

Ultimate Wood Double Hung

Unit Features.....	1
Egress and Vent Openings: Standard Sill.....	2
Egress and Vent Openings: High Performance Sill Liner.....	4
Daylight Measurements: Double Hung.....	6
Daylight Measurements: Transom and Pictures	7
Minimum and Maximum Guidelines: Double Hung Units.....	8
Certified Sizes and Ratings: Double Hung Units.....	9
IZ3 - Minimum and Maximum Guidelines, Certified Sizes and Ratings	10
Measurement Conversions	12
Standard Unit Measurements: Double Hung.....	14
Standard Unit Measurements: Transom/Picture	15
Section Details: Operating.....	16
Section Details: 1 5/8" Transom/Picture.....	17
Section Details: 2" Picture	18
Section Details: Operating IZ3	19
Section Details: Picture IZ3	20
Section Details: Combination/Storm Sash	21
Section Details: Interior Shade Option	22
Section Detail: Mulled Direct Glaze with Interior Shade Option	23
Section Details: Mullions	24
Section Details: Operator with Cedar Dress Option	25
Section Details: Picture with Cedar Dress Option	26

Unit Features

Ultimate Double Hung: UWDH

Ultimate Double Hung Transom: UWDH TR

Ultimate Double Hung Picture: UWDH P

Operating Hardware:

- Sash lock and keeper: Open style crescent cam lock with sash release lever, surface mounted. Color: Satin Taupe.
 - Optional Colors: White, Brass, Satin chrome, Antique Brass, Bronze, Oil Rubbed Bronze, Satin Nickel.
- Balance System: Block and tackle balance system.
- Optional Sash lift: same colors as offered in locks.
- Optional window opening control device field applied.

Optional Glass: WUDH - 7/8" (22) glazing, WUDHP 2" - 1" (25) glazing only

- Tripane Low E1 outer piece and Low E1 Argon inner piece
- Tripane Low E1 outer piece and Low E1 Krypton-Argon inner piece
- Tripane Low E2 outer piece and Low E2 Argon inner piece
- Tripane Low E2 outer piece and Low E2 Krypton-Argon inner piece
- Tripane Low E3 outer piece and Low E1 Argon inner piece
- Tripane Low E3 outer piece and Low E1 Krypton-Argon inner piece

CE Optional Glazing:

- Glazing method: Insulating
- Glazing seal: Silicone glazed
- Standard glass is insulating Low E2 Argon or air
- Optional dual glazing available: Low E1 Argon or air, Low E3 Argon or air, Low E2/ERS argon or air, Low E3/ERS Argon or air, clear, laminated clear and tints, tempered, sandblasted
- Optional Tripane glass types for WUDH - 7/8" (22) glazing, WUDHP 2" - 1"(25) glazing only: Low E1/E1 Argon or Krypton-Argon, Low E2/E2 Argon or Krypton-Argon, Low E3/E1 Argon or Krypton-Argon
- Glass panes available in 3, 4, and 6 mm thicknesses
- Laminated panes available in 7.0 and 7.8 mm thicknesses
- Glazing will be altitude adjusted for higher elevations, Argon, Argon-Krypton, and Krypton gas not included

CE Mulling Options:

- Muller assemblies up to 70 3/4" (1797) x 80 3/8" (2042) as 1H x multi-width
- Muller assemblies with 1" (25) LVL or 3/8" (10) aluminum mull reinforcement up to 124 7/8" (3172) x 100 3/8" (2550) as a multi-wide or multi-high assembly

Egress and Vent Openings: Standard Sill

CN	Opening Width		Opening Height Std. Sill Liner		Egress Opening		CN	Opening Width		Opening Height Std. Sill Liner		Egress Opening	
	ft - in	mm	ft - in	mm	ft ²	m ²		ft - in	mm	ft - in	mm	ft ²	m ²
1612	1-5 55/64	(454)	0-10 9/64	(257)	1.26	(0.12)	2612	2-3 55/64	(708)	0-10 9/64	(257)	1.96	(0.18)
1614	1-5 55/64	(454)	1-0 9/64	(308)	1.51	(0.14)	2614	2-3 55/64	(708)	1-0 9/64	(308)	2.35	(0.22)
1616	1-5 55/64	(454)	1-2 9/64	(359)	1.75	(0.16)	2616	2-3 55/64	(708)	1-2 9/64	(359)	2.74	(0.25)
1618	1-5 55/64	(454)	1-4 9/64	(410)	2.00	(0.19)	2618	2-3 55/64	(708)	1-4 9/64	(410)	3.12	(0.29)
1620	1-5 55/64	(454)	1-6 9/64	(461)	2.25	(0.21)	2620	2-3 55/64	(708)	1-6 9/64	(461)	3.51	(0.33)
1622	1-5 55/64	(454)	1-8 9/64	(511)	2.50	(0.23)	2622	2-3 55/64	(708)	1-8 9/64	(511)	3.90	(0.36)
1624	1-5 55/64	(454)	1-10 9/64	(562)	2.75	(0.26)	2624	2-3 55/64	(708)	1-10 9/64	(562)	4.28	(0.40)
1626	1-5 55/64	(454)	2-0 9/64	(613)	2.99	(0.28)	2626	2-3 55/64	(708)	2-0 9/64	(613)	4.67	(0.43)
1628	1-5 55/64	(454)	2-2 9/64	(664)	3.24	(0.30)	2628	2-3 55/64	(708)	2-2 9/64	(664)	5.06	(0.47)
1630	1-5 55/64	(454)	2-4 9/64	(715)	3.49	(0.32)	2630	2-3 55/64	(708)	2-4 9/64	(715)	5.44	(0.51)
1632	1-5 55/64	(454)	2-6 9/64	(765)	3.74	(0.35)	2632 E	2-3 55/64	(708)	2-6 9/64	(765)	5.83	(0.54)
1634	1-5 55/64	(454)	2-8 9/64	(816)	3.99	(0.37)	2634 E	2-3 55/64	(708)	2-8 9/64	(816)	6.22	(0.58)
1636	1-5 55/64	(454)	2-10 9/64	(867)	4.24	(0.39)	2636 E	2-3 55/64	(708)	2-10 9/64	(867)	6.61	(0.61)
1640	1-5 55/64	(454)	3-2 9/64	(969)	4.73	(0.44)	2640 E	2-3 55/64	(708)	3-2 9/64	(969)	7.38	(0.69)
1642	1-5 55/64	(454)	3-4 9/64	(1019)	4.98	(0.46)	2642 E	2-3 55/64	(708)	3-4 9/64	(1019)	7.77	(0.72)
2012	1-9 55/64	(555)	0-10 9/64	(257)	1.54	(0.14)	2812	2-5 55/64	(759)	0-10 9/64	(257)	2.10	(0.20)
2014	1-9 55/64	(555)	1-0 9/64	(308)	1.84	(0.17)	2814	2-5 55/64	(759)	1-0 9/64	(308)	2.52	(0.23)
2016	1-9 55/64	(555)	1-2 9/64	(359)	2.15	(0.20)	2816	2-5 55/64	(759)	1-2 9/64	(359)	2.93	(0.27)
2018	1-9 55/64	(555)	1-4 9/64	(410)	2.45	(0.23)	2818	2-5 55/64	(759)	1-4 9/64	(410)	3.35	(0.31)
2020	1-9 55/64	(555)	1-6 9/64	(461)	2.75	(0.26)	2820	2-5 55/64	(759)	1-6 9/64	(461)	3.76	(0.35)
2022	1-9 55/64	(555)	1-8 9/64	(511)	3.06	(0.28)	2822	2-5 55/64	(759)	1-8 9/64	(511)	4.18	(0.39)
2024	1-9 55/64	(555)	1-10 9/64	(562)	3.36	(0.31)	2824	2-5 55/64	(759)	1-10 9/64	(562)	4.59	(0.43)
2026	1-9 55/64	(555)	2-0 9/64	(613)	3.67	(0.34)	2826	2-5 55/64	(759)	2-0 9/64	(613)	5.01	(0.47)
2028	1-9 55/64	(555)	2-2 9/64	(664)	3.97	(0.37)	2828	2-5 55/64	(759)	2-2 9/64	(664)	5.42	(0.50)
2030	1-9 55/64	(555)	2-4 9/64	(715)	4.27	(0.40)	2830 E	2-5 55/64	(759)	2-4 9/64	(715)	5.84	(0.54)
2032	1-9 55/64	(555)	2-6 9/64	(765)	4.58	(0.43)	2832 E	2-5 55/64	(759)	2-6 9/64	(765)	6.25	(0.58)
2034	1-9 55/64	(555)	2-8 9/64	(816)	4.88	(0.45)	2834 E	2-5 55/64	(759)	2-8 9/64	(816)	6.67	(0.62)
2036	1-9 55/64	(555)	2-10 9/64	(867)	5.18	(0.48)	2836 E	2-5 55/64	(759)	2-10 9/64	(867)	7.08	(0.66)
2040 E	1-9 55/64	(555)	3-2 9/64	(969)	5.79	(0.54)	2840 E	2-5 55/64	(759)	3-2 9/64	(969)	7.91	(0.73)
2042 E	1-9 55/64	(555)	3-4 9/64	(1019)	6.09	(0.57)	2842 E	2-5 55/64	(759)	3-4 9/64	(1019)	8.32	(0.77)
2412	2-1 55/64	(657)	0-10 9/64	(257)	1.82	(0.17)	3012	2-7 55/64	(809)	0-10 9/64	(257)	2.24	(0.21)
2414	2-1 55/64	(657)	1-0 9/64	(308)	2.18	(0.20)	3014	2-7 55/64	(809)	1-0 9/64	(308)	2.69	(0.25)
2416	2-1 55/64	(657)	1-2 9/64	(359)	2.54	(0.24)	3016	2-7 55/64	(809)	1-2 9/64	(359)	3.13	(0.29)
2418	2-1 55/64	(657)	1-4 9/64	(410)	2.90	(0.27)	3018	2-7 55/64	(809)	1-4 9/64	(410)	3.57	(0.33)
2420	2-1 55/64	(657)	1-6 9/64	(461)	3.26	(0.30)	3020	2-7 55/64	(809)	1-6 9/64	(461)	4.01	(0.37)
2422	2-1 55/64	(657)	1-8 9/64	(511)	3.62	(0.34)	3022	2-7 55/64	(809)	1-8 9/64	(511)	4.46	(0.41)
2424	2-1 55/64	(657)	1-10 9/64	(562)	3.98	(0.37)	3024	2-7 55/64	(809)	1-10 9/64	(562)	4.90	(0.46)
2426	2-1 55/64	(657)	2-0 9/64	(613)	4.34	(0.40)	3026	2-7 55/64	(809)	2-0 9/64	(613)	5.34	(0.50)
2428	2-1 55/64	(657)	2-2 9/64	(664)	4.69	(0.44)	3028 E	2-7 55/64	(809)	2-2 9/64	(664)	5.78	(0.54)
2430	2-1 55/64	(657)	2-4 9/64	(715)	5.05	(0.47)	3030 E	2-7 55/64	(809)	2-4 9/64	(715)	6.23	(0.58)
2432	2-1 55/64	(657)	2-6 9/64	(765)	5.41	(0.50)	3032 E	2-7 55/64	(809)	2-6 9/64	(765)	6.67	(0.62)
2434 E	2-1 55/64	(657)	2-8 9/64	(816)	5.77	(0.54)	3034 E	2-7 55/64	(809)	2-8 9/64	(816)	7.11	(0.66)
2436 E	2-1 55/64	(657)	2-10 9/64	(867)	6.13	(0.57)	3036 E	2-7 55/64	(809)	2-10 9/64	(867)	7.55	(0.70)
2440 E	2-1 55/64	(657)	3-2 9/64	(969)	6.85	(0.64)	3040 E	2-7 55/64	(809)	3-2 9/64	(969)	8.44	(0.78)
2442 E	2-1 55/64	(657)	3-4 9/64	(1019)	7.21	(0.67)	3042 E	2-7 55/64	(809)	3-4 9/64	(1019)	8.88	(0.83)

NOTE: Refer to Product Performance Chapter for International Building Code. Net Clear Opening drawings are pictured with the conversion tables.

