	
44	3-1 5/16 (948)	8.86 (0.82)	10.93 (1.02)	13.00 (1.21)	14.04 (1.30)	15.08 (1.40)	
48	3-5 5/16 (1049)	9.81 (0.91)	12.10 (1.12)	14.40 (1.34)	15.55 (1.44)	16.69 (1.55)	
54	3-11 5/16 (1202)	11.23 (1.04)	13.86 (1.29)	16.49 (1.53)	17.80 (1.65)	19.12 (1.78)	
56	4-1 5/16 (1253)	11.71 (1.09)	14.45 (1.34)	17.19 (1.60)	18.56 (1.72)	19.93 (1.85)	
60	4-5 5/16 (1354)	12.66 (1.18)	15.62 (1.45)	18.58 (1.73)	20.06 (1.86)	21.54 (2.00)	
64	4-9 5/16 (1456)	13.61 (1.26)	16.79 (1.56)	19.97 (1.86)	21.57 (2.00)	23.16 (2.15)	
72	5-5 5/16 (1659)	15.51 (1.44)	19.13 (1.78)	22.76 (2.11)	24.58 (2.28)	26.39 (2.45)	
78	5-11 5/16 (1811)	16.93 (1.57)	20.89 (1.94)	24.85 (2.31)	26.83 (2.49)	28.82 (2.68)	
84	6-5 5/16 (1964)	18.35 (1.71)	22.65 (2.10)	26.95 (2.50)	29.09 (2.70)	31.24 (2.90)	
92	7-1 5/16 (2167)	20.25 (1.88)	24.99 (2.32)	29.73 (2.76)	32.10 (2.98)	34.47 (3.20)	
96	7-5 5/16 (2269)	21.20 (1.97)	26.17 (2.43)	31.13 (2.89)	33.61 (3.12)	36.09 (3.35)	
Tall Bottom Rail							
12	0-3 13/16 (97)	0.91 (0.08)	1.12 (0.10)	1.33 (0.12)	1.43 (0.13)	1.54 (0.14)	
14	0-5 13/16 (148)	1.38 (0.13)	1.70 (0.16)	2.03 (0.19)	2.19 (0.20)	2.35 (0.22)	
16	0-7 13/16 (198)	1.85 (0.17)	2.29 (0.21)	2.72 (0.25)	2.94 (0.27)	3.16 (0.29)	
18	0-9 13/16 (249)	2.33 (0.22)	2.87 (0.27)	3.42 (0.32)	3.69 (0.34)	3.96 (0.37)	
20	0-11 13/16 (300)	2.8 (0.26)	3.46 (0.32)	4.12 (0.38)	4.45 (0.41)	4.77 (0.44)	
24	1-3 13/16 (402)	3.75 (0.35)	4.63 (0.43)	5.51 (0.51)	5.95 (0.55)	6.39 (0.59)	
28	1-7 13/16 (503)	4.7 (0.44)	5.80 (0.54)	6.91 (0.64)	7.46 (0.69)	8.01 (0.74)	
32	1-11 13/16 (605)	5.65 (0.53)	6.98 (0.65)	8.30 (0.77)	8.96 (0.83)	9.62 (0.89)	
36	2-3 13/16 (706)	6.6 (0.61)	8.15 (0.76)	9.69 (0.90)	10.47 (0.97)	11.24 (1.04)	
40	2-7 13/16 (808)	7.55 (0.70)	9.32 (0.87)	11.09 (1.03)	11.97 (1.11)	12.85 (1.19)	
44	2-11 13/16 (910)	8.5 (0.79)	10.49 (0.97)	12.48 (1.16)	13.48 (1.25)	14.47 (1.34)	
48	3-3 13/16 (1011)	9.45 (0.88)	11.66 (1.08)	13.88 (1.29)	14.98 (1.39)	16.09 (1.49)	
54	3-9 13/16 (1164)	10.88 (1.01)	13.42 (1.25)	15.97 (1.48)	17.24 (1.60)	18.51 (1.72)	
56	3-11 13/16 (1214)	11.35 (1.05)	14.01 (1.30)	16.66 (1.55)	17.99 (1.67)	19.32 (1.79)	
60	4-3 13/16 (1316)	12.3 (1.14)	15.18 (1.41)	18.06 (1.68)	19.50 (1.81)	20.94 (1.95)	
64	4-7 13/16 (1418)	13.25 (1.23)	16.35 (1.52)	19.45 (1.81)	21.00 (1.95)	22.55 (2.10)	
72	5-3 13/16 (1621)	15.15 (1.41)	18.69 (1.74)	22.24 (2.07)	24.01 (2.23)	25.79 (2.40)	
78	5-9 13/16 (1773)	16.57 (1.54)	20.45 (1.90)	24.33 (2.26)	26.27 (2.44)	28.21 (2.62)	
84	6-3 13/16 (1926)	18. (1.67)	22.21 (2.06)	26.42 (2.45)	28.53 (2.65)	30.63 (2.85)	
92	6-11 13/16 (2129)	19.9 (1.85)	24.55 (2.28)	29.21 (2.71)	31.54 (2.93)	33.87 (3.15)	
96	7-3 13/16 (2230)	20.85 (1.94)	25.73 (2.39)	30.60 (2.84)	33.04 (3.07)	35.48 (3.30)	

## Daylight Measurements: Picture - Full and Narrow Frame

CN	DLO Height	Square Feet (Square Meters)					
		Standard Bottom Rail					
12	0-5 5/16 (135)	2.44 (0.23)	2.74 (0.25)	3.03 (0.28)	3.33 (0.31)		
14	0-7 5/16 (186)	3.36 (0.31)	3.77 (0.35)	4.17 (0.39)	4.58 (0.43)		
16	0-9 5/16 (237)	4.28 (0.40)	4.80 (0.45)	5.32 (0.49)	5.83 (0.54)		
18	0-11 5/16 (287)	5.20 (0.48)	5.83 (0.54)	6.46 (0.60)	7.09 (0.66)		
20	1-1 5/16 (338)	6.12 (0.57)	6.86 (0.64)	7.60 (0.71)	8.34 (0.77)		
24	1-5 5/16 (440)	7.96 (0.74)	8.92 (0.83)	9.88 (0.92)	10.84 (1.01)		
28	1-9 5/16 (541)	9.80 (0.91)	10.98 (1.02)	12.16 (1.13)	13.35 (1.24)		
32	2-1 5/16 (643)	11.63 (1.08)	13.04 (1.21)	14.45 (1.34)	15.85 (1.47)		
36	2-5 5/16 (745)	13.47 (1.25)	15.10 (1.40)	16.73 (1.55)	18.36 (1.71)		
40	2-9 5/16 (846)	15.31 (1.42)	17.16 (1.59)	19.01 (1.77)	20.86 (1.94)		
44	3-1 5/16 (948)	17.15 (1.59)	19.22 (1.79)	21.30 (1.98)	23.37 (2.17)		
48	3-5 5/16 (1049)	18.99 (1.76)	21.28 (1.98)	23.58 (2.19)	25.87 (2.40)		
54	3-11 5/16 (1202)	21.75 (2.02)	24.37 (2.26)	27.00 (2.51)	29.63 (2.75)		
56	4-1 5/16 (1253)	22.67 (2.11)	25.41 (2.36)	28.14 (2.61)	30.88 (2.87)		
60	4-5 5/16 (1354)	24.50 (2.28)	27.47 (2.55)	30.43 (2.83)	33.39 (3.10)		
64	4-9 5/16 (1456)	26.34 (2.45)	29.53 (2.74)	32.71 (3.04)	35.89 (3.33)		
72	5-5 5/16 (1659)	30.02 (2.79)	33.65 (3.13)	37.28 (3.46)	40.91 (3.80)		
78	5-11 5/16 (1811)	32.78 (3.05)	36.74 (3.41)	40.70 (3.78)	44.66 (4.15)		
84	6-5 5/16 (1964)	35.54 (3.30)	39.83 (3.70)	44.13 (4.10)	48.42 (4.50)		
92	7-1 5/16 (2167)	39.21 (3.64)	43.95 (4.08)	48.69 (4.52)	N/A		
96	7-5 5/16 (2269)	41.05 (3.81)	46.01 (4.27)	50.97 (4.74)	N/A		
Tall Bottom Rail							
12	0-3 13/16 (97)	1.75 (0.16)	1.96 (0.18)	2.18 (0.20)	2.39 (0.22)		
14	0-5 13/16 (148)	2.67 (0.25)	2.99 (0.28)	3.32 (0.31)	3.64 (0.34)		
16	0-7 13/16 (198)	3.59 (0.33)	4.02 (0.37)	4.46 (0.41)	4.89 (0.45)		
18	0-9 13/16 (249)	4.51 (0.42)	5.06 (0.47)	5.60 (0.52)	6.15 (0.57)		
20	0-11 13/16 (300)	5.43 (0.50)	6.09 (0.57)	6.74 (0.63)	7.40 (0.69)		
24	1-3 13/16 (402)	7.27 (0.68)	8.15 (0.76)	9.02 (0.84)	9.90 (0.92)		
28	1-7 13/16 (503)	9.11 (0.85)	10.21 (0.95)	11.31 (1.05)	12.41 (1.15)		
32	1-11 13/16 (605)	10.94 (1.02)	12.27 (1.14)	13.59 (1.26)	14.91 (1.39)		
36	2-3 13/16 (706)	12.78 (1.19)	14.33 (1.33)	15.87 (1.47)	17.42 (1.62)		
40	2-7 13/16 (808)	14.62 (1.36)	16.39 (1.52)	18.16 (1.69)	19.92 (1.85)		
44	2-11 13/16 (910)	16.46 (1.53)	18.45 (1.71)	20.44 (1.90)	22.43 (2.08)		
48	3-3 13/16 (1011)	18.30 (1.70)	20.51 (1.91)	22.72 (2.11)	24.93 (2.32)		
54	3-9 13/16 (1164)	21.06 (1.96)	23.60 (2.19)	26.15 (2.43)	28.69 (2.67)		
56	3-11 13/16 (1214)	21.98 (2.04)	24.63 (2.29)	27.29 (2.54)	29.94 (2.78)		
60	4-3 13/16 (1316)	23.81 (2.21)	26.69 (2.48)	29.57 (2.75)	32.45 (3.01)		
64	4-7 13/16 (1418)	25.65 (2.38)	28.75 (2.67)	31.85 (2.96)	34.96 (3.25)		
72	5-3 13/16 (1621)	29.33 (2.72)	32.88 (3.05)	36.42 (3.38)	39.97 (3.71)		
78	5-9 13/16 (1773)	32.09 (2.98)	35.97 (3.34)	39.84 (3.70)	43.72 (4.06)		
84	6-3 13/16 (1926)	34.85 (3.24)	39.06 (3.63)	43.27 (4.02)	47.48 (4.41)		
92	6-11 13/16 (2129)	38.52 (3.58)	43.18 (4.01)	47.84 (4.44)	N/A		
96	7-3 13/16 (2230)	40.36 (3.75)	45.24 (4.20)	50.12 (4.66)	N/A		

**Minimum and Maximum Guidelines: Full Frame**

Minimum and Maximum Frame Size								
Unit Type			Min Width		Min Height		Max Width	
			in	mm	in	mm	in	mm
UCAPO	Std Btm Rail	Insulating Glass 3/4" (19) or 1" (25)	16	(406)	15	(381)	36	(914)
							40	(1016)
UCAPO	Tall Btm Rail	Insulating Glass 3/4" (19) or 1" (25)	16	(406)	17 3/8	(441)	36	(914)
							40	(1016)
UAWNPO	Std and Tall BTM Rail	Insulating Glass 3/4" (19) or 1" (25)	16	(406)	11 7/8	(302)	72	(1829)
UCAPOP	Std and Tall BTM Rail	Insulating Glass 3/4" (19)	12	(305)	11 1/8	(283)	64	(1626)
							96 1/8	(2442)
UCAPOP	Std and Tall BTM Rail	Insulating Glass 1" (25)	12	(305)	11 1/8	(283)	80	(2032)
							120	(3048)
UCAPOP	Std and Tall BTM Rail	Insulating Glass 1" (25)	12	(305)	11 1/8	(283)	88	(2235)
							96	(2438)
							88	(2235)

**Minimum and Maximum Guidelines: Narrow Frame**

Minimum and Maximum Frame Size								
Unit Type			Min Width		Min Height		Max Width	
			in	mm	in	mm	in	mm
UCANFPO	Std Btm Rail	Insulating Glass 3/4" (19)	16	(406)	15	(381)	36	(914)
							40	(1016)
UCANFPO	Tall Btm Rail	Insulating Glass 3/4" (19)	16	(406)	17 3/8	(441)	36	(914)
							40	(1016)
UAWNNFPO	Std and Tall Btm Rail	Insulating Glass 3/4" (19)	16	(406)	11 7/8	(302)	72	(1829)
UCANFPOP*	Std and Tall Btm Rail	Insulating Glass 3/4" (19)	12	(305)	11 1/8	(283)	64	(1626)
							104	(2642)
							64	(1626)

**Minimum and Maximum Guidelines: IZ3**

Unit Type			Min Width		Min Height		Max Width		Max Height	
			in	mm	in	mm	in	mm	in	mm
UCAPOIZ3	Std Btm Rail	Insulating Glass 3/4" (19)	16	(406)	15	(381)	36	(914)	83 1/8	(2111)
	Tall Btm Rail	Insulating Glass 3/4" (19)	16	(406)	17 3/8	(441)	36	(914)	83 1/8	(2111)
UAWNPOIZ3	Std and Tall BTM Rail	Insulating Glass 3/4" (19)	16	(406)	11 7/8	(302)	72	(1829)	35 1/8	(892)
UCAPOPIZ3	Std and Tall BTM Rail	Insulating Glass 3/4" (19)	16	(406)	11 1/8	(283)	48	(1219)	53 1/8	(1349)
							53 1/8	(1349)	48	(1219)
	Std and Tall BTM Rail	Insulating Glass 3/4" (19)	16	(406)	11 1/8	(283)	36	(914)	83 1/8	(2111)
							83 1/8	(2111)	36	(914)
	Std and Tall BTM Rail	Insulating Glass 1" (25)	16	(406)	11 1/8	(283)	72 5/8	(1845)	77 1/8	(1959)
							77 1/8	(1959)	72 5/8	(1845)
	Std and Tall BTM Rail	Insulating Glass 1" (25)	16	(406)	11 1/8	(283)	60	(1524)	104 45/64	(2659)
							104 45/64	(2659)	60	(1524)

