

STAFF REPORT: 7/13/2022 REGULAR MEETING

PREPARED BY: D. RIEDEN

APPLICATION NUMBER: #22-7901

ADDRESS: 731 COVINGTON

HISTORIC DISTRICT: PALMER PARK APT. BUILDINGS

APPLICANT: STEVEN BURZYNSKI

PROPERTY OWNER: URBAN PROPERTY MANAGEMENT

DATE OF PROVISIONALLY COMPLETE APPLICATION:6/20/2022

DATES OF STAFF SITE VISIT: 6/24/22

SCOPE: REPLACE STEEL CASEMENTS WITH ALUMINUM-CLAD WOOD WINDOWS

EXISTING CONDITIONS

Built in 1925, the property at 731 Covington, also known as the Florentine East Apartments, is a 4-story, Tudor Revival style, multi-family apartment building that faces Palmer Park. The L-plan building features a slate-roofed, side-gabled façade with three, front-facing gables that hides the flat roof of most of the building behind. Half-timbering and wood vergeboard frame the dark-brown brick cladding and steel casements throughout the façade. Patinated copper gutters and drains adorn the roofline of this front façade. A high, rough-faced stone, fenestrated basement anchors the ground floor. Stone cladding accentuates window casements and the Gothic-arched stone surround that highlights the main entrance. The landscape is primarily a short lawn and concrete walkway that leads to this front entrance.

This property has had the following Historic District Commission (HDC) approvals on Detroit Property Information System (DPI):

- September 2018: Certificate of Appropriateness (COA) for removal and replacement of existing EPDM flat roof. No work approved for dormers or gable.
- June 2022: COA for removal and replacement of existing EPDM flat roof. No work approved for dormers or gable.



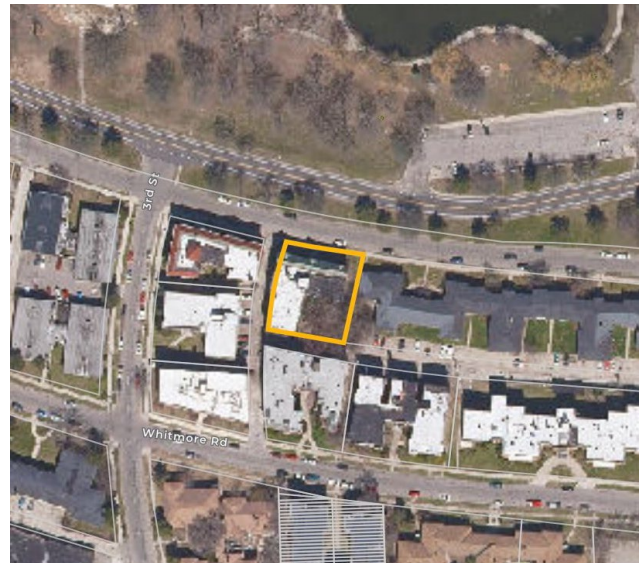
Site Photo 1, by Staff June 24, 2022: (North) Front elevation, showing original casement windows.



Site Photo 2 by Applicant: (Southeast) rear elevation, showing fire damage on east-facing, rear wing of the building.



Site photo 3, by Applicant: (Southeast) rear elevation, showing proposed window replacement location.



Aerial 1 of Parcel # 02002627 by Detroit Parcel Viewer.

PROPOSAL

The proposed work consists of the replacement of two (2) steel casements with Anderson 400 series, aluminum-clad wood casement windows, muntin pattern to match existing with full divided light. The location of these two windows is the east-facing, rear wing of the building, where fire damage had occurred.

Window Product Data (See also attached brochures and cut sheets.)

- 400 Series by Anderson, color: brown, fixed transom
- One (1) unit size 55" x 63 15/16"
- One (1) unit size 97 3/8" x 63 15/16"

STAFF OBSERVATIONS AND RESEARCH

- The Palmer Park Apartment Buildings Historic District was established in 2012.
- Staff observed that the location of the proposed window replacement is not publicly visible.
- Staff has the opinion that the original steel casement windows with true-divided light are distinctive, character-defining features of the building.
- Staff observed that eight (8) sets of casement windows have been replaced, with apparently vinyl double-hung and picture windows, on the first floor, west elevation. These windows are viewable in place by Google Street in 2009, prior to the district's establishment in 2012.
- Staff observed a vast majority of the original casements appeared to be in place.



