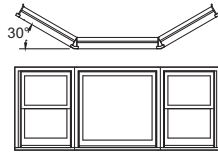


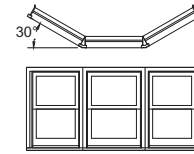
Wood Double Hung Bay

30° Ultimate Wood Double Hung Bay with Picture Center Unit



UNIT NO. (WIDTH)	ROUGH OPENING (WIDTH)	PROJECTION
16-40-16	6-11 3/16 (2113)	11 15/16" (303)
16-48-16	7-7 3/16 (2316)	11 15/16" (303)
16-52-16	7-11 3/16 (2418)	11 15/16" (303)
16-60-16	8-7 3/16 (2621)	11 15/16" (303)
20-40-20	7-6 1/8 (2289)	13 15/16" (354)
20-48-20	8-2 1/8 (2492)	13 15/16" (354)
20-52-20	8-6 1/8 (2594)	13 15/16" (354)
20-60-20	9-2 1/8 (2797)	13 15/16" (354)
20-68-20	9-10 1/8 (3000)	13 15/16" (354)
24-40-24	8-1 1/16 (2465)	15 15/16" (405)
24-48-24	8-9 1/16 (2669)	15 15/16" (405)
24-52-24	9-1 1/16 (2770)	15 15/16" (405)
24-60-24	9-9 1/16 (2973)	15 15/16" (405)
24-68-24	10-5 1/16 (3177)	15 15/16" (405)
26-40-26	8-4 1/2 (2553)	16 15/16" (430)
26-48-26	9-0 1/2 (2756)	16 15/16" (430)
26-52-26	9-4 1/2 (2858)	16 15/16" (430)
26-60-26	10-0 1/2 (3061)	16 15/16" (430)
26-68-26	10-8 1/2 (3264)	16 15/16" (430)
28-40-28	8-7 31/32 (2641)	17 15/16" (456)
28-48-28	9-3 31/32 (2844)	17 15/16" (456)
28-52-28	9-7 31/32 (2946)	17 15/16" (456)
28-60-28	10-3 31/32 (3149)	17 15/16" (456)
28-68-28	10-11 31/32 (3352)	17 15/16" (456)
30-40-30	8-11 7/16 (2729)	18 15/16" (481)
30-48-30	9-7 7/16 (2932)	18 15/16" (481)
30-52-30	9-11 7/16 (3034)	18 15/16" (481)
30-60-30	10-7 7/16 (3237)	18 15/16" (481)
30-68-30	11-3 7/16 (3440)	18 15/16" (481)
32-40-32	9-2 15/16 (2817)	19 15/16" (506)
32-48-32	9-10 15/16 (3020)	19 15/16" (506)
32-52-32	10-2 15/16 (3122)	19 15/16" (506)
32-60-32	10-10 15/16 (3325)	19 15/16" (506)
32-68-32	11-6 15/16 (3528)	19 15/16" (506)
36-40-36	9-9 27/32 (2993)	21 15/16" (557)
36-48-36	10-5 27/32 (3196)	21 15/16" (557)
36-52-36	10-9 27/32 (3298)	21 15/16" (557)
36-60-36	11-5 27/32 (3501)	21 15/16" (557)
36-68-36	12-1 27/32 (3704)	21 15/16" (557)
40-40-40	10-4 3/4 (3169)	23 15/16" (608)
40-48-40	11-0 3/4 (3372)	23 15/16" (608)
40-52-40	11-4 3/4 (3473)	23 15/16" (608)
40-60-40	12-0 3/4 (3677)	23 15/16" (608)
40-68-40	12-8 3/4 (3880)	23 15/16" (608)

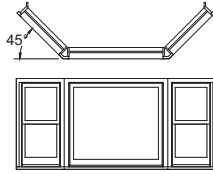
30° Ultimate Wood Double Hung Bay with Operator Center Unit