**Certified Sizes and Ratings: Standard Product**

Product	Air Tested to psf	Water Tested to psf	Structural Tested to psf	Certification Rating	Max Overall Width		Max Overall Height	
					in	mm	in	mm
Ultimate Awning Push Out 3/4" (Full Frame and Narrow Frame)	1.57	7.5	75	LC-PG50	32	(813)	35 1/8	(892)
Ultimate Awning Push Out 3/4" (Full Frame and Narrow Frame)	1.57	7.5	45	LC-PG35	48	(1219)	47 1/8	(1197)
Ultimate Awning Push Out 3/4" (Full Frame and Narrow Frame)	1.57	7.5	75	LC-PG50	72	(1829)	35 1/8	(892)
Ultimate Awning Push Out 3/4" (Full Frame and Narrow Frame)	1.57	7.5	52.5	LC-PG35	72	(1829)	47 1/8	(1197)
Ultimate Awning Push Out 3/4" (Full Frame and Narrow Frame))	1.57	7.5	52.5	LC-PG35	40	(1016)	47 1/8	(1197)
Ultimate Casement Push Out 3/4" (Full Frame and Narrow Frame)	1.57	7.5	75	CW-PG50	36	(914)	71 1/8	(1807)
Ultimate Casement Push Out 3/4" (Full Frame and Narrow Frame)	1.57	7.5	52.5	CW-PG35	36	(914)	96 1/8	(2442)
Ultimate Casement Push Out 3/4" (Full Frame and Narrow Frame)	1.57	7.5	52.5	CW-PG35	40	(1016)	91 1/8	(2315)
Ultimate Casement Push Out Picture 3/4" (Full Frame and Narrow Frame)	1.57	7.5	75	CW-PG50	64	(1626)	96 1/8	(2442)
Ultimate Casement Push Out Picture 3/4" (Full Frame and Narrow Frame)	1.57	7.5	75	CW-PG50	64	(1626)	104	(2642)
Ultimate Casement Push Out Picture 3/4" (Full Frame and Narrow Frame)	1.57	7.5	75	CW-PG50	96 1/8	(2442)	64	(1626)
Ultimate Casement Push Out Picture 3/4" (Full Frame and Narrow Frame)	1.57	7.5	75	CW-PG50	104	(2642)	64	(1626)
Ultimate Casement Push Out Picture 3/4" (Full Frame)	1.57	7.5	75	CW-PG50	72	(1829)	71 1/8	(1807)
Ultimate Casement Push Out Picture 1" (Full Frame)	1.57	7.5	60	CW-PG40	80	(2032)	120	(3048)
Ultimate Casement Push Out Picture 1" (Full Frame)	1.57	7.5	75	CW-PG50	88	(2235)	96 1/8	(2442)
Ultimate Casement Push Out Picture 1" (Full Frame)	1.57	7.5	75	CW-PG50	96 1/8	(2442)	88	(2235)
Ultimate Casement Push Out Picture 1" (Full Frame)	1.57	7.5	60	CW-PG40	120	(3048)	80	(2032)

**Certified Sizes and Ratings: IZ3 Products**

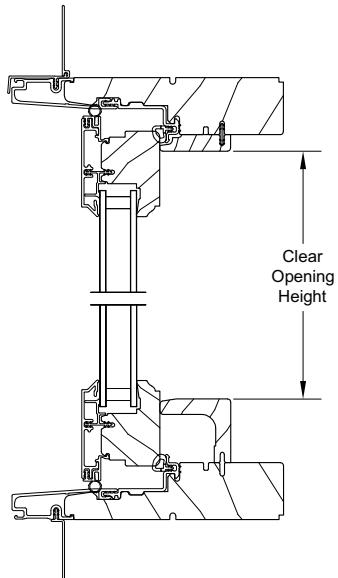
Product	Air Tested to psf	Water Tested to psf	Structural Tested to psf	Certification Rating	Max Overall Width		Max Overall Height	
					in	mm	in	mm
Ultimate Awning Push Out 3/4" IZ3 (Full Frame)	1.57	9.75	97.5	LC-PG65	72	(1829)	35 1/8	(892)
Ultimate Casement Push Out 3/4" StormPlus IZ3 (Full Frame)	1.57	9.75	97.5	LC-PG65	36	(914)	83 1/8	(2111)
Ultimate Casement Push Out Picture 1" StormPlus IZ3 (Full Frame)	1.57	9.75	97.5	CW-PG65	60	(1524)	104 45/64	(2659)
Ultimate Casement Push Out Picture 1" StormPlus IZ3 (Full Frame)	1.57	9.75	97.5	CW-PG65	72 5/8	(1845)	77 1/8	(1959)
Ultimate Casement Push Out Picture 1" StormPlus IZ3 (Full Frame)	1.57	9.75	97.5	CW-PG65	77 1/8	(1959)	72 5/8	(1845)
Ultimate Casement Push Out Picture 1" StormPlus IZ3 (Full Frame)	1.57	9.75	97.5	CW-PG65	104 45/64	(2659)	60	(1524)
Ultimate Casement Push Out Picture 3/4" StomPlus IZ3 (Full Frame)	1.57	9.75	97.5	CW-PG65	48	(1219)	53 1/8	(1349)
Ultimate Casement Push Out Picture 3/4" StomPlus IZ3 (Full Frame)	1.57	9.75	97.5	CW-PG65	53 1/8	(1349)	48	(1219)

**IZ3 modifications made to Ultimate Push Out Casement**
**IZ3 is Product designed to structurally withstand an 8' 2X4 at 50 ft. per second (34mph)**

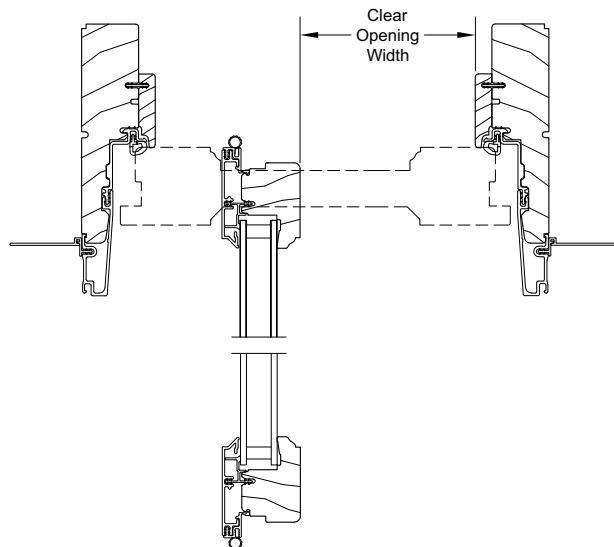
- Wind Speed: 130-140, including NC, SC, GA, TX & FL, or 120 mph to 140 mph and within one mile of the ocean, including coastal part of Eastern Long Island.
- Sash are glazed with insulating glass,
- Additional snubbers, keepers and locks applied. Up to 5 for a maximum frame height of 84" (2134).
- Structural Installation Brackets should be used to install units.
- Units may not exceed tested width and height or reverse sizes and claim certification.

**Measurement Conversions: Push Out Casement and Awning**

Unit Measurements		Width		Height	
From	To				
<b>Inside Opening for Replacement</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
OM of Frame (Existing sill <8")	Inside Opening	+ 3/8	(10)	+ 1/4	(06)
OM of Frame (Existing sill ≥8° - <14°)	Inside Opening	+ 3/8	(10)	+ 1/16	(02)
OM of Frame (Existing sill ≥14°)	Inside Opening	+ 3/8	(10)	+ 7/16	(11)
<b>Rough Opening</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
OM of Frame	Rough Opening	+ 1	(25)	+ 1/2	(13)
Masonry Opening w/BMC	Rough Opening	-2 1/8	(54)	-1 11/16	(43)
Masonry Opening w/Flat Casing	Rough Opening	-5 1/2	(140)	-3 3/8	(86)
Masonry Opening w/Flat Casing	Rough Opening	-2 1/8	(54)	-2 3/8	(60)
Masonry Opening w/Flat Casing	Rough Opening	-5 1/2	(140)	-5 3/4	(146)
Glass Size	Rough Opening	+ 5 45/64	(145)	+ 5 13/64	(132)
<b>Sash</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
OM of Frame	OM of Sash	-1 11/16	(43)	-1 11/16	(43)
Daylight Opening (Std Btm Rail)	OM of Sash	+ 4 7/64	(104)	+ 4 7/64	(104)
Daylight Opening (Tall Btm Rail)	OM of Sash	+ 4 7/64	(104)	+ 5 39/64	(142)
<b>Glass</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
Daylight Opening	Glass	+ 1 3/32	(28)	+ 1 3/32	(28)
<b>Swinging Wood Screen (Push Out)</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
OM of Frame	OM of Screen	-2 37/64	(66)	-2 19/32	(66)
Daylight Opening (Std Btm Rail)	OM of Screen	+ 3 13/64	(81)	+ 3 13/64	(81)
Daylight Opening (Tall Btm Rail)	OM of Screen	+ 3 13/64	(81)	+ 4 45/64	(120)

**Egress and Vent Opening Measurements: Push Out Casement****Egress Formula: Standard Screen****Clear Opening Width:**Frame OM Width 20<sup>2</sup> (508) and wider:Clear Opening Width: Frame OM width -6 3/16<sup>2</sup> (157)Frame OM Width less than 20<sup>2</sup> (508):Clear Opening Width: Frame OM width -8 11/16<sup>2</sup> (222)Clear Opening Height: Frame OM height -4 1/16<sup>2</sup> (103)Clear Opening Area (ft<sup>2</sup>) = (Clear Opening Width x Clear Opening Height) / 144

Head Jamb and Sill



UCAPO - Jambs

## Vent Opening Measurements: Push Out Awning

### Vent Formulas with Standard Swinging Screen for Push Out Awning Unit:

Vent Opening Width = Frame OM Width - 3 1/8" (79)

Vent Opening Height = Frame OM Height - 4 1/16" (103)

### Approximate Opening of Sash Measurement:

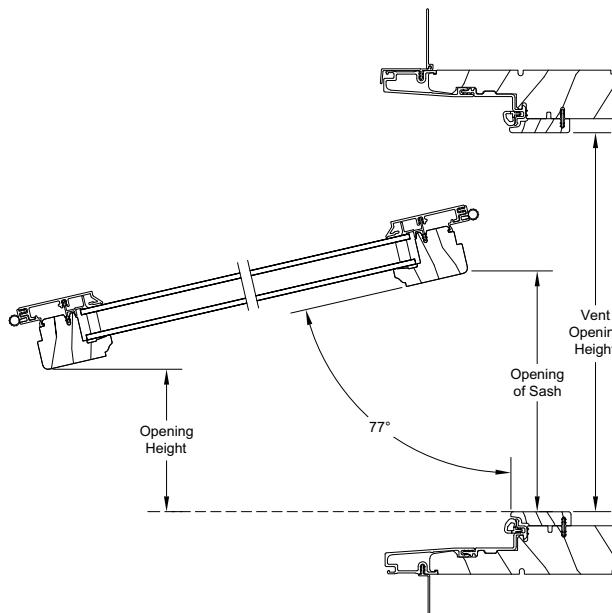
To find height:

(distance from top of sill cover to interior face top sash rail - formula is valid for stock hardware that opens 77-78 degrees)

If your frame OM is 11 7/8" (302) - 24 7/8" (632) - Opening of Sash = Frame OM Height - 9 1/4" (235)

If your frame OM is 24 7/8" (632) - 35 7/8" (911) - Opening of Sash = Frame OM Height - 13 3/4" (350)

If your frame OM is 35 7/8" (911) - 47 1/8" (1197) - Opening of sash = Frame OM Height - 19 13/16" (504)



UAWNPO - Vent Opening

**Egress and Vent Opening Measurements: Casement Narrow Frame Push Out****Egress Formulas with Standard Screen****Clear Opening Width:**

Frame OSM 20" (508) and greater

$$\text{Clear Opening Width} = \text{Frame OSM Width} - 6 \frac{3}{16}'' (157)$$

Frame OSM Width less than 20" (508)

$$\text{Clear Opening Width} = \text{Frame OSM Width} - 8 \frac{11}{16}'' (221)$$

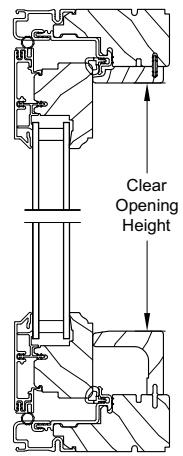
$$\text{Clear Opening Height} = \text{Frame OSM Height} - 4 \frac{1}{16}'' (103)$$

$$\text{Clear Opening Area (ft}^2\text{)} = (\text{Clear Opening Width} \times \text{Clear Opening Height}) / 144$$

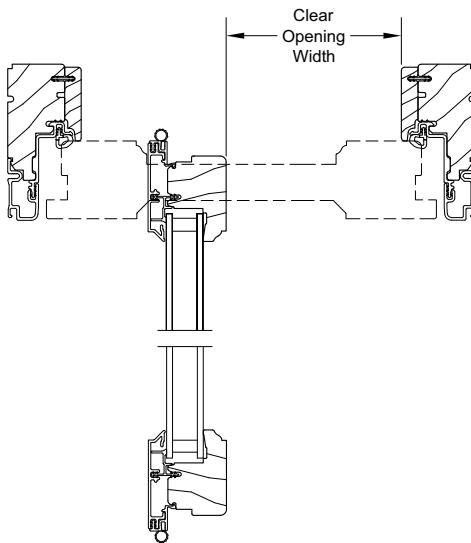
**Vent Opening Standard Screen**

$$\text{Vent Opening Width} = \text{Frame OSM Width} - 4 \frac{31}{32}'' (126)$$

$$\text{Vent Opening Height} = \text{Frame OSM Height} - 5 \frac{1}{8}'' (130)$$



Head Jamb and Sill

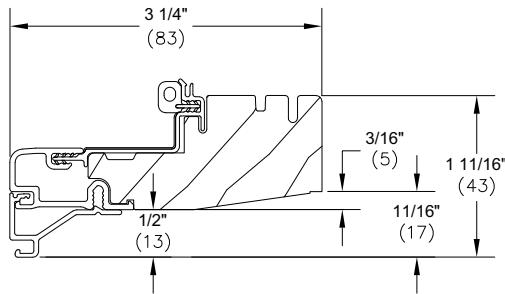


UCANFPO - Jambs

**Field Measurement for Narrow Frame Units**

Operator, Awning, Stationary, Picture Conversion from Field Measurement to Frame OSM		
Width		
Condition	Formula	
If blind stop width is 1/2" (13) or less	Frame OM Width - inside opening width - 0.375 (10)	
Height		
Condition	Type of Sill Bevel	Formula
If old sill angle is less than 8°	Flat-bottom sill	Frame OM Height = inside opening height - 0.250 (6)
If old sill angle is greater than 8° and less than 14°	8-degree bottom sill	Frame OM Height = inside opening height - 0.0563 (1) (frame IM height has a .250 clearance)
If old is angle is 14° or greater	14-degree bottom sill	Frame OM Height = inside height + .431 (11) (frame IM Height has a .250 clearance)