Egress and Vent Openings: Standard Sill Liner

CN	Opening Width		Opening Height Std. Sill Liner		Egress Opening	
	ft - in	mm	ft - in	mm	ft ²	m ²
3212	2-9 55/64	(860)	0-10 9/64	(257)	2.38	(0.22)
3214	2-9 55/64	(860)	1-0 9/64	(308)	2.85	(0.27)
3216	2-9 55/64	(860)	1-2 9/64	(359)	3.32	(0.31)
3218	2-9 55/64	(860)	1-4 9/64	(410)	3.79	(0.35)
3220	2-9 55/64	(860)	1-6 9/64	(461)	4.27	(0.40)
3222	2-9 55/64	(860)	1-8 9/64	(511)	4.74	(0.44)
3224	2-9 55/64	(860)	1-10 9/64	(562)	5.21	(0.48)
3226	2-9 55/64	(860)	2-0 9/64	(613)	5.68	(0.53)
3228	E 2-9 55/64	(860)	2-2 9/64	(664)	6.15	(0.57)
3230	E 2-9 55/64	(860)	2-4 9/64	(715)	6.62	(0.61)
3232	E 2-9 55/64	(860)	2-6 9/64	(765)	7.09	(0.66)
3234	E 2-9 55/64	(860)	2-8 9/64	(816)	7.56	(0.70)
3236	E 2-9 55/64	(860)	2-10 9/64	(867)	8.03	(0.75)
3240	E 2-9 55/64	(860)	3-2 9/64	(969)	8.97	(0.83)
3242	E 2-9 55/64	(860)	3-4 9/64	(1019)	9.44	(0.88)
3612	3-1 55/64	(962)	0-10 9/64	(257)	2.67	(0.25)
3614	3-1 55/64	(962)	1-0 9/64	(308)	3.19	(0.30)
3616	3-1 55/64	(962)	1-2 9/64	(359)	3.72	(0.35)
3618	3-1 55/64	(962)	1-4 9/64	(410)	4.24	(0.39)
3620	3-1 55/64	(962)	1-6 9/64	(461)	4.77	(0.44)
3622	3-1 55/64	(962)	1-8 9/64	(511)	5.30	(0.49)
3624	3-1 55/64	(962)	1-10 9/64	(562)	5.82	(0.54)
3626	E 3-1 55/64	(962)	2-0 9/64	(613)	6.35	(0.59)
3628	E 3-1 55/64	(962)	2-2 9/64	(664)	6.87	(0.64)
3630	E 3-1 55/64	(962)	2-4 9/64	(715)	7.40	(0.69)
3632	E 3-1 55/64	(962)	2-6 9/64	(765)	7.92	(0.74)
3634	E 3-1 55/64	(962)	2-8 9/64	(816)	8.45	(0.79)
3636	E 3-1 55/64	(962)	2-10 9/64	(867)	8.98	(0.83)
3640	E 3-1 55/64	(962)	3-2 9/64	(969)	10.03	(0.93)
3642	E 3-1 55/64	(962)	3-4 9/64	(1019)	10.55	(0.98)
4012	3-5 55/64	(1063)	0-10 9/64	(257)	2.95	(0.27)
4014	3-5 55/64	(1063)	1-0 9/64	(308)	3.53	(0.33)
4016	3-5 55/64	(1063)	1-2 9/64	(359)	4.11	(0.38)
4018	3-5 55/64	(1063)	1-4 9/64	(410)	4.69	(0.44)
4020	3-5 55/64	(1063)	1-6 9/64	(461)	5.27	(0.49)
4022	3-5 55/64	(1063)	1-8 9/64	(511)	5.85	(0.54)
4024	3-5 55/64	(1063)	1-10 9/64	(562)	6.44	(0.60)
4026	E 3-5 55/64	(1063)	2-0 9/64	(613)	7.02	(0.65)
4028	E 3-5 55/64	(1063)	2-2 9/64	(664)	7.60	(0.71)
4030	E 3-5 55/64	(1063)	2-4 9/64	(715)	8.18	(0.76)
4032	E 3-5 55/64	(1063)	2-6 9/64	(765)	8.76	(0.81)
4034	E 3-5 55/64	(1063)	2-8 9/64	(816)	9.34	(0.87)
4036	E 3-5 55/64	(1063)	2-10 9/64	(867)	9.92	(0.92)

NOTE: Refer to Product Performance Chapter for International Building Code. Net Clear Opening drawings are pictured with the conversion tables.

Egress and Vent Openings: High Performance Sill Liner

CN	Opening Width		Opening Height HP Sill Liner		Egress Opening		CN	Opening Width		Opening Height HP Sill Liner		Egress Opening	
	ft - in	mm	ft - in	mm	ft ²	m ²		ft - in	mm	ft - in	mm	ft ²	m ²
1612	1-5 55/64	(454)	0-9 17/64	(235)	1.15	(0.11)	2612	2-3 55/64	(708)	0-9 17/64	(235)	1.79	(0.17)
1614	1-5 55/64	(454)	0-11 17/64	(286)	1.40	(0.13)	2614	2-3 55/64	(708)	0-11 17/64	(286)	2.18	(0.20)
1616	1-5 55/64	(454)	1-1 17/64	(337)	1.65	(0.15)	2616	2-3 55/64	(708)	1-1 17/64	(337)	2.57	(0.24)
1618	1-5 55/64	(454)	1-3 17/64	(388)	1.89	(0.18)	2618	2-3 55/64	(708)	1-3 17/64	(388)	2.95	(0.27)
1620	1-5 55/64	(454)	1-5 17/64	(438)	2.14	(0.20)	2620	2-3 55/64	(708)	1-5 17/64	(438)	3.34	(0.31)
1622	1-5 55/64	(454)	1-7 17/64	(489)	2.39	(0.22)	2622	2-3 55/64	(708)	1-7 17/64	(489)	3.73	(0.35)
1624	1-5 55/64	(454)	1-9 17/64	(540)	2.64	(0.25)	2624	2-3 55/64	(708)	1-9 17/64	(540)	4.11	(0.38)
1626	1-5 55/64	(454)	1-11 17/64	(591)	2.89	(0.27)	2626	2-3 55/64	(708)	1-11 17/64	(591)	4.50	(0.42)
1628	1-5 55/64	(454)	2-1 17/64	(642)	3.13	(0.29)	2628	2-3 55/64	(708)	2-1 17/64	(642)	4.89	(0.45)
1630	1-5 55/64	(454)	2-3 17/64	(692)	3.38	(0.31)	2630	2-3 55/64	(708)	2-3 17/64	(692)	5.28	(0.49)
1632	1-5 55/64	(454)	2-5 17/64	(743)	3.63	(0.34)	2632	2-3 55/64	(708)	2-5 17/64	(743)	5.66	(0.53)
1634	1-5 55/64	(454)	2-7 17/64	(794)	3.88	(0.36)	2634 E	2-3 55/64	(708)	2-7 17/64	(794)	6.05	(0.56)
1636	1-5 55/64	(454)	2-9 17/64	(845)	4.13	(0.38)	2636 E	2-3 55/64	(708)	2-9 17/64	(845)	6.44	(0.60)
1640	1-5 55/64	(454)	3-1 17/64	(946)	4.62	(0.43)	2640 E	2-3 55/64	(708)	3-1 17/64	(946)	7.21	(0.67)
1642	1-5 55/64	(454)	3-3 17/64	(997)	4.87	(0.45)	2642 E	2-3 55/64	(708)	3-3 17/64	(997)	7.60	(0.71)
2012	1-9 55/64	(555)	0-9 17/64	(235)	1.41	(0.13)	2812	2-5 55/64	(759)	0-9 17/64	(235)	1.92	(0.18)
2014	1-9 55/64	(555)	0-11 17/64	(286)	1.71	(0.16)	2814	2-5 55/64	(759)	0-11 17/64	(286)	2.34	(0.22)
2016	1-9 55/64	(555)	1-1 17/64	(337)	2.01	(0.19)	2816	2-5 55/64	(759)	1-1 17/64	(337)	2.75	(0.26)
2018	1-9 55/64	(555)	1-3 17/64	(388)	2.32	(0.22)	2818	2-5 55/64	(759)	1-3 17/64	(388)	3.17	(0.29)
2020	1-9 55/64	(555)	1-5 17/64	(438)	2.62	(0.24)	2820	2-5 55/64	(759)	1-5 17/64	(438)	3.58	(0.33)
2022	1-9 55/64	(555)	1-7 17/64	(489)	2.92	(0.27)	2822	2-5 55/64	(759)	1-7 17/64	(489)	3.99	(0.37)
2024	1-9 55/64	(555)	1-9 17/64	(540)	3.23	(0.30)	2824	2-5 55/64	(759)	1-9 17/64	(540)	4.41	(0.41)
2026	1-9 55/64	(555)	1-11 17/64	(591)	3.53	(0.33)	2826	2-5 55/64	(759)	1-11 17/64	(591)	4.82	(0.45)
2028	1-9 55/64	(555)	2-1 17/64	(642)	3.84	(0.36)	2828	2-5 55/64	(759)	2-1 17/64	(642)	5.24	(0.49)
2030	1-9 55/64	(555)	2-3 17/64	(692)	4.14	(0.38)	2830	2-5 55/64	(759)	2-3 17/64	(692)	5.65	(0.53)
2032	1-9 55/64	(555)	2-5 17/64	(743)	4.44	(0.41)	2832 E	2-5 55/64	(759)	2-5 17/64	(743)	6.07	(0.56)
2034	1-9 55/64	(555)	2-7 17/64	(794)	4.75	(0.44)	2834 E	2-5 55/64	(759)	2-7 17/64	(794)	6.48	(0.60)
2036	1-9 55/64	(555)	2-9 17/64	(845)	5.05	(0.47)	2836 E	2-5 55/64	(759)	2-9 17/64	(845)	6.90	(0.64)
2040	1-9 55/64	(555)	3-1 17/64	(946)	5.66	(0.53)	2840 E	2-5 55/64	(759)	3-1 17/64	(946)	7.73	(0.72)
2042 E	1-9 55/64	(555)	3-3 17/64	(997)	5.96	(0.55)	2842 E	2-5 55/64	(759)	3-3 17/64	(997)	8.14	(0.76)
2412	2-1 55/64	(657)	0-9 17/64	(235)	1.66	(0.15)	3012	2-7 55/64	(809)	0-9 17/64	(235)	2.05	(0.19)
2414	2-1 55/64	(657)	0-11 17/64	(286)	2.02	(0.19)	3014	2-7 55/64	(809)	0-11 17/64	(286)	2.49	(0.23)
2416	2-1 55/64	(657)	1-1 17/64	(337)	2.38	(0.22)	3016	2-7 55/64	(809)	1-1 17/64	(337)	2.93	(0.27)
2418	2-1 55/64	(657)	1-3 17/64	(388)	2.74	(0.25)	3018	2-7 55/64	(809)	1-3 17/64	(388)	3.38	(0.31)
2420	2-1 55/64	(657)	1-5 17/64	(438)	3.10	(0.29)	3020	2-7 55/64	(809)	1-5 17/64	(438)	3.82	(0.35)
2422	2-1 55/64	(657)	1-7 17/64	(489)	3.46	(0.32)	3022	2-7 55/64	(809)	1-7 17/64	(489)	4.26	(0.40)
2424	2-1 55/64	(657)	1-9 17/64	(540)	3.82	(0.35)	3024	2-7 55/64	(809)	1-9 17/64	(540)	4.70	(0.44)
2426	2-1 55/64	(657)	1-11 17/64	(591)	4.18	(0.39)	3026	2-7 55/64	(809)	1-11 17/64	(591)	5.15	(0.48)
2428	2-1 55/64	(657)	2-1 17/64	(642)	4.54	(0.42)	3028	2-7 55/64	(809)	2-1 17/64	(642)	5.59	(0.52)
2430	2-1 55/64	(657)	2-3 17/64	(692)	4.90	(0.45)	3030 E	2-7 55/64	(809)	2-3 17/64	(692)	6.03	(0.56)
2432	2-1 55/64	(657)	2-5 17/64	(743)	5.26	(0.49)	3032 E	2-7 55/64	(809)	2-5 17/64	(743)	6.48	(0.60)
2434	2-1 55/64	(657)	2-7 17/64	(794)	5.62	(0.52)	3034 E	2-7 55/64	(809)	2-7 17/64	(794)	6.92	(0.64)
2436 E	2-1 55/64	(657)	2-9 17/64	(845)	5.97	(0.56)	3036 E	2-7 55/64	(809)	2-9 17/64	(845)	7.36	(0.68)
2440 E	2-1 55/64	(657)	3-1 17/64	(946)	6.69	(0.62)	3040 E	2-7 55/64	(809)	3-1 17/64	(946)	8.25	(0.77)
2442 E	2-1 55/64	(657)	3-3 17/64	(997)	7.05	(0.66)	3042 E	2-7 55/64	(809)	3-3 17/64	(997)	8.69	(0.81)

NOTE: Refer to Product Performance Chapter for International Building Code. Net Clear Opening drawings are pictured with the conversion tables.

