# 36 State Street LU-21-212 Public Hearing

City of Portsmouth, NH

### LU-21-212

Land Use Application

Status: Active

### Applicant

John Angelopoulos johnangel57@yahoo.com 36 Statest Portsmouth, NH 03801 6034752699 Date Created: Dec 7, 2021

### Location

36 STATE ST Portsmouth, NH 03801

### Owner:

John Angelopoulos 36 Statest 36 STATE ST Portsmouth, NH 03801

### Applicant Information

Please indicate your relationship to this project

A. Property Owner

### Alternative Project Address

### Alternative Project Address

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#### Project Type

Addition or Renovation: any project (commercial or residential) that includes an ADDITION to an existing structure or a NEW structure on a property that already has structure(s) on it

 $\Box$ 

New Construction: any project (commercial or residential) that involves adding a NEW structure on a parcel that is currently VACANT. If there are any existing structures on the property (even if you are planning to remove them), you should select Addition and Renovation above

#### $\Box$

Minor Renovation: for projects in the Historic District only that involve a minor exterior renovation or alteration that does not include a building addition or construction of a new structure

 $\mathbf{\nabla}$ 

Home Occupation: residential home occupation established in an existing residential dwelling unit and regulated by the Zoning Ordinance. Home Occupations are not allowed in the following Zoning Districts: Waterfront Business, Office Research, Industrial, or Waterfront Industrial

New Use/Change in Use: for a change of land use or an expansion to an existing use (e.g. addition of dwelling units) that includes no exterior work or site modifications

 $\Box$ 

Temporary Structure / Use: only for temporary uses (e.g. tents, exhibits, events)

#### $\Box$

Demolition Only: only applicable for demolition projects that do not involve any other construction, renovation, or site work

Subdivision or Lot Line Revision: for projects which involved a subdivision of land or an adjustment to an existing lot line

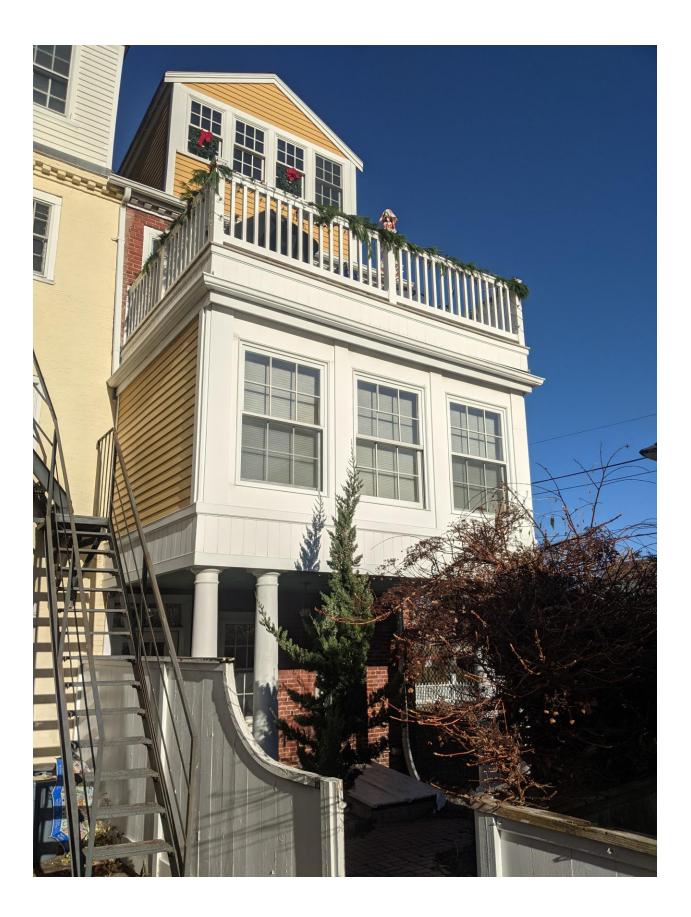
Other Site Alteration requiring Site Plan Review Approval and/or Wetland Conditional Use Permit Approval

Sign: Only applies to signs requiring approval from a land use board (e.g. Historic Commission, Zoning Board of Adjustment)

#### **Request for Extension of Previously Granted Land Use Approval**

OpenGov





# WOODWRIGHT DOUBLE-HUNG FULL-FRAME WINDOWS

### SECTION REFERENCE

. . .

Tables of Sizes	50-56
Specifications	54-61
Custom Sizing	62
Grille Patterns	63
Window Details	63-64
Joining Details	65
Combination Designs	181
Product Performance	194

CUSTOM SIZING in <sup>1</sup>/<sub>4</sub>" (3) increments Dimensions in parentheses are in millimeters. le-Hung

400 SERIES

### **FEATURES**

### Frame

A Perma-Shield® exterior cladding protects the frame - beautifully. Best of all, it's low maintenance and never needs painting.

B For exceptional long-lasting\* performance, sill members are constructed with a wood core and a Fibrex® material exterior.

 Natural wood stops are available in pine, oak, maple and prefinished white. Wood jamb liners add beauty and authenticity to the window interior.

D A factory-applied rigid vinyl flange on the head, sill and sides of the outer frame helps secure the unit to the structure.

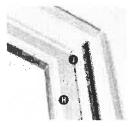
 Multiple weatherstrip systems help provide a barrier against wind, rain and dust. The combination of spring tension vinyl, rigid vinyl and flexible bulb weatherstrip is efficient and effective.

G For units with white exterior color, exterior jamb liner is white. For all other units, the exterior jamb liner is gray.

### Sash

G Balancers in the sash enable contractors to screw through the jamb during installation without interfering with the window's operation.

#### Wood Jamb Liner



O Natural wood sash interior with classic chamfer detailing. Available in pine, oak, maple or prefinished white.

Low-maintenance sash exterior provides long-lasting\* protection and performance. Sash exteriors on most units include Fibrex material.

Sash joints simulate the look of traditional mortise-and-tenon construction inside and out.

#### Glass

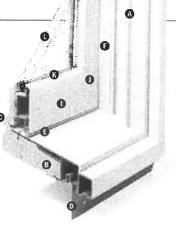
Silicone bed glazing provides superior weathertightness and durability.

\* Visit andersenwindows.com/warranty

for details

\*\* Hardware sold separately. Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.



High-Performance glass options include:

- Low-E4<sup>™</sup> glass
- Low-E4 HeatLock<sup>®</sup> glass
- Low-E4 Sun glass
- Low-E4 SmartSun<sup>™</sup> glass

Low-E4 SmartSun HeatLock glass

Tempered glass and other glass options are available. Contact your Andersen supplier. A removable translucent film helps shield

the glass from damage during delivery and construction and simplifies finishing at the jobsite.

### Patterned Glass

Patterned glass options are available. See page 12 for more details.

#### Hardware



Standard lock and keeper design provides an easy tilt-to-clean feature integrated into the lock.

### Storn WATCH

### Performance Grade (PG) Upgrade

Performance upgrades are available for select sizes allowing these units to achieve higher performance ratings. Performance Grade (PG) Ratings are more comprehensive than Design Pressure (DP) Ratings for measuring product performance. Use of this option will subtract 5%" (16) from clear opening height. Contact your Andersen supplier for availability. For up-to-date performance information of individual products, visit andersenwindows.com.

Visit andersenwindows.com/coastal for more information on Stormwatch Protection.

Bronze Distressed bronze and oil rubbed bronze are 'living' finishes that will change with time and use.

Antique Brass

Gold Dust

### DOUBLE-HUNG HARDWARE

Bright Brass

Polished

Chrome



Bar Lift

CONTEMPORARY

Bar Lift

Satin Nickel | Stone | White

Oil Rubbed

Antique Brass | Black | Bright Brass Brushed Chrome | Distressed Bronze Distressed Nickel | Gold Dust | Oil Rubbed Bronze Polished Chrome | Satin Nickel | Stone | White



Hand Lift



Antique Brass | Black | Bright Brass | Brushed Chrome | Distressed Bronze | Distressed Nickel Gold Dust | Oil Rubbed Bronze | Polished Chrome | Satin Nickel | Stone | White 

CLASSIC SERIES"

Hand Lift





..... ESTATE<sup>™</sup>

Finger Lifts



Bold name denotes finish shown.

### EXTERIOR INTERIOR White Canvas Sandtone Terratone Pine

Forest Dark Bronze Black Green

Black

HARDWARE FINISHES

Maple

Distressed

Bronze

Stone

Distressed

Nickel

White

White

Oak

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless prefinished white is specified.

Brushed Chrome

Satin

Nicke

#### Shapes

Woodwright<sup>®</sup> windows are available in the following shapes.



Double-Hung



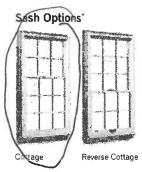
Arch Double-Hung

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Unequal Leg Arch Double-Hung



Springline "Single-Hung

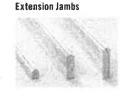


For more information about glass, patterned glass, grilles and TruScene insect screens, see pages 12-14.

For more information about combination designs, product performance, installation instructions and accessories, see pages 181-211 or visit andersenwindows.com.

### ACCESSORIES Sold Separately

Frame



Standard jamb depth is 4 ½" (114). Extension jambs are available in unfinished pine or prefinished white. Some sizes may be veneered.

Factory-applied and non-applied interior extension jambs are available in  $Y_{16}$ " (1.5) increments between 5  $Y_4$ " (133) and 7  $Y_6$ " (181). Extension jambs can be factory-applied to either three sides (stool and apron application) or four sides (picture frame casing).

#### Pine Stool



A clear pine stool is available and ready for finishing. The Woodwright stool is available in 4  $\%_6$ " (116) for use in wall depths up to 5 4" (133), and 6  $\%_6$ " (167) for use in wall depths up to 7 %" (181). Works with 2 4" (57) and 2  $\frac{1}{2}$ " (64) wide casings. Shown on 400 Series tilt-wash double-hung window.

#### Hardware

#### Window Opening Control Device Kit



A Window Opening Control Device Kit is available, which limits sash travel to less than 4" (102) when the window is first opened. Available factory applied or field applied in stone and white.

### Security Sensors

### Open/Closed Sensors

Wireless open/closed sensors are available in four colors. See page 15 for details.

### Storm/Insect Screen Combination Unit\*\*



A self-storing storm window combined with an insect screen provides greater energy efficiency, while allowing ventilation when needed.

Constructed with an aluminum frame, single-pane upper and lower glass panels and charcoal powder-coated aluminum screen mesh. Available in white, Sandtone and Terratone to match product exteriors. Canvas, forest green, dark bronze and black available by special order.

Combination units can improve Sound Transmission Class (STC) and Outdoor Indoor Transmission Class (OITC) ratings. Ideal for projects near airports, busy roadways or other noisy environments. For example, adding a combination unit to a 400 Series tilt-wash double-hung (3862) unit with Low-E4<sup>®</sup> glass will improve its STC rating from 26 to 32. Contact your Andersen supplier for additional STC and OITC rating information.

### **Insect Screens**

#### **Insect Screen Frames**



Choose full insect screen or half insect screen. Half insect screen (shown above) allows ventilation without affecting the view through the upper sash. Frames are available in colors to match product exteriors.

#### TruScene® Insect Screen

Exclusive Andersen TruScene insect screens provide over 50% more clarity than our conventional insect screens for a beautiful unobstructed view. They allow more fresh air and sunlight in, while doing a better job of keeping out small insects.

#### Conventional Insect Screen

Conventional insect screens have charcoal powder-coated aluminum screen mesh.

#### Grilles

Grilles are available in a variety of configurations and widths. For double-hung grille patterns, see page 62.

### **Exterior Trim**

This product is available with Andersen exterior trim. See pages 175-180 for details.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- Do not paint 400 Series windows with white, canvas, Sandtone, forest green, dark bronze or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- 400 Series windows in Terratone color may be painted any color fighter than Terratone color using quality oil-based or latex paint.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
   Do not paint weatherstrip.
- Do not paint weathers
   Concerts based stains
- Creasate-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

\* Shown on 400 Series tilt-wash double-hung windows.

\*\* Do not add combination units to windows with Low-E4 Sun glass, unless window glass is tempered. Combination units may also reduce the overall clear operable area of the window. See your local code official for egress requirements in your area. Dimensions in parentheses are in millimeters.

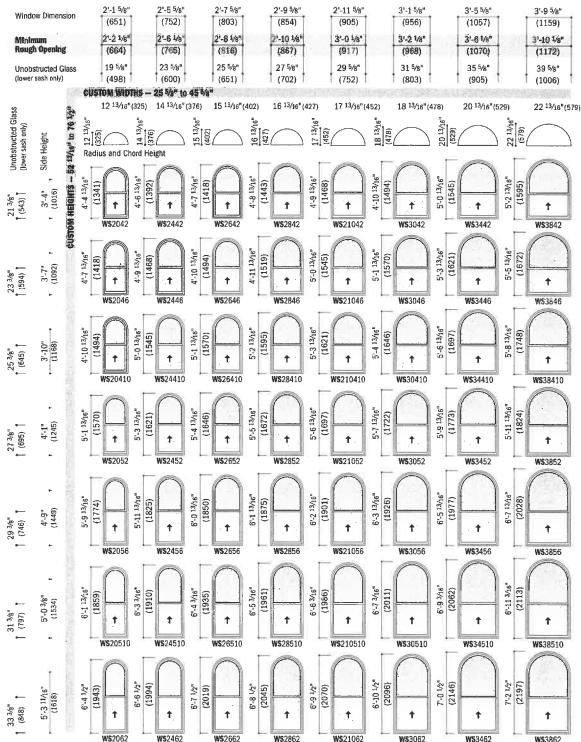
### Table of Woodwright Double-Hung Window Sizes Scale $\frac{1}{8}$ " (3) = 1'-0" (305) - 1:96

Window Dimension	1'-9 5/8" (549)	2'-1 5/8" (651)	2'-5 5/8" (752)	2'-7 5/8" (803)	2'-9 5/8" (854)	2'-11 5/8" (905)	3'-1 5/8" (956)	3'-5 5/8" (1057)	3'-9 5/8" (1159)	ratio available for all widths and he
Minimum Rough Opening	1'-10 ¼s (562)	2'-2 1/8	2'-6 ¼s (765)	2'-8 1/8" (816)	2 -10 1/s* (867)	3'-0-1⁄8" (917)	3'-2 1/8" (968)	3'-6 1/3" (1070)	3"-10 1/8"	Size tables for windows with cottage reverse cottage sash are available a
Unobstructed Glass	15 5/8"	19 5/8"	23 5/8"	25 5/8"	27 5/8"	(917) 29 5/8"	(906) 31 <sup>5</sup> /8"	35 5/8"	(1172) 39 <sup>5</sup> /8"	andersenwindow.com/sizing. CUSTOM WIDTHS —
lower sash only)	†(397) †	† (498) †	† (600) †	(651)	(702)	(752)	(803)	(905)	(1006)	1'-4 1/2" (419) to 3'-9 % (1159 CUSTOM HEIGHTS -
	CUSTOM	KIDTHS - 1	16 1/2" to 45 1	() () () () () () () () () () () () () (	( <del>[]</del>					3'-0 */s" (937) to 6'-4 */s" (1953)
(937) 3°-0 7/8" (937) 13 3/8" (340) to 76 7%	<u>.</u>									
	اليتحدك	WDH20210	WDH24210	WDH26210	WDH28210	WDH210210	WDH30210	WDH34210	WDH38210	Cottage Reverse Cottage
									100030210	Cottage Reverse Cottage
(1038) <b>3'-4</b> 7% (1038) 15 3% (1038) (391) (391)										
	WDH1832	WDH2032	WDH2432	WDH2632	WDH2832	WDH21032	WDH3032	WDH3432	WDH3832	
40)         (1038)           76"         3'-4 76           76"         3'-4 76           40)         (1038)           40)         (1038)           76"         15 36"           1)         (391)           2)         (136)           2)         (138)           2)         (1038)           2)         (1038)           2)         (1038)           2)         (15 36")           2)         (1038)           2)         (1038)           2)         (1038)           2)         (1038)										
(1140) 3'-8 7/8" (1140) 17 3/8" (441) (441) (441)										
	WDH1836	WDH2036	WDH2436	WDH2636	WDH2836	WDH21036	WDH3036	WDH3436	WDH3836	
(1241) (1241) (1241) 19 3/8" (492)	<u> </u>			<u></u>						
		WDW20310	WDH24310	WDH26310	WDH28310	WDH210310	WDH30310	WDH34310	WDH38310	
									WDH36310	
(1343) 4*4 78° (1343) (1343) 21 3/8" (543)				<u></u>				Later and the second		
2488										
	WDH1842	WDH2042	WDH2442	WDH2642	WDH2842	WDH21042	WDH3042	WDH3442	WDH3842	
3 * 8 * 0										
(1445) 4:8 7/8" (1445) 22 3/4" (577)					<u> </u>		<u>k</u>			·····
	WDH1846	WDH2046	WDH2446	WDH2646	WDH2846	WDH21046	100000	WDUD4460	WENDO	
1. 1				1012048	WDH2040	WDH21046	WDH3046°	WDH3446*	WDH3846°	
(1546) 5'-0 7g* (1546) 25 3/8" (645)										
(15 5 <sup>1</sup> -0 (15 (15 (15 (15))										
<b>└──</b> ↓ ,	WDH18410	WDH20410	WDH24410	WDH26410	WDH28410	WDH210410°	WDH30410°	WDH34410 <sup>o</sup>	WDH38410 <sup>o</sup>	
					[·····]					
(1648) 5'-4 7g" (1648) 27 3/6" (695)										
(16 (16 (6)										
	WDH1852	WDH2052	WDH2452	WDH2652	WDH2852*	WDH21052*	WDH30520	WDH3452	WDH3852*	
(1749) <b>5-8</b> 76" (1749) 29 3/8" (746)								Ale and and		
(1749) <b>5-8</b> 76" (1749) (1749) 29 3/8" (746)										
1										
	WDH1856	WDH2056	WDH2456	WDH2656*	WDH2856*	WDH21056	WDH3056*	WDH3456*	WDH3856*	
(1851) 6°-0°% (1851) 31 3/8" (797)				<u> </u>	-	<u></u>		<u> </u>		
	WDH18510	WDH20510	WDH24510	WDH26510*	WDH28510	WDH210510	WDH30510*	WDH34510*	WDH38510*	
(1953) 6-4 76" (1953) 33 3/8" (848)										
(1953) 6-4 7/8* (1953) 33 3/8" (848)						1				
3										

### Notes on the next page also apply to this page.

### Table of Woodwright Springline<sup>™</sup> Single-Hung Window Sizes

Scale 1/8" (3) = 1'-0" (305) - 1:96





Custom-size windows are available in 1/8" (3) increments. See page 62 for custom sizing.