Interior Frame Size to Frame Size (exterior)	
Frame Bevel	Conversions
0°	0
8°	+3/16" (5)
14°	+11/16" (17)



**Standard Unit Measurements: Casement Push Out Full and Narrow Frame**

Standard Casement Push Out Unit Measurements										
Width										
CN	Masonry Opening		Rough Opening		Frame Size		Glass Size		Daylight Opening	
	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm
16	1-4 1/2	(419)	1-5	(432)	1-4	(406)	0-11 19/64	(287)	0-10 3/16	(259)
18	1-6 1/2	(470)	1-7	(483)	1-6	(457)	1-1 19/64	(338)	1-0 3/16	(310)
20	1-8 1/2	(521)	1-9	(533)	1-8	(508)	1-3 19/64	(388)	1-2 3/16	(360)
24	2-0 1/2	(622)	2-1	(635)	2-0	(610)	1-7 19/64	(490)	1-6 3/16	(462)
26	2-2 1/2	(673)	2-3	(686)	2-2	(660)	1-9 19/64	(541)	1-8 3/16	(513)
28	2-4 1/2	(724)	2-5	(737)	2-4	(711)	1-11 19/64	(592)	1-10 3/16	(564)
30	2-6 1/2	(775)	2-7	(787)	2-6	(762)	2-1 19/64	(642)	2-0 3/16	(614)
32	2-8 1/2	(826)	2-9	(838)	2-8	(813)	2-3 19/64	(693)	2-2 3/16	(665)
36	3-0 1/2	(927)	3-1	(940)	3-0	(914)	2-7 19/64	(795)	2-6 3/16	(767)
40	3-4 1/2	(1029)	3-5	(1041)	3-4	(1016)	2-11 19/64	(896)	2-10 3/16	(868)
									3-2 5/16	(973)
									3-1 27/64	(950)

Standard Casement Push Out Unit Measurements												
Height												
CN	Masonry Opening		Rough Opening		Frame Size		Daylight Opening (Std Bottom Rail)		Glass Size (Std Bottom Rail)		Daylight Opening (Tall Bottom Rail)	
	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm
16	1-3 3/8	(391)	1-3 5/8	(397)	1-3 1/8	(384)	0-9 5/16	(237)	0-10 27/64	(265)	0-7 13/16	(198)
18	1-5 3/8	(441)	1-5 5/8	(448)	1-5 1/8	(435)	0-11 5/16	(287)	1-0 27/64	(315)	0-9 13/16	(249)
20	1-7 3/8	(492)	1-7 5/8	(498)	1-7 1/8	(486)	1-1 5/16	(338)	1-2 27/64	(366)	0-11 13/16	(300)
24	1-11 3/8	(594)	1-11 5/8	(600)	1-11 1/8	(587)	1-5 5/16	(440)	1-6 27/64	(468)	1-3 13/16	(402)
28	2-3 3/8	(695)	2-3 5/8	(702)	2-3 1/8	(689)	1-9 5/16	(541)	1-10 27/64	(569)	1-7 13/16	(503)
32	2-7 3/8	(797)	2-7 5/8	(803)	2-7 1/8	(791)	2-1 5/16	(643)	2-2 27/64	(671)	1-11 13/16	(605)
36	2-11 3/8	(899)	2-11 5/8	(905)	2-11 1/8	(892)	2-5 5/16	(745)	2-6 27/64	(773)	2-3 13/16	(706)
40	3-3 3/8	(1000)	3-3 5/8	(1006)	3-3 1/8	(994)	2-9 5/16	(846)	2-10 27/64	(874)	2-7 13/16	(808)
44	3-7 3/8	(1102)	3-7 5/8	(1108)	3-7 1/8	(1095)	3-1 5/16	(948)	3-2 27/64	(976)	2-11 13/16	(910)
48	3-11 3/8	(1203)	3-11 5/8	(1210)	3-11 1/8	(1197)	3-5 5/16	(1049)	3-6 27/64	(1077)	3-3 13/16	(1011)
54	4-5 3/8	(1356)	4-5 5/8	(1362)	4-5 1/8	(1349)	3-11 5/16	(1202)	4-0 27/64	(1230)	3-9 13/16	(1164)
56	4-7 3/8	(1407)	4-7 5/8	(1413)	4-7 1/8	(1400)	4-1 5/16	(1253)	4-2 27/64	(1281)	3-11 13/16	(1214)
60	4-11 3/8	(1508)	4-11 5/8	(1514)	4-11 1/8	(1502)	4-5 5/16	(1354)	4-6 27/64	(1382)	4-3 13/16	(1316)
64	5-3 3/8	(1610)	5-3 5/8	(1616)	5-3 1/8	(1603)	4-9 5/16	(1456)	4-10 27/64	(1484)	4-7 13/16	(1418)
72	5-11 3/8	(1813)	5-11 5/8	(1819)	5-11 1/8	(1807)	5-5 5/16	(1659)	5-6 27/64	(1687)	5-3 13/16	(1621)
78	6-5 3/8	(1965)	6-5 5/8	(1972)	6-5 1/8	(1959)	5-11 5/16	(1811)	6-0 27/64	(1839)	5-9 13/16	(1773)
84	6-11 3/8	(2118)	6-11 5/8	(2124)	6-11 1/8	(2111)	6-5 5/16	(1964)	6-6 27/64	(1992)	6-3 13/16	(1926)
92	7-7 3/8	(2321)	7-7 5/8	(2327)	7-7 1/8	(2315)	7-1 5/16	(2167)	7-2 27/64	(2195)	6-11 13/16	(2129)
96	7-11 3/8	(2423)	7-11 5/8	(2429)	7-11 1/8	(2416)	7-5 5/16	(2269)	7-6 27/64	(2297)	7-3 13/16	(2230)
									7-4 59/64	(2259)	7-9 7/16	(2373)
									7-8 35/64	(2351)		

**Standard Unit Measurements: Awning Push Out - Full and Narrow Frame**

Standard Awning Push Out Unit Measurements								
Width								
CN	Masonry Opening	Rough Opening	Frame Size	Glass Size	Daylight Opening	Sash OM	Screen OM	
	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	
16	1-7 5/8 (498)	1-5 (432)	1-4 (406)	0-11 19/64 (287)	0-10 3/16 (259)	1-2 5/16 (363)	1-1 27/64 (341)	
18	1-9 5/8 (549)	1-7 (483)	1-6 (457)	1-1 19/64 (338)	1-0 3/16 (310)	1-4 5/16 (414)	1-3 27/64 (392)	
20	1-11 5/8 (600)	1-9 (533)	1-8 (508)	1-3 19/64 (388)	1-2 3/16 (360)	1-6 5/16 (465)	1-5 27/64 (442)	
24	2-3 5/8 (702)	2-1 (635)	2-0 (610)	1-7 19/64 (490)	1-6 3/16 (462)	1-10 5/16 (567)	1-9 27/64 (544)	
26	2-5 5/8 (752)	2-3 (686)	2-2 (660)	1-9 19/64 (541)	1-8 3/16 (513)	2-0 5/16 (617)	1-11 27/64 (595)	
28	2-7 5/8 (803)	2-5 (737)	2-4 (711)	1-11 19/64 (592)	1-10 3/16 (564)	2-2 5/16 (668)	2-1 27/64 (646)	
30	2-9 5/8 (854)	2-7 (787)	2-6 (762)	2-1 19/64 (642)	2-0 3/16 (614)	2-4 5/16 (719)	2-3 27/64 (696)	
32	2-11 5/8 (905)	2-9 (838)	2-8 (813)	2-3 19/64 (693)	2-2 3/16 (665)	2-6 5/16 (770)	2-5 27/64 (747)	
36	3-3 5/8 (1006)	3-1 (940)	3-0 (914)	2-7 19/64 (795)	2-6 3/16 (767)	2-10 5/16 (871)	2-9 27/64 (849)	
40	3-7 5/8 (1108)	3-5 (1041)	3-4 (1016)	2-11 19/64 (896)	2-10 3/16 (868)	3-2 5/16 (973)	3-1 27/64 (950)	
48	4-3 5/8 (1311)	4-1 (1245)	4-0 (1219)	3-7 19/64 (1100)	3-6 3/16 (1072)	3-10 5/16 (1176)	3-9 27/64 (1154)	
56	4-11 5/8 (1514)	4-9 (1448)	4-8 (1422)	4-3 19/64 (1303)	4-2 3/16 (1275)	4-6 5/16 (1379)	4-5 27/64 (1357)	
60	5-3 5/8 (1616)	5-1 (1549)	5-0 (1524)	4-7 19/64 (1404)	4-6 3/16 (1376)	4-10 5/16 (1481)	4-9 27/64 (1458)	
64	5-7 5/8 (1718)	5-5 (1651)	5-4 (1626)	4-11 19/64 (1506)	4-10 3/16 (1478)	5-2 5/16 (1583)	5-1 27/64 (1560)	
72	6-3 5/8 (1921)	6-1 (1854)	6-0 (1829)	5-7 19/64 (1709)	5-6 3/16 (1681)	5-10 5/16 (1786)	5-9 27/64 (1763)	

Standard Awning Push Out Unit Measurements										
Height										
CN	Masonry Opening	Rough Opening	Frame Size	Daylight Opening (Std Bottom Rail)	Glass Size (Std Bottom Rail)	Daylight Opening (Tall Bottom Rail)	Glass Size (Tall Bottom Rail)	Sash OM	Screen OM	
	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	
14	1-2 15/16 (379)	1-1 5/8 (346)	1-1 1/8 (333)	0-7 21/64 (186)	0-8 27/64 (214)	0-5 53/64 (148)	0-6 59/64 (176)	0-11 7/16 (290)	0-10 35/64 (268)	
16	1-4 15/16 (430)	1-3 5/8 (397)	1-3 1/8 (384)	0-9 21/64 (237)	0-10 27/64 (265)	0-7 53/64 (199)	0-8 59/64 (227)	1-1 7/16 (341)	1-0 35/64 (319)	
18	1-6 15/16 (481)	1-5 5/8 (448)	1-5 1/8 (435)	0-11 21/64 (288)	1-0 27/64 (315)	0-9 53/64 (250)	0-10 59/64 (277)	1-3 7/16 (392)	1-2 35/64 (369)	
20	1-8 15/16 (532)	1-7 5/8 (498)	1-7 1/8 (486)	1-1 21/64 (339)	1-2 27/64 (366)	0-11 53/64 (301)	1-0 59/64 (328)	1-5 7/16 (443)	1-4 35/64 (420)	
24	2-0 15/16 (633)	1-11 5/8 (600)	1-11 1/8 (587)	1-5 21/64 (440)	1-6 27/64 (468)	1-3 53/64 (402)	1-4 59/64 (430)	1-9 7/16 (544)	1-8 35/64 (522)	
28	2-4 15/16 (735)	2-3 5/8 (702)	2-3 1/8 (689)	1-9 21/64 (542)	1-10 27/64 (569)	1-7 53/64 (504)	1-8 59/64 (531)	2-1 7/16 (646)	2-0 35/64 (623)	
32	2-8 15/16 (837)	2-7 5/8 (803)	2-7 1/8 (791)	2-1 21/64 (643)	2-2 27/64 (671)	1-11 53/64 (605)	2-0 59/64 (633)	2-5 7/16 (748)	2-4 35/64 (725)	
36	3-0 15/16 (938)	2-11 5/8 (905)	2-11 1/8 (892)	2-5 21/64 (745)	2-6 27/64 (773)	2-3 53/64 (707)	2-4 59/64 (735)	2-9 7/16 (849)	2-8 35/64 (827)	
40	3-4 15/16 (1040)	3-3 5/8 (1006)	3-3 1/8 (994)	2-9 21/64 (847)	2-10 27/64 (874)	2-7 53/64 (809)	2-8 59/64 (836)	3-1 7/16 (951)	3-0 35/64 (928)	
44	3-8 15/16 (1141)	3-7 5/8 (1108)	3-7 1/8 (1095)	3-1 21/64 (948)	3-2 27/64 (976)	2-11 53/64 (910)	3-0 59/64 (938)	3-5 7/16 (1052)	3-4 35/64 (1030)	
48	4-0 15/16 (1243)	3-11 5/8 (1210)	3-11 1/8 (1197)	3-5 21/64 (1050)	3-6 27/64 (1077)	3-3 53/64 (1012)	3-4 59/64 (1039)	3-9 7/16 (1154)	3-8 35/64 (1131)	

**Standard Unit Measurements: 3/4" Casement Push Out Picture - Full and Narrow Frame**

Standard 3/4" Casement Push Out Picture Unit Measurements												
Width												
CN	Masonry Opening		Rough Opening		Frame Size		Glass Size		Daylight Opening		Sash OM	
	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm
40	3-7 5/8	(1108)	3-5	(1041)	3-4	(1016)	2-11 19/64	(896)	2-10 3/16	(868)	3-2 5/16	(973)
48	4-3 5/8	(1311)	4-1	(1245)	4-0	(1219)	3-7 19/64	(1100)	3-6 3/16	(1072)	3-10 5/16	(1176)
56	4-11 5/8	(1514)	4-9	(1448)	4-8	(1422)	4-3 19/64	(1303)	4-2 3/16	(1275)	4-6 5/16	(1379)
60	5-3 5/8	(1616)	5-1	(1549)	5-0	(1524)	4-7 19/64	(1404)	4-6 3/16	(1376)	4-10 5/16	(1481)
64	5-7 5/8	(1718)	5-5	(1651)	5-4	(1626)	4-11 19/64	(1506)	4-10 3/16	(1478)	5-2 5/16	(1583)
72	6-3 5/8	(1921)	6-1	(1854)	6-0	(1829)	5-7 19/64	(1709)	5-6 3/16	(1681)	5-10 5/16	(1786)
80	6-11 5/8	(2124)	6-9	(2057)	6-8	(2032)	6-3 19/64	(1912)	6-2 3/16	(1884)	3-10 5/16	(1989)
88	7-7 5/8	(2327)	7-5	(2261)	7-4	(2235)	6-11 19/64	(2116)	6-10 3/16	(2088)	7-2 5/16	(2192)
96	8-3 5/8	(2530)	8-1	(2464)	8-0	(2438)	7-7 19/64	(2319)	7-6 3/16	(2291)	7-10 5/16	(2395)