Egress and Vent Openings: High Performance Sill Liner

CN	Opening Width		Opening Height HP Sill Liner		Egress Opening	
	ft - in	mm	ft - in	mm	ft ²	m ²
3212	2-9 55/64	(860)	0-9 17/64	(235)	2.18	(0.20)
3214	2-9 55/64	(860)	0-11 17/64	(286)	2.65	(0.25)
3216	2-9 55/64	(860)	1-1 17/64	(337)	3.12	(0.29)
3218	2-9 55/64	(860)	1-3 17/64	(388)	3.59	(0.33)
3220	2-9 55/64	(860)	1-5 17/64	(438)	4.06	(0.38)
3222	2-9 55/64	(860)	1-7 17/64	(489)	4.53	(0.42)
3224	2-9 55/64	(860)	1-9 17/64	(540)	5.00	(0.46)
3226	2-9 55/64	(860)	1-11 17/64	(591)	5.47	(0.51)
3228 E	2-9 55/64	(860)	2-1 17/64	(642)	5.94	(0.55)
3230 E	2-9 55/64	(860)	2-3 17/64	(692)	6.41	(0.60)
3232 E	2-9 55/64	(860)	2-5 17/64	(743)	6.88	(0.64)
3234 E	2-9 55/64	(860)	2-7 17/64	(794)	7.35	(0.68)
3236 E	2-9 55/64	(860)	2-9 17/64	(845)	7.82	(0.73)
3240 E	2-9 55/64	(860)	3-1 17/64	(946)	8.76	(0.81)
3242 E	2-9 55/64	(860)	3-3 17/64	(997)	9.23	(0.86)
3612	3-1 55/64	(962)	0-9 17/64	(235)	2.44	(0.23)
3614	3-1 55/64	(962)	0-11 17/64	(286)	2.96	(0.28)
3616	3-1 55/64	(962)	1-1 17/64	(337)	3.49	(0.32)
3618	3-1 55/64	(962)	1-3 17/64	(388)	4.01	(0.37)
3620	3-1 55/64	(962)	1-5 17/64	(438)	4.54	(0.42)
3622	3-1 55/64	(962)	1-7 17/64	(489)	5.06	(0.47)
3624	3-1 55/64	(962)	1-9 17/64	(540)	5.59	(0.52)
3626	3-1 55/64	(962)	1-11 17/64	(591)	6.12	(0.57)
3628 E	3-1 55/64	(962)	2-1 17/64	(642)	6.64	(0.62)
3630 E	3-1 55/64	(962)	2-3 17/64	(692)	7.17	(0.67)
3632 E	3-1 55/64	(962)	2-5 17/64	(743)	7.69	(0.71)
3634 E	3-1 55/64	(962)	2-7 17/64	(794)	8.22	(0.76)
3636 E	3-1 55/64	(962)	2-9 17/64	(845)	8.75	(0.81)
3640 E	3-1 55/64	(962)	3-1 17/64	(946)	9.80	(0.91)
3642 E	3-1 55/64	(962)	3-3 17/64	(997)	10.32	(0.96)
4012	3-5 55/64	(1063)	0-9 17/64	(235)	2.69	(0.25)
4014	3-5 55/64	(1063)	0-11 17/64	(286)	3.27	(0.30)
4016	3-5 55/64	(1063)	1-1 17/64	(337)	3.86	(0.36)
4018	3-5 55/64	(1063)	1-3 17/64	(388)	4.44	(0.41)
4020	3-5 55/64	(1063)	1-5 17/64	(438)	5.02	(0.47)
4022	3-5 55/64	(1063)	1-7 17/64	(489)	5.60	(0.52)
4024	3-5 55/64	(1063)	1-9 17/64	(540)	6.18	(0.57)
4026	3-5 55/64	(1063)	1-11 17/64	(591)	6.76	(0.63)
4028 E	3-5 55/64	(1063)	2-1 17/64	(642)	7.34	(0.68)
4030 E	3-5 55/64	(1063)	2-3 17/64	(692)	7.93	(0.74)
4032 E	3-5 55/64	(1063)	2-5 17/64	(743)	8.51	(0.79)
4034 E	3-5 55/64	(1063)	2-7 17/64	(794)	9.09	(0.84)
4036 E	3-5 55/64	(1063)	2-9 17/64	(845)	9.67	(0.90)

NOTE: Refer to Product Performance Chapter for International Building Code. Net Clear Opening drawings are pictured with the conversion tables.

Daylight Measurements: Double Hung

Ultimate Wood Double Hung Daylight Measurements			Width										
			CN	16		20		24		26		28	
			DLO	1-2 15/16	(379)	1-6 15/16	(481)	1-10 15/16	(583)	2-0 15/16	(633)	2-2 15/16	(684)
CN	DLO Height		Square Feet (Square Meters)										
12	0-10 15/16	(278)	1.13	(0.11)	1.44	(0.13)	1.74	(0.16)	1.89	(0.18)	2.05	(0.19)	
14	1-0 15/16	(329)	1.34	(0.12)	1.70	(0.16)	2.06	(0.19)	2.24	(0.21)	2.42	(0.22)	
16	1-2 15/16	(379)	1.55	(0.14)	1.96	(0.18)	2.38	(0.22)	2.59	(0.24)	2.79	(0.26)	
18	1-4 15/16	(430)	1.76	(0.16)	2.23	(0.21)	2.70	(0.25)	2.93	(0.27)	3.17	(0.29)	
20	1-6 15/16	(481)	1.96	(0.18)	2.49	(0.23)	3.02	(0.28)	3.28	(0.30)	3.54	(0.33)	
22	1-8 15/16	(532)	2.17	(0.20)	2.75	(0.26)	3.33	(0.31)	3.63	(0.34)	3.92	(0.36)	
24	1-10 15/16	(583)	2.38	(0.22)	3.02	(0.28)	3.65	(0.34)	3.97	(0.37)	4.29	(0.40)	
26	2-0 15/16	(633)	2.59	(0.24)	3.28	(0.30)	3.97	(0.37)	4.32	(0.40)	4.66	(0.43)	
28	2-2 15/16	(684)	2.79	(0.26)	3.54	(0.33)	4.29	(0.40)	4.66	(0.43)	5.04	(0.47)	
30	2-4 15/16	(735)	3.00	(0.28)	3.81	(0.35)	4.61	(0.43)	5.01	(0.47)	5.41	(0.50)	
32	2-6 15/16	(786)	3.21	(0.30)	4.07	(0.38)	4.93	(0.46)	5.36	(0.50)	5.79	(0.54)	
34	2-8 15/16	(837)	3.42	(0.32)	4.33	(0.40)	5.25	(0.49)	5.70	(0.53)	6.16	(0.57)	
36	2-10 15/16	(887)	3.62	(0.34)	4.59	(0.43)	5.57	(0.52)	6.05	(0.56)	6.54	(0.61)	
40	3-2 15/16	(989)	4.04	(0.38)	5.12	(0.48)	6.20	(0.58)	6.74	(0.63)	7.28	(0.68)	
42	3-4 15/16	(1040)	4.25	(0.39)	5.38	(0.50)	6.52	(0.61)	7.09	(0.66)	7.66	(0.71)	

Ultimate Wood Double Hung Daylight Measurements			Width								
			CN	30		32		36		40	
			DLO	2-4 15/16	(735)	2-6 15/16	(786)	2-10 15/16	(887)	3-2 15/16	(989)
CN	DLO Height		Square Feet (Square Meters)								
12	0-10 15/16	(278)	2.20	(0.20)	2.35	(0.22)	2.65	(0.25)	2.96	(0.27)	
14	1-0 15/16	(329)	2.60	(0.24)	2.78	(0.26)	3.14	(0.29)	3.50	(0.32)	
16	1-2 15/16	(379)	3.00	(0.28)	3.21	(0.30)	3.62	(0.34)	4.04	(0.38)	
18	1-4 15/16	(430)	3.40	(0.32)	3.64	(0.34)	4.11	(0.38)	4.58	(0.43)	
20	1-6 15/16	(481)	3.81	(0.35)	4.07	(0.38)	4.59	(0.43)	5.12	(0.48)	
22	1-8 15/16	(532)	4.21	(0.39)	4.50	(0.42)	5.08	(0.47)	5.66	(0.53)	
24	1-10 15/16	(583)	4.61	(0.43)	4.93	(0.46)	5.56	(0.52)	6.20	(0.58)	
26	2-0 15/16	(633)	5.01	(0.47)	5.36	(0.50)	6.05	(0.56)	6.74	(0.63)	
28	2-2 15/16	(684)	5.41	(0.50)	5.79	(0.54)	6.54	(0.61)	7.28	(0.68)	
30	2-4 15/16	(735)	5.81	(0.54)	6.22	(0.58)	7.02	(0.65)	7.82	(0.73)	
32	2-6 15/16	(786)	6.22	(0.58)	6.65	(0.62)	7.51	(0.70)	8.37	(0.78)	
34	2-8 15/16	(837)	6.62	(0.61)	7.08	(0.66)	7.99	(0.74)	8.91	(0.83)	
36	2-10 15/16	(887)	7.02	(0.65)	7.51	(0.70)	8.48	(0.79)	9.45	(0.88)	
40	3-2 15/16	(989)	7.82	(0.73)	8.37	(0.78)	9.45	(0.88)	N/A		
42	3-4 15/16	(1040)	8.23	(0.76)	8.79	(0.82)	9.93	(0.92)	N/A		

NOTE: Daylight Opening square footage values are "per sash."