Grille patterns shown on page 63.

### Woodwright Springline Single-Hung only:

Minimum rough opening height is the same as the window dimension height. Upper sash does not operate and lower sash travel is limited by the radius of the upper sash. Contact your Andersen supplier for cottage and reverse cottage sash availability. Side-by-side joining is not recommended.

400 Series Woodwright<sup>®</sup> Double-Hung Full-Frame Windows

"Window Dimension" always refers to outside frame to frame dimension.

• "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details. • Dimensions in parentheses are in millimeters.

Office of the second clear opening area of 5.7 sq. ft. or 0.53 m<sup>2</sup>, clear opening width of 20" (508) and clear opening height of 24° (210). See tables on pages 57-58.

51

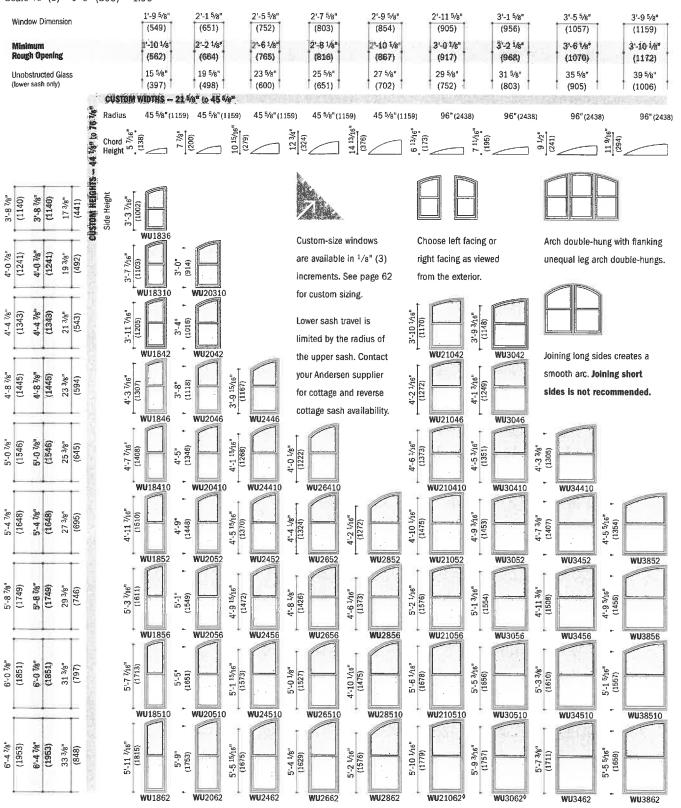
### 400 SERIES

able of Woodwri cale <sup>1</sup> /8" (3) = 1'-0	<b>ght<sup>*</sup> Arch Double-H</b> ' (305) — 1:96	lung Windo	w Sizes				Notes on	the next page also app	y to this pap
Window Dimension	1'-9 <sup>5</sup> /8"	2'-1 <sup>5</sup> /8"	2'-5 <sup>5</sup> /8"	2'-7 5/8" (803)	2'-9 5/8" (854)	2'-11 5/8" (905)	3'-1 5/8"	3'-5 5/8"	3'-9 5/8"
Minimum	1'-10 1/s'	2'-2 1/8"	2'-6 1/8"	(803)	(854)	(905)	(956) 3'-2 <sup>1</sup> /8"	(1057) 3'-6 1/8"	(1159) 3'-10 1/8"
Rough Opening	(562)	(664)	(765)	(816)	(867)	(917)	(968)	(1070)	(1172)
Unobstructed Glass (lower sash only)	15 5⁄8" (397)	19 5⁄8" (498)	23 <sup>5</sup> /8" (600)	25 <sup>5</sup> /8" (651)	27 <sup>5</sup> /8" (702)	29 <sup>5</sup> /8" (752)	31 <sup>5</sup> /8" (803)	35 <sup>5</sup> /8" (905)	39 5/8" (1006)
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(937) 3'-0 7/8" (937) 13 3/8" (340)	Radius 21 5/6" (5 Radius 21 5/6" (5 Chord (51)								
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38) 38) 38) 10 11)									
(1038) 3'-4'7/8" (1038) 15 3/8" (391)	3'-1 15/16" (964)		(937)	3'-0 5/8" (930)				Side-by-side joining o	
	WA1832	WA2032	WA2432	WA2632				double-hung windows not recommended.	15
(1140) 3 <sup>1</sup> -8 7/8" (1140) 17 3/8" (441)	3'-5 15/16" (1065) : []]	(1053)	(1038)	3'-4 5/8" (1032)	3'-4 3/8" (1026)				
	ة <u>السا</u> ة WA <u>18</u> 36	WA2036	WA2436	WA2636					
11) 7/8" (%" 2)	15/16" 67)			3.6			3) 10	19	
(1241) 4'-0'/8" (1241) 19 3/8" (492)	3'-9 15/16" (1167)	(1154)	(1140)	3'-8 5/8" (1133)	3'-8 3/8" (1127)	3'-8 <sup>1/16"</sup> (1119)	3'-7 13/16" (1113)	3'-7 5/16" (1100)	
	WA18310	WA20310	WA24310	WA26310	WA28310	WA210310	WA30310	WA34310	
(1343) 4'-4 %s" (1343) (1343) 21 <sup>3</sup> /s" (543)	(1268) (1268)	(1256)	(1241)	4'-0 5/8" (1235)	4'-0 3/8" (1229)	4'-0 1/16" (1221)	3'-11 13/16" (1214)	5/16" 02) 3/4" 3/4"	
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	WA1842	WA2042	WA2442	WA2642	WA2842	WA21042	WA3042	WA3442	WA3842
(1445) 4'-8 % (1445) 23 <sup>3</sup> /s" (594)	(1370) (1370) (1370)	(1357)	(1343)	4'-4 5/8" (1337)	4'-4 3/8" (1330)	4'-4 1/16" (1322)	(1316) (1316)	4'-3 5/16" (1303) 4'-2 3/4" (1289)	
	4-5 1	4 (1)	<sup>+</sup>	4'-2	(13	4'-4 (13	4"-3 (13	4'-3 5/16' (1303) (1303) 4'-2 3/4" (1289)	
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(1546) 5'-0 % (1546) 25 3/8" (645)	(1472) (1472) (172)	669)	45)	38)	3/8"	1/16" 24)	3/16"	5/16" )5) 334"	
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	WA18410	WA20410	WA24410	WA26410	WA28410	WA210410	WA30410	WA34410	WA38410
a	194	9					,1e,	19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
(1648) 5'.4 7/8" (1648) 27 3/8" (695)	5'-1 15/16" (1573)	(1561)	(1546)	5'-0 5/8" (1540)	5'-0 3/6"	5'-0 1/16" (1526)	(1519) (1519)	4'-11 5/16" (1507) (1507) 4'-10 3/4" (1492)	<u>.</u>
	WA1852	WA2052	WA2452	WA2652	WA2852	WA21052	¥ WA3052		
	I D			11/2052	1	1	MA3032	WA3452	WA3852
(1749) 5'-8 7/8" (1749) (1749) 29 3/8" (746)	5'-5 15/16" (1675) E' E 74.4"	(1662)	(1648)	5'-4 5/8" (1641)	5'-4 3/8" (1635)	5'-4 1/16" (1627)	5'-3 13/16" (1621)	5'-3 5/16" (1608) (1608) 5'-2 3/4" (1594)	
	5-5 (1)	55 1	50	17 D	2-	2 <sup>-7</sup>	5-3	5 <sup>1</sup> -3 (16) (16) (16) (16) (16) (16) (16) (16)	
	WA1856	WA2056	WA2456	WA2656	WA2856	WA21056	WA3056	WA3456	WA3856
G # G % A		D		-		-			
(1851) 6"-0 7%" (1851) (1851) 31 3%" (797)	5'-9 15/16" (1776)	(1764)	(1749)	5'-8 5/8" (1743)	5'-8 3/8" (1737)	5'-8 1/16" (1729)	5'-7 13/16" (1722)	5'-7 5/16" (1710) (1710) 5'-6 3/4" (1695)	
						2	۵ï	201 C	
	WA18510	WA20510	WA24510	WA26510	WA28510	WA210510	WA30510	WA34510	WA38510
(3) (8) (8)	15/16" .78)	a ()		" <sup>8</sup> "	* <sup>8</sup> (t	"J	/16"	16 <sup>th</sup>	
(1953) 6'-4 7/8" (1953) (1953) 33 3/8" (848)	6'-1 15/16" (1878) 6.1 7/16"	(1865)	(1851)	6'-0 5/8" (1845)	6'-0 3/8" (1838)	6'-0 1/16" (1830)	5'-11 <sup>13/16"</sup> (1824)	5'-11 5/16" (1811) (1811) 5'-10 3/4" (1797)	
							ю.	ю <u> </u>	
	WA1862	WA2062	WA2462	WA2662	WA2862	WA210620	WA3062*	WA3462	WA3862*

### Table of Woodwright Arch Double-Hung Window Sizes

### Table of Woodwright Unequal Leg Arch Double-Hung Window Sizes

Scale 1/8" (3) = 1'-0" (305) - 1:96



"Window Dimension" always refers to outside frame to frame dimension.

"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, slil panning, brackets, fasteners or other items. See pages 210-211 for more details. Dimensions in parentheses are in millimeters.

0 Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (210). See tables on pages 59-61.

### Table of Woodwright Transom Window Sizes

Scale 1/8" (3) = 1'-0" (305) - 1:96

Window Dimension	1'-9 5/8" (549)	2'-1 5/8" (651)	2'-5 <sup>5</sup> /8"	2'-7 5/8" (803)	2'-9 5/8" (854)	2'-11 5/8" (905)	3'-1 <sup>5</sup> /8"	3'-5 5/8" (1057)	3'-9 5/8" (1159)	3'-11 <sup>5</sup> /16" (1202)	
Minimum Rough Opening	1 <sup>1</sup> -10 1/8* (562)	2*-2 1/8* (664)	2*-6 1/8* (765)	2'-8 1/8" (816)	2'-10 ¼* (867)	3'-0 1/8" (917)	3'-2 1/8" (968)	3*-6 1/8" (1070)	3'-10 1/8" (1172)	3-11 %*	
Unobstructed Glass	15 <sup>5</sup> /8" (397)	19 <sup>5</sup> /8" (498)	23 5⁄8" (600)	25 <sup>5</sup> /8" (651)	27 <sup>5</sup> /8" (702)	29 <sup>5</sup> /8" (752)	31 <sup>5</sup> /8" (803)	35 <sup>5</sup> /8" (905)	39 <sup>5</sup> /8" (1006)	41 <sup>1</sup> /4" (1048)	
	CUSTOM V	VIDTHS — 12	" to 75 %16"		2448-75			招助法规制计	W DEETER S	CALCULATION OF	
1'-0" (305) (305) (318) (318) (318) (173) (173)	WTR1810	<b>WTR</b> 2010	<b>WTR</b> 2410	WTR2610	WTR2810	WTR21010	WTR3010	WTR3410	WTR3810	WTR31010	
1-7 5/16" (491) (491) (504) 14.18" (359) (359)	WTR1815	WTR2015	<b>WTR24</b> 15	WTR2615	WTR2815	<b>WIR</b> 21015	WTR3015	WTR3415			
1-9 5/16" 1 (541) (541) 1-9 78s" (565) 16 1/8" (410)									WTR3815	WTR31015	
	WTR1817	WTR2017	WTR2417	WTR2617	WTR2817	WTR21017	WTR3017	WTR3417	WTR3817	WTR31017	
2'-1 5/16" (643) (643) 2'-1 7/8" (657) 20 1/8" (511)	WTR18111	WTR20111	WTR24111	WTR26111	WTR28111	WTR210111	WTR30111	WTR34111	WTR38111	WTR310111	
2'-3 5/16" (694) 2'-3 7/6" (707) 22 1/8" (562)	WTR1821	WTR2021	WTR2421	WTR2621	WTR2821	WTR210111	WTR3021	WTR3421	WIR38111	WIR310111	
2'-5 5/16" (745) 2'-5 7/8" (758) 24 1/8" (613)	WTR1823	WTR2023									
2'-9 5/16" (846) 2'-9 78" (860) 28 1/8" (714)			WTR2423	WTR2623	WTR2823	WTR21023	WTR3023	WTR3423	WTR3823	WTR31023	
3'-3 5/16" (999) 3'-3 7/9" (1012) 34 1/8" (867)	WTR1827	WTR2027	WTR2427	WTR2627	WTR2827	WTR21027	WTR3027	WTR3427	WTR3827	WTR31027	
	WTR1831	WTR2031	WTR2431	WTR2631	WTR2831	WTR21031	WTR3031	WTR3431	WTR3831	WTR31031	

•"Window Dimension" always refers to outside frame to frame dimension. •"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details. •Dimensions in parentheses are in millimeters.

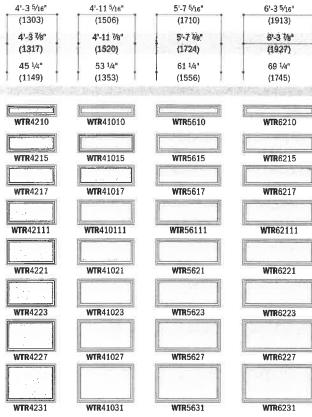
### Woodwright<sup>®</sup> Transom Window Area Specifications

Window Number	Gl Ai Sq. F	Overall Window Area Sq. Ft./(m²)		
WIR1810	0.74	(0.07)	1.80	(0.17)
WIR1815	1.53	(0.14)	2.90	(0.27)
WIR1817	1.75	(0.16)	3.20	(0.30)
WTR18111	2.18	(0.20)	3.80	(0,35)
WIR1821	2.40	(0.22)	4.10	(0:38)
WTR1823	2.62	(0.24)	4.40	(0.41)
WIR1827	3.05	(0.28)	5.00	(0.46)
WIR1831	3.70	(0.34)	5,90	(0.55)
WTW2010	0.93	(0.09)	2.14	(0.20)
WIR2015	1.93	(0.18)	3.44	(0.32)
WIR2017	2.20	(0.20)	3.79	(0.35)
WIR20111	2.74	(0.25)	4.50	(0.42)
WIR2021	3.02	(0.28)	4.86	(0.45)
WIR2023	3.29	(0.31)	5.22	(0.48)
WIR2027	3.83	(0.36)	5.93	(0.55)
WTR2031	4.65	(0.43)	7.00	(0.65)
WIR2410	1.12	(0.10)	2.47	(0.23)
WIN2415	2,32	(0.22)	3.97	(0.37)
WTR2417	2.65	(0.25)	4.38	(0.41)
WIR24111	3.30	(0.31)	5.21	(0.48)

Window Number	Gt Ar Sq. F	Overall Window Area Sq. Ft./(m²)		
WTR2421	3.63	(0.34)	5.62	(0.52)
WIR2423	3.96	(0.37)	6.03	(0.56)
win2427	4.61	(0.43)	6.85	(0.64)
WTR2431	5.60	(0.52)	8.09	(0.75)
WTR2610	1.21	(0.11)	2.64	(0:24)
WTR2615	2.51	(0.23)	4.24	(0.39)
WIR2617	2.87	(0.27)	4.68	(0.43)
WIR26111	3.58	(0.33)	5.56	(0.52)
WTR2621	3.94	(0.37)	6.00	(0.56)
WTR2623	4.29	(0.40)	6.44	(0.60)
WIN2027	5.00	(0.46)	7:32	(0.68)
WTR2631	6.07	(0.56)	6:63	(0.80)
WIR2810	1.31	(0.12)	2:80	(0.26)
WTR2818	2.71	(0.25)	4.51	(0.42)
WIR2817	3.09	(0.29)	4.98	(0.46)
WIR28111	3.86	(0.36)	5.91	(0.55)
WIR2821	4.24	(0.39)	6.38	(0.59)
WTR2823	4.63	(0.43)	6,84	(0.64)
WTR2827	5.40	(0.50)	7.78	(0.72)
WTR2831	6.55	(0.61)	9.18	(0.85)

Window Number		Glass Area . Ft./(m²)	A	Overall Window Area Sq. Ft./(m <sup>2</sup> )		
WTR21010	1.4	0 (0.13)	2.97	(0.28)		
WTR21015	2.9	1 (0.27)	4.78	(0.44)		
WTR21017	3.3	2 (0.31)	5.27	(0.49)		
WIR210111	. 4.14	4 (0.38)	6.26	(0.58)		
WTR23021	4.5	5 (0.42)	6.76	(0.63)		
WTR21023	4.9	6 (0.46)	7.25	(0.87)		
WTR21027	5.79	0.54)	8.24	(0.77)		
WTR21031	7.02	2 (0.65)	9.73	(0.90)		
WIR3010	1.50	(0.14)	3:14	(0.29)		
WTR3015	3.10	(0.29)	5.05	(0.47)		
WIR3017-	1 3.54	4 (0.33)	5.57	(0.52)		
WIR30111	4.43	2 (0.41)	6.61	(0.61)		
WTR3021	4.86	6 (0.45)	7.14	(0.06)		
WTR3023	5.30	) (0.49)	7.66	(0.71)		
WIR3027	6.18	3 (0.57)	8.70	(0.81)		
WTR3031.	7.49	) (0.70)	10.27	(0.95)		
WTR3410	1.69	(0.16)	3.47	(0.32)		
WIR3415	3.49	(0,32)	5.58	(0.52)		

Dimensions in parentheses are in square meters.