Standard 3/4" Casement Push Out Picture Unit Measurements																
Height																
CN	Masonry Opening		Rough Opening		Frame Size		Daylight Opening (Std Bottom Rail)		Glass Size (Std Bottom Rail)		Daylight Opening (Tall Bottom Rail)		Glass Size (Tall Bottom Rail)		Sash OM	
	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm
12	1-0 15/16	(329)	0-11 5/8	(295)	0-11 1/8	(283)	0-5 5/16	(135)	0-6 27/64	(163)	0-3 13/16	(97)	0-4 59/64	(125)	0-9 7/16	(240)
14	1-2 15/16	(379)	1-1 5/8	(346)	1-1 1/8	(333)	0-7 5/16	(186)	0-8 27/64	(214)	0-5 13/16	(148)	0-6 59/64	(176)	0-11 7/16	(290)
16	1-4 15/16	(430)	1-3 5/8	(397)	1-3 1/8	(384)	0-9 5/16	(237)	0-10 27/64	(265)	0-7 13/16	(198)	0-8 59/64	(227)	1-1 7/16	(341)
18	1-6 15/16	(481)	1-5 5/8	(448)	1-5 1/8	(435)	0-11 5/16	(287)	1-0 27/64	(315)	0-9 13/16	(249)	0-10 59/64	(277)	1-3 7/16	(392)
20	1-8 15/16	(532)	1-7 5/8	(498)	1-7 1/8	(486)	1-1 5/16	(338)	1-2 27/64	(366)	0-11 13/16	(300)	1-0 59/64	(328)	1-5 7/16	(443)
24	2-0 15/16	(633)	1-11 5/8	(600)	1-11 1/8	(587)	1-5 5/16	(440)	1-6 27/64	(468)	1-3 13/16	(402)	1-4 59/64	(430)	1-9 7/16	(544)
28	2-4 15/16	(735)	2-3 5/8	(702)	2-3 1/8	(689)	1-9 5/16	(541)	1-10 27/64	(569)	1-7 13/16	(503)	1-8 59/64	(531)	2-1 7/16	(646)
32	2-8 15/16	(837)	2-7 5/8	(803)	2-7 1/8	(791)	2-1 5/16	(643)	2-2 27/64	(671)	1-11 13/16	(605)	2-0 59/64	(633)	2-5 7/16	(748)
36	3-0 15/16	(938)	2-11 5/8	(905)	2-11 1/8	(892)	2-5 5/16	(745)	2-6 27/64	(773)	2-3 13/16	(706)	2-4 59/64	(735)	2-9 7/16	(849)
40	3-4 15/16	(1040)	3-3 5/8	(1006)	3-3 1/8	(994)	2-9 5/16	(846)	2-10 27/64	(874)	2-7 13/16	(808)	2-8 59/64	(836)	3-1 7/16	(951)
44	3-8 15/16	(1141)	3-7 5/8	(1108)	3-7 1/8	(1095)	3-1 5/16	(948)	3-2 27/64	(976)	2-11 13/16	(910)	3-0 59/64	(938)	3-5 7/16	(1052)
48	4-0 15/16	(1243)	3-11 5/8	(1210)	3-11 1/8	(1197)	3-5 5/16	(1049)	3-6 27/64	(1077)	3-3 13/16	(1011)	3-4 59/64	(1039)	3-9 7/16	(1154)
54	4-6 15/16	(1395)	4-5 5/8	(1362)	4-5 1/8	(1349)	3-11 5/16	(1202)	4-0 27/64	(1230)	3-9 13/16	(1164)	3-10 59/64	(1192)	4-3 7/16	(1306)
56	4-8 15/16	(1446)	4-7 5/8	(1413)	4-7 1/8	(1400)	4-1 5/16	(1253)	4-2 27/64	(1281)	3-11 13/16	(1214)	4-0 59/64	(1243)	4-5 7/16	(1357)
60	5-0 15/16	(1548)	4-11 5/8	(1514)	4-11 1/8	(1502)	4-5 5/16	(1354)	4-6 27/64	(1382)	4-3 13/16	(1316)	4-4 59/64	(1344)	4-9 7/16	(1459)
64	5-4 15/16	(1649)	5-3 5/8	(1616)	5-3 1/8	(1603)	4-9 5/16	(1456)	4-10 27/64	(1484)	4-7 13/16	(1418)	4-8 59/64	(1446)	5-1 7/16	(1560)

**Standard Unit Measurements: 1" Casement Push Out Picture - Full Frame**

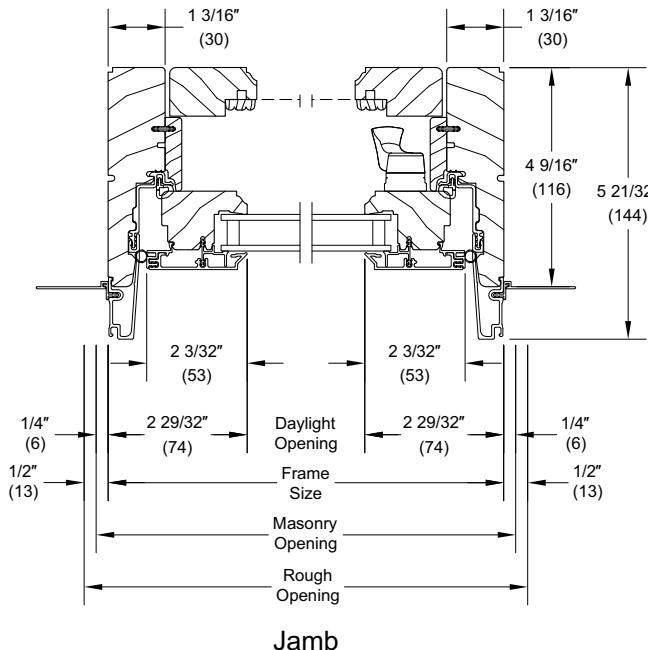
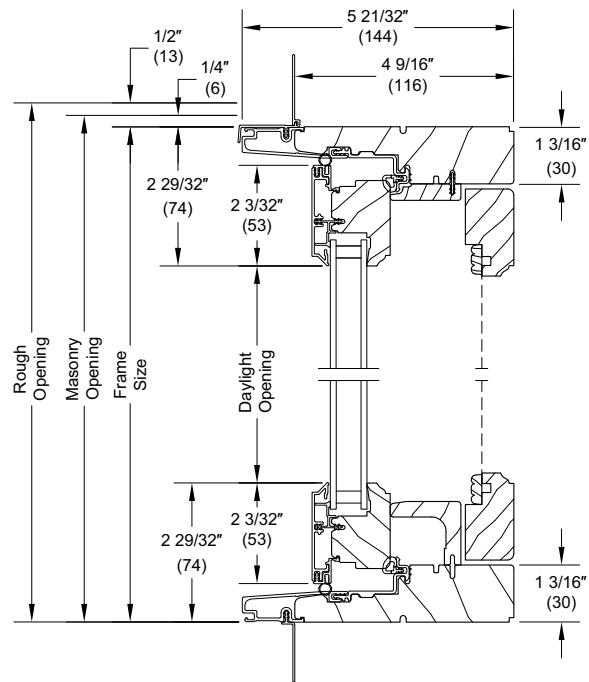
Standard 1" Casement Push Out Picture Unit Measurements							
Width							
CN	Masonry Opening	Rough Opening	Frame Size	Glass Size	Daylight Opening	Sash OM	
	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	
40	3-7 5/8 (1108)	3-5 (1041)	3-4 (1016)	2-11 19/64 (896)	2-10 3/16 (868)	3-2 5/16 (973)	
48	4-3 5/8 (1311)	4-1 (1245)	4-0 (1219)	3-7 19/64 (1100)	3-6 3/16 (1072)	3-10 5/16 (1176)	
56	4-11 5/8 (1514)	4-9 (1448)	4-8 (1422)	4-3 19/64 (1303)	4-2 3/16 (1275)	4-6 5/16 (1379)	
60	5-3 5/8 (1616)	5-1 (1549)	5-0 (1524)	4-7 19/64 (1404)	4-6 3/16 (1376)	4-10 5/16 (1481)	
64	5-7 5/8 (1718)	5-5 (1651)	5-4 (1626)	4-11 19/64 (1506)	4-10 3/16 (1478)	5-2 5/16 (1583)	
72	6-3 5/8 (1921)	6-1 (1854)	6-0 (1829)	5-7 19/64 (1709)	5-6 3/16 (1681)	5-10 5/16 (1786)	
80	6-11 5/8 (2124)	6-9 (2057)	6-8 (2032)	6-3 19/64 (1912)	6-2 3/16 (1884)	3-10 5/16 (1989)	
88	7-7 5/8 (2327)	7-5 (2261)	7-4 (2235)	6-11 19/64 (2116)	6-10 3/16 (2088)	7-2 5/16 (2192)	
96	8-3 5/8 (2530)	8-1 (2464)	8-0 (2438)	7-7 19/64 (2319)	7-6 3/16 (2291)	7-10 5/16 (2395)	

Standard 1" Casement Push Out Picture Unit Measurements									
Height									
CN	Masonry Opening	Rough Opening	Frame Size	Daylight Opening (Std Bottom Rail)	Glass Size (Std Bottom Rail)	Daylight Opening (Tall Bottom Rail)	Glass Size (Tall Bottom Rail)	Sash OM	
	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm	ft - in mm
12	1-0 15/16 (329)	0-11 5/8 (295)	0-11 1/8 (283)	0-5 5/16 (135)	0-6 27/64 (163)	0-3 13/16 (97)	0-4 59/64 (125)	0-9 7/16 (240)	
14	1-2 15/16 (379)	1-1 5/8 (346)	1-1 1/8 (333)	0-7 5/16 (186)	0-8 27/64 (214)	0-5 13/16 (148)	0-6 59/64 (176)	0-11 7/16 (290)	
16	1-4 15/16 (430)	1-3 5/8 (397)	1-3 1/8 (384)	0-9 5/16 (237)	0-10 27/64 (265)	0-7 13/16 (198)	0-8 59/64 (227)	1-1 7/16 (341)	
18	1-6 15/16 (481)	1-5 5/8 (448)	1-5 1/8 (435)	0-11 5/16 (287)	1-0 27/64 (315)	0-9 13/16 (249)	0-10 59/64 (277)	1-3 7/16 (392)	
20	1-8 15/16 (532)	1-7 5/8 (498)	1-7 1/8 (486)	1-1 5/16 (338)	1-2 27/64 (366)	0-11 13/16 (300)	1-0 59/64 (328)	1-5 7/16 (443)	
24	2-0 15/16 (633)	1-11 5/8 (600)	1-11 1/8 (587)	1-5 5/16 (440)	1-6 27/64 (468)	1-3 13/16 (402)	1-4 59/64 (430)	1-9 7/16 (544)	
28	2-4 15/16 (735)	2-3 5/8 (702)	2-3 1/8 (689)	1-9 5/16 (541)	1-10 27/64 (569)	1-7 13/16 (503)	1-8 59/64 (531)	2-1 7/16 (646)	
32	2-8 15/16 (837)	2-7 5/8 (803)	2-7 1/8 (791)	2-1 5/16 (643)	2-2 27/64 (671)	1-11 13/16 (605)	2-0 59/64 (633)	2-5 7/16 (748)	
36	3-0 15/16 (938)	2-11 5/8 (905)	2-11 1/8 (892)	2-5 5/16 (745)	2-6 27/64 (773)	2-3 13/16 (706)	2-4 59/64 (735)	2-9 7/16 (849)	
40	3-4 15/16 (1040)	3-3 5/8 (1006)	3-3 1/8 (994)	2-9 5/16 (846)	2-10 27/64 (874)	2-7 13/16 (808)	2-8 59/64 (836)	3-1 7/16 (951)	
44	3-8 15/16 (1141)	3-7 5/8 (1108)	3-7 1/8 (1095)	3-1 5/16 (948)	3-2 27/64 (976)	2-11 13/16 (910)	3-0 59/64 (938)	3-5 7/16 (1052)	
48	4-0 15/16 (1243)	3-11 5/8 (1210)	3-11 1/8 (1197)	3-5 5/16 (1049)	3-6 27/64 (1077)	3-3 13/16 (1011)	3-4 59/64 (1039)	3-9 7/16 (1154)	
54	4-6 15/16 (1395)	4-5 5/8 (1362)	4-5 1/8 (1349)	3-11 5/16 (1202)	4-0 27/64 (1230)	3-9 13/16 (1164)	3-10 59/64 (1192)	4-3 7/16 (1306)	
56	4-8 15/16 (1446)	4-7 5/8 (1413)	4-7 1/8 (1400)	4-1 5/16 (1253)	4-2 27/64 (1281)	3-11 13/16 (1214)	4-0 59/64 (1243)	4-5 7/16 (1357)	
60	5-0 15/16 (1548)	4-11 5/8 (1514)	4-11 1/8 (1502)	4-5 5/16 (1354)	4-6 27/64 (1382)	4-3 13/16 (1316)	4-4 59/64 (1344)	4-9 7/16 (1459)	
64	5-4 15/16 (1649)	5-3 5/8 (1616)	5-3 1/8 (1603)	4-9 5/16 (1456)	4-10 27/64 (1484)	4-7 13/16 (1418)	4-8 59/64 (1446)	5-1 7/16 (1560)	
72	6-0 15/16 (1853)	5-11 5/8 (1819)	5-11 1/8 (1807)	5-5 5/16 (1659)	5-6 27/64 (1687)	5-3 13/16 (1621)	5-4 59/64 (1649)	5-9 7/16 (1764)	
78	6-6 15/16 (2005)	6-5 5/8 (1972)	6-5 1/8 (1959)	5-11 5/16 (1811)	6-0 27/64 (1839)	5-9 13/16 (1773)	5-10 59/64 (1801)	6-3 7/16 (1916)	
84	7-0 15/16 (2157)	6-11 5/8 (2124)	6-11 1/8 (2111)	6-5 5/16 (1964)	6-6 27/64 (1992)	6-3 13/16 (1926)	6-4 59/64 (1954)	6-9 7/16 (2068)	
92	7-8 15/16 (2361)	7-7 5/8 (2327)	7-7 1/8 (2315)	7-1 5/16 (2167)	7-2 27/64 (2195)	6-11 13/16 (2129)	7-0 59/64 (2157)	7-5 7/16 (2272)	
96	8-0 15/16 (2462)	7-11 5/8 (2429)	7-11 1/8 (2416)	7-5 5/16 (2269)	7-6 27/64 (2297)	7-3 13/16 (2230)	7-4 59/64 (2259)	7-9 7/16 (2373)	