Daylight Measurements: Transom and Pictures

Ultimate Wood Double Hung Transom Daylight Measurements			Width						
			CN	16		20		24	
			DLO	1-2 15/16 (379)		1-6 15/16 (481)		1-10 15/16 (583)	
CN	DLO Height		Square Feet (Square Meters)						
12	0-10 15/16 (278)		1.13 (0.11)		1.44 (0.13)		1.74 (0.16)		
20	1-6 15/16 (481)		1.96 (0.18)		2.49 (0.23)		3.02 (0.28)		

Ultimate Wood Double Double Hung Transom Daylight Measurements			Width						
			CN	26		28		30	
			DLO	2-0 15/16 (633)		2-2 15/16 (684)		2-4 15/16 (735)	
CN	DLO Height		Square Feet (Square Meters)						
12	0-10 15/16 (278)		1.89 (0.18)		2.05 (0.19)		2.20 (0.20)		
20	1-6 15/16 (481)		3.28 (0.30)		3.54 (0.33)		3.81 (0.35)		

Ultimate Wood Double Double Hung Transom Daylight Measurements			Width						
			CN	32		36		40	
			DLO	2-6 15/16 (786)		2-10 15/16 (887)		3-2 15/16 (989)	
CN	DLO Height		Square Feet (Square Meters)						
12	0-10 15/16 (278)		2.35 (0.22)		2.65 (0.25)		2.96 (0.27)		
20	1-6 15/16 (481)		4.07 (0.38)		4.59 (0.43)		5.12 (0.48)		

Ultimate Wood Double Hung Picture Daylight Measurements			Width											
			CN	40		48		52		60		68		
			DLO	2-10 15/16 (887)		3-6 15/16 (1091)		3-10 15/16 (1192)		4-6 15/16 (1395)		5-2 15/16 (1599)		
CN	DLO Height		Square Feet (Square Meters)											
38	2-8 1/4 (819)		7.82 (0.73)		9.62 (0.89)		10.51 (0.98)		12.30 (1.14)		14.10 (1.31)			
42	3-0 1/4 (921)		8.80 (0.82)		10.81 (1.00)		11.82 (1.10)		13.83 (1.28)		15.84 (1.47)			
46	3-4 1/4 (1022)		9.77 (0.91)		12.00 (1.12)		13.12 (1.22)		15.36 (1.43)		17.59 (1.63)			
50	3-8 1/4 (1124)		10.74 (1.00)		13.19 (1.23)		14.42 (1.34)		16.88 (1.57)		19.34 (1.80)			
54	4-0 1/4 (1226)		11.71 (1.09)		14.39 (1.34)		15.73 (1.46)		18.41 (1.71)		21.09 (1.96)			
58	4-4 1/4 (1327)		12.68 (1.18)		15.58 (1.45)		17.03 (1.58)		19.93 (1.85)		22.84 (2.12)			
62	4-8 1/4 (1429)		13.65 (1.27)		16.77 (1.56)		18.34 (1.70)		21.46 (1.99)		24.59 (2.28)			
66	5-0 1/4 (1530)		14.62 (1.36)		17.97 (1.67)		19.64 (1.82)		22.99 (2.14)		26.33 (2.45)			
70	5-4 1/4 (1632)		15.59 (1.45)		19.16 (1.78)		20.94 (1.95)		24.51 (2.28)		28.08 (2.61)			
74	5-8 1/4 (1734)		16.56 (1.54)		20.35 (1.89)		22.25 (2.07)		26.04 (2.42)		29.83 (2.77)			
78	6-0 1/4 (1835)		17.53 (1.63)		21.54 (2.00)		23.55 (2.19)		27.56 (2.56)		31.58 (2.93)			
86	6-8 1/4 (2038)		19.47 (1.81)		23.93 (2.22)		26.16 (2.43)		30.62 (2.84)		35.07 (3.26)			
90	7-0 1/4 (2140)		20.44 (1.90)		25.12 (2.33)		27.46 (2.55)		32.14 (2.99)		36.82 (3.42)			

Minimum and Maximum Guidelines: Double Hung Units

Minimum and Maximum Guidelines											
Unit Type		Min Frame Size				Max Frame Size				Max Glass Size	
		Width		Height		Width		Height			
		in	mm	in	mm	in	mm	in	mm	Sq. Feet	Sq. Meters
UWDH	11/16" (18) IG	13 3/8	(340)	25	(635)	45 3/8	(1153)	97	(2464)	11	1.022
UWDH	7/8" (22) Tripane	13 3/8	(340)	25	(635)	45 3/8	(1153)	97	(2464)	7	0.650
UWDHTR	11/16" (18) IG	13 3/8	(340)	13 3/8	(340)	104	(2642)	59 1/2	(1511)	25	2.323
UWDHP	1" (25) IG	13 3/8	(340)	15 9/16	(395)	120	(3048)	120	(3048)	49	4.552

NOTE: Maximum Interior Shade width 72" (1829) and Maximum Interior Shade height 113" (2870)

Minimum and Maximum for CE Mark - UWDH Operable, Transom and Picture									
Unit Type		Min Frame Size Unit				Max Frame Size Unit			
		Width		Height		Width		Height	
		in	mm	in	mm	in	mm	in	mm
UWDH	11/16" (8) or 7/8" (22) IG	13 3/8	(340)	25	(635)	45 3/8	(1153)	81	(2057)
UWDHTR	11/16" (8) or 7/8" (22) IG	13 3/8	(340)	13 3/8	(340)	79 3/8	(2016)	27 11/16	(703)
UWDHP	11/16" (8) IG	13 3/8	(340)	15 9/16	(395)	61 3/8	(1559)	57	(1448)
UWDHP	1" (25) IG	13 3/8	(340)	15 9/16	(395)	61 3/8	(1559)	105	(2667)

Certified Sizes and Ratings: Double Hung 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
UWDH 3036	1.57	6	60	LC-PG40-H	40	35 3/8	(899)	81	(2057)
UWDH 3644	1.57	6	60	LC-PG40-H	40	41 3/8	(1051)	97	(2464)
UWDH HP3644	1.57	8.25	60	LC-PG40-H	40	41 3/8	(1051)	97	(2464)
UWDH 4026	1.57	6	60	LC-PG40-H	40	45 3/8	(1153)	61	(1549)
UWDH 4036	1.57	6	45	LC-PG40-H	40	45 3/8	(1153)	81	(2057)
UWDHHP 4036	1.57	8.25	60	LC-PG40-H	40	45 3/8	(1153)	81	(2057)
UWDHHP 2830	1.57	7.5	75	LC-PG50-H	50	33 3/8	(848)	69	(1753)

NOTE: For CE ratings, please refer to CE Performance Section.

IZ3 - Minimum and Maximum Guidelines, Certified Sizes and Ratings

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
UWDHIZ3 3234	1.57	8.25	82.5	LC-PG55-H	+55/-65	37 3/8	(949)	77	(1956)
UWDHIZ3 4026	1.57	8.25	82.5	LC-PG55-H	+55/-65	45 3/8	(1153)	61	(1549)
UWDHPIZ3	1.57	8.25	82.5	CW-PG55-FW	+55/-65	60	(1524)	106 15/16	(2716)

NOTE: Maximum Interior Shade width 72" (1829) and Maximum Interior Shade height 113" (2870)

Impact Zone 3 - Minimum and Maximum Guidelines, Certified Sizes and Ratings

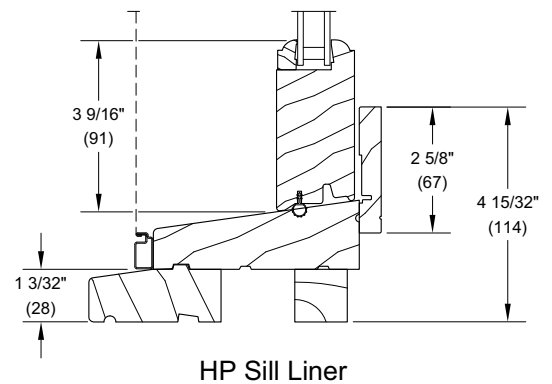
Impact Glazing Zone 3 (IZ3):

Frame:

- Sealant added at sill liner
- Sill brackets added for bottom sash retention
- Screws through the jamb liner to reinforce the frame

Sash:

- Top check rail has different profile for interlock
- Bottom check rail has profile for interlock
- Painted stainless steel stamped interlock for top sash for sash retention
- Mil finish stainless steel stamped interlock for bottom sash retention
- End plate with over molded stainless steel tilt latch blade
- Long cladding clip screws through it at check rail to reinforce stiles
- Stainless steel tilt pins for sash retention
- Different check rail cladding connector profile for interlock
- Keeper insert to keep lock from disengaging during impact



Glazing:

- PVC tube in check rail to reinforce check rail and to protect tilt cord from sealant
- Backfilled with Dow 995 silicone sealant
- Interior glass used is laminated with a PVB inner layer
- Exterior glass is standard annealed. All CUDH operator sizes certified are OK with annealed glass. Optional tempered glass is available
- Simulated Divided Lites are available on IZ3 products
- Grilles Between the Glass are not available in IZ3 unit

NOTE: CE mark is not available on Impact units.

Measurement Conversions

Double Hung Operating Unit						
Unit Measurements		Width		Height		
From	To					
Rough Opening		in	mm		in	mm
OM of Frame	Rough Opening	+ 1	(25)		+ 1/2	(13)
Masonry Opening w/BMC	Rough Opening	-2 1/8	(54)		-1 1/16	(27)
Top Sash		in	mm		in	mm
OM of Frame	OM of Top Sash	-2 29/32	(74)	÷ 2	- 1 11/16	(43)
Bottom Sash		in	mm		in	mm
OM of Frame	OM of Bottom Sash	-2 29/32	(74)	÷ 2	+ 1/8	(03)
Glass		in	mm		in	mm
Daylight Opening	Glass	+ 1 1/16	(27)		+ 1 1/16	(27)
Screen		in	mm		in	mm
OM of Frame	OM of Screen	-1 1/2	(38)		-1 7/8	(48)
Daylight Opening	OM of Screen	+ 4 15/16	(125)	× 2	+ 9 9/32	(236)
Half Screen		in	mm		in	mm
OM of Frame	OM of Screen	-1 1/2	(38)	÷ 2	+1/4	(06)
Daylight Opening	OM of Screen	+ 4 15/16	(125)		+ 5 13/16	(148)
Combination		in	mm		in	mm
OM of Frame	OM of Combination	-1 1/2	(38)		-1 11/16	(43)
Daylight Opening	OM of Combination	+ 4 15/16	(125)	× 2	+ 9 7/16	(240)
Interior Shade		in	mm		in	mm
OM of Frame	Shade Surround	-1 15/32	(37)	× 4	-2 11/16	(68)

NOTE: The following formula will properly size a standard cottage style double hung:

Formula

1. Select the standard size double hung that will fit the rough opening
2. Add the top and the bottom glass heights together
3. Divide the total glass height by the ration of the top sash
4. Round to the nearest standard glass height
5. Subtract from the total glass height

Example

1. UWDH with a 2/5 - 3/5 cottage style. If the rough opening is 2'-6 3/8" x 4'-8 7/8" (RO for a UWDH 2424)
2. 24" + 24" = 48"
3. 48" divide by 2/5 (0.4) = 19 13/64 (20)
4. 48" - 20" = 28"

The top sash will be a 2420 and the bottom sash will be a 2428. The call number for the example is: UWDH 2420/28.

Measurement Conversions

Double Hung Transoms with Subsill					
Unit Measurements		Width		Height	
From	To				
Rough Opening		in	mm	in	mm
OM of Frame	Rough Opening	+ 1	(25)	+ 1/2	(13)
Masonry Opening w/BMC	Rough Opening	-2 1/8	(54)	-1 1/16	(27)
Sash		in	mm	in	mm
OM of Frame	OM of Sash	-2 29/32	(74)	-2 1/8	(54)
Daylight Opening	OM of Sash	+ 3 17/32	(90)	+ 4 11/32	(110)
Glass		in	mm	in	mm
Daylight Opening	Glass	+ 1 1/16	(27)	+ 1 1/16	(27)
Interior Shade		in	mm	in	mm
OM of Frame	Shade Surround	-1 15/32	(37)	-2 3/32	(53)

Double Hung Picture					
Unit Measurements		Width		Height	
From	To				
Rough Opening		in	mm	in	mm
OM of Frame	Rough Opening	+ 1	(25)	+ 1/2	(13)
Masonry Opening w/BMC	Rough Opening	-2 1/8	(54)	-1 1/16	(27)
Sash		in	mm	in	mm
OM of Frame	OM of Sash	-1 9/16	(40)	-3 3/32	(79)
Daylight Opening	OM of Sash	+ 4 7/8	(124)	+ 5 21/32	(144)
Glass		in	mm	in	mm
Daylight Opening	Glass	+ 1 1/16	(27)	+ 1 1/16	(27)
Interior Shade		in	mm	in	mm
OM of Frame	Shade Surround	-1 15/32	(37)	-2 11/16	(68)

Egress Formulas for Double Hung

Clear Opening:

- Clear Opening Width = Frame OM Width - 5 1/2" (140)

Units with Standard Sill Liner

- Clear Opening Height = (Frame OM Height* / 2) - 6 3/8" (162)

Units with High Performance Sill Liner

- Clear Opening Height = (Frame OM Height* / 2) - 7 1/4" (184)

*including subsill

Vent Opening

- Vent Opening Width = Jamb to Jamb Width
- Vent Opening Height = Top of sill liner to btm of btm sash fully opened
- Vent Width * Vent Height / 144

Clear Opening Width with Interior Shade:

- Clear Opening Width = Frame OM Width - 4 3/16" (107)

Clear Opening Height with Interior Shade:

- Units with Standard Sill Liner
 - Clear Opening Height = (Frame OM Height* / 2) - 6 1/16" (154)