Custom-size windows are available in 1/8" (3) increments. See page 62 for custom sizing.

Grille patterns shown on page 63.



"Window Dimension" always refers to outside frame to frame dimension.
 "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps,
flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
 "Dimensions in parentheses are in millimeters.

### Woodwright<sup>®</sup> Transom Window Area Specifications (continued)

Window Number	Gi Ai Sq. F	Overall Window Area Sq. Ft./(m²)		
WIR3417	3.99	(0.37)	6.16	(0.57)
WIR34111	4.98	(0.46)	7.32	(0.68)
WTR3421	5.47	(0.51)	7.90	(0.73)
WTR3423	5.97	(0.55)	8.47	(0.79)
WTR3427	6.96	(0.65)	9.63	(0.89)
WTR3431	8.44	(0.78)	11.36	(1.06)
WIRSBIO	1.87	(0.17)	3.80	(0.35)
WTR3815	3.89	(0.36)	6.12	(0.67)
WTR3817	4.44	(0.41)	6.75	(0.63)
WTR38111	5.54	(0.51)	8.02	(0.75)
WTR3821	6.09	(0.57)	8.65	(0.80)
WIR3823	6.64	(0.62)	9,29	(0.86)
WIR3827	7.74	(0.72)	10.55	(0.98)
WTR3831	9.39	(0.87)	12.46	(1.16)
WTR31010	1.95	(0.18)	3.94	(0.37)
WTR31015	4.05	(0.38)	6.35	(0.59)
WIR31017	4,63	(0.43)	7.00	(0.65)
WIRS10111	5.77	(0.54)	8.32	(0.77)
WTR31021	6.35	(0.59)	8.97	(0.83)
WIR31023	6.92	(0.64)	9.63	(0.89)

Window Number	A	ass ica t./(m²)	Overall Window Area Sq. FL/(m²)		
WIR31027	8.07	(0.75)	10.95	(1.02)	
WIR31091	9.79	(0.91)	12.92	(1.20)	
WTR4210	2.14	(0.20)	4.28	(0.40)	
WTR4215	4.44	(0.41)	6.88	(0.64)	
WIR4217	5.07	(0.47)	7.59	(0.71)	
WTR42111	6.33	(0.59)	9.02	(0.84)	
WIR4221	6.96	(0.65)	9,73	(0.90)	
WTR4223 .	7.59	(0.71)	10.45	(0.97)	
WIR4227	8.85	(0.82)	11.87	(1.10)	
WIR4231	10.74	(1.00)	14.01	(1.30)	
WIR41010	2.52	(0.23)	4.94	(0.46)	
WTR41015	5.23	(0.49)	7.95	(0.74)	
WIR41017	5.97	(0.55)	8.78	(0.82)	
WTR410111	7.45	(0.69)	10.43	(0.97)	
WIR41021	8.19	(0.76)	11.25	(1.05)	
WIR41023	8.93	(0.83)	12.07	(1.12)	
WTR41027	10.41	(0.97)	13.72	(1.27)	
WIR41031	12.63	(1.17)	16.19	(1.50)	
WIR5610	2.90	(0.27)	5.61	(0.52)	
WIRSOIS	6.01	(0.56)	9.03	(0.84)	

Window Number		A	85\$ 'ea 1./(m²)	Overall Window Area Sq. Ft./(m <sup>2</sup> )		
WTR5617		6.87	(0.64)	9.96	(0.93)	
WTR56111	1912510	8.57	(0.80)	11.83	(1.10)	
WTR5621		9.42	(0.88)	12.77	(1.19)	
WT85628		10.27	(0.95)	13.70	(1.27)	
WIR5627	in.	11.98	(1.11)	15.57	(1.45)	
WTR5631	Caller.	14.53	(1.35)	18.38	(1.71)	
WIR6210 -		3.28	(0.30)	6.28	(0.58)	
WIR6215		6.80	(0.63)	10.10	(0.94)	
WTR6217		7.76	(0.72)	11.15	(1:04)	
WIR62111		9.69	(0.90)	13.24	(1.23)	
WIR6221	3000	10.65	(0.99)	14.28	(1.33)	
WTR6223		11.61	(1.08)	15.33	(1.42)	
WIR6227		13.54	(1.26)	17.42	(1.62)	
WTR6231	AND TO	16.43	(1.53)	20.56	(1.91)	

\* Dimensions in parentheses are in square meters.

### Table of Woodwright Picture Window Sizes Scale 1/8" (3) = 1'-0" (305) - 1:96

.

Vind	ow D	imer	nsior			1'-0"	3'-1 5/8"	3'-5 5/8"	3'-11 5/16"	4'-3 5/16"	4'-11 5/16"	5'-7 5/16"
						(305)	(956)	(1057)	(1202)	(1303)	(1507)	(1710)
Minir Roug	num h Os	enir	and in			1'-0.1/2"	3'-2 1/8"	3'-6 1/8"	31-11 7/8"	4'-3 7/8"	4'-11 7/8"	51-7 7/8"
						(318)	(968)	(1070)	(1216)	(1318)	(1521)	(1724)
Unob	struc	ted	Glass	3		6" (152)	31 5/8" (803)	35 <sup>5</sup> /8" (905)	41 1/4"	45 1/4"	53 1/4"	61 1/4"
					100		(803) VIDTHS - 12		(1048)	(1149)	(1353)	(1556)
-			-	-	181					[ <del>[]</del> ]	(r)	1
Ê	#8/1	æ	-8%	2)	1 81							
(1241)	4-0 7/8"	(12/	41 1	(107	9							
	-		_		- 14 1/2" to 76 7/6"							
÷		-	_	-	1	WPW10310	WPW30310	WPW34310	WPW310310	WPW42310	WPW410310	WPW56310
3)	18/1	6	<b>"</b> 8"	(9)	SIH							
(1343)	4:-4.7/8"	(134	45 1/8"	(114								
				_	DIN I						L	
		-	_		CUSTON HEIGHTS	WPW1042	WPW3042	WPW3442	WPW31042	WPW4242	WPW41042	WPW5642
6	#-00	<b>a</b>	•	ŝ	9					1000		1000
(1445)	41-8 7/8"	144	49 1/8"	1248								
Ĭ	4	جبه	4	-					:			
					1	NPW1046	WPW3046	WPW3446	WPW31046	WPW4246	WPW41046	WPW5646
(1547)	2'-0 7/8ª	(11)	53 1/8"	849)								
(15	5-19	5	53	(13								
	_	_			3	U						
	-	-	-	-	M	/PW10410	WPW30410	WPW34410	WPW310410	WPW42410	WPW410410	WPW56410
_	s	-		~	ł				Service.			
(1648)	5-4718	648	57 1/8"	451	9							
1	ග්	E.	ίΩ.	5								
	-	-			8	NPW1052	WPW3052	WPW3452	WPW31052	WPW4252	WPW41052	WPW5652
		-			12	n					1111102	11110002
(6	8ª	6		e								1.2.1.2.1.2
(1749)	5'-8 7/8"	N I	61 1/8"	155.								
ľ	80		-	~	Ĩ.							
-	-	-	1		8	NPW1056	WPW3056	WPW3456	WPW31056	WPW4256	WPW41056	WPW5656
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0	.00	-		÷						. 24 TA	- T 1	
(1851)	6-0 7%	1851	65 1/8"	1654								
°	9	ت	ç	9				1				
	_									Lunnu dors 10	WIDW/440540	WINNEAR
	-		- 11	-	N	/PW10510	WPW30510	WPW34510	WPW310510	WPW42510	WPW410510	WPW56510
											THE AF	
(1953)	6'-4 7/8"	953)	69 1/8"	756)								
(15	9-9	E)	69	(17								
											1	
2	-		-	÷	1	<b>NPW1062</b>	WPW3062	WPW3462	WPW31062	WPW4262	WPW41062	WPW5662



Custom-size windows are available in 1/8" (3) increments. See page 62 for custom sizing.

Grille patterns shown on page 63.

"Window Dimension" always refers to outside frame to frame dimension.
 "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.
 Dimensions in parentheses are in millimeters.

### Woodwright\* Double-Hung Window Opening and Area Specifications

Window Number	A	Opening rea t./(m²)	Wi	ening in eith \$/(mm)		Position ight s/(mm)	GI A	ass rea L/(m²)	A	ent rea L./(m²)	to Top I Sill	Subfloor of Inside Stop s/(mm)		Windor rea L/(m²)
WDH18210	1.73	(0.16)	17 2/3"	(454)	14 1/4"	(362)	2.90	(0.27)	1.78	(0.17)	48 1/2"	(1231)	5.53	(0.51
WOH1832	1.98	(0.18)	17 7/8"	(454)	16 1/4"	(412)	3.32	(0.31)	2.03	(0.19)	44 1/2"	(1130)	6.14	(0.57
WDH1836	2.23	(0.21)	17 1/a"	(454)	18 1/4"	(463)	3.74	(0.85)	2,28	(0.21)	40 1/2"	(1028)	6.74	(0.63
WDH18310	2.48	(0.23)	17.7%	(454)	20 1/4"	(514)	4.15	(0.39)	2.53	(0.24)	. 36 1/2"	(926)	7.34	(0.68
WDH1842	2.73	(0.25)	17 1/1	(454)	22 1/4"	(565)	4.57	(0.43)	2.78	(0,26)	32 1/2	(825)	7,94	(0.74
WDH1846	2.90	(0.27)	17 1/1"	(454)	24 1/4"	(616)	4,98	(0.46)	3.02	(0.28)	28 1/2*	(723)	8.54	(0.79
WDH18410	3.22	(0.30)	17 1/3"	(454)	26 1/4"	(666)	5.40	(0.50)	3.27	(0.30)	24 1/2"	(622)	9.14	(0.85
WDH1852	3.47	(0.32)	17 1/1	(454)	28 1/4"	(717)	5.81	(0.54)	3.52	(0.33)	20 1/3*	(520)	9.74	(0.91
WDH1856	3.72	(0.35)	17 7/6"	(454)	30 1/4"	(768)	6.23	(0.58)	3.02	(0.28)	16 1/3"	(418)	10.34	(0.96
WDH18510	3.97	(0.37)	17 1/8"	(454)	32 1/4"	(819)	6.65	(0.62)	4.02	(0.37)	12 1/3"	(317)	10.94	(1.02
WDR1862	4.22	(0.39)	177/8"	(454)	34 1/4"	(870)	7.06	(0.66)	4.26	(0.40)	8 1/2"	(215)	11.54	(1.07
WDH20210	2.12	(0.20)	21 1/3"	(556)	14 1/4"	(362)	3.68	(0.34)	2.18	(0.20)	48 1/2"	(1231)	6,56	(0.6)
WDH2032	2.42	(0.23)	21 %"	(556)	16 1/4"	(412)	4.21	(0.39)	2.48	(0.23)	44 1/2"	(1130)	7.27	(0.68
WDH2036	2.73	(0.25)	21 7/8"	(556)	18 1/4"	(463)	4.73	(0.44)	2.79	(0.26)	40 1/2"	(1028)	7.98	(0.7
WDH20310	3.03	(0.28)	21 %"	(556)	20 1/4"	(514)	5.26	(0.49)	3.09	(0,29)	36 1/2"	(926)	8.69	(0.8
WDH2042	3.34	(0.31)	21 7/4"	(556)	22 1/4"	(565)	5.79	(0.54)	3.40	(0.32)	32 1/2"	(825)	9.41	(0.8
WDH2046	3.55	(0.33)	21 7/8"	(556)	24 1/4"	(616)	6.31	(0.59)	3.70	(0.34)	28 1/2*	(723)	10.12	(0.94
WDH20410	3.94	(0.37)	21 7/8	(556)	26 1/4"	(666)	6.84	(0.64)	4.00	(0.37)	24 1/2"	(622)	10.83	(1.0
WDH2052	4.25	(0.39)	21 7/3"	(556)	28 1/4"	(717)	7.37	(0.69)	4.31	(0.40)	20 1/2"	(520)	11.54	(1.0
WDH2056	4.55	(0.42)	21 %	(556)	30 1/4"	(768)	7.89	(0.73)	3.70	(0.34)	16 1/2"	(418)	12.25	(1.1
WDH20510	4.86	(0.45)	21 1/8"	(556)	32 1/4"	(819)	8,42	(0.78)	4.92	(0.46)	12 1/2"	(317)	12.96	(1.2)
WDH2062	5.16	(0.48)	21 2/8"	(556)	34 1/4"	(870)	8.95	(0.83)	5.22	(0.49)	8 1/2"	(215)	13,68	(1.2
WDH24210	2.51	(0.23)	25 7/8"	(657)	14 1/4"	(362)	4.46	(0.41)	2.58	(0.24)	48 1/2"	(1231)	7.58	(0.70
WDH2432	2.86	(0.27)	25 1/8"	(657)	16 1/4"	(412)	5:09	(0.47)	2,94	(0.27)	44 1/2"	(1130)	8.40	(0.78
WDH2436	3.22	(0,30)	25 1/8"	(657)	18 1/4"	(463)	5.73	(0.53)	3.30	(0.31)	40 1/2"	(1028)	9.23	(0.8
NDH24310	3.59	(0.33)	25 1/3"	(657)	20 1/4"	(514)	6.37	(0.59)	3.66	(0.34)	36 1/1*	(926)	10.05	(0.9
NDH2442	3.95	(0.37)	25 1/4"	(657)	22 1/4"	(565)	7,01	(0.65)	4.02	(0.37)	32 1/2"	(825)	10.87	(1.0
NDH2446	4.19	(0.39)	25 1/1	(657)	24 1/4"	(616)	7.65	(0.71)	4.38	(0.41)	28 1/2"	(724)	11.70	(1.0
WDH24410	4.66	(0.43)	25 1/4"	(657)	26 1/4"	(666)	8.28	(0.77)	4.74	(0.44)	24 1/2"	(622)	12.52	(1.10
WDH2452	5.02	(0.47)	257/8"	(657)	28 1/4"	(717)	8.92	(0.83)	5.10	(0.47)	20 1/2"	(520)	13.34	(1.24
WDH2456	5.38	(0.50)	25 7/8"	(657)	30 1/4"	(768)	9.56	(0.89)	4.38	(0.41)	16 1/2*	(418)	14.17	(1.3
WDH245100	5.74	(0.53)	25 7/8"	(657)	32 1/4"	(819)	10.20	(0.95)	5.81	(0.54)	12 1/2"	(317)	14.99	(1.39
WDH24620	6.10	(0.57)	25 7/8"	(657)	34 1/4"	(870)	10.84	(1.01)	6.17	(0.57)	84/2"	(215)	15.81	(1.4
WDH26210	2.71	(0.25)	27 1/1"	(708)	14 1/4"	(362)	4.84	(0.45)	2.78	(0.26)	48 1/2"	(1231)	8.09	(0.7
WDH2632	3.09	(0.29)	27 1/6"	(708)	16 1/4"	(412)	5,54	(0.52)	3.17	(0.30)	44 1/2"	(1130)	8.97	(0.83
WDH2636	3.48	(0,32)	27 1/1"	(708)	18 1/4"	(463)	6.23	(0.58)	3,55	(0.33)	40 1/5"	(1028)	9.85	(0,9)
WDH26310	3.86	(0.36)	27 1/8"	(708)	20 1/4"	(514)	6.92	(0.64)	3.94	(0.37)	36 1/2*	(926)	10.73	(1.00
NDH2642	4.25	(0.40)	27 1/8"	(708)	22 1/4"	(565)	7.62	(0.71)	4.33	(0.40)	32 1/5"	(825)	11.61	(1.0)
WDH2846	4.52	(0.42)	27 1/2"	(708)	24 1/4"	(616)	8.31	(0.77)	4,71	(0.44)	28 1/2"	(723)	12,49	(1,1)
WDH26410	5,02	(0.47)	27 %	(708)	26 1/4"	(666)	9.01	(0.84)	5.10	(0.47)	24 1/2"	(622)	13.36	(1.24
WDH2052	5.41	(0.50)	27 7/8"	(708)	28 1/4"	(717)	9.70	(0.90)	5.49	(0.51)	20 1/2*	(520)	14,24	(1.3
WDH26564	5.80	(0.54)	27 %	(708)	30 1/4"	(768)	10.39	(0.96)	4.71	(0.44)	16 1/2"	(418)	15.12	(1.4
NOH20510 0	6.19	(0.57)	27 7/8"	(708)	32 1/4"	(819)	11.09	(1.03)	6.26	(0.58)	12 1/2"	(317)	16.00	(1.4
WDH26620	6.58	(0.61)	27 1/8"	(708)	34 1/4"	(870)	11.78	(1.09)	6.65	(0.62)	8 1/2"	(215)	16.88	(1.5
WDH28210	2.90	(0.27)	29 7/8"	(759)	14 1/4"	(362)	5.23	(0.49)	2.98	(0.28)	48 1/2"	(1231)	8.61	(0.8
WDH2832	3.31	(0.31)	29 1/2"	(759)	16 1/4"	(412)	5,98	(0.55)	3,39	(0.32)	44 1/2"	(1130)	9.54	(0.8
NDH2836	3.73	(0.35)	29 1/8"	(759)	18 1/4"	(463)	6.73	(0.63)	3.81	(0.35)	40 1/2"	(1028)	10.47	(0.9
WDH28310	4.14	(0,38)	29 1/8"	(759)	20 1/4"	(514)	7.48	(0.70)	4.22	(0.39)	36 1/2"	(926)	11.41	(1.0
WDH2842	4.56	(0.42)	29 1/."	(759)	22 1/4"	(565)	8.23	(0.77)	4.64	(0.43)	32 1/2"	(825)	12.34	(1.19
NDH2846	4.85	(0.45)	29 1/8"	(759)	24 1/4"	(616)	8.98	(0.83)	5,05	(0.47)	28 1/2*	(723)	13,28	(1,2)
WDH28410	5.38	(0.50)	29 7/8"	(759)	26 1/4*	(666)	9.73	(0.90)	5.47	(0.51)	24 1/2"	(622)	14.21	(1.3
VDH2852 0	5.80	(0.54)	29 %	(759)	28 1/4"	(717)	10.48	(0.97)	5.88	(0.55)	20 1/2"	(520)	15.14	(1.4
NDH28560	6.22	(0.58)	29 7/8"	(759)	30 1/4"	(768)	11.22	(1.04)	5.05	(0.47)	16 1/2"	(418)	16.08	(1.4
WDH285100	6.63	(0.62)	29 7/8"	(759)	32 1/4"	(819)	11.97	(1.11)	6.71	(0.62)	12:1/3"	(317)	17.01	(1.5
NDH28620	7.05	(0.66)	29 7/8"	(759)	34 1/4"	(870)	: 12.72	(1.18)	7.13	(0.66)	8 1/2"	(215)	17.95	(1.6
NDH210210	3.09	(0.29)	S1 1/8"	(809)	14 1/4"	(362)	5.62	(0.52)	3.18	(0.30)	48 1/2"	(1231)	9.12	(0.8
NDH21032	3.53	(0.33)	31 1/4"	(809)	16 1/4"	(412)	6.42	(0.60)	3.62	(0.34)	44 1/2"	(1130)	10.11	(0.9
ADH21036	3.97	(0.37)	31 %	(809)	18 1/4"	(463)	7,23	(0.67)	4.06	(0.38)	40 1/2"	(1028)	11.10	(1.0
WDH210310	4.42	(0.41)	31 1/1"	(809)	20 1/4"	(514)	8.03	(0.75)	4.51	(0.42)	36 1/2*	(926)	12.09	(1.1
NOH21042	4.86	(0,45)	31 1/6"	(809)	22 1/4"	(565)	8.84	(0.82)	4.95	(0.46)	32 1/2"	(825)	13.08	(1.2
WDH21046	5.17	(0.48)	31 1/4"		24 1/4"	(616)	9.64	(0.90)	5.39	(0.50)	28 1/2"	1.	14.07	(1.3