**Section Details: Operating/Stationary - Casement / Awning Push Out - 3/4" (19) IG**

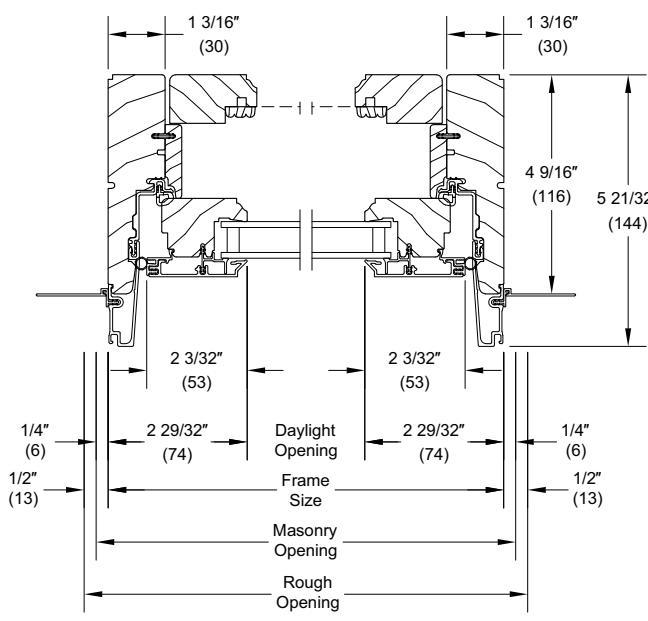
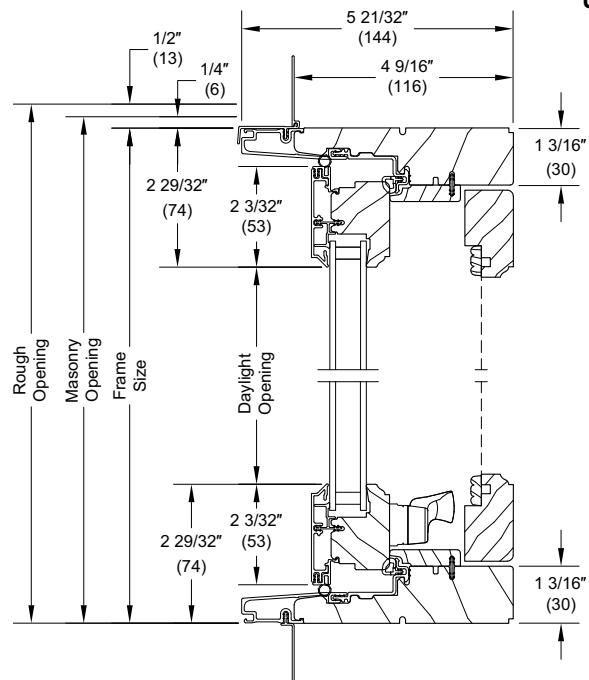
Scale: 3" = 1' 0"

**UCAPO**



**Head Jamb and Sill**

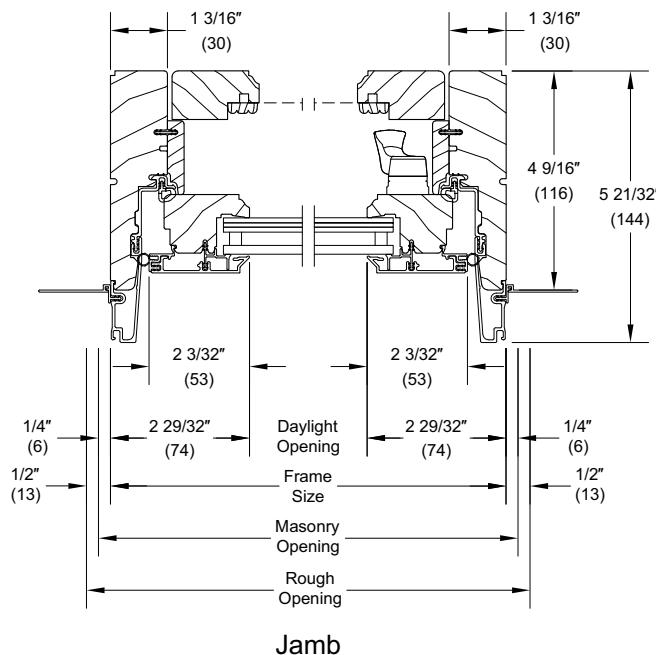
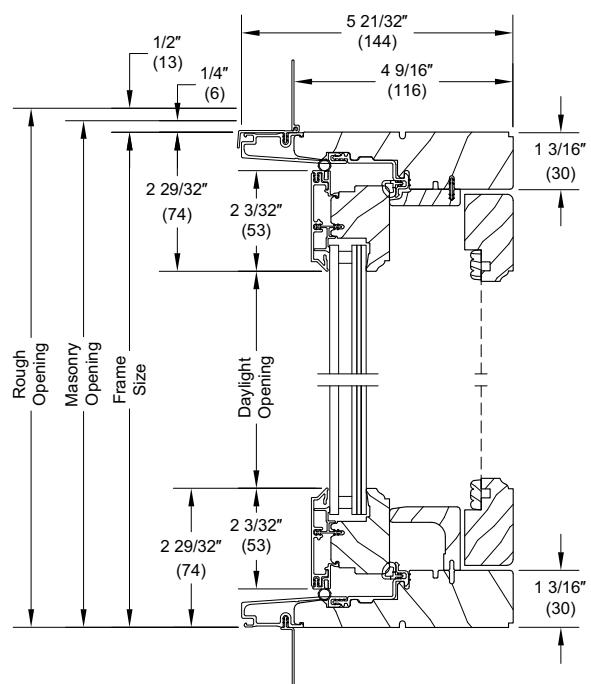
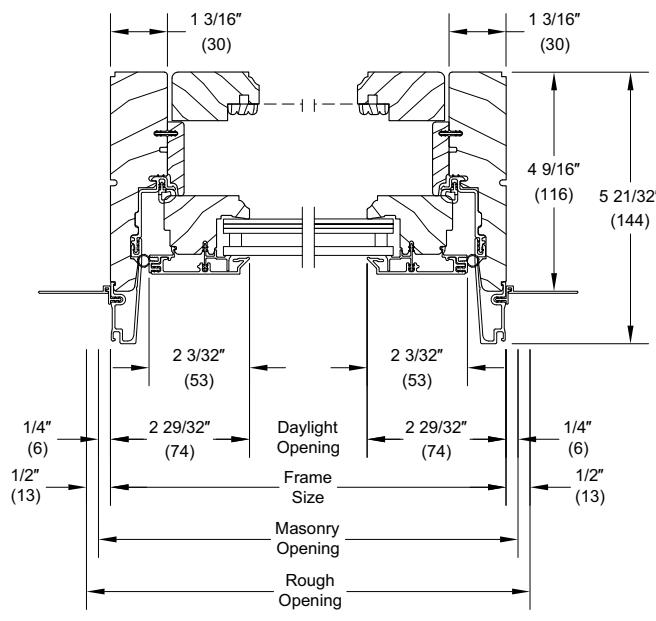
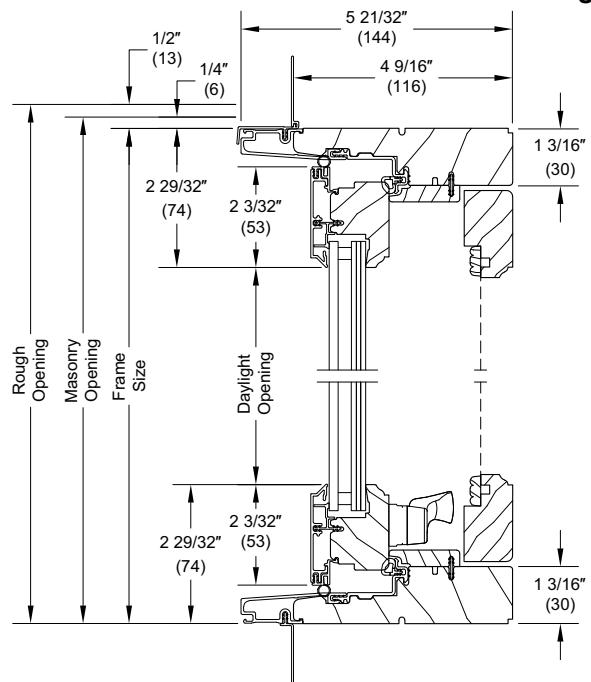
**UAWNPO**



**Head Jamb And Sill**

**Section Details: IZ3 Operating/Stationary - Casement / Awning Push Out - 3/4" (19) IG**

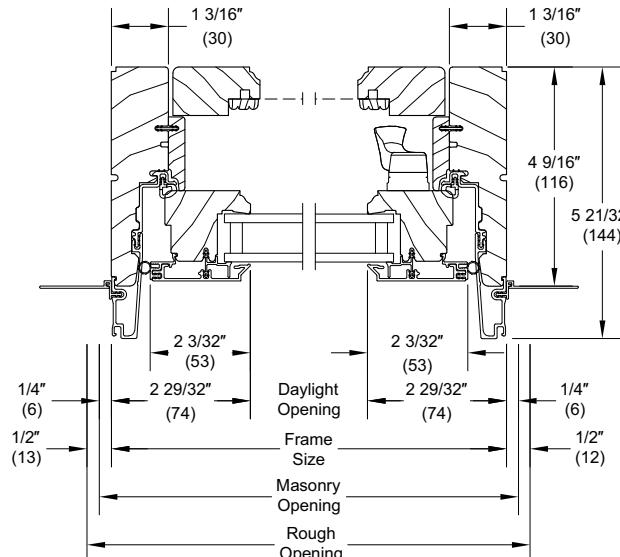
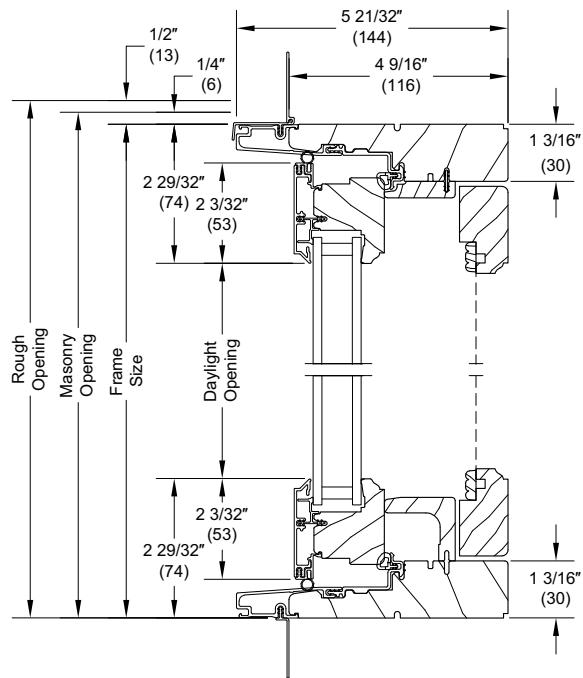
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**UCA PO**

**Head Jamb and Sill**
**UAWNPO**

**Head Jamb And Sill**

**Section Details: Operating/Stationary- Casement / Awning Push Out - 1" (25) IG**

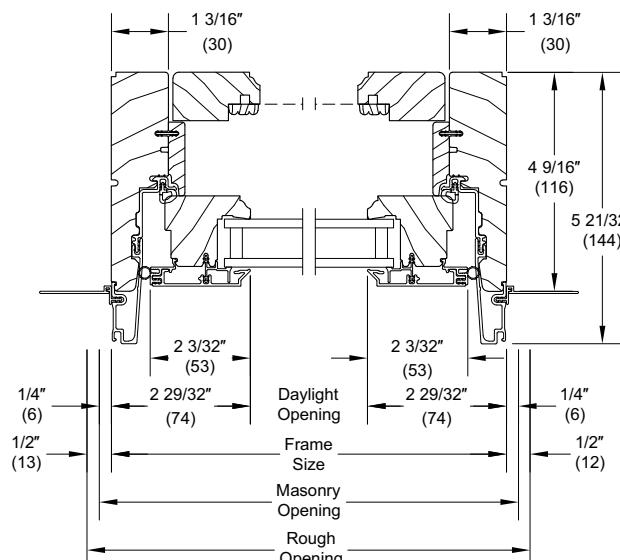
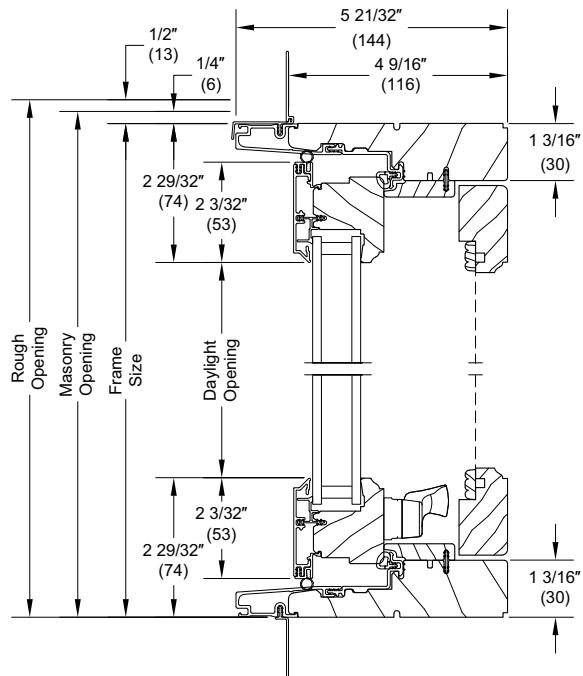
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**UCAPO**