Site photo 4, by Applicant, on alley (west elevation), showing replaced windows on first floor prior to historic designation.

- Staff requested the applicant to provide an alternative quote for steel casements as an alternative to the aluminum clad casements in this proposal or to provide an explanation as to why this alternative has not yet been pursued. To the date of this report, staff has not received a response.
- Staff requested the applicant to provide cross-sections of the existing casements' dimensions (horizontal and vertical) to compare with the proposed cross-section dimensions of the casements. Staff has found in past proposals, that the dimensions of aluminum-clad wood casements are oftentimes much bulkier in their dimensions than those of original steel casements, thereby completely altering the character of the window's character. To the date of this report, staff has not received a response.
- Staff observed that the operation, configuration and color closely resemble the original casement windows. However the proposed material, aluminum-clad wood is not historically a match.

ISSUES

- Staff recommends that the installation of wood aluminum clad casements are inappropriate as they introduce a material and design that alters the historic character of the property (Standards 2 and 3), remove distinctive features (Standard 5), and does not match the character-defining feature of the original casements in design, texture, and material (Standard 6).

RECOMMENDATION

Section 21-2-78, Determination of Historic District Commission

Recommendation #1: Installation of wood aluminum clad casements

Staff finds that the replacement of steel casements with aluminum-clad wood casements alters the historic character of this property and removes distinctive, character-defining features.

Staff therefore recommends that the Commission issue a Denial for the above work items, as it does not meet the Secretary of the Interior's Standards for Rehabilitation, specifically Standards:

- 2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.*
- 5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.*
- 6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.*