Standard Unit Measurements: Double Hung

Standard Double Hung Unit Measurements								
Width								
CN	Masonry Opening		Rough Opening		Frame Size		Daylight Opening	
	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm
16	2-0 1/2	(622)	1-10 3/8	(568)	1-9 3/8	(543)	1-2 15/16	(379)
20	2-4 1/2	(724)	2-2 3/8	(670)	2-1 3/8	(645)	1-6 15/16	(481)
24	2-8 1/2	(826)	2-6 3/8	(772)	2-5 3/8	(746)	1-10 15/16	(583)
26	2-10 1/2	(876)	2-8 3/8	(822)	2-7 3/8	(797)	2-0 15/16	(633)
28	3-0 1/2	(927)	2-10 3/8	(873)	2-9 3/8	(848)	2-2 15/16	(684)
30	3-2 1/2	(978)	3-0 3/8	(924)	2-11 3/8	(899)	2-4 15/16	(735)
32	3-4 1/2	(1029)	3-2 3/8	(975)	3-1 3/8	(949)	2-6 15/16	(786)
36	3-8 1/2	(1130)	3-6 3/8	(1076)	3-5 3/8	(1051)	2-10 15/16	(887)
40	4-0 1/2	(1232)	3-10 3/8	(1178)	3-9 3/8	(1153)	3-2 15/16	(989)

Standard Double Hung Unit Measurements								
Height								
CN	Masonry Opening		Rough Opening		Frame Size (w/subsill)		Daylight Opening	
	ft - in	mm	ft - in	mm	ft-in	mm	ft - in	mm
12	2-10 9/16	(878)	2-9 1/2	(851)	2-9	(838)	0-10 15/16	(278)
14	3-2 9/16	(980)	3-1 1/2	(953)	3-1	(940)	1-0 15/16	(329)
16	3-6 9/16	(1081)	3-5 1/2	(1054)	3-5	(1041)	1-2 15/16	(379)
18	3-10 9/16	(1183)	3-9 1/2	(1156)	3-9	(1143)	1-4 15/16	(430)
20	4-2 9/16	(1284)	4-1 1/2	(1257)	4-1	(1245)	1-6 15/16	(481)
22	4-6 9/16	(1386)	4-5 1/2	(1359)	4-5	(1346)	1-8 15/16	(532)
24	4-10 9/16	(1488)	4-9 1/2	(1461)	4-9	(1448)	1-10 15/16	(583)
26	5-2 9/16	(1589)	5-1 1/2	(1562)	5-1	(1549)	2-0 15/16	(633)
28	5-6 9/16	(1691)	5-5 1/2	(1664)	5-5	(1651)	2-2 15/16	(684)
30	5-10 9/16	(1792)	5-9 1/2	(1765)	5-9	(1753)	2-4 15/16	(735)
32	6-2 9/16	(1894)	6-1 1/2	(1867)	6-1	(1854)	2-6 15/16	(786)
34	6-6 9/16	(1996)	6-5 1/2	(1969)	6-5	(1956)	2-8 15/16	(837)
36	6-10 9/16	(2097)	6-9 1/2	(2070)	6-9	(2057)	2-10 15/16	(887)
40	7-6 9/16	(2300)	7-5 1/2	(2273)	7-5	(2261)	3-2 15/16	(989)
42	7-10 9/16	(2402)	7-9 1/2	(2375)	7-9	(2362)	3-4 15/16	(1040)

Standard Unit Measurements: Transom/Picture

Standard Double Hung Transom Unit Measurements								
Width								
CN	Masonry Opening		Rough Opening		Frame Size		Daylight Opening	
	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm
16	2-0 1/2	(622)	1-10 3/8	(568)	1-9 3/8	(543)	1-2 15/16	(379)
20	2-4 1/2	(724)	2-2 3/8	(670)	2-1 3/8	(645)	1-6 15/16	(481)
24	2-8 1/2	(826)	2-6 3/8	(772)	2-5 3/8	(746)	1-10 15/16	(583)
26	2-10 1/2	(876)	2-8 3/8	(822)	2-7 3/8	(797)	2-0 15/16	(633)
28	3-0 1/2	(927)	2-10 3/8	(873)	2-9 3/8	(848)	2-2 15/16	(684)
30	3-2 1/2	(978)	3-0 3/8	(924)	2-11 3/8	(899)	2-4 15/16	(735)
32	3-4 1/2	(1029)	3-2 3/8	(975)	3-1 3/8	(949)	2-6 15/16	(786)
36	3-8 1/2	(1130)	3-6 3/8	(1076)	3-5 3/8	(1051)	2-10 15/16	(887)
40	4-0 1/2	(1232)	3-10 3/8	(1178)	3-9 3/8	(1153)	3-2 15/16	(989)

Standard Double Hung Transom Unit Measurements								
Height								
CN	Masonry Opening		Rough Opening		Frame Size (no subsill)		Daylight Opening	
	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm
12	1-6 15/16	(481)	1-5 7/8	(454)	1-5 3/8	(441)	0-10 15/16	(278)
20	2-2 15/16	(684)	2-1 7/8	(657)	2-1 3/8	(645)	1-6 15/16	(481)

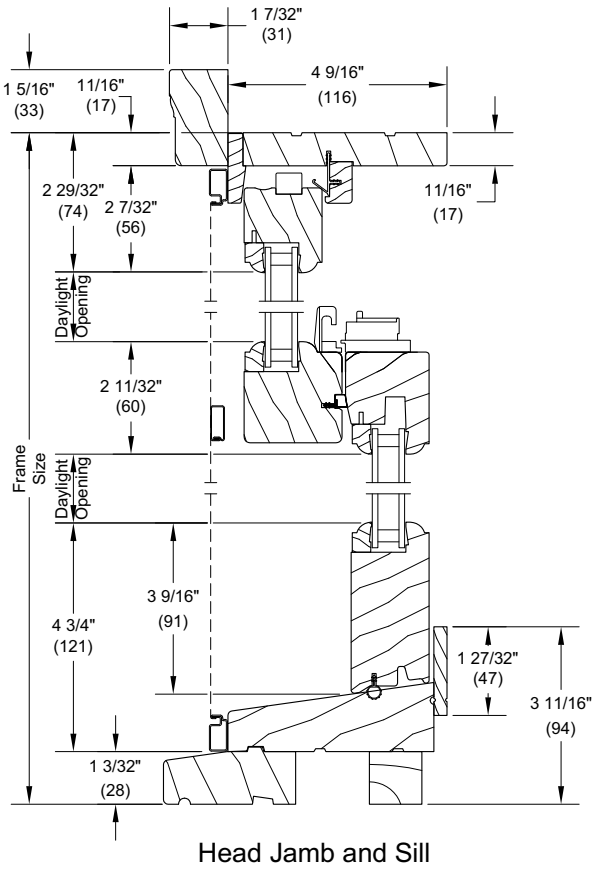
Standard Double Hung Picture Unit Measurements								
Width								
CN	Masonry Opening		Rough Opening		Frame Size		Daylight Opening	
	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm
40	3-8 1/2	(1130)	3-6 3/8	(1076)	3-5 3/8	(1051)	2-10 15/16	(887)
48	4-4 1/2	(1334)	4-2 3/8	(1280)	4-1 3/8	(1254)	3-6 15/16	(1091)
52	4-8 1/2	(1435)	4-6 3/8	(1381)	4-5 3/8	(1356)	3-10 15/16	(1192)
60	5-4 1/2	(1638)	5-2 3/8	(1584)	5-1 3/8	(1559)	4-6 15/16	(1395)
68	6-0 1/2	(1842)	5-10 3/8	(1788)	5-9 3/8	(1762)	5-2 15/16	(1599)

Standard Double Hung Picture Unit Measurements								
Height								
CN	Masonry Opening		Rough Opening		Frame Size (w/subsill)		Daylight Opening	
	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm
38	3-6 9/16	(1081)	3-5 1/2	(1054)	3-5	(1041)	2-8 1/4	(819)
42	3-10 9/16	(1183)	3-9 1/2	(1156)	3-9	(1143)	3-0 1/4	(921)
46	4-2 9/16	(1284)	4-1 1/2	(1257)	4-1	(1245)	3-4 1/4	(1022)
50	4-6 9/16	(1386)	4-5 1/2	(1359)	4-5	(1346)	3-8 1/4	(1124)
54	4-10 9/16	(1488)	4-9 1/2	(1461)	4-9	(1448)	4-0 1/4	(1226)
58	5-2 9/16	(1589)	5-1 1/2	(1562)	5-1	(1549)	4-4 1/4	(1327)
62	5-6 9/16	(1691)	5-5 1/2	(1664)	5-5	(1651)	4-8 1/4	(1429)
66	5-10 9/16	(1792)	5-9 1/2	(1765)	5-9	(1753)	5-0 1/4	(1530)
70	6-2 9/16	(1894)	6-1 1/2	(1867)	6-1	(1854)	5-4 1/4	(1632)
74	6-6 9/16	(1996)	6-5 1/2	(1969)	6-5	(1956)	5-8 1/4	(1734)
78	6-10 9/16	(2097)	6-9 1/2	(2070)	6-9	(2057)	6-0 1/4	(1835)
86	7-6 9/16	(2300)	7-5 1/2	(2273)	7-5	(2261)	6-8 1/4	(2038)
90	7-10 9/16	(2402)	7-9 1/2	(2375)	7-9	(2362)	7-0 1/4	(2140)

Section Details: Operating

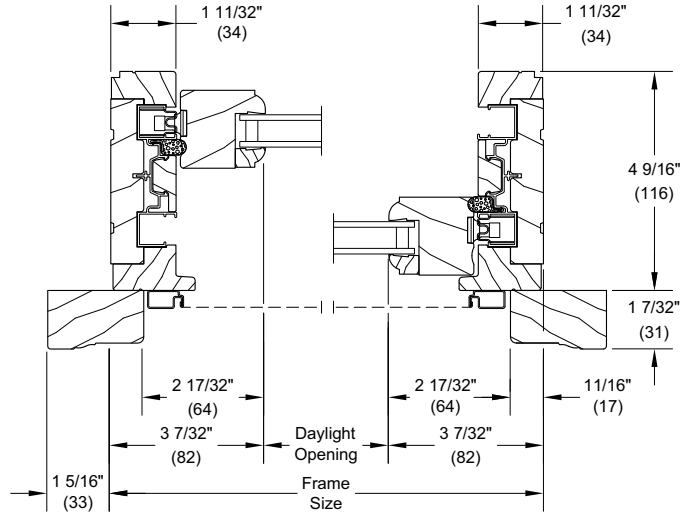
Scale: 3" = 1' 0"

Double Hung



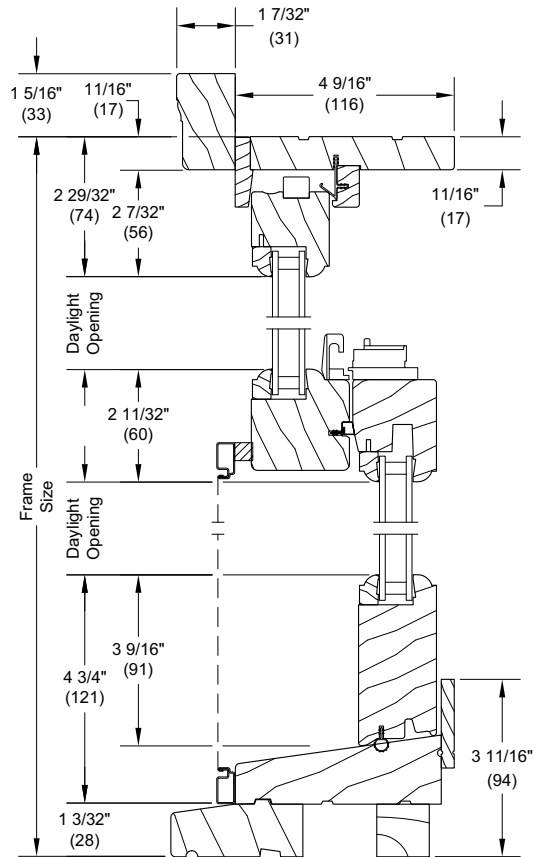
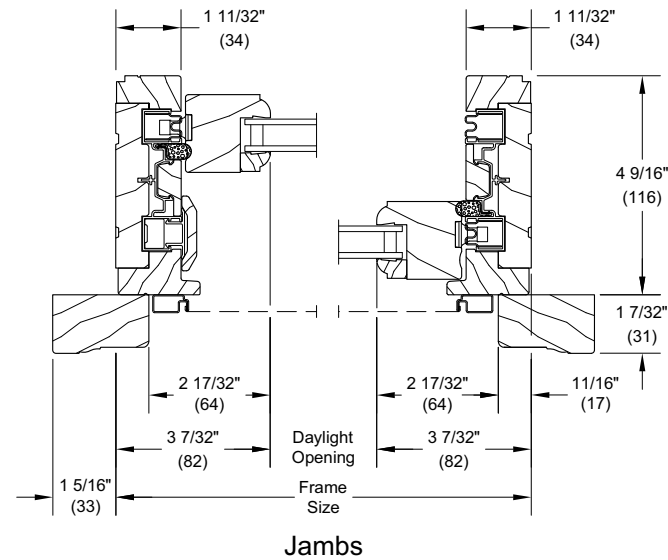
Lower Sash