UNIT NO. (WIDTH)	ROUGH OPENING (WIDTH)	PROJECTION
16-16-16	5-3 3/16 (1605)	11 15/16" (304)
16-20-16	5-7 3/16 (1707)	11 15/16" (304)
16-24-16	5-11 3/16 (1808)	11 15/16" (304)
16-26-16	6-1 3/16 (1859)	11 15/16" (304)
16-28-16	6-3 3/16 (1910)	11 15/16" (304)
16-30-16	6-5 3/16 (1961)	11 15/16" (304)
16-32-16	6-7 3/16 (2012)	11 15/16" (304)
16-36-16	6-11 3/16 (2113)	11 15/16" (304)
16-40-16	7-3 3/16 (2215)	11 15/16" (304)
20-20-20	6-2 1/8 (1883)	13 15/16" (354)
20-24-20	6-6 1/8 (1985)	13 15/16" (354)
20-26-20	6-8 1/8 (2032)	13 15/16" (354)
20-28-20	6-10 1/8 (2086)	13 15/16" (354)
20-30-20	7-0 1/8 (2137)	13 15/16" (354)
20-32-20	7-2 1/8 (2188)	13 15/16" (354)
20-36-20	7-6 1/8 (2289)	13 15/16" (354)
20-40-20	7-10 1/8 (2391)	13 15/16" (354)
24-24-24	7-1 1/16 (2160)	15 15/16" (405)
24-26-24	7-3 1/16 (2211)	15 15/16" (405)
24-28-24	7-5 1/16 (2262)	15 15/16" (405)
24-30-24	7-7 1/16 (2313)	15 15/16" (405)
24-32-24	7-9 1/16 (2364)	15 15/16" (405)
24-36-24	8-1 1/16 (2465)	15 15/16" (405)
24-40-24	8-5 1/16 (2567)	15 15/16" (405)
26-26-26	7-6 1/2 (2299)	16 15/16" (431)
26-28-26	7-8 1/2 (2350)	16 15/16" (431)
26-30-26	7-10 1/2 (2401)	16 15/16" (431)
26-32-26	8-0 1/2 (2452)	16 15/16" (431)
26-36-26	8-4 1/2 (2553)	16 15/16" (431)
26-40-26	8-8 1/2 (2655)	16 15/16" (431)
28-28-28	8-0 (2438)	17 15/16" (456)
28-30-28	8-2 (2489)	17 15/16" (456)
28-32-28	8-4 (2540)	17 15/16" (456)
28-36-28	8-8 (2641)	17 15/16" (456)
28-40-28	9-0 (2743)	17 15/16" (456)
30-30-30	8-5 7/16 (2577)	18 15/16" (481)
30-32-30	8-7 7/16 (2628)	18 15/16" (481)
30-36-30	8-11 7/16 (2729)	18 15/16" (481)
30-40-30	9-3 7/16 (2831)	18 15/16" (481)
32-32-32	8-10 15/16 (2716)	19 15/16" (507)
32-36-32	9-2 15/16 (2817)	19 15/16" (507)
32-40-32	9-6 15/16 (2919)	19 15/16" (507)
36-36-36	9-9 27/32 (2993)	21 15/16" (558)
36-40-36	10-1 27/32 (3095)	21 15/16" (558)
40-40-40	10-8 3/4 (3271)	23 15/16" (608)