**Head Jamb and Sill**

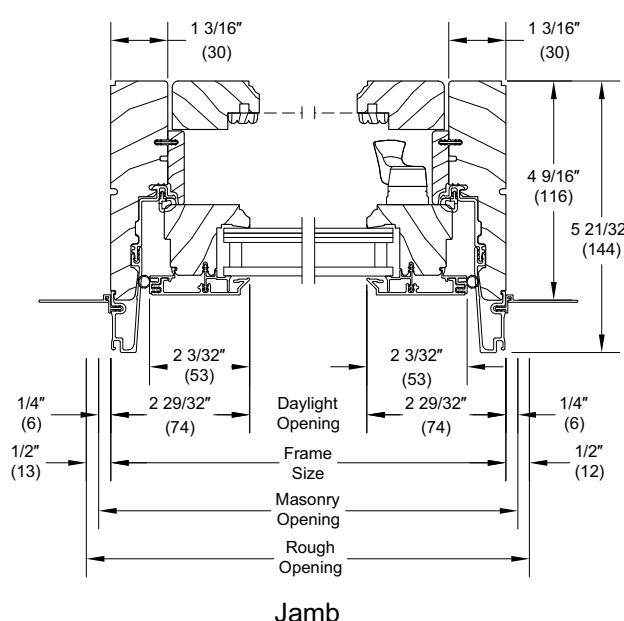
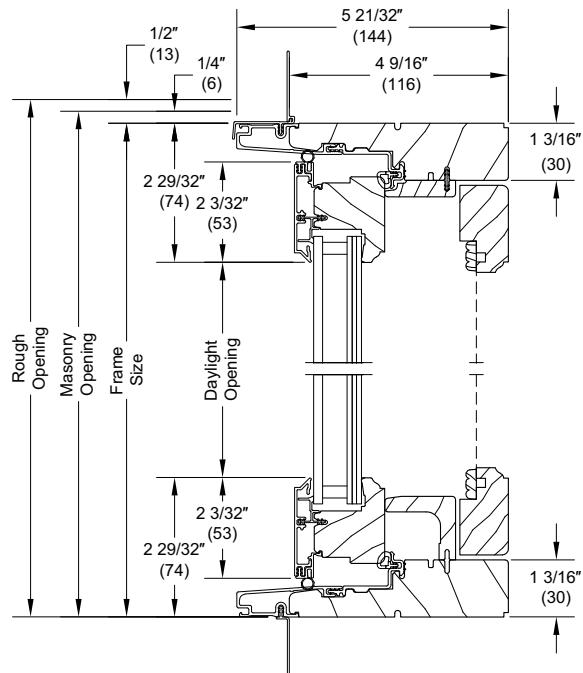
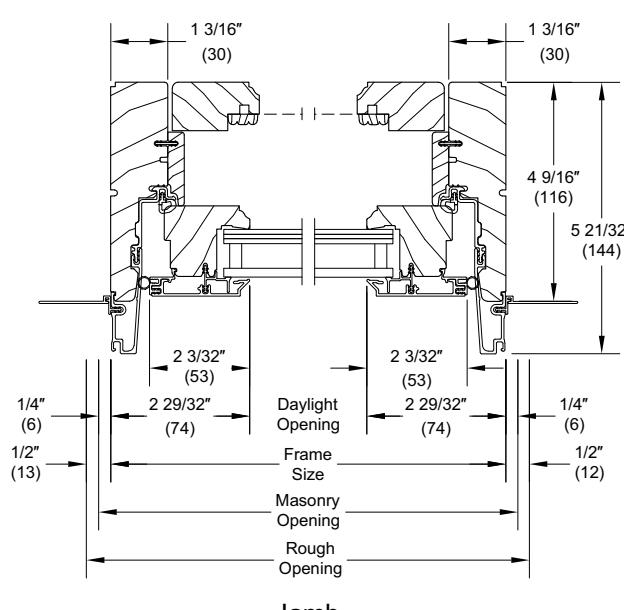
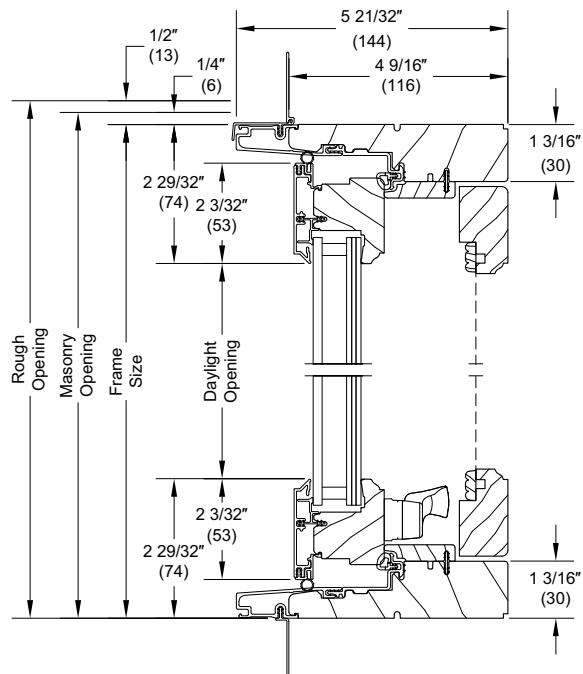
**UAWNPO**



**Head Jamb and Sill**

**Section Details: IZ3 Operating/Stationary- Casement / Awning Push Out - 1" (25) IG**

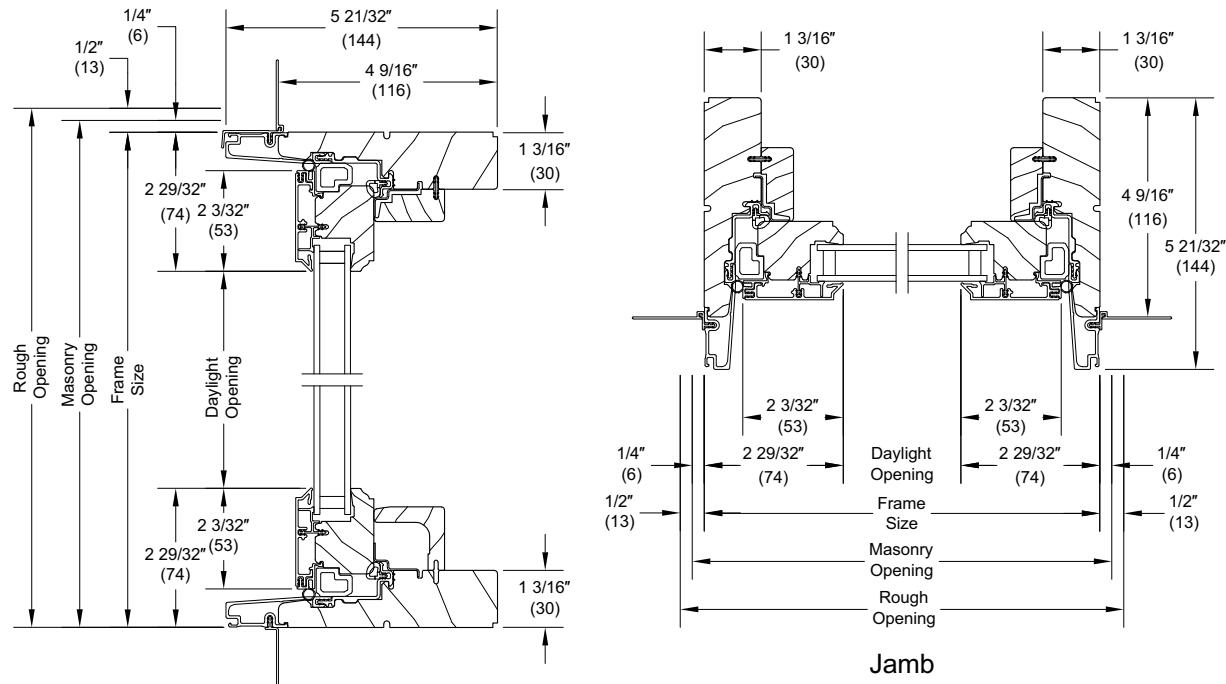
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**UCAPO**

**Head Jamb and Sill**
**UAWNPO**

**Head Jamb and Sill**

**Section Details: Casement Push Out Picture - 3/4" (19) IG and 1" (25) IG**

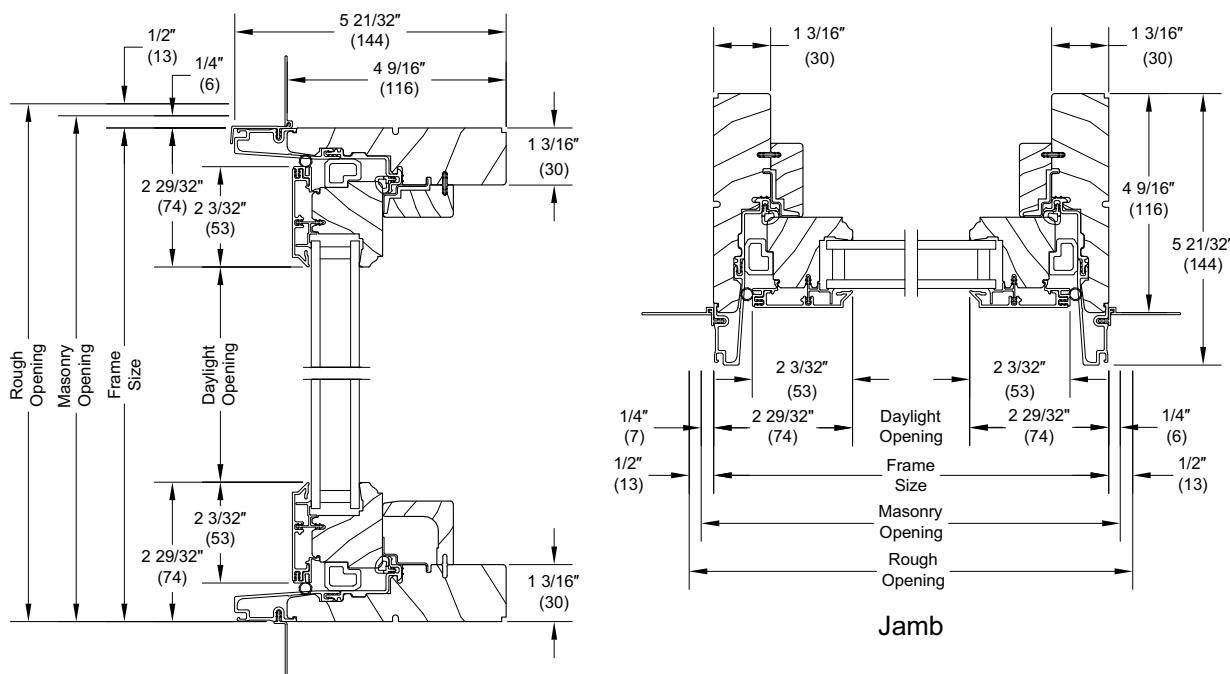
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**UCAPOP 3/4" IG**



**Head Jamb and Sill**

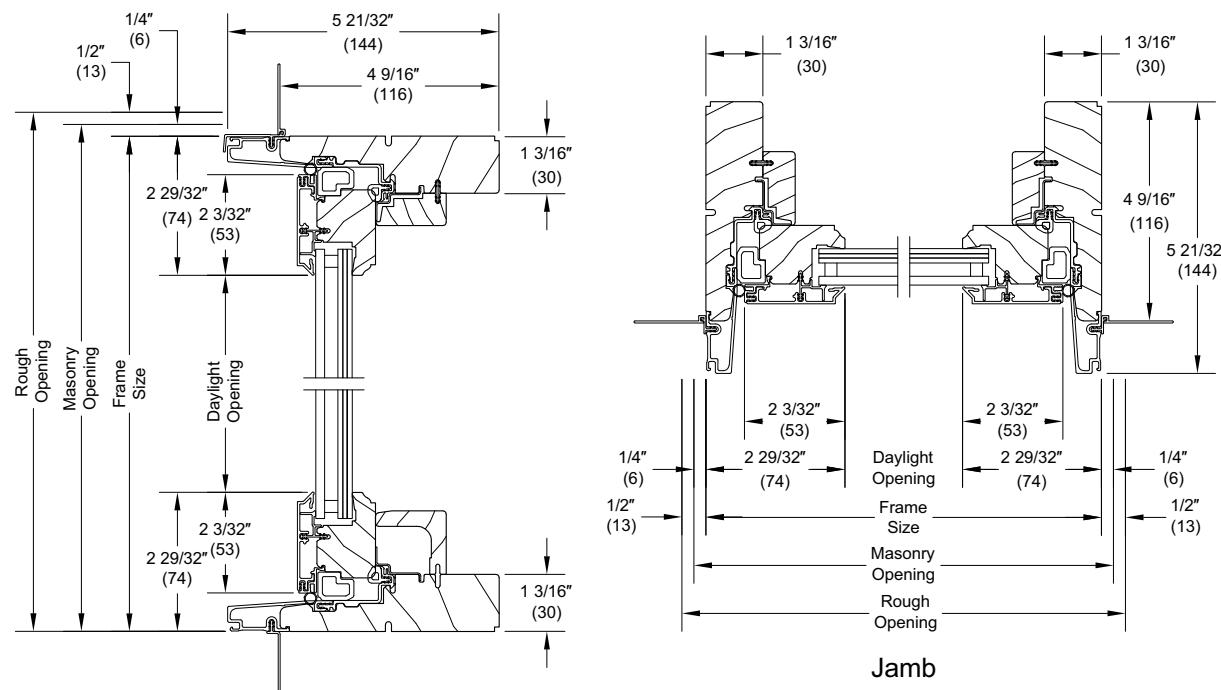
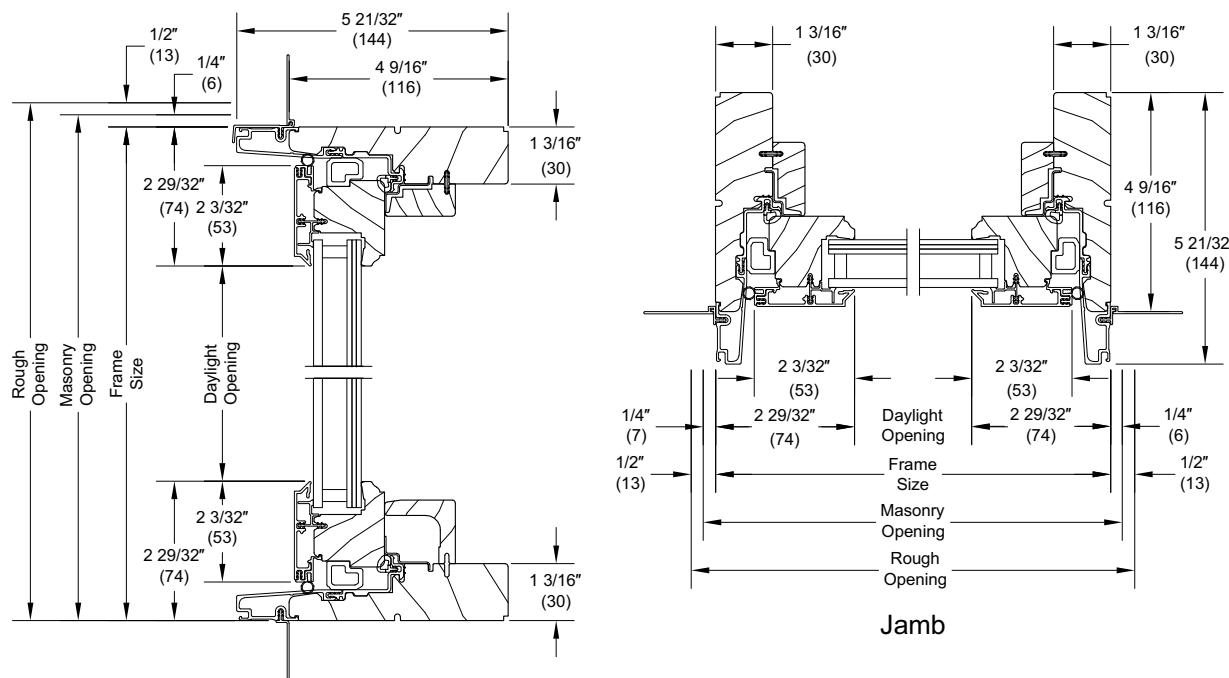
**UCAPOP 1" IG**