Upper Sash



Jambs

Single Hung

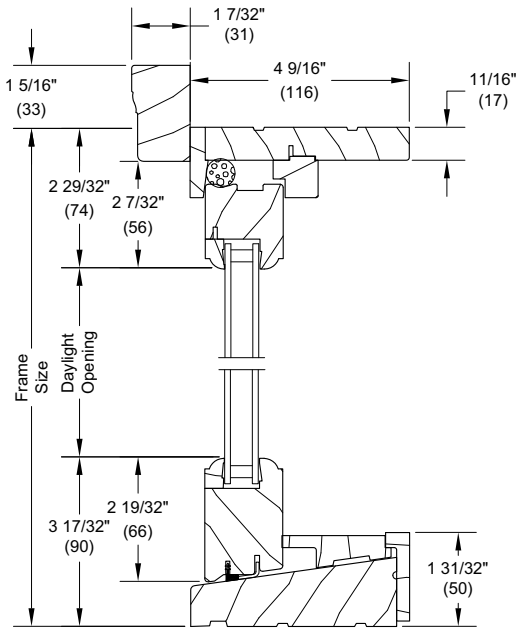


Head Jamb and Sill

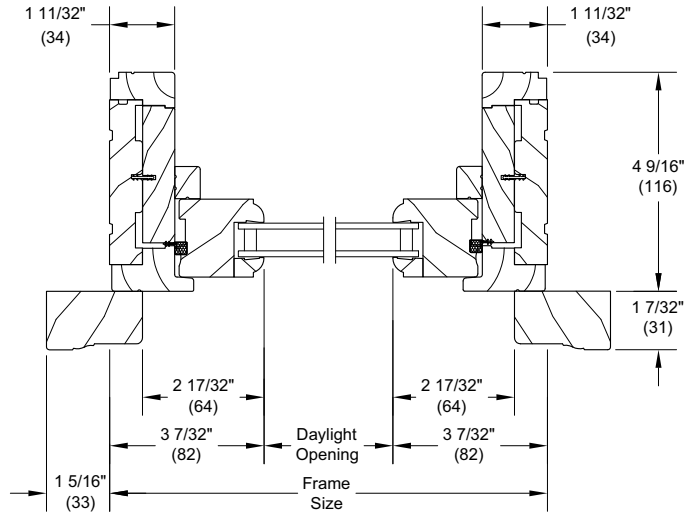
Section Details: 1 5/8" Transom/Picture

Scale: 3" = 1' 0"

1 5/8" Transom

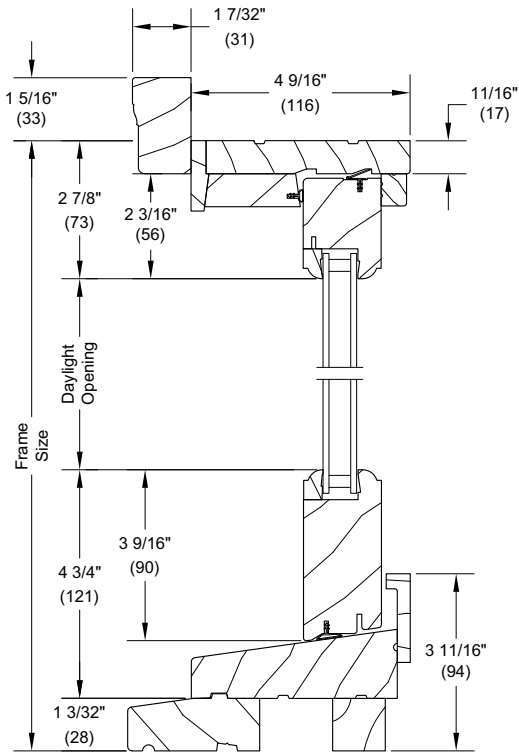


Head Jamb and Sill

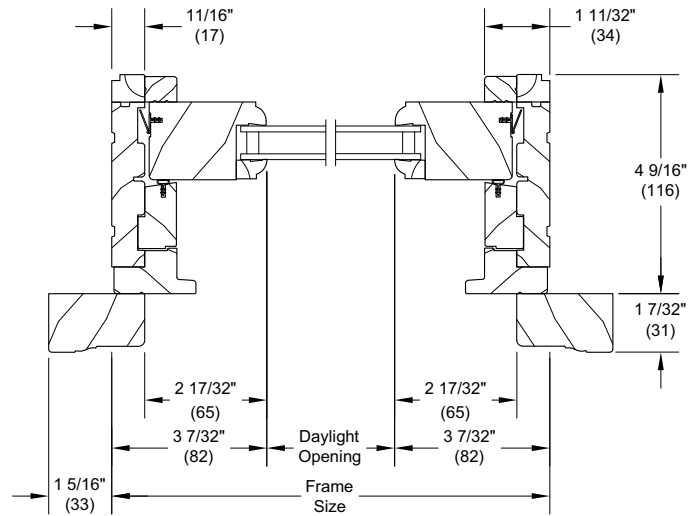


Jamb

1 5/8" Picture



Head Jamb and Sill

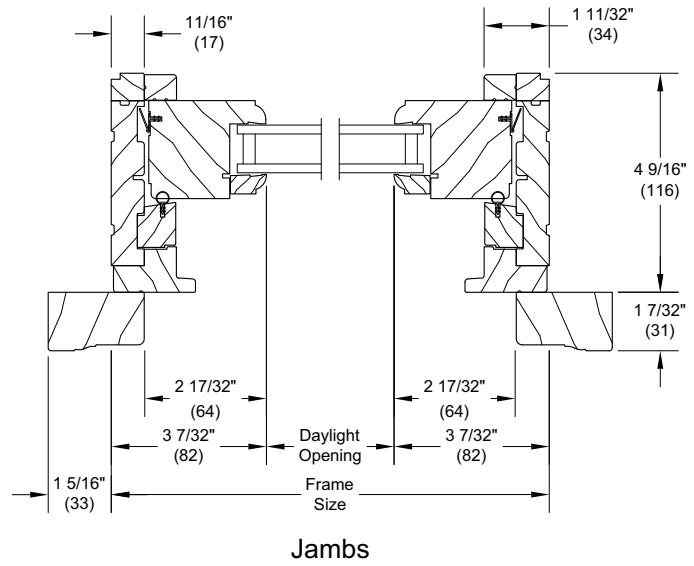
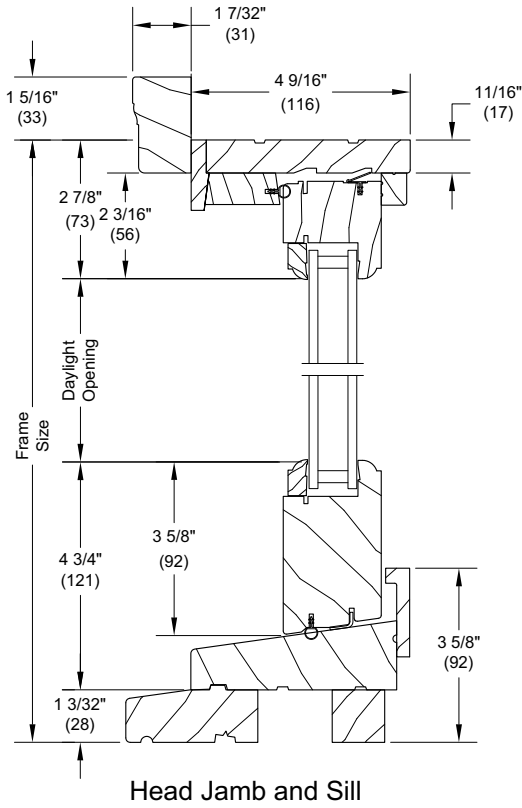


Jamb

Section Details: 2" Picture

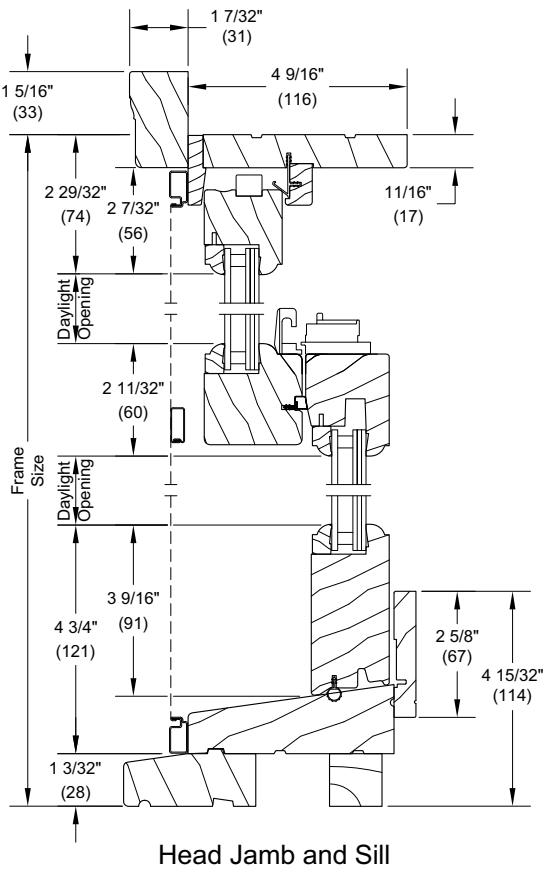
Scale: 3" = 1' 0"