400 SERIES

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\* "Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10  $^{1}/_{5''}$  (2096). \* Dimensions in parentheses are in millimeters or square meters. § Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610).

continued on next page

### Woodwright\* Double-Hung Window Opening and Area Specifications (continued)

Ser Restant			Clear O	pening in	Full Open	Position	1				Top of	Subfloor		
Window Number	A	Opening rea °L/(m²)		idth s/(mm)		ight s/(mm)	A	ase rea t./(m²)	A	ent rea t./(m²)	to Top Sill	of Inside Stop s/(mm)	A	Window rea t./(m²)
WDH2104100	5.74	(0.53)	31 1/8"	(809)	26 1/4*	(666)	10,45	(0.97)	5.83	(0.54)	24 1/2"	(622)	15.05	(1.40)
WDH210520	6.18	(0.57)	31 1/1"	(809)	28 1/4"	(717)	11,25	(1.05)	6.28	(0.58)	20 1/2"	(520)	16.04	(1.49)
WDH210564	6.63	(0.62)	31 1/1"	(809)	30 1/4"	(768)	12.06	(1.12)	5.39	(0.50)	16 1/1"	(418)	17.03	(1.59)
WDH2105100	7.07	(0.66)	31 7/3"	(809)	34 1/4"	(819)	12,86	(1.20)	7.16	(0.67)	12 1/2"	(317)	18.02	(1.67)
WDH210620	7.52	(0.70)	31 1/8"	(809)	34 1/4"	(870)	13.67	(1.27)	7.60	(0.71)	84/2	(215)	19.01	(1.77)
W0H30210	3.29	(0.31)	33 1/3"	(860)	14 1/4"	(362)	6.01	(0.56)	3.38	(0.31)	48 1/2"	(1231)	9.63	(0.90)
WDH3032	3.75	(0.35)	33 1/8	(860)	16 1/4"	(412)	6.87	(0.64)	3.85	(0.36)	44 1/2"	(1130)	10.67	(0.99)
WDH3036	4.22	(0.39)	33 1/8"	(860)	18 1/4"	(463)	7.73	(0.72)	4.32	(0.40)	40 1/2"	(1028)	11.72	(1.09)
WDH30310	4.69	(0.44)	33 7/8"	(860)	20 1/4"	(514)	8,59	(0.80)	4.79	(0.45)	36 1/2"	(926)	12.76	(1.19)
WDH3042	5.17	(0.48)	33 1/2"	(860)	22 1/4"	(565)	9.45	(0.88)	5.26	(0.49)	32 1/2"	(825)	13.81	(1.28)
WDH30460	5.75	(0.53)	33 7/8"	(860)	24 1/4"	(616)	10.31	(0.96)	5.73	(0.53)	28 1/2	(723)	14.85	(1.38)
WOH304100	6.10	(0.57)	33 1/1"	(860)	26 1/4"	(666)	11.17	(1.04)	6.20	(0.58)	24 1/3"	(622)	15.90	(1.48)
WDH30520	6.57	(0.61)	33 1/3"	(860)	28 1/4"	(717)	12.03	(1.12)	6.67	(0.62)	20 1/2*	(520)	16.95	(1.58)
WDH30560	7.04	(0.65)	38 1/3"	(860)	30 1/4"	(768)	12.89	(1.20)	5.73	(0.53)	16 1/2"	(418)	17.99	(1.67)
WDR30510.0	7.52	(0.70)	33 1/3"	(860)	32 1/4"	(819)	13.75	(1.28)	7.61	(0.71)	: 12 1/2"	(317)	19.04	(1.77)
WDH30620	7.99	(0.74)	33 1/3"	(860)	34 1/4"	(870)	14.61	(1.36)	8.08	(0.75)	8 1/2"	(215)	20.08	(1.87)
WD834210	3.68	(0.34)	37 1/5	(962)	14 1/4"	(362)	6.79	(0.63)	3.78	(0.35)	48 1/2"	(1231)	10.65	(0.99)
WDN3432	4.19	(0.39)	37 1/8"	(962)	16 1/4"	(412)	7.76	(0.72)	4.30	(0.40)	44 1/2"	(1130)	11.81	(1.10)
WDR3436	4.72	(0.44)	37 1/8"	(962)	18 1/4"	(463)	8.73	(0.81)	4.83	(0.45)	40 1/2"	(1028)	12.97	(1.21)
WDH34310	5.25	(0.49)	37 1/8"	(962)	20 1/4"	(514)	9.70	(0.90)	5.35	(0.50)	36 1/2"	(926)	14.12	(1.31)
WDH3442	5.78	(0.54)	37 1/2*	(962)	22 1/4"	(565)	10.67	(0.99)	5.88	(0.55)	32 1/2"	(825)	15.28	(1.42)
WDH34460	6.14	(0.57)	37 7/8"	(962)	24 1/4"	(616)	11 64	(1.08)	6.41	(0.60)	: 28 1/2"	(723)	16.43	(1.53)
WDH34410 Q	6.82	(0.63)	37 1/8	(962)	26 1/4"	(666)	12.61	(1.17)	6.93	(0.64)	24 1/2"	(622)	17.59	(1.63)
WDH34520	7.35	(0.68)	37 1/8	(962)	28 1/4"	(717)	13.58	(1.26)	7.46	(0.69)	20 1/2"	(520)	18.75	(1,74)
WDN34560	7.88	(0.73)	37 7/8"	(962)	30 1/4*	(768)	14.55	(1:35)	6.41	(0.60)	16 1/3"	(418)	19.90	(1.85)
WD834510 Q	8.41	(0.78)	37 1/8	(962)	32 1/4"	(819)	15.53	(1.44)	8.51	(0.79)	12 1/2"	(317)	21.06	(1.96)
WDN34620	8.94	(0.83)	37 1/8"	(962)	34 1/4"	(870)	16.50	(1.53)	9.04	(0.84)	8 1/2"	(215)	22.22	(2.06)
WDR38210	4.07	(0.38)	41 1/8	(1064)	14 1/4"	(362)	7.56	(0.70)	4.17	(0.39)	48 1/3"	(1231)	11.68	(1.09)
WDH3832	4.64	(0.43)	41 7/8"	(1064)	16 ¼"	(412)	8.64	(0.80)	4.76	(0.44)	44 1/2"	(1130)	12.94	(1.20)
WDH3836	5.22	(0.49)	41 1/0"	(1064)	18 1/4"	(463)	9.72	(0:90)	5.34	(0.50)	40 1/2"	(1028)	14.21	(1.32)
WDH38310	5.81	(0.54)	41 7/8	(1064)	20 ¼/4"	(514)	10.81	(1.00)	5.92	(0.55)	36 1/2"	(926)	15.48	(1.44)
WDN3842	6.39	(0.59)	41 7/6	(1064)	22 1/4"	(565)	11.89	(1.11)	6.50	(0.60)	32 1/2"	(825)	16.75	(1.56)
WDR38460	6.79	(0.63)	41 7/8"	(1064)	24 1/4"	(616)	12.97	(1.21)	7.08	(0.66)	28 1/2"	(723)	18.01	(1.67)
WDH384100	7.55	(0.70)	41 1/1	(1064)	26 1/4"	(666)	14.05	(1.31)	7.66	(0.71)	24 1/2"	(622)	19.28	(1.79)
WDH3852 0	8.13	(0.76)	41 7/1	(1064)	28 1/4"	(717)	15.14	(1.41)	8,25	(0.77)	20 1/2"	(520)	20,55	(1.91)
WDH38560	8.72	(0.81)	41 1/1	(1064)	30 1/4"	(768)	16.22	(1.51)	7.08	(0.66)	16 1/2	(418)	21.62	(2.01)
WDH385100	9.30	(0.86)	41 7/5	(1064)	32 1/4"	(819)	17.30	(1.61)	9.41	(0.87)	12 1/2"	(317)	23.08	(2.14)
WDN38620	9.88	(0.92)	41 7/8	(1064)	34 1/4"	(870)	18,38	(1.71)	9.99	(0.93)	8 1/2"	(215)	24.35	(2.26)

Woodwright\* Springline<sup>™</sup> Single-Hung Window Opening and Area Specifications

Window Number	A	)pening rea L/(m²)	Clear Or Wil Inches	tin '	Full Open Hei Inches	ght	GI	ass rea L/(m²)	A	ent ea L/(m²)	Top of S to Top of Sill S Inches	f Inside Stop	A	Window rea t./(m²)
W\$2042	• 1.39	(0.13)	21 1/8	(556)	9 ²/ <sub>16</sub> "	(231)	5.48	(0.51)	1.39	(0.13)	32 9/16"	(828)	8.90	(0.83)
W52046	1.54	(0.14)	21 7/*	(556)	10 2/16"	(257)	5.88	(0.55)	1.54	(0.14)	29 %10"	(751)	9.44	(0.88)
W\$20410	1.69	(0.16)	21 7/8"	(556)	11 ²/ <sub>36</sub> "	(282)	6.29	(0.59)	1.69	(0.16)	26 %is"	(675)	9.97	(0.93)
W\$2052	1.84	(0.17)	21 1/4"	(556)	12 ²/16"	(308)	6.70	(0.62)	1.84	(0.17)	23 %	(599)	10.51	(0.98)
W\$2056	2.76	(0.26)	21 1/3"	(556)	18 ²/15"	(461)	7.80	(0.72)	2.76	(0.26)	15 % 15"	(395)	11.94	(1.11)
W520510	2.96	(0.28)	21 1/2"	(556)	. 19 1/2"	(495)	8.25	(0.77)	2.96	(0.28)	12.%	(310)	12.53	(1.16)
W\$2062	3.16	(0.29)	21 3/8"	(556)	20 13/16"	(529)	8.71	(0.81)	3.16	(0.29)	8 1/a"	(226)	13.12	(1.22
W\$2442	1.64	(0.15)	25 1/3"	(658)	9 ²/16"	(231)	6.85	(0.64)	1.64	(0.15)	30 %18"	(777)	10.62	(0.99
W\$2446	1.82	(0.17)	25 1/*	(658)	10 2/16"	(257)	7.34	(9.68)	1.82	(0.17)	27 9/10"	(701)	11.23	(1.04
W\$24410	2.00	(0.19)	25 7/8"	(658)	11 ²/16"	(282)	7.83	(0.73)	2.00	(0.19)	24 9/16"	(624)	11.85	(1.10
W\$2452	2.18	(0.20)	25 7/4"	(658)	12 ²/15"	(308)	8.33	(0.77)	2.18	(0.20)	21 % 18"	(548)	12.47	(1.16
W\$2456	. 3.26	(0.30)	25 1/1"	(658)	18 ²/15"	(461)	9.65	(0.90)	3.26	(0.30)	13 %16*	(344)	14.12	(1.31
W\$24510	3,50	(0.33)	25 7/8"	(658)	19 1/2"	(495)	10.19	(0.95)	3.50	(0.33)	10 1/58*	(259)	14.81	(1.38
W\$2462	3.74	(0.35)	25 1/8*	(658)	20 13/16"	(529)	10.74	(1.00)	3.74	(0.35)	6 1/a"	(175)	15.49	(1.44
W\$2642	1.76	(0.16)	27 1/8"	(708)	9 1/8"	(231)	7.57	(0.70)	1.76	(0.16)	29 1/36"	(751)	11.51	(1.07
W\$2646	1.96	(0.18)	27 1/3"	(708)	10 '/s"	(257)	8.10	(0.75)	1.96	(0.18)	26 %/16"	· (675)	12.17	(1.13
W\$26410	2.15	(0.20)	27 1/8	(708)	11 ¼,"	(282)	8.64	(0.80)	2.15	(0.20)	23 % 35"	(599)	12.82	(1.19
W\$2652	2.35	(0.22)	27 1/8"	(708)	12 ¼ <sup>*</sup>	(308)	9.17	(0.85)	2.35	(0.22)	20 %	(523)	13.48	(1.25
W\$2656	3.52	(0.33)	27 1/3"	(708)	18 ½"	(461)	10.60	(0.99)	3.52	(0.33)	12 %18	(319)	15.25	(1.42

For cottage and reverse cottage sash

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\* "Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 '/<sub>4</sub>" (2096). \* Dimensions in parentheses are in millimeters or square meters. Ø Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610).