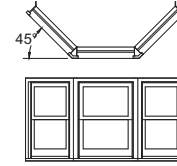
Wood Double Hung Bay

45° Ultimate Wood Double Hung Bay with Picture Center Unit



UNIT NO. (WIDTH)	ROUGH OPENING (WIDTH)	PROJECTION
16-40-16	6-5 3/16 (1961)	17 3/8" (441)
16-48-16	7-1 3/16 (2164)	17 3/8" (441)
16-52-16	7-5 3/16 (2265)	17 3/8" (441)
16-60-16	8-1 3/16 (2469)	17 3/8" (441)
20-40-20	6-10 7/8 (2104)	20 3/16" (513)
20-48-20	7-6 7/8 (2307)	20 3/16" (513)
20-52-20	7-10 7/8 (2409)	20 3/16" (513)
20-60-20	8-6 7/8 (2612)	20 3/16" (513)
20-68-20	9-2 7/8 (2815)	20 3/16" (513)
24-40-24	7-4 1/2 (2248)	23 1/32" (585)
24-48-24	8-0 1/2 (2451)	23 1/32" (585)
24-52-24	8-4 1/2 (2553)	23 1/32" (585)
24-60-24	9-0 1/2 (2756)	23 1/32" (585)
24-68-24	9-8 1/2 (2959)	23 1/32" (585)
26-40-26	7-7 11/32 (2320)	24 7/16" (621)
26-48-26	8-3 11/32 (2523)	24 7/16" (621)
26-52-26	8-7 11/32 (2625)	24 7/16" (621)
26-60-26	9-3 11/32 (2828)	24 7/16" (621)
26-68-26	9-11 11/32 (3031)	24 7/16" (621)
28-40-28	7-10 3/16 (2392)	25 7/8" (656)
28-48-28	8-6 3/16 (2595)	25 7/8" (656)
28-52-28	8-10 3/16 (2696)	25 7/8" (656)
28-60-28	9-6 3/16 (2900)	25 7/8" (656)
28-68-28	10-2 3/16 (3103)	25 7/8" (656)
30-40-30	8-1 (2464)	27 9/32" (693)
30-48-30	8-9 (2667)	27 9/32" (693)
30-52-30	9-1 (2769)	27 9/32" (693)
30-60-30	9-9 (2972)	27 9/32" (693)
30-68-30	10-5 (3175)	27 9/32" (693)
32-40-32	8-3 13/16 (2535)	28 11/16" (729)
32-48-32	8-11 13/16 (2738)	28 11/16" (729)
32-52-32	9-3 13/16 (2840)	28 11/16" (729)
32-60-32	9-11 13/16 (3043)	28 11/16" (729)
32-68-32	10-7 13/16 (3246)	28 11/16" (729)
36-40-36	8-9 1/2 (2679)	31 1/2" (800)
36-48-36	9-5 1/2 (2882)	31 1/2" (800)
36-52-36	9-9 1/2 (2984)	31 1/2" (800)
36-60-36	10-5 1/2 (3187)	31 1/2" (800)
36-68-36	11-1 1/2 (3390)	31 1/2" (800)
40-40-40	9-3 1/8 (2823)	34 11/32" (872)
40-48-40	9-11 1/8 (3026)	34 11/32" (872)
40-52-40	10-3 1/8 (3127)	34 11/32" (872)
40-60-40	10-11 1/8 (3331)	34 11/32" (872)
40-68-40	11-7 1/8 (3534)	34 11/32" (872)

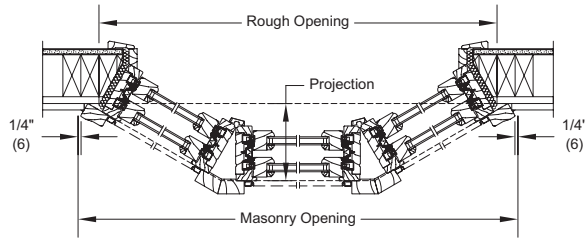
45° Ultimate Wood Double Hung Bay with Operator Center Unit