2" Picture

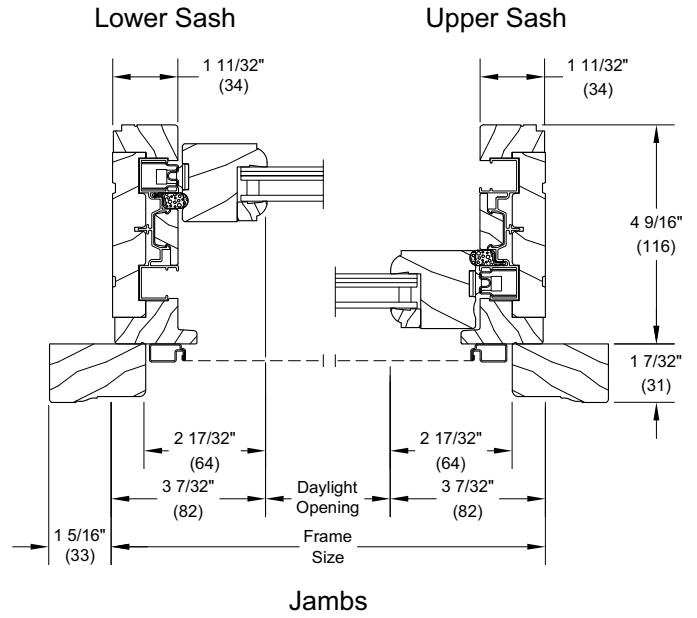


Section Details: Operating IZ3

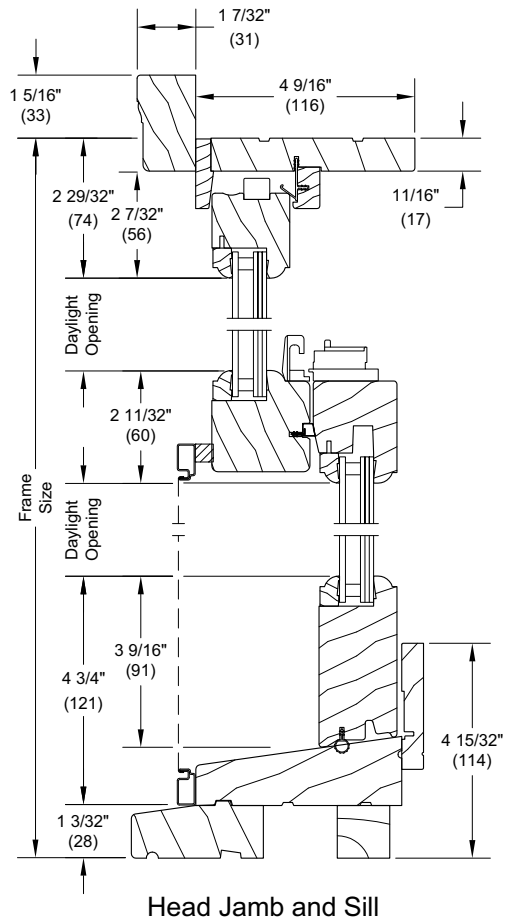
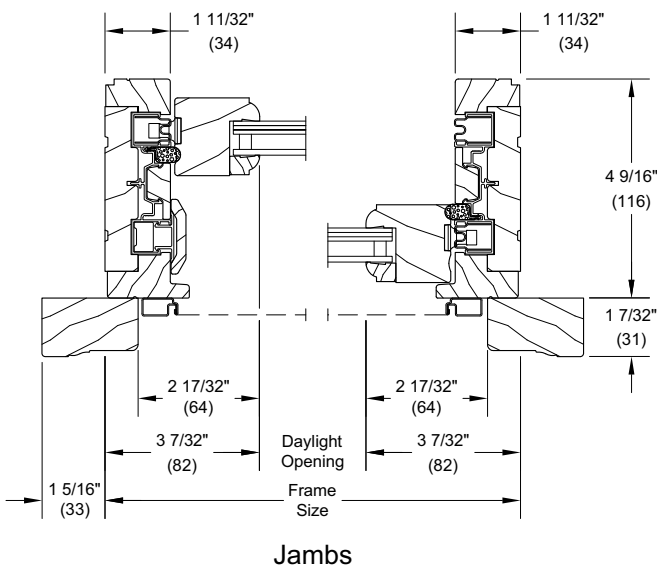
Scale: 3" = 1' 0"



Double Hung



Single Hung

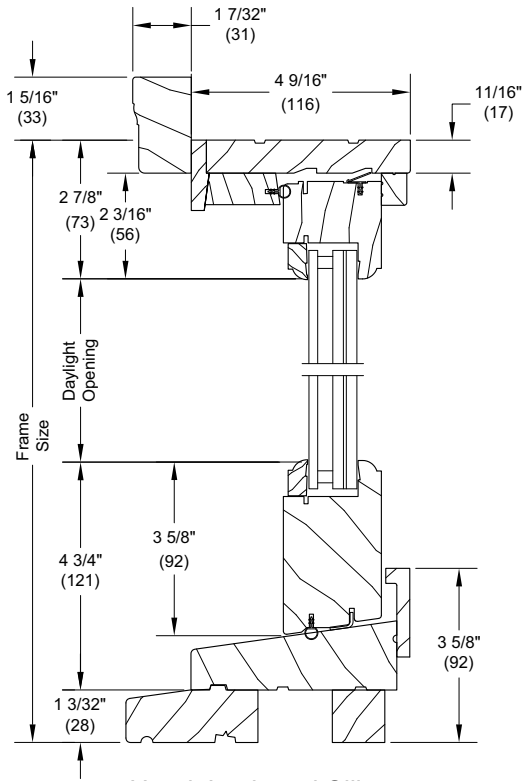


NOTE: CE mark is not available on IZ3 units.

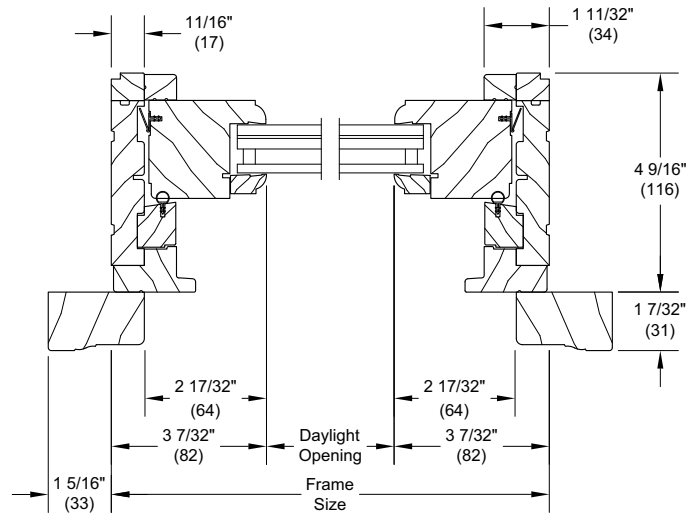
Section Details: Picture IZ3

Scale: 3" = 1' 0"

2" Picture



Head Jamb and Sill



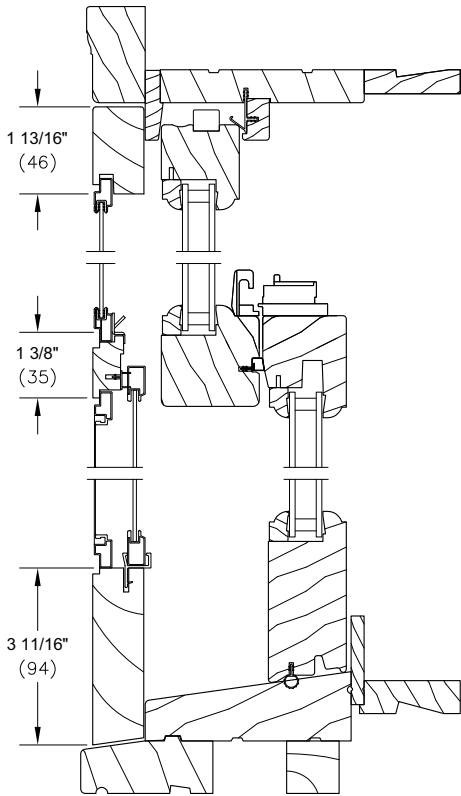
Jamb

NOTE: CE mark is not available on IZ3 units.

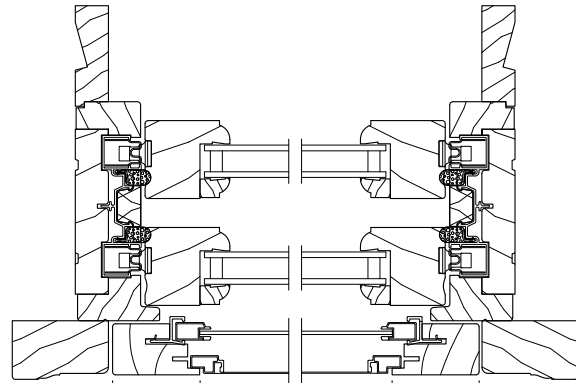
Section Details: Combination/Storm Sash

Scale: 3" = 1' 0"

Combination w/ 6 9/16"