### Woodwright<sup>®</sup> Springline<sup>™</sup> Single-Hung Window Opening and Area Specifications (continued)

Window Number	A	Opening rea t./(m²)	W	idth s/(mm)	Full Open He Inches	ight	A	ass rea t./(m²)	A	ent réa L/(m²)	to Top o Sill	Subfloor of Inside Stop o/(mm)	A	Window rea 1./(m²)
W\$26510	3.77	(0.35)	27 1/8"	(708)	19 º/2"	(495)	11.19	(1:04)	3.77	(0.35)	9 3/16"	(234)	15.98	(1.49)
W\$2662	4.03	(0.38)	27 7/8"	(708)	20 13/16"	(529)	11.79	(1.10)	4.03	(0.38)	5 1/8*	(149)	16.71	(1.55)
W\$2842	1.89	(0.18)	29 1/8"	(759)	9 1/8"	(231)	8,31	(0,77)	1.89	(0.18)	28 % 15"	(726)	12.42	(1.15)
W\$2846	2.10	(0.20)	29 1/1	(759)	10 1/8"	(257)	8.89	(0.83)	2.10	(0.20)	25 %	(650)	13.12	(1.22)
WS28410	2.31	(0.21)	29 7/8	(759)	11 1/8"	(282)	9.46	(0.88)	2.31	(0.21)	22 %/16"	(574)	13.82	(1.28)
W\$2852	2.51	(0.23)	29 1/8"	(759)	12 <sup>1</sup> /8"	(308)	10.04	(0.93)	2.51	(0.23)	19 %16"	(497)	14.52	(1.35)
W\$2856	3.77	(0.35)	29 7/8"	(759)	18 1/8"	(461)	11.58	(1.08)	3.77	(0.35)	11º/16"	(293)	16.40	(1.52)
W528510	4.04	(0.38)	29 1/6	(759)	19 1/2"	(495)	12.22	(1.14)	4.04	(0.38)	8 3/38	(209)	17.18	(1.60)
W\$2862	4.32	(0.40)	29 7/8"	(759)	20 13/16"	(529)	12.86	(1.20)	4.32	(0.40)	4 1/8"	(124)	17.95	(1.67)
W\$21042	2.02	(0.19)	31 1/8"	(810)	9 1/8"	(231)	9.07	(0.84)	2,02	(0,19)	27 9/15	(701)	13.35	(1.24)
W\$21046	2.24	(0.21)	31 %"	(810)	10 1/8"	(257)	9.69	(0.90)	2.24	(0.21)	24 %/16*	(624)	14.09	(1.31)
W\$210410	2.46	(0.23)	31 1/8"	(810)	11 1/8"	(282)	10,31	(0.96)	2.46	(0.23)	21 %15	(548)	14.84	(1.38)
W\$24052	2.68	(0.25)	31 1/0"	(810)	12 1/8"	(308)	10.93	(1.02)	2.68	(0.25)	18 1/15	(472)	15.58	(1.45)
W\$21056	4.02	(0.37)	31 1/8"	(810)	18 1/8"	(461)	12.58	(1.17)	4.02	(0.37)	10 %15"	(268)	17.57	(1.63)
W\$210510	4.32	(0.40)	31 %	(810)	19 1/2"	(495)	13.27	(1.23)	4.32	(0.40)	7 3/16"	(183)	18.39	(1.71)
W621062	4.61	(0.43)	31 1/16	(810)	20 13/16"	(529)	13.95	(1.30)	4.61	(0.43)	3 7/8"	(99)	19.22	(1.79)
W83042	2.14	(0.20)	33 7/4"	(861)	9 1/8"	(231)	9.86	(0.92)	2.14	(0.20)	26 %/15"	(675)	14.31	(1.33)
W\$3046	2.38	(0.22)	33 1/1*	(861)	10 1/8"	(257)	10.52	(0.98)	2.38	(0.22)	23 %	(599)	15.09	(1.40)
W530410	2.62	(0.24)	33 1/4"	(861)	11 4/8"	(282)	11.18	(1:04)	2.62	(0.24)	20 %18"	(523)	15.87	(1.48)
w\$3052	2.85	(0.27)	38 %"	(861)	12 1/8"	(308)	11.84	. (1.10)	2.85	(0.27)	17 %15"	(447)	16.66	(1.55)
W53056	4.27	(0.40)	33 7/8"	(861)	18 1/8"	(461)	13.60	(1.26)	4.27	(0.40)	9 %	(242)	18.76	(1.74)
W930510	4,59	(0.43)	33 1/8"	(861)	19 1/2"	(495)	14.33	(1.33)	4.59	(0.43)	6 3/18"	(158)	19.63	(1.82)
ws3062	4.90	(0.46)	33 7/8"	(861)	20 13/16"	(529)	15.07	(1.40)	4.90	(0.46)	2 7/3"	(73)	20.50	(1.90)
w\$3442	2.40	(0.22)	37 %	(962)	9 ¼"	(231)	11.50	(1.07)	2.40	(0.22)	24 1/10"	(624)	16.28	(1.51)
W\$3446	2.66	(0.25)	37 1/8	(962)	10 1/8"	(257)	12.24	(1.14)	2.66	(0.25)	21 %/16"	(548)	17.15	(1.59)
ws34410	2.92	(0.27)	37 1/8"	(962)	11 1/8"	(282)	12.98	(1.21)	2.92	(0.27)	18 %15"	(472)	18.02	(1.67)
W\$3452	3.19	(0.30)	37 7/8"	(962)	12 1/8"	(308)	13.72	(1.28)	3.19	(0.30)	15 %	(396)	18.88	(1.75)
W\$3456	4.78	(0.44)	37 1/8	(962)	18 1/8"	(461)	15.71	(1.46)	4.78	(0.44)	7 %/16"	(192)	21.21	(1.97)
W\$34510	5.13	(0.48)	37 1/8"	(962)	19 1/2"	(495)	16.54	(1.54)	5.13	(0.48)	4 3/18"	(107)	22.17	(2.06
W\$3462	5.48	(0.51)	37 1/8"	(962)	20 13/16"	(529)	17.36	(1.61)	5.48	(0.51)	2/8"	(22)	23.13	(2.15)
W\$3842	2.65	(0.25)	41 7/8"	(1064)	9 1/8"	(231)	13.22	(1.23)	2.65	(0.25)	22.1/16"	(574)	18.34	(1.70)
W53846	2.94	(0.27)	41 7/8"	(1064)	10 1/8"	(257)	14.04	(1.31)	2.94	(0.27)	19 %15"	(497)	19.29	(1.79)
W\$38410	3.23	(0.30)	41 1/8"	(1064)	11 1/8"	(282)	14.87	(1.38)	3.23	(0.30)	16 %10	(421)	20.24	(1.88)
W\$3852	3.52	(0.33)	41 7/2"	(1064)	12 1/8"	(308)	15.69	(1.46)	3.52	(0.33)	13 %/18"	(345)	21.19	(1.97)
W\$3856	5.28	(0.49)	.41 7/8"	(1064)	18 1/8"	(461)	17.91	(1.66)	5,28	(0.49)	5%	(141)	23.74	(2.21)
W\$36510	5.67	(0.53)	41 7%	(1064)	19 1/2"	(495)	18,82	(1.75)	5.67	(0.53)	23/18	(56)	24.80	(2.30)
W\$3862	6.06	(0.56)	41 1/1	(1064)	20 13/16"	(529)	19.74	(1.83)	6.06	(0.56)	4%	(-28)	25.85	(2.40)

### Woodwright\* Arch Double-Hung Window Opening and Area Specifications

			Clear Op	pening in	Full Open	Position	1		1.5				Subfloor		
Window Number	A	Opening rea t./(m²)		dth /(mm)	Hei Inches	ight /(mm)	A	835 rea L./(m²)	IS	Ai	ent 'ea L/(m²)	Sill	of Inside Stop s/(mm)	A	Window ea :./(m²)
WA18210	1.26	(0.12)	17 7/8"	(454)	10 3/15"	(259)	2.84	(0.26)	1.	61	(0.15)	48 1/2*	(1232)	5.39	(0.50)
WA1832	1.51	(0.14)	17 ¥8ª	(454)	12 ³/16"	(309)	3:27	(0.30)	1.	85	(0.17)	44 1/2"	(1131)	5.99	(0.56)
WA1836	1.76	(0.16)	17 1/1"	(454)	14 ³/16"	(360)	3.71	(0.34)	2.	10	(0.20)	40 1/2"	(1029)	6.59	(0.61)
WA18310	2.01	(0.19)	17 1/8"	(454)	16 ³/16"	(411)	4.14	(0.39)	2.	35	(0.22)	36 1/2"	(928)	7.20	(0.67)
WA1842	2.26	(0.21)	17 1/8"	(454)	18 ³/ıe"	(462)	4.58	(0.43)	2.	60	(0.24)	32 1/5"	(826)	7.80	(0.72)
WA1846	2.51	(0.23)	17 1/8"	(454)	20 <sup>3</sup> / <sub>16</sub> "	(513) .	5,01	(0.47)	2.	85	(0.27)	28 1/2*	(724)	8.40	(0.78)
WA18410	2.76	(0.26)	17 1/8"	(454)	22 3/16"	(563)	5:44	(0.51)	3.	10	(0.29)	24 1/2"	(623)	9,00	(0.84)
WA1852	3.00	(0.28)	17 7/8*	(454)	24 <sup>3</sup> /16"	(614)	5.88	(0.55)	3.	35	(0.31)	20 1/2"	(521)	9.60	(0.89)
WA1856	3.25	(0.30)	17 1/8*	(454)	26 ³/16"	(665)	6.31	(0.59)	3.	59	(0.33)	16 1/2"	(420)	10.20	(0.95)
WA18510	3.50	(0.33)	17 7/8°	(454)	28 ³/16"	(716)	6.75	(0.63)	3.	84	(0.36)	12 1/2"	(318)	10.80	(1.00)
WA1862	3.75	(0.35)	17 7/8"	(454)	30 3/16	(767)	7.18	(0.67)	4.	09	(0.38)	B 1/2"	(216)	11.40	(1.06)
WA2032	1.77	(0.16)	21 7/8"	(556)	11 <sup>5</sup> / <sub>8</sub> "	(296)	4.09	(0.38)	2.	24	(0.21)	44:1/2"	(1131)	7.07	(0.66)
WA2036	2.07	(0.19)	21 %	(556)	13 <sup>5</sup> /8"	(347)	4.63	(0.43)	2.	55	(0.24)	40 1/2"	(1029)	7.78	(0.72)
WA20310	2.38	(0.22)	21 1/8"	(556)	15 %"	(397)	5.18	(0.48)	2.	85	(0.27)	36 1/2"	(928)	8.50	(0.79)
WA2042	2.68	(0.25)	21 1/8"	(556)	17 <sup>5</sup> /8"	(448)	. 5.72	(0.53)	3.	15	(0.29)	32 1/2"	(826)	9.21	(0.86)
WA2046	2.99	(0.28)	21 7%	(556)	19 <sup>5</sup> /8"	(499)	6.27	(0.58)	3.	46	(0.32)	28 1/2"	(724)	9.92	(0,92)
WA20410	3.29	(0.31)	21 7/8	(556)	21 5/8"	(550)	6.81	(0.63)	3.	76	(0.35)	24 1/2"	(623)	10.63	(0,99)
WA2052	3.59	(0.33)	21 1/8"	(556)	23 5/8"	(601)	7.36	(0.68)	4.	07	(0.38)	20 1/2"	(521)	11.34	(1.05)
WA2056	3.90	(0.36)	21 1/8"	(556)	25 5/8"	(651)	7.90	(0.73)	4.	37	(0.41)	16 1/2"	(420)	12.05	(1.12)
WA20510	4.20	(0.39)	21 1/8"	(556)	27 5/8"	(702)	8.45	(0.79)	4.	68	(0.43)	12 1/5"	(318)	12.77	(1.19)

### Woodwright\* Picture Window Area Specifications

Window Number	A	ass (ea L/(m²)	A	Windov rea t./(m²)
WPW10310	2.03	(0,19)	4.07	(0.38)
WPW1042	2.22	(0.21)	4.41	(0.41)
WPW1046	2.42	(0.23)	4.74	(0.44)
WPW10410	2.61	(0.23)	5.07	(0.47)
WPW1052	2.81			
WPW1056		(0.26)	5.41	(0.50)
WPW10510	3.01	(0.28)	5.74	(0.53)
WPW10A2	3.20	(0.30)	6.07	(0.56)
· · · ·	3.40	(0.32)	6.41	(0.60)
WPW30310	9.38	(0.87)	12.77	(1.19)
WPW3042	10.29	(0.96)	13.82	(1.28)
WPW3046	11.19	(1.04)	14.86	(1.38)
WPW30410	12.10	(1.12)	15.91	(1.48)
WPW3057	13.01	(1.21)	16.95	(1.58)
WPW3056	13.92	(1.29)	18.00	(1.67)
WPW30510	14.83	(1.38)	19.04	(1.77)
WPW3062	15.73	(1.46)	20.09	(1.87)
WPW34310	10.53	(0.98)	14.13	(1.31)
WPW3442	11.54	(1.07)	15.28	(1.42)
WPW3446	12.56	(1.17)	16.44	(1.53)
WPW34410	13.58	(1.26)	17:60	(1.64)
WWW3452	14,60	(1.36)	18.75	(1.74)
WPW3456	15.62		19,91	(1.85)
WPW3451D		(1.45)		
1 12 mm da	16.64	(1.55)	21.07	(1.96)
WPW3462	17.66	(1.64)	22.22	(2.06)
WPW310310	12.16	(1.13)	16.06	(1.49)
WPW31042.	13.33	(1.24)	17.37	(1.61)
WPW31046	14.51	(1.35)	18,69	(1.74)
WPW310410	15.69	(1.46)	20.00	(1.86)
WPW31052	16.87	(1.57)	21.32	(1.98)
WPW31056	18.04	(1.68)	22.63	(2.10)
WPW310510	19.22	(1.79)	23.94	(2.22)
WPW31062	20.40	(1.90)	25,26	(2.35)
WPW42310	13.30	(1.24)	17.42	(1.62)
WPW4242	14.20	(1.32)	18.84	(1.75)
WPW4246	15.88	(1.48)	20.27	(1.88)
WPW42410	17.17	(1.60)	21.69	(2.02)
WPW4252	18.46	(1,72)	23.12	(2.15)
WPW4256	19.75	(1.84)	24.54	(2.28)
WPW42510	21.03			······································
WPW4262	22.32	(1.95)	25.97	(2.41)
	••••••••••••••••••	(2.07)	27:39	(2.55)
WPW410310	15.60	(1.45)	20.13	(1.87)
WPW41042	17.11	(1.59)	21.78	(2.02)
WPW41046	18.62	(1.73)	23.43	(2.18)
WPW410410	20.13	(1.87)	25.07	(2.33)
WPW41052	21.64	(2.01)	26.72	(2.48)
WPW41056	23.15	(2.15)	28.37	(2.64)
WPW410510	24.66	(2.29)	30.02	(2.79)
WPW41052	26.17	(2.43)	31.66	(2.94)
WPW56310	17.89	(1.66)	22.85	(2.12)
WPW5642	19.63	(1.82)	24.72	(2.30)
WPW5648	21.36	(1.98)	26.59	(2.47)
WPW56410	23.09	(2.15)	28.46	(2:64)
WPW5652	24.83	(2.31)	30.33	(2.82)
WPW5656	26.56	(2.47)	32.20	(2.99)
WPW50510	28.29	******	34.07	
WPW5662	30.02	(2.63)	35.98	(3.17)

Dimensions in parentheses are in square meters.

 "Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 <sup>1</sup>/<sub>2</sub>" (2096).
 Dimensions in parentheses are in millimeters or square meters.