SPEED
HUMP



Storling
506-940-1800

CAUTION



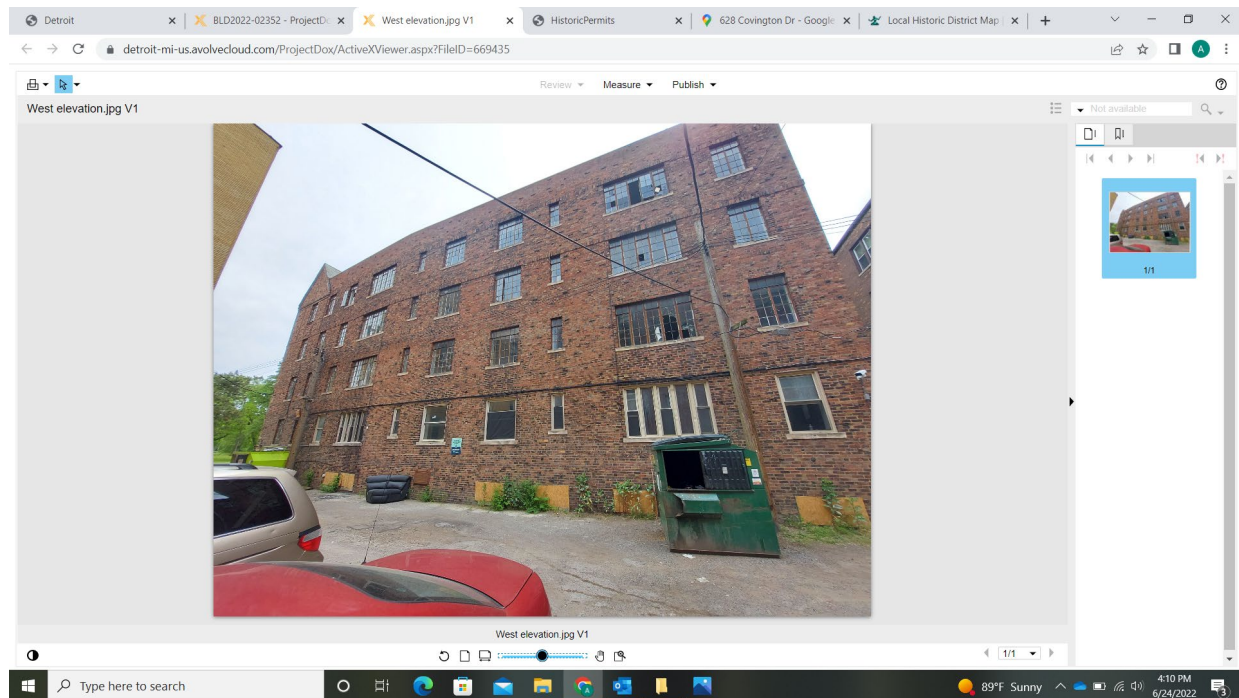
PROJECT
GREEN LIGHT
DETROIT
PARTNER

GFL
WASTE MANAGEMENT
SERVICES

WHITE PICKUP TRUCK

From: [Audra Dye](#)
To: [Dan Rieden](#)
Subject: 731 Covington - FYI
Date: Friday, June 24, 2022 4:12:28 PM
Attachments: [image001.png](#)

I was on ePlans for 731 Covington when I noticed the vinyl windows installed at the first floor on the west elevation. The district was established in 2012 and according to Google street view, these windows were in place in 2009, prior to the district being established. I see the same picture is in the HDC application folder.



Audra Dye

Architectural Historian, Planner | Planning & Development | City of Detroit
Coleman A. Young Municipal Center, 2 Woodward Ave. Suite 808, Detroit, MI 48226
www.detroitmi.gov/hdc
dyea@detroitmi.gov

Michael E. Duggan, Mayor



Google

THIS IS A 3-PAGE FORM - ALL INFORMATION IS REQUIRED FOR PROJECT REVIEW

HISTORIC DISTRICT COMMISSION PROJECT REVIEW REQUEST

City of Detroit - Planning & Development Department
2 Woodward Avenue, Suite 808
Detroit, Michigan 48226

DATE: 06/10/2022

PROPERTY INFORMATION

ADDRESS(ES): 731 Covington AKA: _____

PARCEL ID: 020026274 HISTORIC DISTRICT: _____

SCOPE OF WORK: (Check ALL that apply)

<input checked="" type="checkbox"/> Windows/ Doors	<input type="checkbox"/> Walls/ Siding	<input type="checkbox"/> Painting	<input type="checkbox"/> Roof/Gutters/ Chimney	<input type="checkbox"/> Porch/Deck/ Balcony	<input type="checkbox"/> Addition
<input type="checkbox"/> Demolition	<input type="checkbox"/> Signage	<input type="checkbox"/> New Building	<input type="checkbox"/> Major Alteration (3+ scope items)	<input type="checkbox"/> Site Improvements (landscape, trees, fences, patios, etc.)	

BRIEF PROJECT DESCRIPTION: Replacing 2 exterior windows on the rear elevation
Replacing 2 exterior windows on the rear elevation

APPLICANT IDENTIFICATION

Property Owner/
Homeowner Contractor Tenant or
Business Occupant Architect/Engineer/
Consultant

NAME: Steven Burzynski COMPANY NAME: Gold Star Property Restoration

ADDRESS: 264 Executive Dr CITY: Troy STATE: MI ZIP: 48083

PHONE: 248-688-9963 MOBILE: 248-688-9963 EMAIL: heathers@goldstarmi.com

PROJECT REVIEW REQUEST CHECKLIST

Please attach the following documentation to your request:

PLEASE KEEP FILE SIZE OF ENTIRE SUBMISSION UNDER 30MB

Completed Building Permit Application (highlighted portions only)

ePLANS Permit Number (only applicable if you've already applied for permits through ePLANS)

Photographs of ALL sides of existing building or site

Detailed photographs of location of proposed work (photographs to show existing condition(s), design, color, & material)

Description of existing conditions (including materials and design)

Description of project (if replacing any existing material(s), include an explanation as to why replacement--rather than repair--of existing and/or construction of new is required)

Detailed scope of work (formatted as bulleted list)

Brochure/cut sheets for proposed replacement material(s) and/or product(s), as applicable

NOTE:

Based on the scope of work, additional documentation may be required.

See www.detroitmi.gov/hdc for scope-specific requirements.

Upon receipt of this documentation, staff will review and inform you of the next steps toward obtaining your building permit from the Buildings, Safety Engineering and Environmental Department (BSEtED) to perform the work.