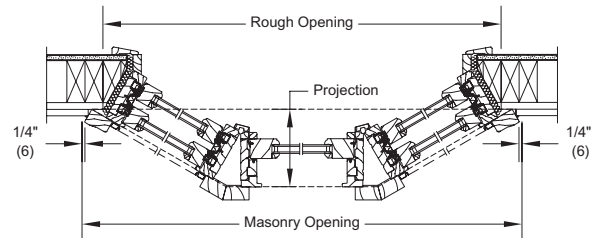
UNIT NO. (WIDTH)	ROUGH OPENING (WIDTH)	PROJECTION
16-16-16	4-9 3/16 (1453)	17 3/8" (441)
16-20-16	5-1 3/16 (1554)	17 3/8" (441)
16-24-16	5-5 3/16 (1656)	17 3/8" (441)
16-26-16	5-7 3/16 (1707)	17 3/8" (441)
16-28-16	5-9 3/16 (1758)	17 3/8" (441)
16-30-16	5-11 3/16 (1808)	17 3/8" (441)
16-32-16	6-1 3/16 (1859)	17 3/8" (441)
16-36-16	6-5 3/16 (1961)	17 3/8" (441)
16-40-16	6-9 3/16 (2062)	17 3/8" (441)
20-20-20	5-6 27/32 (1698)	20 3/16" (513)
20-24-20	5-10 27/32 (1800)	20 3/16" (513)
20-26-20	6-0 27/32 (1851)	20 3/16" (513)
20-28-20	6-2 27/32 (1901)	20 3/16" (513)
20-30-20	6-4 27/32 (1952)	20 3/16" (513)
20-32-20	6-6 27/32 (2003)	20 3/16" (513)
20-36-20	6-10 27/32 (2105)	20 3/16" (513)
20-40-20	7-2 27/32 (2206)	20 3/16" (513)
24-24-24	6-4 1/2 (1943)	23 1/32" (585)
24-26-24	6-6 1/2 (1994)	23 1/32" (585)
24-28-24	6-8 1/2 (2045)	23 1/32" (585)
24-30-24	6-10 1/2 (2096)	23 1/32" (585)
24-32-24	7-0 1/2 (2147)	23 1/32" (585)
24-36-24	7-4 1/2 (2248)	23 1/32" (585)
24-40-24	7-8 1/2 (2350)	23 1/32" (585)
26-26-26	6-9 11/32 (2066)	24 7/16" (621)
26-28-26	6-11 11/32 (2117)	24 7/16" (621)
26-30-26	7-1 11/32 (2168)	24 7/16" (621)
26-32-26	7-3 11/32 (2219)	24 7/16" (621)
26-36-26	7-7 11/32 (2320)	24 7/16" (621)
26-40-26	7-11 11/32 (2422)	24 7/16" (621)
28-28-28	7-2 3/16 (2189)	25 7/8" (657)
28-30-28	7-4 3/16 (2240)	25 7/8" (657)
28-32-28	7-6 3/16 (2290)	25 7/8" (657)
28-36-28	7-10 3/16 (2392)	25 7/8" (657)
28-40-28	8-2 3/16 (2494)	25 7/8" (657)
30-30-30	7-7 (2311)	27 9/32" (693)
30-32-30	7-9 (2362)	27 9/32" (693)
30-36-30	8-1 (2464)	27 9/32" (693)
30-40-30	8-5 (2565)	27 9/32" (693)
32-32-32	7-11 13/16 (2434)	28 11/16" (729)
32-36-32	8-3 13/16 (2536)	28 11/16" (729)
32-40-32	8-7 13/16 (2637)	28 11/16" (729)
36-36-36	8-9 1/2 (2679)	31 1/2" (800)
36-40-36	9-1 1/2 (2781)	31 1/2" (800)
40-40-40	9-7 1/8 (2925)	34 11/32" (872)