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continued on next page

### Woodwright\* Arch Double-Hung Window Opening and Area Specifications (continued)

Window Number	A	Dpening rea t./(m²)	W	idth s/(mm)	Fall Open Hei Inches	ght .	1. A	ass rea t./(m=)	A	ent rea L./(m²)	to Top Sill	Subfloor of Inside Stop s/(mm)	A	Window rea t./(m²)
WA2062	4,51	(0.42)	21 7/8"	(556)	29 5/8"	(753)	8,99	(0.84)	4,98	(0.46)	8 1/2"	(216)	13.48	(1.25
WA2432	2.00	(0.19)	25 7/1"	(658)	11 1/R"	(282)	4,89	(0.46)	2.62	(0.24)	44 1/2"	(1131)	8.14	(0.76
WA2436	2.36	(0.22)	25 1/3"	(658)	13 1/8"	(333)	5.55	(0.52)	2.98	(0.28)	40 1/2"	(1029)	8.96	(0.83
WA24310 .	2.72	(0.25)	25 7/8"	(658)	15 1/8"	(384)	6.21	(0.58)	3.34	(0.20)	36 1/2"	(928)	9.79	(0.91
WA2442	3.08	(0.29)	25 1/5	(658)	17 1/8"	(435)	6.86	(0.64)	3.70	(0.34)	· 32 1/2"	(826)	10.61	(0.99
WA2446	3.44	(0.32)	25 %	(658)	19 1/3"	(485)	7.52	(0.70)	4.06	(0.34)	28 1/2*	(724)	11.43	(1.06
WA24410	3.80	(0.35)	25 1/4"	(658)			8.17	(0.76)	4.00				12.26	********
WA2452	4.16	(0.39)	25 %	(658)	21 1/8"	(536)	-			(0.41)	24 1/2"	(623)		(1.14
WA2456	4.10	(0.39)		-	23 1/3"	(587)	8.83	(0.82)	4.78	(0.44)	20 1/2"	(521)	13.08	(1.22
			25.7/3"	(658)	25 1/8"	(638)	9.49	(0.88)	5.14	(0.48)	16 1/2"	(420)	13.90	(1.29
WA24510	4.87	(0.45)	25 1/8"	(658)	27 1/8"	(689)	10.14	(0.94)	5.50	(0.51)	12 1/2"	(318)	14.72	(1.37
WA2462	5.23	(0.49)	25 1/4"	(658)	29 1/8"	(739)	10.80	(1.00)	5.86	(0.54)	8 1/2"	(216)	15.55	(1.44
WA2632	2.10	(0.20)	27 1/8"	(708)	10 13/16"	(275)	5.29	(0.49)	2.81	(0.26)	44 1/2"	(1131)	8.67	(0.81
WA2636	2.49	(0.23)	27 1/3"	(708)	12 13/16"	(326)	6.00	(0.56)	3.19	(0.30)	40 1/2"	(1029)	9.55	(0.89
WA26310	2.88	(0,27)	27 1/1	(708)	14 13/15"	(377)	6.72	(0.62)	3.58	(0.33)	36 42	(928)	10.43	(0.97
WA2642	3.26	(0.30)	27 7/3"	(708)	16 <sup>13</sup> /16"	(428)	7.43	(0.69)	3.97	(0.37)	32 1/2*	(826)	11.31	(1.05
WA2646	3.65	(0.34)	27 1/1"	(708)	· 18 13/16"	(479)	8.14	(0.76)	4.36	(0.41)	28 1/2*	(724)	12.18	(1.13
WA26410	4.04	(0.38)	27 1/8*	(708)	20 13/16"	(529)	8.85	(0.82)	4.74	(0.44)	24 1/2"	(623)	13.06	(1.21
WA2652	4.42	(0.41)	27 7/8"	(708)	22 <sup>13</sup> / <sub>16</sub> "	(580)	9.56	(0.89)	5.13	(0.48)	20 1/2*	(521)	13.94	(1.30
WA2656	4.81	(0.45)	27 7/8"	(708)	24 13/16"	(631)	10.28	(0.96)	5.52	(0.51)	16 1/2"	(420)	14.82	(1.38
WA26510	5.20	(0.48)	27 7/3"	(708)	26 13/16"	(682)	10.99	(1.02)	5.91	(0.55)	12 1/2"	(318)	15.70	(1.46
WA2662	5.59	(0.52)	27 1/8	(708)	28 <sup>13</sup> /16"	(733)	11.70	(1.09)	6.29	(0.59)	81/2	(216)	16.58	(1.54
NA2836	2.61	(0.24)	29 1/8"	(759)	12 <sup>9</sup> /16"	(319)	5:46	(0.60)	3.41	(0.32)	40 1/2"	(1029)	10,13	(0.94
WA28310	3.03	(0.28)	29 %	(759)	14 º/16"	(370)	7.22	(0.67)	3.82	(0.36)	36 1/2"	(928)	11.07	(1.03
MA2842	3.44	(0.32)	29 1/3"	(759)	16 <sup>g</sup> / <sub>16</sub> "	(421)	7.99	(0.74)	4.24	(0.39)	32 1/2"	(826)	12.00	(1.12
NA2846	3.86	(0.36)	29 7/4	(759)	18 º/16"	(472)	8.76	(0.81)	4.65	(0.43)	28 1/2"	(724)	12.94	(1.20
NA28410	4.27	(0.40)	29 1/3"	(759)	20 º/16"	(523)	9.53	(0.89)	5.07	(0.47)	24 1/2"	(623)	13.87	(1.29
NA2852	4.69	(0.44)	29 7/8"	(759)	22 9/16"	(573)	10.29	(0.96)	5.48	(0.51)	20 1/2"	(521)	14.80	(1.38
WA2856	5.10	(0.47)	29 1/3"	(759)	24 9/16"	(624)	11.06	(1.03)	5.90	(0.55)	16 1/2"	(420)	15.74	(1.46
WA28510	5.52	(0.51)	29 1/3"	(759)	26 º/16"	(675)	11.83	(1.10)	6.31	(0.59)	12 1/3"	(318)	16.67	(1.55
WA2862 0	5.93	(0.55)	29 1/8"	(759)	28 9/16"	(726)	12,60	(1.17)	6.73	(0.63)	81%*	(216)	17.61	(1.64
WA210310	3.17	(0.29)	31 7/8	(810)	14 5/16"	(363)	7.73	(0.72)	4.06	(0.38)	36 1/2"	(928)	11.70	(1.09
NA21042	3.61	(0.34)	31 7/8"	(810)	16 <sup>5</sup> /16"	(414)	8.55	(0.80)	4.50	(0.42)	32 1/2"	(826)	12.69	(1.18
WA21046	4.05	(0.38)	31 7/4"	(810)	18 5/15"	(465)	9.38	(0.87)	4.94	(0.46)	28 1/2"	(724)	13.68	(1.27
NA210410	4.50	(0.42)	31.7/*	(810)	20 5/16"	(516)	10.20	(0.95)	5.39	(0.50)	24 1/2"	(623)	14.67	(1.36
WA21052	4.94	(0.46)	31 7/1*	(810)	22 5/16"	(567)	11.02	(1.02)	5.83	(0.54)	20 %	(521)	15.66	(1.46
WA21056	5.38	(0.50)	31 7/*	(810)	24 5/16"	(617)	11.84	(1.10)	6.27	(0.58)	16 1/2"	(420)	16.65	(1.55
WA210510.0	5.83	(0.54)	31 1/8"	. (810)	26 5/16"	(668)	12.67	(1.18)	6.72	(0.62)	12 1/4"	(318)	17.64	(1.64
NA210620	6.27	(0.58)	31 7/8	(810)	28 5/15"	(719)	13,49	(1.25)	7.16	(0.67)	8 4	(216)	18.63	(1.73
WA30310	3.30	(0.31)	33 1/1"	(861)	14 1/15"	(357)	8.23	(0.77)	4.29	(0.40)	36 1/2"	(928)	12.34	(1.15
NA3042	3.78	(0.35)	33 1/1"	(861)	16 1/16"	(407)	9.11	(0.85)	4.76	(0.44)	82 1/2"	(826)	13.38	(1.24
NA3046	4.25	(0.39)	33 1/1	(861)	18 1/16"	(458)	9:99	(0.93)	5.23	(0.49)	28 1/2"	(724)	14.43	(1.34
	4.72	(0.33)	33 1/8		*****		10.87				24 1/2"			
WA30410 WA3052	4.72 5.19	(0.44)	33 1/8	(861)	20 1/16"	(509) (560)	11.75	(1.01)	5.70 6.17	(0.53)	20 1/2"	· (623) (521)	15.47 16.52	(1.44
WA3056	5.66	(0.48)	33 1/8"	(861)	22 1/16"	(611)	12.62	(1.17)		(0.62)			16.52	
NA305100	6.13	(0.53)	33 1/8"	(861)	24 1/16" 26 1/16"	(661)	13.50	(1.17)	6.65	(0.62)	· 16 1/2" 12 1/2"	(420)	17.56	(1.63
-	eres . They provided takes take-				****	and red has made and the	-					(318)		(1.73
0 500EAN	6.60	(0.61)	33 1/8"	(861)	28 1/16"	(712)	14.38	(1.34)	7.59	(0.71)	81/2"	(216)	19,65	(1.83
WA34810	3.55	(0.33)	37 1/8	(962)	13 1/2"	(343)	9.23	(0.86)	4.75	(0.44)	36 1/2"	(928)	13.60	(1.26
NA3442	4.08	(0.38)	37 1/8	(962)	15 1/2"	(394)	10.22	(0.95)	5.28	(0.49)	32 1/2"	(826)	14.76	(1.37
WA3446	4.61	(0.43)	37 7/8"	(962)	17 1/2"	(445)	11 21	(1.04)	5.81	(0.54)	28 1/2"	(724)	15.91	(1.48
WA34410	5.13	(0.48)	37 1/2"	(962)	19 1/2"	(495)	12,20	(1.13)	6.33	(0.59)	24 1/2"	(623)	17.07	(1.59
VA3452	5.66	(0.53)	37 1/2"	(962)	21 1/2"	(546)	13.19	(1.23)	6.86	(0.64)	20 1/2"	(521)	18.22	(1.69
VA3456	6.19	(0.58)	37 1/8"	(962)	23 1/2*	(597)	14.18	(1.32)	7.38	(0.69)	16 1/2"	(420)	19.38	(1.80
VA34510.0	6.71	(0.62)	37.7/4*	(962)	25 1/2"	(648)	15.17	(1.41)	7.91	(0.74)	<i>p</i> -	(318)	20.54	(1.9)
NA3462.0	7.24	(0.67)	37 7/8	(962)	27 1/2*	(699)	16.16	(1.50)	8.44	(0.78)	8 %	(216)	21.69	(2.02
MA3842	4.36	(0.41)	41 7/8*	(1064)	15"	(380)	11.32	(1.05)	5.79	(0.54)	32 1/3"	(826)	16.12	(1.50
NA3846	4.94	(0.46)	41 1/8"	(1064)	17"	(431)	12.42	(1.15)	6.37	(0.59)	- 28 1/2"	(724)	17.39	(1.62
NA38410	5.52	(0.51)	41 1/8*	(1064)	19*	(482)	13.52	(1.26)	6.95	(0.65)	24 1/2"	(623)	18.65	(1.73
MA3852	6.10	(0.57)	41 7/8"	(1064)	21″	(533)	14.62	(1.36)	7.53	(0.70)	20 1/2"	(521)	19.92	(1.85
MA3856	6.68	(0.62)	41 1/1"	(1064)	23"	(583)	15.72	(1.46)	8.11	(0.75)	16 1/2"	(420)	21.19	(1.97
MA385100	7.26	(0.68)	41 7/8"	(1064)	25"	(634)	16.82	(1.56)	8.70	(0.81)	12 1/2"	(318)	22.46	(2.09
NA3862 0	7.85	(0.73)	41 1/8"	(1064)	27"	(685)	17.93	(1.67)	9.28	(0,86)	8 1/2"	(216)	23.72	(2.20

"Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 <sup>1</sup>/s" (2096).
 "Dimensions in parentheses are in millimeters or square meters.
 Meat or exceed clear opening area of 5.7 sq. ft. or 0.53 m<sup>2</sup>, clear opening width of 20" (508) and clear opening height of 24" (610).

### Woodwright<sup>®</sup> Unequal Leg Arch Double-Hung Window Opening and Area Specifications

Window Number	A	Opening rea	Ŵ	idth		Position ight	A	855 188	A	ent rea	to Top :	Subfloor of Inside Stop	· . A	Windon rea
		t./(m²)		s/(mm)	i Inches	s/(mm)	, Sq. P	t/(m²)	Sq. f	t/(m²)	Inches	/(mm)		°t./(m²)
WU1636	1.44	(0.13)	17 1/18"	(454)	11 5/8"	(295)	3.59	(0.33)	1.98	(0.18)	40 1/2"	(1029)	6.47	(0.60
NU18310	1.69	(0.16)	17 7/8	(454)	13 5/8"	(346)	4.02	(0.37)	2.23	(0.21)	36 1/2*	(928)	7.07	(0.66
NU1842	1.94	(0.18)	17 1/8"	(454)	15 5/8"	(396)	4.46	(0.41)	2.48	(0.23)	32 1/2"	(826)	7.67	(0.7
NU 1846	2,19	(0.20)	17 1/3"	(454)	17 5/8"	(447)	4.89	(0.45)	2.72	(0.25)	28 1/2"	(724)	8.27	(0.77
NU18410	2.44	(0.23)	17 1/8"	(454)	19 <sup>5</sup> /s"	(498)	5.32	(0.49)	2.97	(0.28)	24 1/3*	(623)	8.87	(0.82
NU1852	2.68	(0.25)	17 1/8	(454)	21 5/8"	(549)	5.76	(0.53)	3,22	(0.30)	20 1/2"	(521)	9.47	(0.8
NU1856	2.93	(0.27)	17 1/3"	(454)	23 5/8"	(600)	6:19	(0.58)	3.47	(0.32)	16 1/2"	(420)	10.07	(0.9
NU18510	3.18	(0.30)	17 1/8"	(454)	25 5/8"	(650)	6,63	(0.62)	3.72	(0.35)	12 1/2"	(318)	10.67	(0.9
NU1862	3.43	(0.32)	17 7/8"	(454)	27 5/8"	(701)	7.06	(0.66)	3.97	(0.37)	81/2"	(216)	11.28	(1.0
NU20810	1.71	(0.16)	21 1/8"	(558)	11 1/4"	(286)	4.95	(0.46)	2.61	(0.24)	36 1/2"	(928)	8,24	(0.7
NU2042	2.02	(0.19)	21 7/8"	(556)	13 1/4"	(337)	5.50	(0.51)	2.91	(0.27)	32 1/2*	(826)	8.96	(0,8
WU2046	2.32	(0.22)	21 %	(556)	15 1/4"	(388)	6.04	(0.56)	3.22	(0.30)	28 1/2*	(724)	9.67	(0.90
MU20410	2.62	(0.24)	21 7/8"	(556)	17 1/4"	(438)	6.59	(0.61)	3.52	(0.33)	24 1/2"	(623)	10.38	(0.96
WU2052	2.93	(0.27)	21 %	(556)	19 1/4"	(489)	7.13	(0.66)	3.83	(0.36)	20 1/2"	(521)	11.09	(1.03
NU2056	3.23	(0.30)	21 7/1	(556)	21 1/4"	(540)	7.68	(0.71)	4.13	(0.38)	16 1/5"	(420)	11.80	(1.10
NU20510	3.54	(0.33)	21 1/1	(556)	23 1/4"	(591)	8.22	(0.76)	4.44	(0.41)	12 1/2		12.51	
NU2062	3.84	(0.36)	21 7/8	(556)			8.77	(0.81)	4.44		- manual and the second	(318)		(1.1
ND2446	2.21				25 1/4"	(642)				(0.44)	8 1/2	(216)	13.23	(1.2
		(0.21)	25 7/8"	(658)	12 1/4"	(312)	7.12	(0.66)	3.64	(0.34)	28 1/2"	(724)	10.99	{1.0:
RU24410	2.57	(0.24)	25 1/8"	(658)	14 1/4"	(363)	7.78	(0.72)	4.00	(0,37)	24 1/2"	(623)	11.81	(1.1)
NU2452	2.93	(0.27)	25 1/8	(658)	16 1/4"	(413)	8.44	(0.78)	4.36	(0.41)	20 1/2*	(521)	12.63	(1.1
WU2456E	3.29	(0.31)	25 1/8°	(658)	18 1/4"	(464)	9.09	(0.84)	4.72	(0.44)	16 1/2"	(420)	13.46	(1.2
WJ24510	3.65	(0.34)	25 1/8"	(658)	20 1/4"	(515)	9.75	(0.91)	5.08	(0.47)	12 1/2"	(318)	14.28	(1.3
VU2462	4.01	(0.37)	25 1/8"	(658)	22 1/6*	(566)	10.40	(0,97)	5,44	(0,51)	8 1/2*	(216)	15.10	(1.4)
WU26410	2.42	(0.23)	27 1/8	(708)	12 1/2"	(318)	8.34	(0.78)	4.21	(0.39)	24 1/2"	(623)	12.49	(1.1
W2652	2.81	(0,26)	27 1/8"	(708)	14 1/3"	(368)	9.06	(0.84)	4.59	(0.43)	20 1/2"	(521)	13.37	(1.2
WI2655	3.20	(0.30)	27 1⁄9*	(708)	16 1/2*	(419)	9.77	(0.91)	4.98	(0.46)	16 1/2"	(420)	14.25	(1.3
1026510	3.58	(0.33)	27 7/8	(708)	18 ¼2 <sup>8</sup>	(470)	10.48	(0.97)	5.37	(0.50)	12 1/2"	(318)	15,13	(1.4
NU2662	3.97	(0.37)	27 1/6"	(708)	20 1/2"	(521)	11.19	(1.04)	5.76	(0.53)	81/2*	(216)	16.01	(1.49
WI2852	2.59	(0.24)	29 7/6"	(759)	12 <sup>1</sup> /2 <sup>#</sup>	(317)	9.65	(0.90)	4.80	(0.45)	20 1/4"	(521)	14.08	(1.3
NU2856	3.01	(0.28)	29 1/4"	(759)	14 1/2"	(368)	10.42	(0.97)	5.22	(0.48)	16 1/2"	(420)	15.01	(1.4)
VU28510	3.42	(0.32)	29 2/8"	(759)	16 <sup>1</sup> / <sub>2</sub> "	(419)	11.19	(1.04)	5.63	(0.52)	12 1/1"	(318)	15.95	(1.4
WU2862	3.84	(0.36)	29 7/a"	(759)	18 1/2"	(470)	11.95	(1.11)	6.05	(0.56)	8 1/2"	(216)	16.88	(1.5
WU21042	3.13	(0.29)	31 7/8"	(810)	14 1/8"	(359)	8.35	(0.78)	4.31	(0.40)	32 1/2"	(826)	12.52	(1.1)
WU21046	3.57	(0.33)	31 1/4"	(810)	16 1/8"	(409)	9.17	(0.85)	4.75	(0.44)	28 1/2"	(724)	13.51	(1.2)
NU210410	4.01	(0.37)	31 %"	(810)	18 ¼"	(460)	10.00	(0.93)	5.19	(0.48)	24 1/2"	(623)	14.50	(1.3
WU21052	4.46	(0.41)	31 7/4"	(810)	20 1/8"	(511)	10.82	(1.01)	5.64	(0.52)	20 1/3*	(521)	15.49	(1.4
WU21056	4.90	(0.46)	31 1/6"	(810)	22 1/8"	(562)	11.64	(1.08)	6.08	(0.56)	16 16"	(420)	16.48	(1.5
W210510	5.34	(0.50)	31 2/8"	(810)	24 1/8"	(613)	12.46	(1.16)	6,52	(0.61)	12 1/2"	(318)	17.47	(1.6
WI210624	5.78	(0.54)	31 1/8"	(810)	26 1/8"	(663)	13.29	(1.23)	6.96	(0.65)	81/	(216)	18.46	(1.7)
WJ3042	3.13	(0.29)	33 7/8"	(861)	13 5/16"	(338)	8.86	(0.82)	4.51	(0.42)	32 1/2"	(826)	13,15	(1.2
VU3046	3.60	(0.34)	33 7/6"	(861)	15 5/16	(389)	9.73	(0.90)	4.98	(0.46)	28 1/2"	(724)	14.20	(1.3
VU30410	4.07	(0.38)	33 1/8"	(861)	17 5/16	(440)	10.61	(0.99)	5.46	(0.51)	24 1/2"	(623)	15.24	(1.4)
VU3052	4.54	(0.42)	33 7/8"	(861)	19 5/16	(490)	11.49	(1.07)	5.93	(0.51)	20 1/2"	(521)	16.29	(1.4
VU3056	5.02	(0.42)	33 7/4"	(861)	21 <sup>5</sup> / <sub>16</sub> "	(541)	12.37	(1.15)	6.40	(0.55)	16 1/2"	(420)	17.33	(1.5
W30510	5.49	(0.47)	33 1/4*	(861)			****	- adings - second			· · · ·			
W30520	5.96			and the second second	23 5/16	(592)	13.25	(1.23)	6.87	(0.64)	12 1/2"	(318)	18.38	(1.7
1030629	4.09	(0.55)	33.1/6*	(861)	25 5/16"	(643)	14.13		7.34	(0.68)	8 1/2"	(216)	19.42	(1.8
1034410 103452		(0.38)	37 %*	(962)	15 1/2"	(395)	11.81	(1.10)	5.95	(0.55)	24 1/2"	(623)	16.69	(1.5
~ ×	4.61	(0.43)	37 1/8"	(962)	17 1/2"	(445)	12.80	(1.19)	6.47	(0.60)	20 1/2"	(521)	17.85	(1.6
103456	5.14	(0.48)	37 1/8*	(962)	19 <sup>1</sup> /2"	(496)	13.79	(1.28)	7.00	(0.65)	16 1/2"	(420)	19.01	(1.7
1034510	5.67	(0.53)	37 7/8*	(962)	21 1/2"	(547)	14.78	(1.37)	7.53	(0.70)	12 1/2"	(318)	20.16	(1.8
WU3462	6.19	(0.58)	37 1/8"	(962)	23 1/2"	(598)	15.77	(1.47)	8.05	(0.75)	8 1/2"	(216)	21.32	(1.9
VU3852	4.52	(0.42)	41 1/8"	(1064)	15 ¼/2"	(394)	14.06	(1.31)	6.97	(0.65)	20 1/2"	(521)	19.36	(1.8
VU3856	5.10	(0.47)	41 7/8"	(1064)	17 1/2"	(445)	15.16	(1.41)	7.55	(0.70)	16 1/2*	(420)	20.63	(1.9
VU38510	5.68		41 7/8"	(1064)	19 1/2"	(496)	16.27	(1.51)	8.13	(0.76)	12 1/2"	(318)	21.90	(2.0)

"Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 <sup>1</sup>/<sub>2</sub>" (2096).
Dimensions in parentheses are in millimeters or square meters.
Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m<sup>2</sup>, clear opening width of 20" (508) and clear opening height of 24" (610).