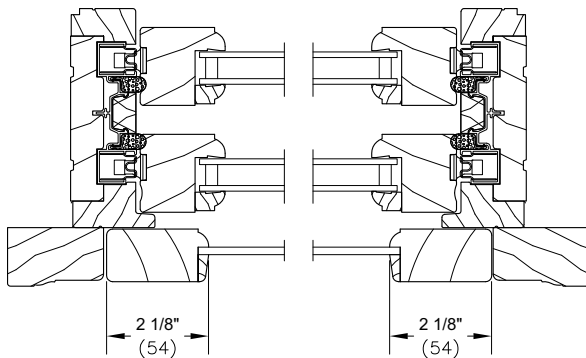


Head Jamb and Sill

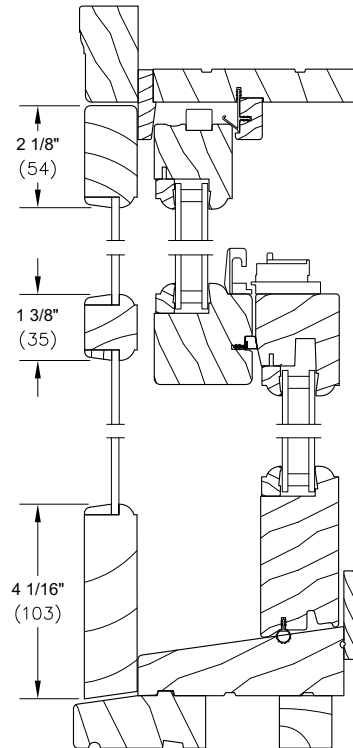


Jambs

Storm Sash



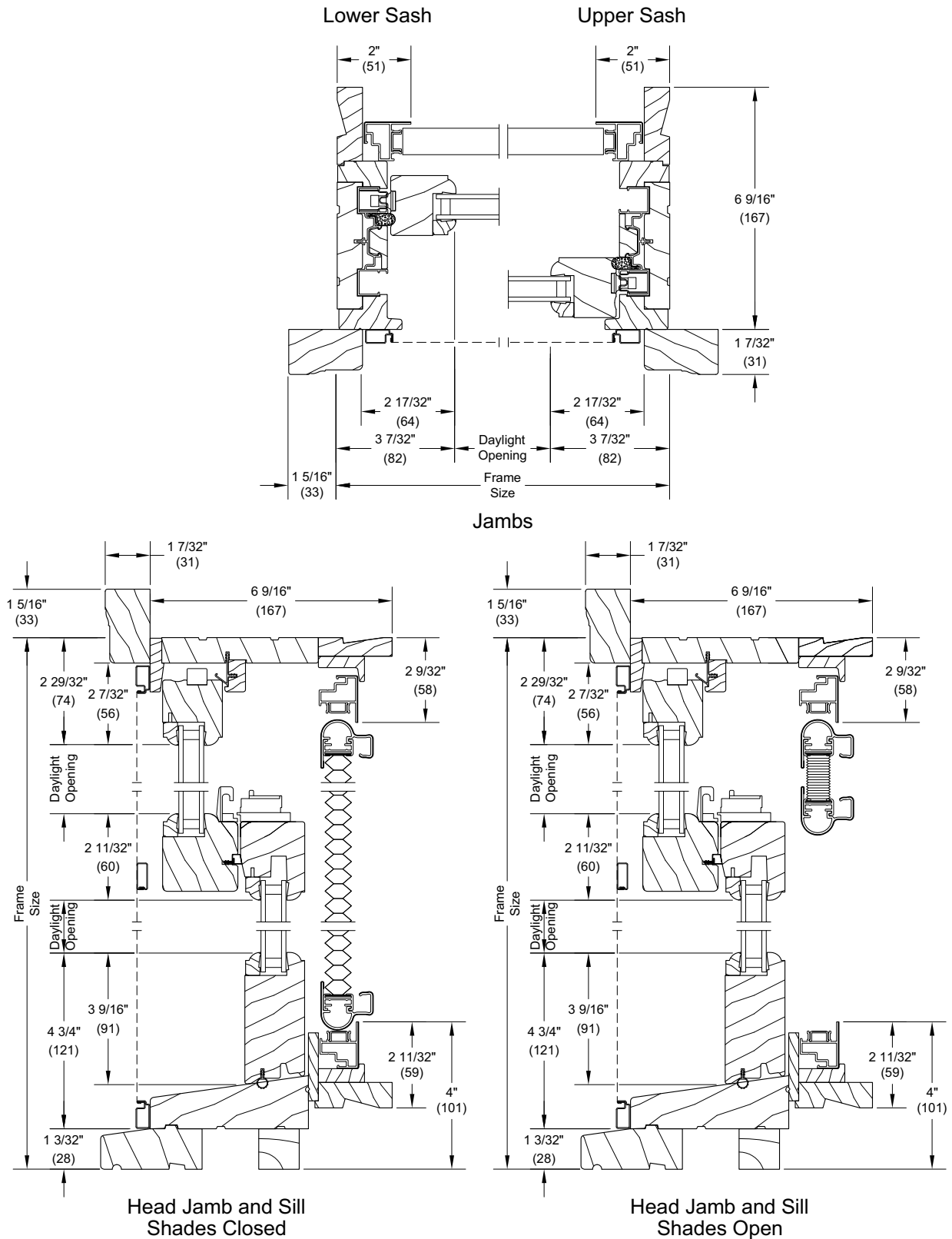
Jambs



Head Jamb and Sill

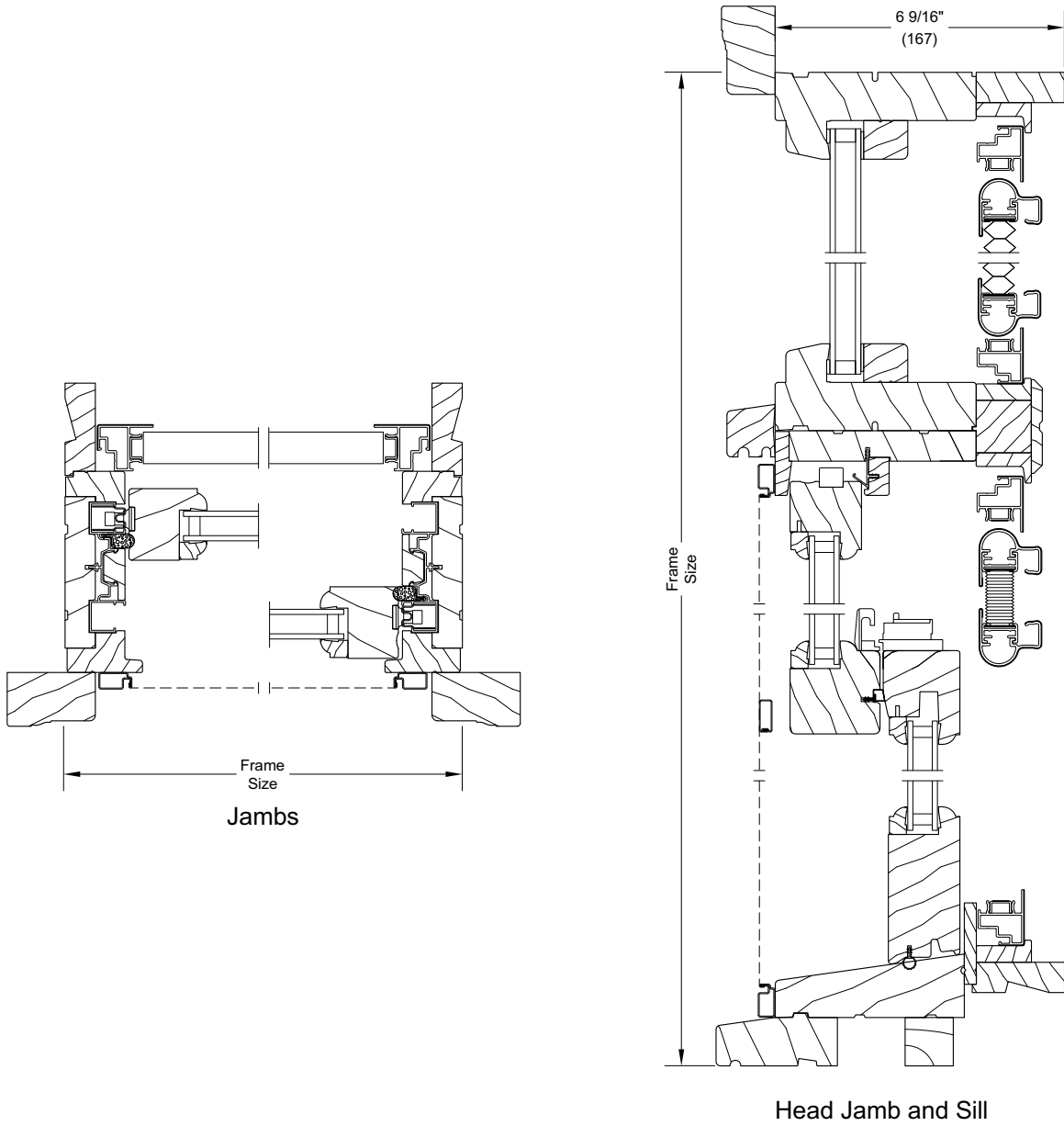
Section Details: Interior Shade Option

Scale: 3" = 1' 0"



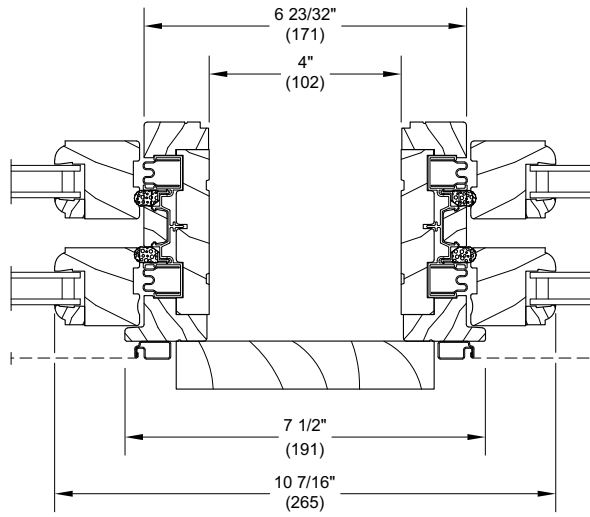
Section Detail: Muller Direct Glaze with Interior Shade Option

Scale: 3" = 1' 0"

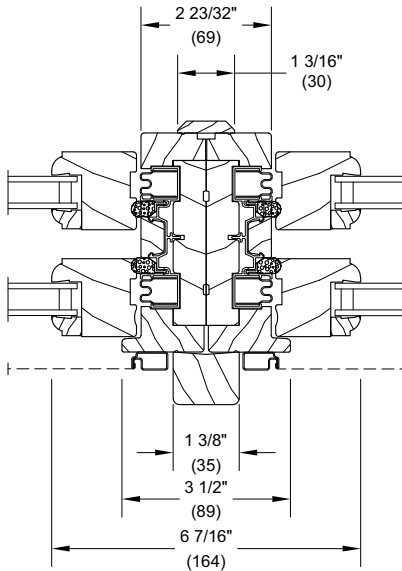


Section Details: Mullions

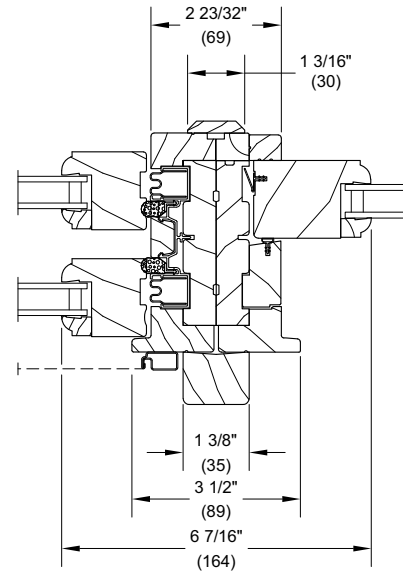
Scale: 3" - 1' 0"



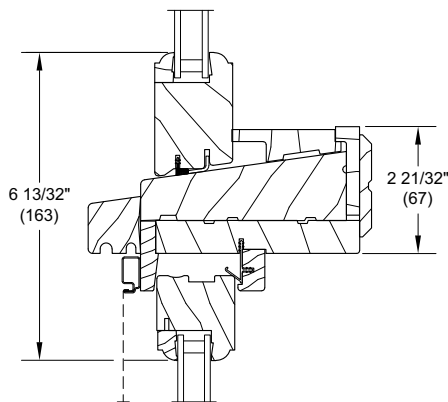
Vertical Mullion - with 4" Space Mull Operator/Operator



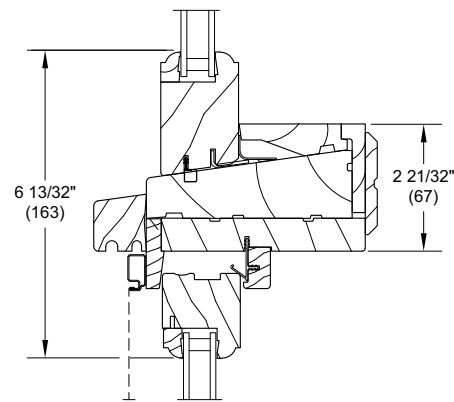
Vertical Mullion Operator/Operator/Direct Mull



Vertical Mullion Operator/Picture/Direct Mull



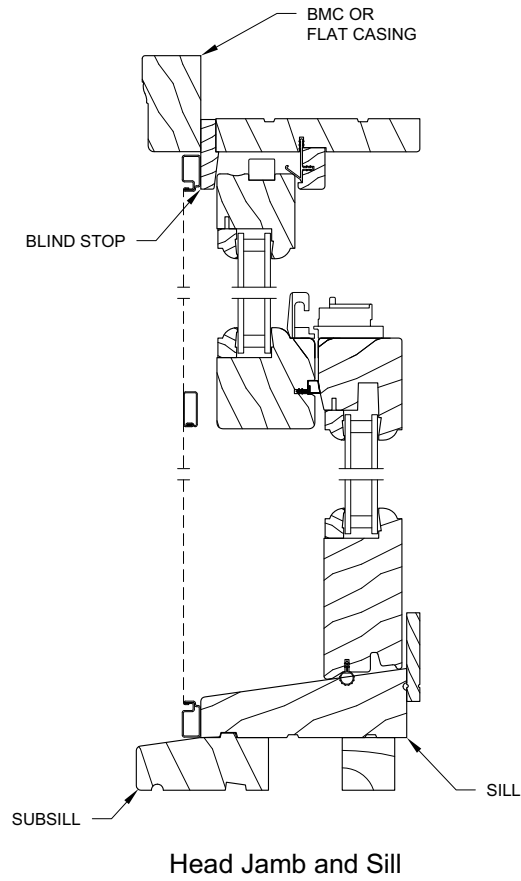
Transom milled over UWDH



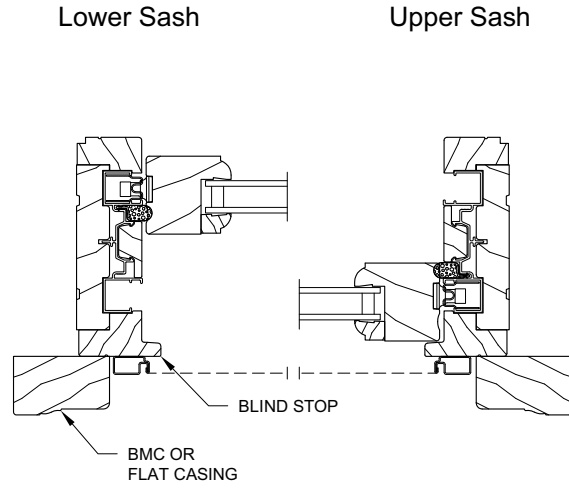
RT Transom milled over UWDH

Section Details: Operator with Cedar Dress Option

Scale: 3" - 1' 0"



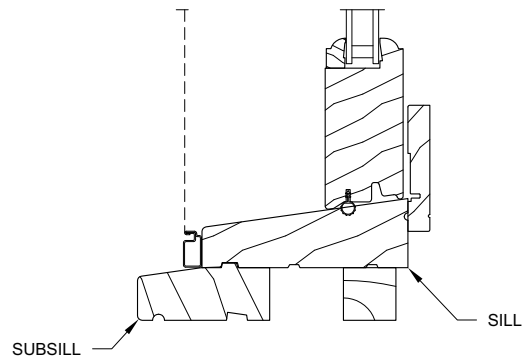
Head Jamb and Sill



Lower Sash

Upper Sash

Jamb



HP Sill Liner

Section Details: Picture with Cedar Dress Option

Scale: 3" - 1' 0"