Wood Double Hung Bay

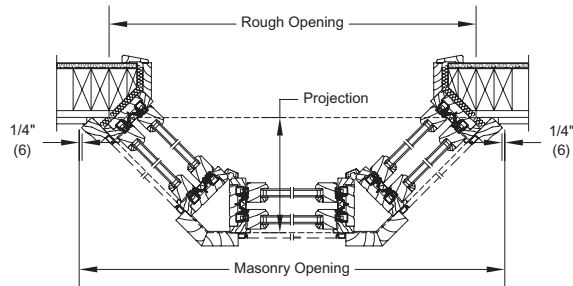
Construction Details



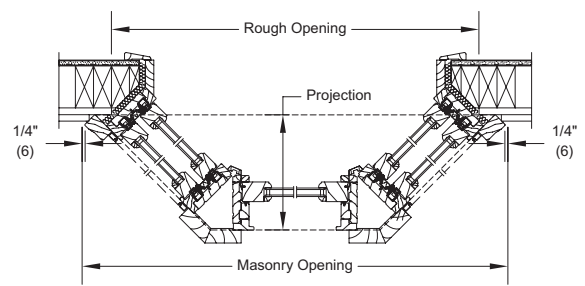
30° ULTIMATE WOOD DOUBLE HUNG BAY
JAMB WITH OPERATOR CENTER UNIT



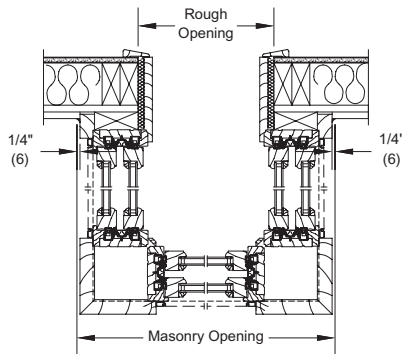
30° ULTIMATE WOOD DOUBLE HUNG BAY
JAMB WITH PICTURE CENTER UNIT



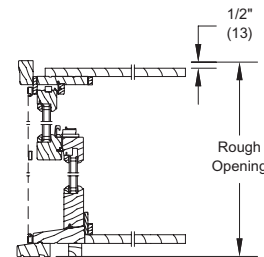
45° ULTIMATE WOOD DOUBLE HUNG BAY
JAMB WITH OPERATOR CENTER UNIT



45° ULTIMATE WOOD DOUBLE HUNG BAY
JAMB WITH PICTURE CENTER UNIT



90° ULTIMATE WOOD DOUBLE HUNG BAY
JAMB WITH OPERATOR CENTER UNIT



ULTIMATE WOOD DOUBLE HUNG BAY
HEAD JAMB AND SILL

90° Ultimate Double Hung Bay Formula

TO CALCULATE PROJECTION

OM of Flanker (width) PLUS 6 1/16" (154) = PROJECTION

TO CALCULATE ROUGH OPENING

OM of Center Unit(s) (width) PLUS 1 5/8" (41) = ROUGH OPENING width

60° Ultimate Double Hung Bay Formula

TO CALCULATE PROJECTION

Flanker GLASS SIZE (width) PLUS 9.3217 (237) x .86603 (22) = PROJECTION

TO CALCULATE ROUGH OPENING

PROJECTION x .57735 (15) MINUS 2.1251 (54) x 2 (51) PLUS 5.2684 (134) PLUS
Center Unit Sash Operating width = ROUGH OPENING width (Allows 1" (25) clearance)

Rough Opening Heights

UNIT NO. (HEIGHT)		ROUGH OPENING
Side Unit No.	Center Unit No.	Height
16	38	3-6 3/16 (1073)
18	42	3-10 3/16 (1175)
20	46	4-2 3/16 (1276)
22	50	4-6 3/16 (1378)
24	54	4-10 3/16 (1480)
26	58	5-2 3/16 (1581)
28	62	5-6 3/16 (1683)
30	66	5-10 3/16 (1784)
32	70	6-2 3/16 (1886)
34	74	6-6 3/16 (1988)
36	78	6-10 3/16 (2089)

Details and Elevations not to scale.

• Above dimensions include head and seat boards.

If no head/seat board, deduct 1 1/16" (17) in rough opening height.

Please consult your local Marvin representative for more information.

For further details and drawings visit the 'Technical Specifications' section at Marvin.com.