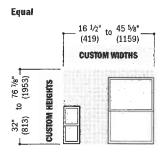


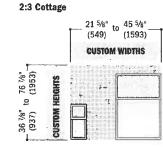
### **Custom Sizes and Specification Formulas**



Available in 1/8" (3) increments between minimum and maximum widths and heights. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. Some restrictions apply, contact your Andersen supplier. Measurement guide for custom-size windows can be found at andersenwindows.com/measure.

### Woodwright\* Double-Hung Windows





### Woodwright<sup>®</sup> Picture Windows

		12" to 67 5/16" (305) to (1718) CUSTOM WIDTHS
$\begin{bmatrix} 14 & 1/2^{\text{ll}} & \text{to} & 76 & 7/8^{\text{ll}} \\ (368) & (1953) \end{bmatrix}$	CUSTOM HEIGHTS	

### Woodwright\* Transom Windows

**3:2 Reverse Cottage** 

CUSTOM HEIGHTS

to 76 7/8" (1953)

36 7/8" (937)

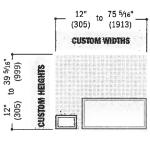
to 45 5/8"

**CUSTOM WIDTHS** 

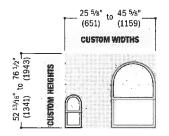
(1159)

21 5/8"

(549)

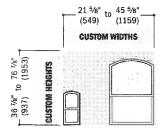


### Woodwright<sup>•</sup> Springline<sup>™</sup> Single-Hung Windows



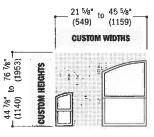
Side-by-side joining of two arch or Springline™ windows or short side joining of unequal leg arch windows is not recommended.

### Woodwright<sup>®</sup> Arch Double-Hung Windows



· Dimensions in parentheses are in millimeters.

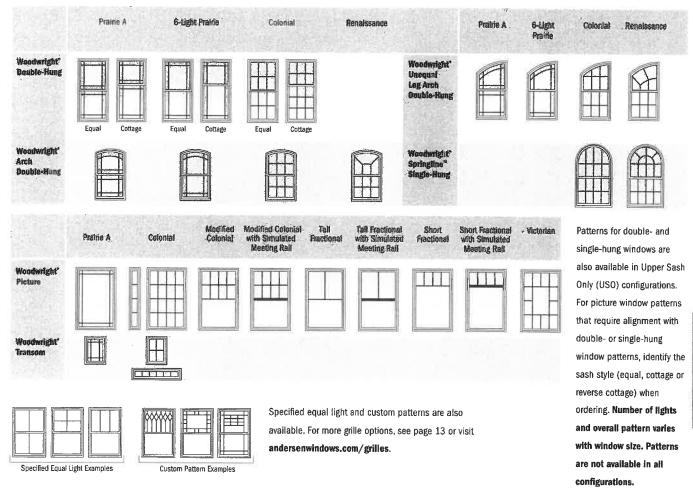
### Woodwright\* Unequal Leg Arch Double-Hung Windows



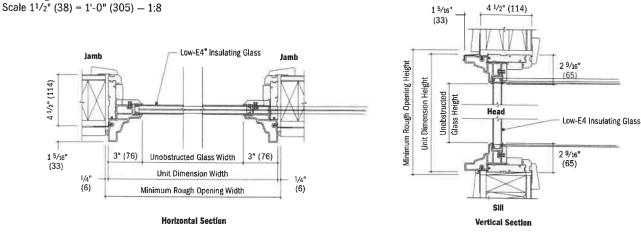


### 400 SERIES

**Grille Patterns** 



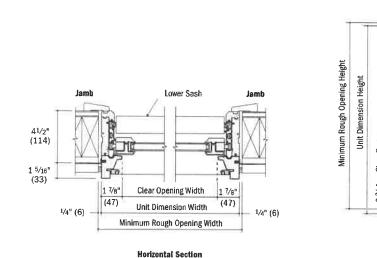
### Woodwright\* Transom Window Details

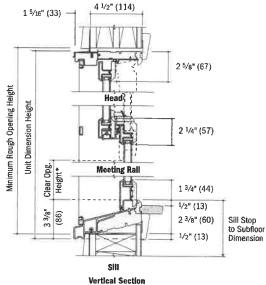


Rough openings may need to be increased to allow for use of building wraps, flashing, stil panning, brackets, fasteners or other items. See installation information on pages 210-211.
 Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.
 Dimensions in parentheses are in millimeters.

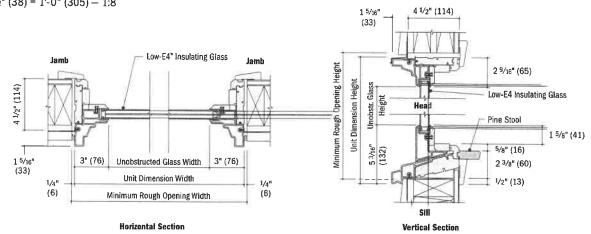
### Woodwright\* Double-Hung Window Details

Scale 11/2" (38) = 1'-0" (305) - 1:8





### Woodwright<sup>®</sup> Picture Window Details Scale $1^{1/2^{"}}(38) = 1' - 0" (305) - 1:8$



Light-colored areas are parts included with window. Dark-colored areas are additional Andersen' parts required to complete window assembly as shown.

- Rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fastoners or other items. See installation information on pages 210-211. Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

Definition of parentheses are in millimeters.
 "Clear opening height dimension is less on arch, unequal leg arch and Springline" hung windows.



### Horizontal (stack) Joining Detail

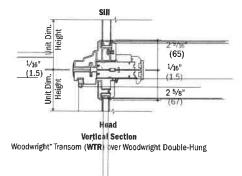
Scale 11/2" (38) = 1'-0" (305) - 1:8

### **Overall Window Dimension Height**

Sum of individual window heights plus 1/16" (1.5) for each join.

#### **Overall Rough Opening Height**

Overall window dimension height.\*



For more joining information, see the combination designs section starting on page 181.

### Vertical (ribbon) Joining Detail

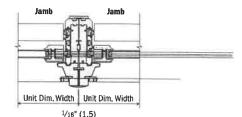
Scale 11/2" (38) = 1'-0" (305) - 1:8

### **Overall Window Dimension Width**

Sum of individual window widths plus 1/16" (1.5) for each join.

### **Overall Rough Opening Width**

Overall window dimension width plus 1/2" (13).

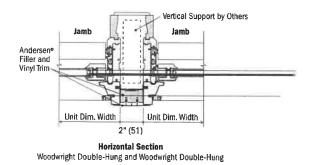


**Horizontal Section** Woodwright Double-Hung to Woodwright Double-Hung

### **Separate Rough Openings Detail**

Scale  $1^{1}/2^{"}(38) = 1'-0"(305) - 1:8$ 

To meet structural requirements or to achieve a wider joined appearance, windows may be installed into separate rough openings having vertical support (by others) in combination with Andersen\* exterior filler and exterior vinyl trim.



• Light-colored areas are parts included with window. Dark-colored areas are additional Andersen' parts required to complete window assembly as shown. • Rough openings may need to be increased to allow for use of building wraps, flashing, slil panning, brackets, fasteners or other items. See installation information on pages 210-211.

Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com. \* Consult with an architect or structural engineer regarding minimum requirements for structural support members between adjacent rough openings.

Dimensions in parentheses are in millimeters.

\*For stacks where bottom unit in combination is a double-hung or picture window with a sloped sill. If bottom window has a straight sill, add 1/2" (13) to the overall window dimension height.

400 SERIES

### NOTES

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400 SERIES

# WOODWRIGHT DOUBLE-HUNG









### SECTION REFERENCE

Custom Sizing70	
Specifications 70	
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Sill Angle Details71	
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Joining Detail73	
Product Performance194	

custom sizing in 1/4" (3) increments



Dimensions in parentheses are in millimeters.

### WOODWRIGHT® DOUBLE-HUNG INSERT WINDOWS

### **FEATURES**

### Frame

A Fibrex<sup>®</sup> material exterior protects the frame - beautifully. Best of all, it's low maintenance and never needs painting.

B For exceptional long-lasting performance, sill members are constructed with a wood core and a Fibrex material exterior.

 Natural wood stops are available in pine, oak, maple and prefinished white. Wood jamb liners add beauty and authenticity to the window interior.

Multiple weatherstrip systems help provide a barrier against wind, rain and dust. The combination of spring tension vinyl, rigid vinyl and flexible bulb weatherstrip is efficient and effective.

Exterior stop covers are specially designed to allow easy application of high-quality sealant.

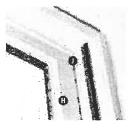
3 1/4" (83) "pocket window" jamb depth allows convenient replacement without disturbing interior window trim for most double-hung replacement situations.

G For units with white exterior color, exterior jamb liner is white. For all other units, the exterior jamb liner is gray.

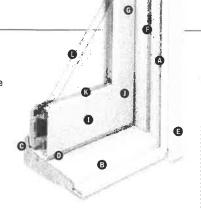
### Sash

**G** Balancers in the sash enable contractors to screw through the jamb during installation without interfering with the window's operation.

#### Wood Jamb Liner



O Natural wood sash interior with classic chamfer detailing. Available in pine, oak, maple or prefinished white.



Low-maintenance sash exterior provides long-lasting' protection and performance. Sash exteriors on most units include Fibrex material,

Sash joints simulate the look of traditional mortise-and-tenon construction inside and out.

#### Glass

**(3)** Silicone bed glazing provides superior weathertightness and durability.

High-Performance glass options include:

- Low-E4<sup>®</sup> glass
- Low-E4 HeatLock<sup>®</sup> glass
- Low-E4 Sun glass
- Low-E4 SmartSun<sup>™</sup> glass
- Low-E4 SmartSunHeatLock glass

Tempered glass and other glass options are available. Contact your Andersen supplier.

A removable translucent film helps shield the glass from damage during delivery and construction and simplifies finishing at the jobsite.

### **Patterned Glass**

Patterned glass options are available. See page 12 for more details.

#### Hardware



Standard lock and keeper design provides an easy tilt-to-clean feature integrated into the lock.

\* Visit andersenwindows.com/warranty for details.

\*\* Hardware sold separately.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

### Black Bright Brass Brushed Chrome

Sandtone

Black

Terratone

Naturally occurring variations in grain, color and texture of wood make each window

one-of-a-kind. All wood interiors are unfinished unless prefinished white is specified.



Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

### **DOUBLE-HUNG HARDWARE**

Chrome



Oil Rubbed

Bronze

EXTERIOR

Canvas

Dark Bronze

HARDWARE FINISHES

White

Forest Green

Antique Brass

Gold Dust

Antique Brass | Black | Bright Brass Brushed Chrome | Distressed Bronze Distressed Nickel | Gold Dust | Oil Rubbed Bronze Polished Chrome | Satin Nickel | Stone | White

INTERIOR

White

Oak

Pine

Maple

### **OPTIONAL DOUBLE-HUNG HARDWARE**

TRADITIONAL



Antique Brass | Black | Bright Brass | Brushed Chrome | Distressed Bronze | Distressed Nickel Gold Dust | Oil Rubbed Bronze | Polished Chrome | Satin Nickel | Stone | White ......

CLASSIC SERIES

Hand Lift

Finger Lifts

Finger Lifts

Stone | White -----

ESTATE

Hand Lift

Antique Brass | Black | Bright Brass Brushed Chrome | Distressed Bronze Distressed Nickel | Gold Dust Oil Rubbed Bronze | Polished Chrome Satin Nickel | Stone | White

Bar Lift

......

CONTEMPORARY

Bar Lift

Antique Brass | Bright Brass Brushed Chrome | Distressed Bronze Distressed Nickel | Oil Rubbed Bronze Polished Chrome | Satin Nickel

Bold name denotes finish shown.

### Sill Angles

Three sill angles are available --- 0,° 8° and 14° ---- to closely match the existing sill in window replacement applications. See page 71 for details.



0° Sill Angle



8° Sill Angle



14° Sill Angle

#### **Sill Angle Finder App**

Our Sill Angle Finder App lets you quickly and easily find the sill angle of existing double-hung windows. Available for free for both iPhone® and Android™ smartphones. Download app for iPhone from the App StoresM or for Android smartphones from the Google Play Store. The app is only available for smartphones, as tablets and other large devices are too bulky for measuring window sill angles.

#### For more information about glass, patterned glass, grilles and TruScene insect screens, see pages 12-14.

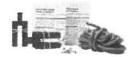
For more information about combination designs, product performance, installation instructions and accessories, see pages 181-211 or visit andersenwindows.com.

### **Exterior Stop Cover**



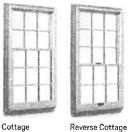
An exterior stop cover provides a clean transition from new window to the existing window casing.

### Included Installation Materials



Flat, self-hanging shims, backer rod, installation screws and complete instructions are included with each insert window, Measurement guide and worksheet at andersenwindows.com/measure.

#### Sash Options



Reverse Cottage

### ACCESSORIES Sold Separately

Frame

**Wood Interior Stop** 



Optional interior stop with matching chamfer is available.

### Sash

### Window Opening Control Device Kit



A Window Opening Control Device Kit is available, which limits sash travel to less than 4" (102) when the window is first opened. Available factory applied or field applied in stone and white.

### Installation

# **Coil Stock**

Andersen® aluminum coil stock can be

ordered to match any of our 11 trim colors. Made from .018" thick aluminum,

Andersen coil stock is available in

24" (610) x 50' (15240) rolls. Color-

matched stainless steel trim nails

be ordered in 1 lb/.454 kg boxes.

 $1 \frac{1}{4}$  (32) long are also available and can

Insect Screen Frames

Insect Screens



Choose full insect screen or half insect screen. Half insect screen (shown above) allows ventilation without affecting the view through the upper sash. Frames are available in colors to match product exteriors.

### TruScene® Insect Screen

Exclusive Andersen TruScene insect screens provide over 50% more clarity than our conventional insect screens for a beautiful unobstructed view. They allow more fresh air and sunlight in, while doing a better job of keeping out small insects.

#### **Conventional Insect Screen**

Conventional insect screens have charcoal powder-coated aluminum screen mesh.

### Grilles

Grilles are available in a variety of configurations and widths. For double-hung grille patterns, see page 72.

#### CAUTION

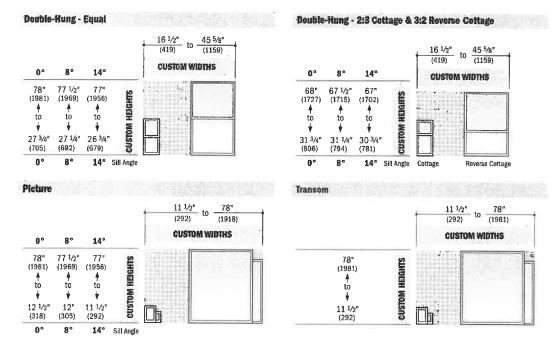
- · Painting and staining may cause damage to rigid vinyl.
- Do not paint 400 Series windows with white, canvas, Sandtone, forest green, dark bronze or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- · For vinyl painting instructions and preparation, contact your Andersen supplier.
- · Do not paint weatherstrip.
- · Creosote-based stains should not come in contact with Andersen products.
- · Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.
- Security Sensors

### **Open/Closed Sensors**

Wireless open/closed sensors are available in four colors. See page 15 for details.

### WOODWRIGHT® DOUBLE-HUNG INSERT WINDOWS

### Woodwright<sup>®</sup> Double-Hung, Plcture & Transom Insert Window Sizes



#### Woodwright\* Double-Hung Insert Window Specification Formulas

Clear Opening	Width = window width - 3.4375" (	r				
	Height = Depends on sash ratio and spec sash ratio	ific sill angle of insert window, see below.	si 14°	lli angle dec 8°	luction	0°
	1:1 Equal	= (window height + 2) - sill angle deduction	3.1875* (6.)	3.4375" (3	(7) 3.7	5" (95)
	2:3 Cottage	= (window height x 2) ÷ 5 - sill angle deduction	2.875" (73)	3.0625" (7	6) 32	5" (83)
EEEE	3:2 Reverse Cottage	= (window height x 2) + 5 - sill angle deduction	2.375" (60)	2.5625" (6	5) 2.81	25" (71)
Vent Opening	Width = window width - 3.4375" ( Height = Depends on sash ratio and speci	r				
	sash ratio	vent opening height		sill a 14°	ngle dedi 8°	uction 0°
	Equal, Height < 48" (1219) Equal, Height > 48" (1219)	<ul> <li>= ((window height ÷ 2) - sill angle deduction) -</li> <li>= ((window height ÷ 2) - sill angle deduction) -</li> </ul>		<b>2.75</b> * (70).	2.9375" (75)	3.25° (83)
	Cottage, нырт < 48" (1-19) Cottage, нырт > 48" (1-19)	= ((window height x 2) + 5 - sill angle deduction = ((window height x 2) + 5 - sill angle deduction		1.9375* (49)	2.125" (54)	2.375 <sup>e</sup> (60)
	Reverse Cottage, Hught < 48" (1219) Reverse Cottage, Hught > 48" (1219)	= ( (window height x 2) $\div$ 5 - sill angle deduction = ( (window height x 2) $\div$ 5 - sill angle deduction		3.5625" (90)	3.8125" (97)	4.8125 (122)
Unobstr. Glass	where $=$ window width $= 6.0^{\circ}$ (152) Height $=$ Depends on sash ratio and speci-					
	sash ratio	unobstructed glass height	si 14°	ill angle ded 8°	uction	0°
	Equal - Upper and Lower Sash	= window height - sill angle deduction	7.875* (200)	8.375" (21)	39 <b>9.0</b>	(229)
	Cottage - Upper Sash or Reverse Cottage - Lower Sash	= (window height x 2) ÷ 5 - sill angle deduction	3.1875° (P1	3.375" (8€	3.6	25" (92)
	Cottage - Lower Sash or Reverse Cottage - Upper Sash	= (window height x 2) ÷ 5 - sill angle deduction	4.75" (121)	5.0625" (1)	o) <b>5.43</b>	75" (138)

### Woodwright<sup>®</sup> Picture and Transom Insert Window Specification Formulas

Unobstr. Glass	Picture insert	Transom Insert				
	width = window width = 6.0" (152)			width = window width = $6.0^{\circ}$ (152)		
	Helget - Depends on sash ratio and specific sil	Reight = window width $-$ 6.0" (16.2)				
	unobstructed glass height					
		14°	8.	0°		
NA DELA MATERIA	window height – sill angle deduction	5,816" (148)	6.285" (160)	<b>6.890</b> ° (375)		

Available in 1/8" (3) increments between minimum and maximum widths and heights. Height limits for double-hung and picture insert windows depend on new insert window sill angle.