**Head Jamb and Sill**

**Section Details: IZ3 Casement Push Out Picture - 3/4" (19) IG and 1" (25) IG**

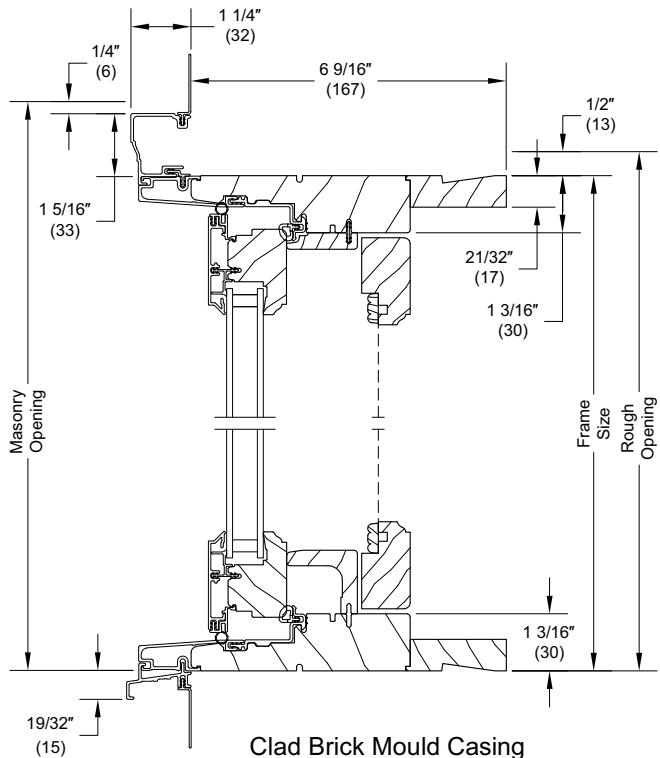
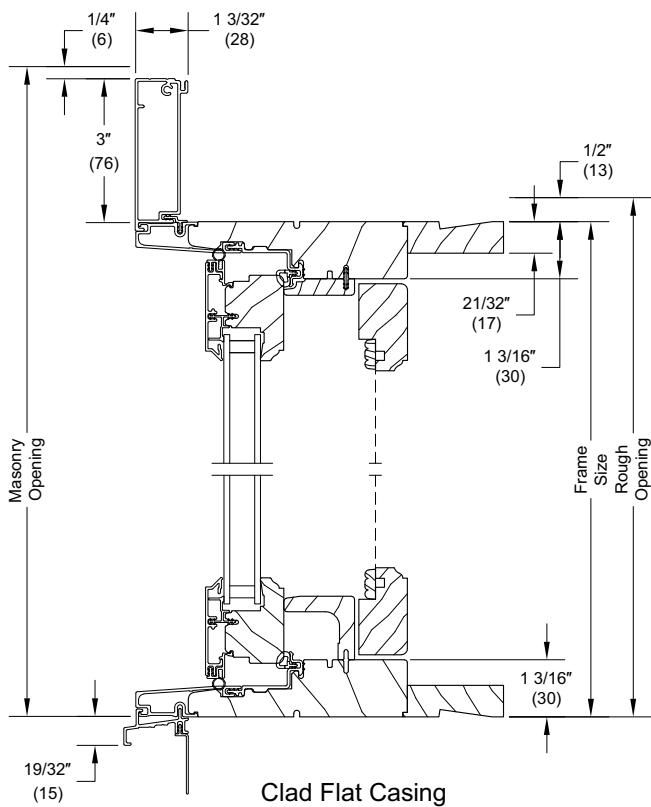
Scale: 3" = 1' 0"

**UCAPOP 3/4" IG**

**Head Jamb and Sill**
**UCAPOP 1" IG**

**Head Jamb and Sill**

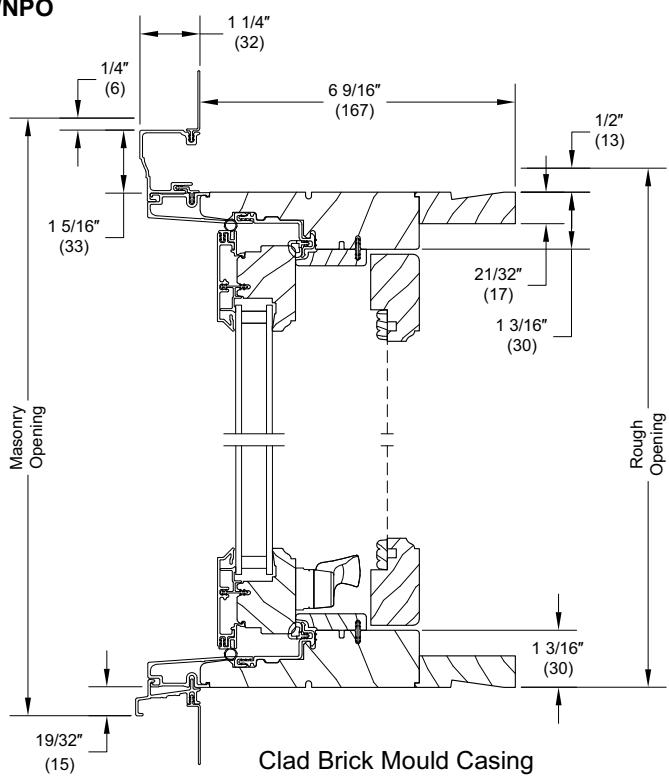
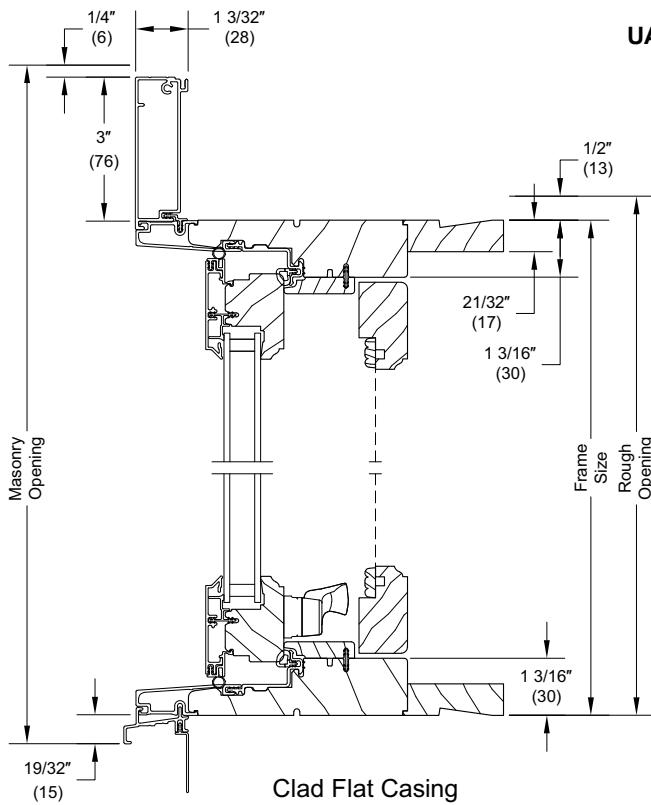
**Section Details: Casing and 6 9/16" (167) Jambs - Casement / Awning Push Out**

Scale: 3" - 1' 0"

**UCAPO**

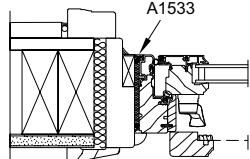


**UAWNPO**

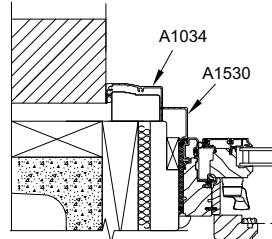


**Section Details: Clad Applications - Ultimate Casement Push Out**

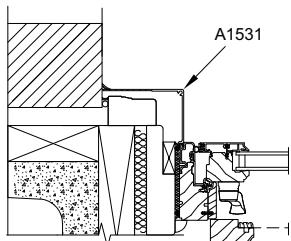
Scale: 1' 1/2" = 1' 0"



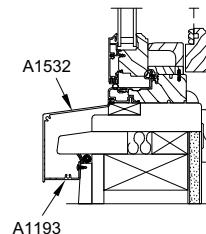
Frame Expander



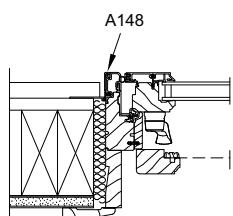
Panning (BMC shown)



Panning (Masonry shown)



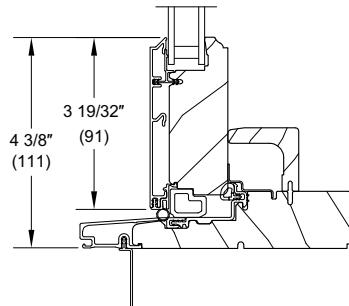
Sill Panning



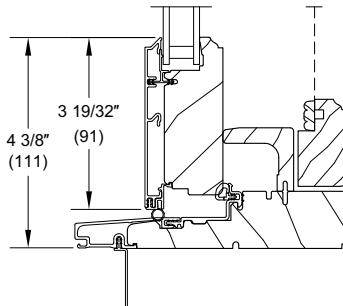
Panning with Kerf Cover

**Section Details: Wide Bottom Rail Option - Casement / Awning Push Out**

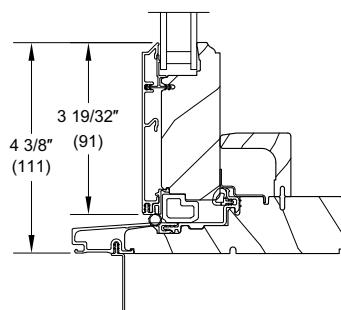
Scale: 3" = 1' 0"

**UCAPO**

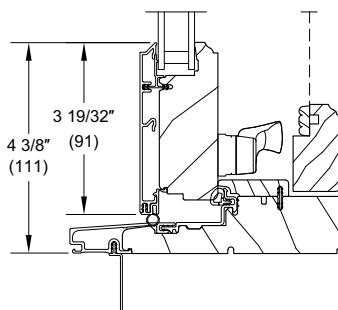
Picture



Operator

**UAWNPO**

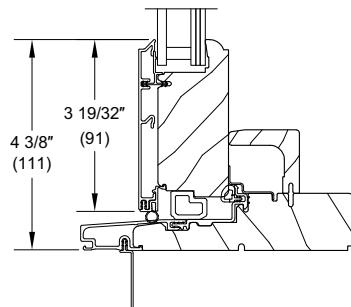
Picture



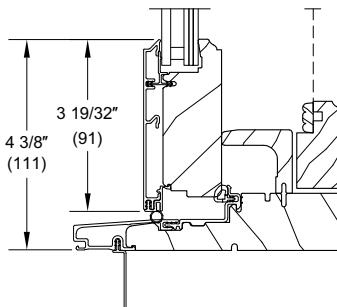
Operator

**Section Details: Wide Bottom Rail Option - IZ3 Casement / Awning Push Out**

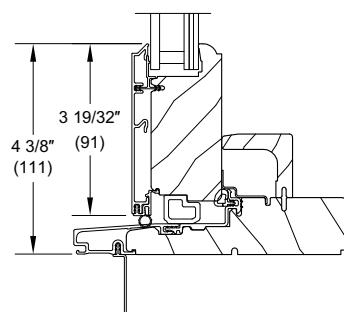
Scale: 3" = 1' 0"

**UCAPO**

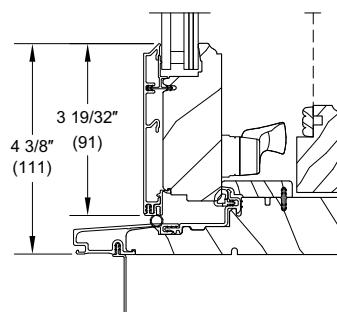
Picture - 2"



Operator

**UAWNPO**

Picture - 2"

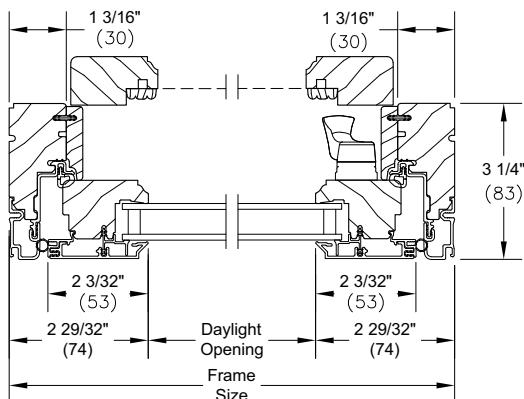
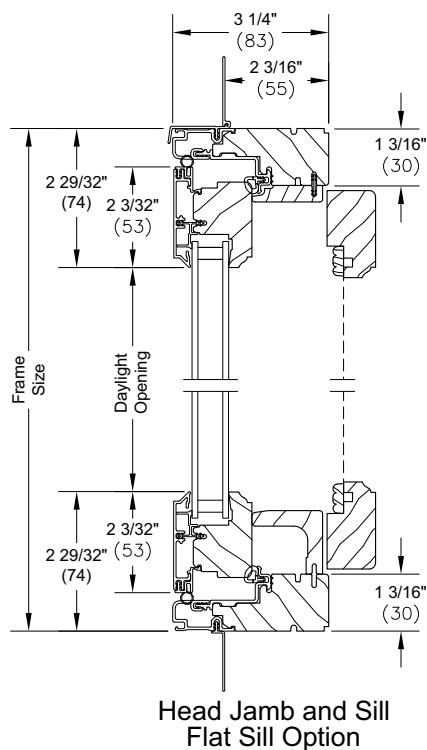