For picture and transom insert windows, either height or width must be 68" (1727) or less and height plus width cannot be less than 28" (711).

Measurement guide for custom sized windows can be found at andersenwindows.com/measure. Grille patterns shown on page 72.

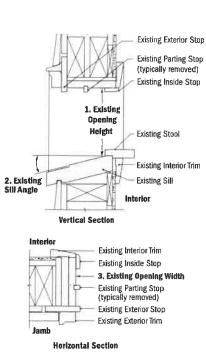
 Dimensions in parentheses are in millimeters.

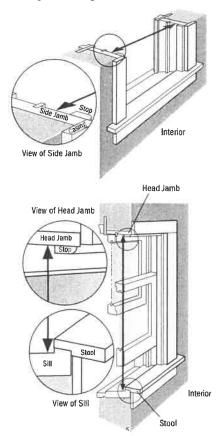
 Clear Opening formulas provide dimensions for determining area available for egress. Vent Opening formulas provide dimensions for determining area available for passage of air. Unobstr. Glass (unobstructed glass) formulas provide dimensions for determining area available for passage of light. Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.

### **Existing Window Measurements**

Required measurements:

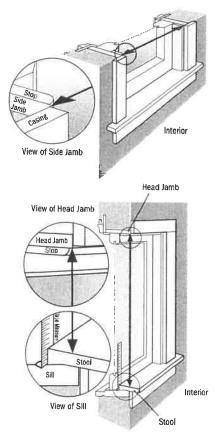
- **1. Existing Opening Height**
- 2. Existing Sill Angle
- 3. Existing Opening Width





**Existing Double-Hung Window** 

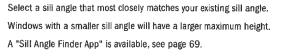
**Existing Picture Window** 

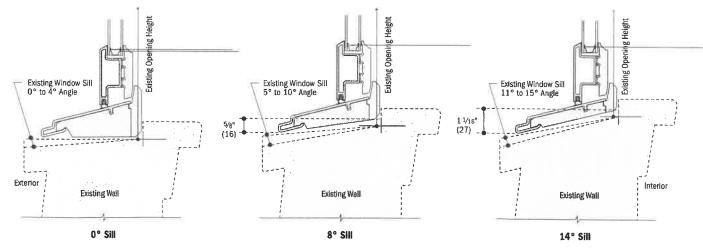


Sill Angle Details

Scale 3" (76) = 1'-0" (305) - 1:4

100 Series Voodwright" Double-Hung insert Windows



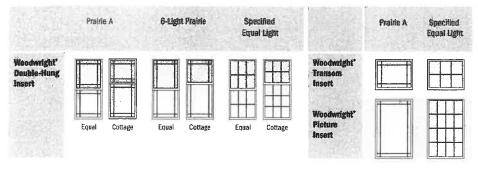


\* Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

Dimensions in parentheses are in millimeters.
 Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.

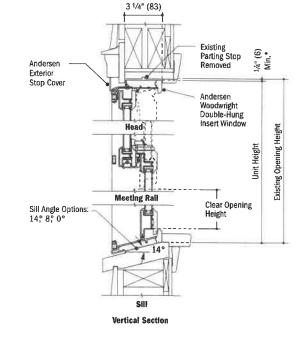
### WOODWRIGHT® DOUBLE-HUNG INSERT WINDOWS

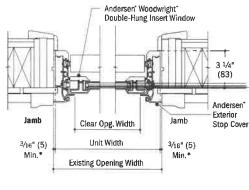
### **Grille Patterns**



Patterns for double-hung windows are also available in Upper Sash Only (USO) configurations. For picture window patterns that require alignment with double-hung window patterns, identify the sash style (equal, cottage, reverse cottage) when ordering. Number of lights and overall pattern varies with window size. Patterns are not available in all configurations. For more grille options, see page 13 or visit andersenwindows.com/grilles.







**Horizontal Section** 

· Light-colored areas are parts included with window. Dark-colored areas are additional Andersen\* parts required to complete window assembly as shown.

• Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com.

Dimensions in parentheses are in millimeters.

\*Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows

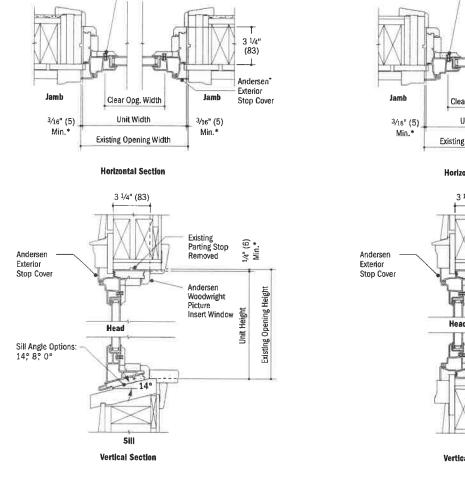


### Woodwright<sup>®</sup> Picture Insert Window Details

Andersen' Woodwright\* Picture Insert Window

Scale  $1^{1/2}$ " (38) = 1'-0" (305) - 1:8

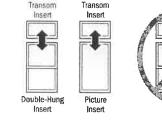
### Woodwright\* Transom Insert Window Details

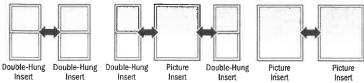


### **Joining Combinations**

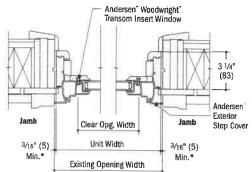
Join insert windows in one-way horizontal (stack) or vertical (ribbon) combinations.

Do not join insert windows in two-way combinations.

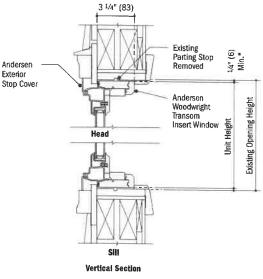




### Scale 11/2" (38) = 1'-0" (305) - 1:8

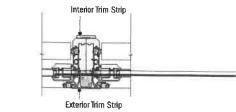


#### **Horizontal Section**



Vertical (ribbon) Joining Detail

Scale 11/2" (38) = 1'-0" (305) - 1:8



**Horizontal Section** Woodwright\* Double-Hung Insert to Woodwright Double-Hung Insert

For more joining information, see the combination designs section starting on page 181.

\* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen\* parts required to complete window assembly as shown. Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at andersenwindows.com. · Dimensions in parentheses are in millimeters.

\*Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for insert windows.

## **GLASS** OPTIONS

Andersen has the glass you need to get the performance you want. From SmartSun<sup>™</sup> glass with HeatLock<sup>®</sup> coating that is ENERGY STAR® certified in all climate zones to PassiveSun® glass that helps heat homes in northern areas, there's an option for every climate, project and customer. Check with your supplier for the selections that meet ENERGY STAR requirements in your area.

### PERFORMANCE COMPARISON OF ANDERSEN® GLASS OPTIONS

	ENERGY								LIGHT							
GLASS	U-FACTOR How well a product prevents heat from escaping.				SOLAR HEAT GAIN COEFFICIENT How well a product blocks heat caused by sunlight.				TRA How	NSN muci	n visibi	GHT ANCE le light product.	UV PROTECTION How well a product blocks ultraviolet rays.			
SmartSun	•	•	•	0	٠	•	۲	٠	۲	•	O	0	٠	۲	٠	۲
SmartSun with HeatLock Coating	٠	۲	٠	O	٠	۲	۲	٠	•	۲	0	0	٠	۲	٠	•
Low-E4®	۰	•	٠	:")	•	<b>d</b> is	•	0	۲	۲	۲	Ο	•	٠	۲	0
Low-E4 with HeatLock Coating		۲	۲	Ø	٠	۲	۲	0	6	•	Ø	0	٠	٠	۲	0
Sun	۲	•	٠	О	۲	0	۲	٠	٠	0	0	0		۲	۲	0
PassiveSun	۲	•	٢	0	*	0	0	े	•	٠	۴	0	۰	۲	۲	0
PassiveSun with HeatLock Coating	•	۵	۲	0	•	0	Э	0	٠	۰	٢	0	•	۰	٠	0
Clear Dual-Pane	۲	.)	0	O	0	0	0	o		4	٠		0	0	0	$\odot$

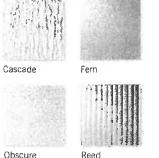
Center of glass performance only. Ratings based on glass options as of January 2019, Visit andersenwindows.com for ENERGY STAR map and NFRC total unit performance data.

### ADDITIONAL GLASS OPTIONS

TEMPERED safety glass, standard on patio doors LAMINATED glass for added strength, enhanced

security and sound control

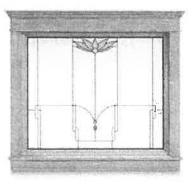
PATTERNED glass lets in light while obscuring vision and adds a unique, decorative touch. Cascade and Reed patterns can be ordered with either a vertical or horizontal orientation.



Obscure

### ART GLASS

With art glass from Andersen, you can add interest, create focal points and make your work stand out. These finely crafted inserts are available in two distinctly different series --- Classic and Artisan - to complement any home's architecture. Visit andersenwindows.com/artglass for more information.





**TIME-SAVING FILM** 

We help protect our products during delivery and construction with a translucent film on the glass. It also minimizes time spent masking on the jobsite, then peels away for a virtually spotless window.



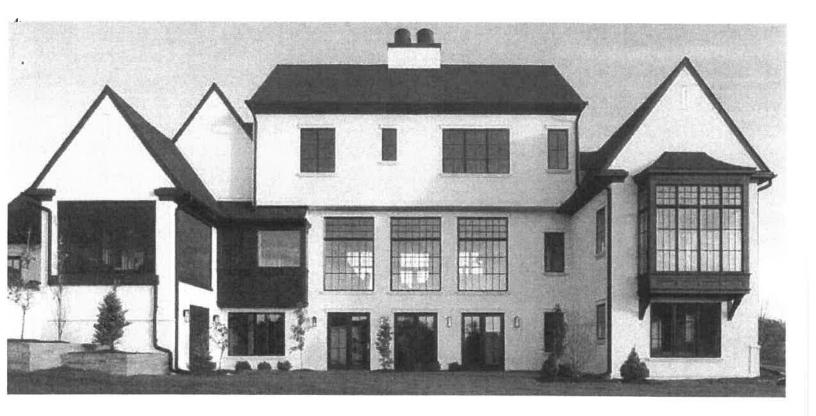
Visit andersenwindows.com/glass for more details on our glass options.

### STORMWATCH® PROTECTION

Most Andersen 400 Series windows are available with impact-resistant glass and structural upgrades to meet the tough building codes of hurricane-prone coastal areas. See your local code official for specific requirements.



\* Andersen 400 Series products only with SmartSun glass with HeatLock coating (argon gas blend), no grilles, no capillary breather tubes. Excludes patterned/textured glass.



### **GRILLE** OPTIONS

Grille patterns are available in widths and configurations to fit any architectural style or the taste of any customer. We can match virtually any existing grille pattern and we'll even work with you and your customers to create custom patterns.



Permanent exterior Permanent interior with spacer

### FULL DIVIDED LIGHT

Permanently applied to the exterior and interior of the window with a spacer between the glass.





Permanent grilles on the exterior and interior with no

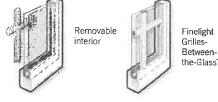
spacer between the glass. We also offer permanent

exterior grilles with removable interior grilles.

### SIMULATED DIVIDED LIGHT

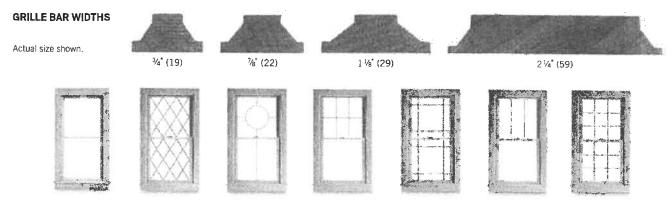


Permanent exterior Removable interior



### CONVENIENT CLEANING OPTIONS

Removable interior grilles come off for easy cleaning. Finelight" grilles-between-the-glass are installed between the glass panes and feature a contoured profile in 1" (25) and  $\frac{34}{4}$ " (19) widths.



To see all of the standard patterns available for a specific window, refer to the detailed product sections in this product guide.

\*  $\%^*$  (22), 1  $\%^*$  (29) and 2  $¼^*$  (57) not available in Finelight grilles-between-the-glass. Dimensions in parentheses are in millimeters.

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## **COMPARISON CHART**

Use the quick reference chart below to decide which Andersen® 400 Series products best fit your project needs.

			PATIO DOORS									
FEATURES		WOODWRIGHT DOUDURE HUNG FULLFRAME WOODRIGHT DOUBLOFGHT NISERT HUNG		TILT-WASH DOUBLE-HASH FULL-FRAME TILT-WASH DOUBLE-HUNG INSERT -HUNG		MARROLINE KIT CONVERSION KIT VERSION CASEMENT		AWNING	ertpiwe	FRENCHWOOD.	FRENCHWOOD HINGED INSWING	
LOW-MAIN	TENANCE EXTERIORS		10000					~				
	White		•	•	•		•		•	•	•	
	Canvas	•		•					6			
SAL SER	Sandtone	•		٠	۲	۲	•			•	•	
10/21-70	Terratone	•		۲	•	•				•		
Ser an	Forest Green	٠		•	۲		•	۲				
	Dark Bronze	•	٠	۲	۲		۲	۲	•			
	Black	•		۲			•	۲			1	
INTERIORS	<b>1</b>	k			1000							
	Maple	•		1			1			•		
. And	Oak	•	•				******					
	Pine	•	۲	۲	•		٠	•	•		۲	
	White	•	۲	٠	•	•	٠	٠	•	•	•	
C	Sandtone		1994 (1997) - Alexandro Carlos (1997) - Anna (1997) - A						۲			
	Dark Bronze			٠	۲		•	٠	•			
	Black			۲	٠		•		٠	J		
EASY CLEA	NING						h			-	1	
Tilt-to-Clean	n Sash		•	•	٠			**************************************	1		1	
GRILLES &	BLINDS		Art Angene and an Art of a Angenia see Angen	······································					d		1	
Full Divided	l Light	•	۲	۲	۲		•	٠	•	٠		
Simulated D	Divided Light	٠	۲	۲	۲	٠	•	۲	•	٠	۲	
Finelight <sup>™</sup> Grilles-Between-the-Glass		۵	۲	۲	•	۲	۲	۲	۲	۲	•	
Removable Interior Grilles		٠	¢	٠	٠	۲	۲	۲		٠	٠	
Blinds-Betw	veen-the-Glass (select sizes only)									٠	٠	
HIGH-PERF	ORMANCE GLASS Additional	glass options are av	vailable. See p	age 19 for deta	uls. For patio	doors, all glass	options are ten	opered.	1.58			
Low-E4®		•	٠	٠	٠	•	•	٠	•	٠	•	
Low-E4 Sun	1	٥	•	٠	٠	٠	٠	٠	٠		۲	
Low-E4 Sm	artSun™	۲	•	۲	۲	۲	۲	۲	٠	۲	۲	
Clear Dual-F	Pane						•	۲				
HeatLock® (	Coating	•	•	•	۲	•	٠	٠	۲	٠	•	
PERFORMA	NCE OPTION									1	************	
Stormwatch	<sup>®</sup> Protection	PG Upgrade		۲			٠	۲	1			
STANDARD	SIZES								103.1.10			
Minimum Width		1'-9 <sup>5</sup> /8"	1'-4 <sup>1</sup> /2"	1'-9 <sup>5</sup> /8"	1'-9 1/4°	Fga	1'-5"	2'-0 1/8'	2'-11 1/4"	4'-11 1/4"	2'-6 1/8"	
Maximum Width		3'-9 5/8"	3'-9 %*	З'-9 5/в*	3'-8 1/8"	Narrolina window:	2'-11 <sup>15</sup> /16"	5'-11 %"	5'-11 <sup>1</sup> /4"	15'-9"	8'-11 ¼	
Minimum H	leight	3'-0 7/8"	2'-3 3/4"	3'-0 7/в"	3'-0 ³/в"	mails after	2'-0 <sup>1</sup> /8"	1'-5"	1'-10 ¼"	6'-7 ½"	6'-7 ½"	
Maximum H	leight	6'-4 <sup>7</sup> /8"	6'-5"	7'-8 <sup>7</sup> /8"	7'-6 <sup>5</sup> /8	1967	5'-11 <sup>7</sup> /8"	4'-0"	4'-11 1/4"	7'-11 <sup>1</sup> /2"	7'-11 ½"	
CUSTOM S	IZES A	•		•		2	•			•		

To learn more about other traditional and contemporary style Andersen patio door options, visit andersenwindows.com/doors.

\* Some product configurations not available in all colors or wood species, see your Andersen supplier for details.