Operator

## Section Details: Casement / Awning Narrow Frame Push Out

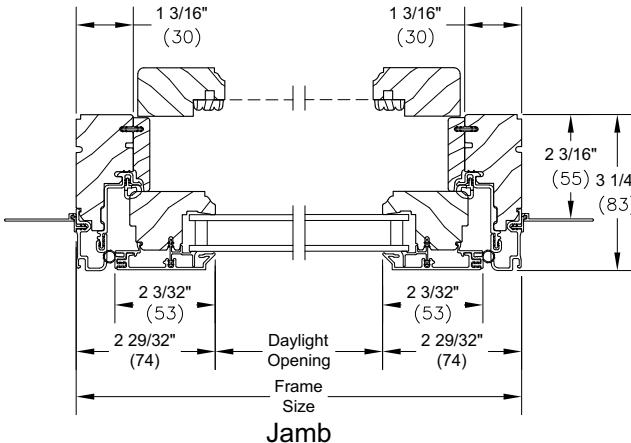
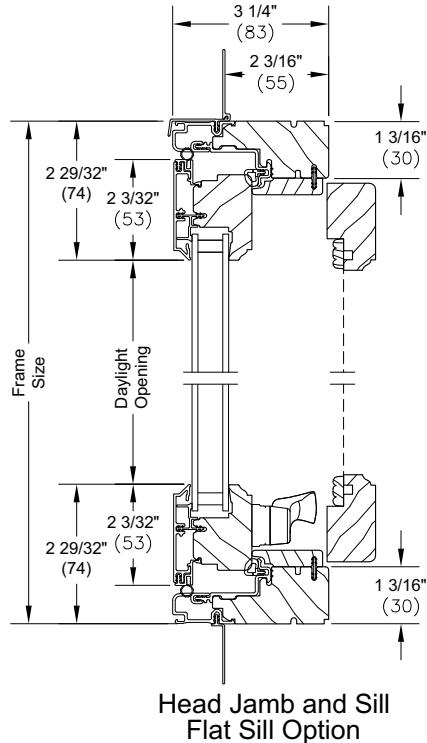
Scale: 3" = 1' 0"

**UCANFPO**



Tall Bottom Rail and Sloped Sill Options

**UAWNNFPO**

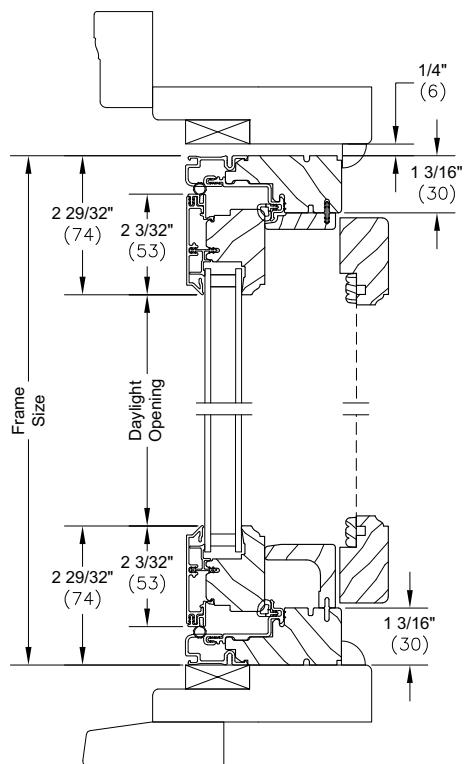


Tall Bottom Rail and Sloped Sill Option

*NOTE: Square Sticking is the default for the narrow frame product.*

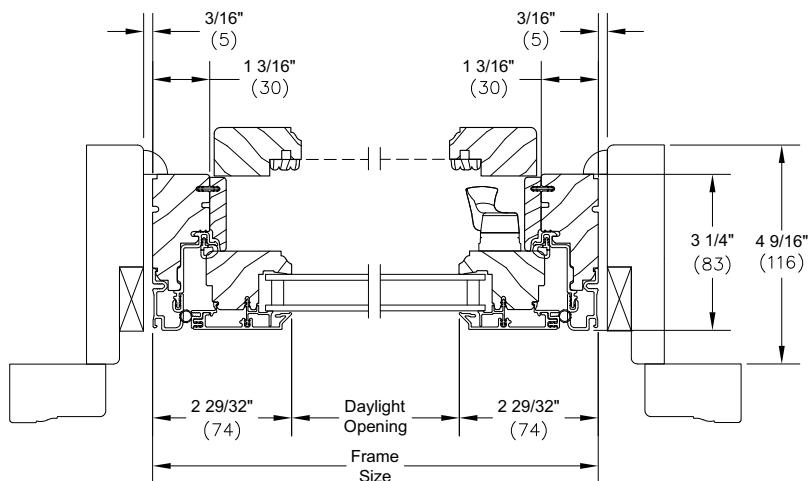
**Section Details: Casement Narrow Frame Push Out Picture - Casement Frame**

Scale: 3" - 1' 0"

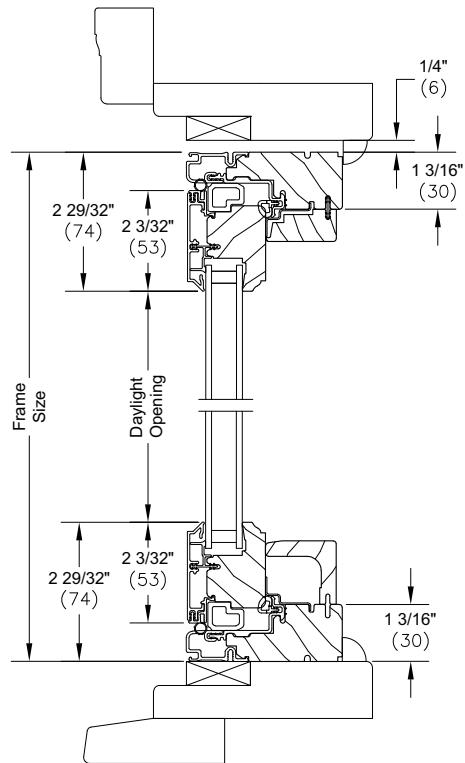


Head Jamb and Sill

UCANFPOP

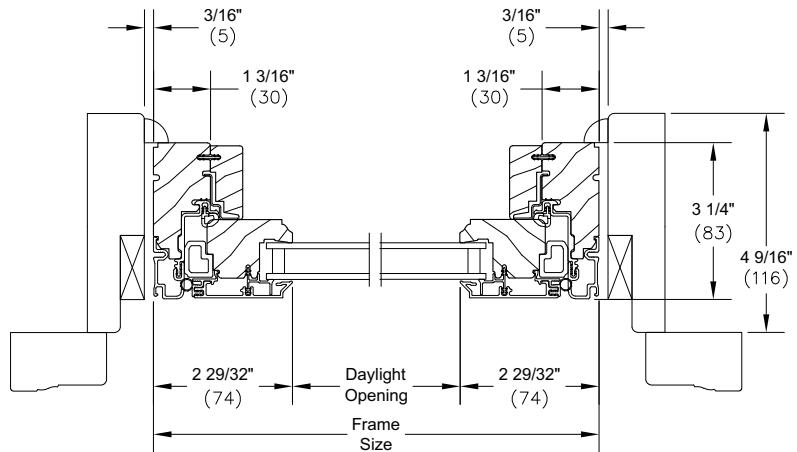


Jamb



Head Jamb and Sill

UCANFPOP

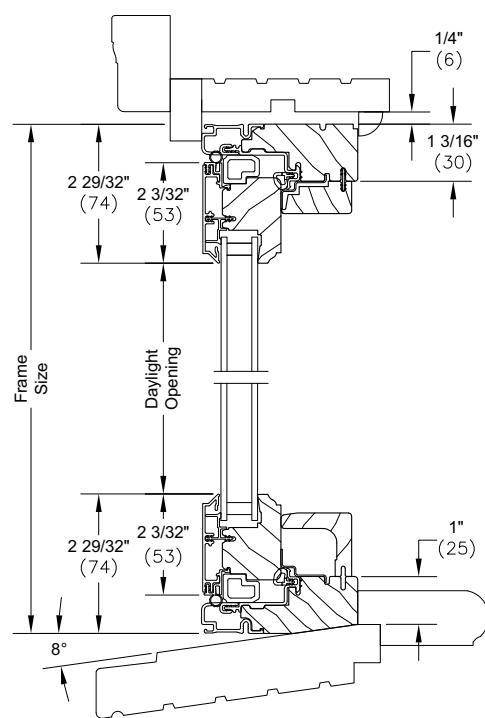


Jamb

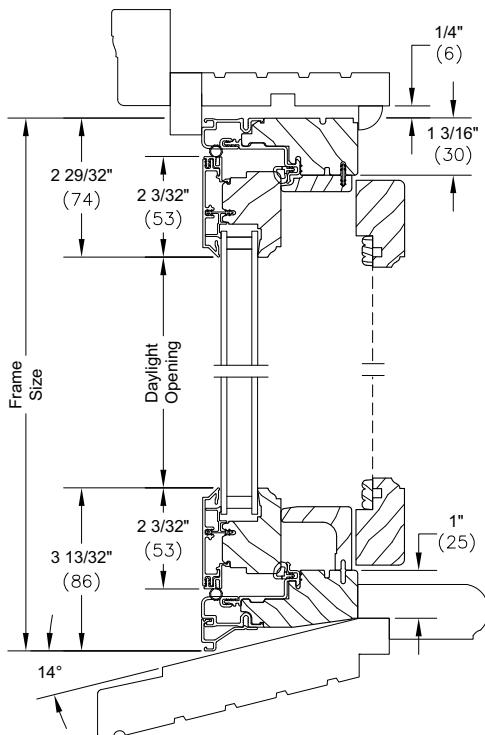
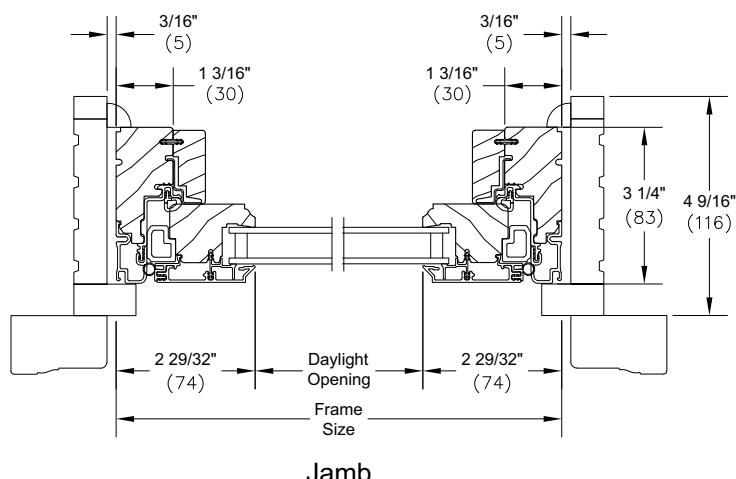
NOTE: Square Sticking is the default for narrow frame products.

## Section Details: Casement Narrow Frame Push Out Picture - Double Hung Frame

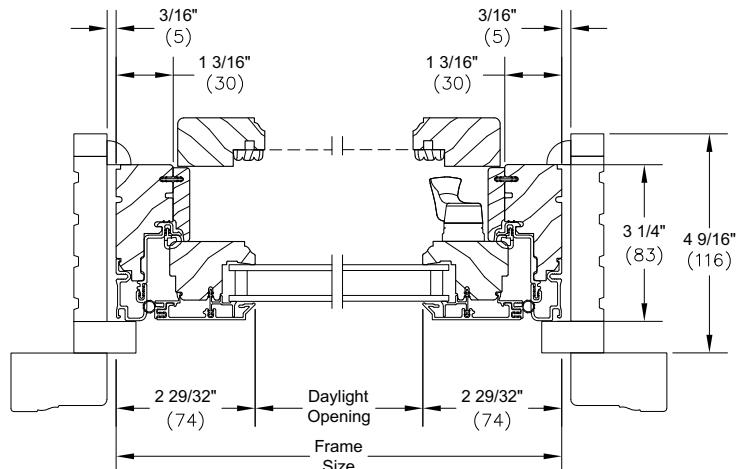
Scale: 3" - 1' 0"



**Operating - 8 Degree**

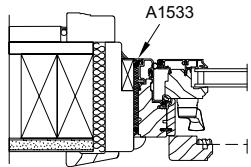
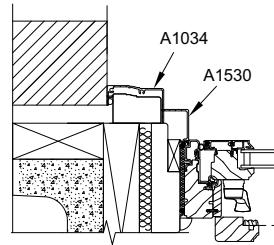
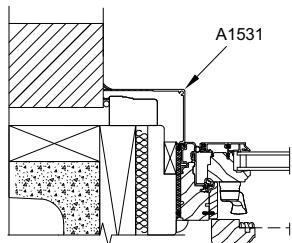
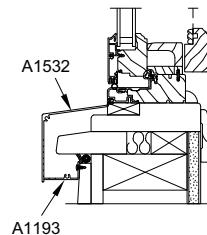
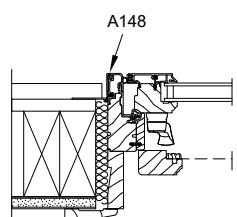


**Operating - 14 Degree**



**Section Details: Clad Applications - Casement Narrow Frame Picture**

Scale: 1' 1/2" = 1' 0"


**Frame Expander**

**Panning (BMC shown)**

**Panning (Masonry shown)**

**Sill Panning**

**Panning with Kerf Cover**

*NOTE: Square Sticking is the default for the narrow frame product.*