SUBMIT COMPLETED REQUESTS TO: HDC@DETROITMI.GOV

P2 - BUILDING PERMIT APPLICATION

Date: 06/10/2022

PROPERTY INFORMATION

Address: 731 Covington Floor: 2 Suite#: 205 Stories: 4
AKA: _____ Lot(s): _____ Subdivision: _____
Parcel ID#(s): 020026274 Total Acres: _____ Lot Width: _____ Lot Depth: _____
Current Legal Use of Property: Multi - Family Proposed Use: Multi - Family
Are there any existing buildings or structures on this parcel? Yes No

PROJECT INFORMATION

Permit Type: New Alteration Addition Demolition Correct Violations
 Foundation Only Change of Use Temporary Use Other: _____
 Revision to Original Permit #: _____ (Original permit has been issued and is active)

Description of Work (Describe in detail proposed work and use of property, attach work list)

Replacing 2 exterior windows on rear elevation

MBC use change No MBC use change

Included Improvements (Check all applicable; these trade areas require separate permit applications)

HVAC/Mechanical Electrical Plumbing Fire Sprinkler System Fire Alarm

Structure Type

New Building Existing Structure Tenant Space Garage/Accessory Building
 Other: _____ Size of Structure to be Demolished (LxWxH) _____ cubic ft.

Construction involves changes to the floor plan? Yes No
(e.g. interior demolition or construction to new walls)

Use Group: _____ Type of Construction (per current MI Bldg Code Table 601) _____

Estimated Cost of Construction \$ 15,000 By Contractor \$ _____ By Department

Structure Use

Residential-Number of Units: 24 Office-Gross Floor Area _____ Industrial-Gross Floor Area _____
 Commercial-Gross Floor Area: _____ Institutional-Gross Floor Area _____ Other-Gross Floor Area _____

Proposed No. of Employees: _____ List materials to be stored in the building: _____

PLOT PLAN SHALL BE submitted on separate sheets and shall show all easements and measurements (must be correct and in detail). SHOW ALL streets abutting lot, indicate front of lot, show all buildings, existing and proposed distances to lot lines. (Building Permit Application Continues on Next Page)

For Building Department Use Only

Intake By: _____ Date: _____ Fees Due: _____ DngBld? No

Permit Description: _____

Permit #:

Current Legal Land Use: _____ Proposed Use: _____

Permit#: _____ Date Permit Issued: _____ Permit Cost: \$ _____

Zoning District: _____ Zoning Grant(s): _____

Lots Combined? Yes No (attach zoning clearance)

Revised Cost (revised permit applications only) Old \$ _____ New \$ _____

Structural: _____ Date: _____ Notes: _____

Zoning: _____ Date: _____ Notes: _____

Other: _____ Date: _____ Notes: _____



IDENTIFICATION (All Fields Required)

Property Owner/Homeowner Property Owner/Homeowner is Permit Applicant

Name: Urban Property Management Company Name: Urban
Address: 17437 3rd Ave City: Detroit State: MI Zip: 48203
Phone: 313-635-2063 Mobile: 313-635-2063
Driver's License #: 0000000000000000 Email: heathers@goldstarmi.com

Contractor Contractor is Permit Applicant

Representative Name: Steven Burzynski Company Name: Gold Star Property Restoration
Address: 264 Executive Dr City: Troy State: MI Zip: 48083
Phone: 248-688-9963 Mobile: NA Email: heathers@goldstarmi.com
City of Detroit License #: BLDA2022-00006

TENANT OR BUSINESS OCCUPANT Tenant is Permit Applicant

Name: _____ Phone: _____ Email: _____

ARCHITECT/ENGINEER/CONSULTANT Architect/Engineer/Consultant is Permit Applicant

Name: _____ State Registration#: _____ Expiration Date: _____
Address: _____ City: _____ State: _____ Zip: _____
Phone: _____ Mobile: _____ Email: _____

HOMEOWNER AFFIDAVIT (Only required for residential permits obtained by homeowner.)

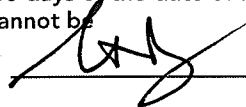
I hereby certify that I am the legal owner and occupant of the subject property and the work described on this permit application shall be completed by me. I am familiar with the applicable codes and requirements of the City of Detroit and take full responsibility for all code compliance, fees and inspections related to the installation/work herein described. I shall neither hire nor sub-contract to any other person, firm or corporation any portion of the work covered by this building permit.

Print Name: _____ Signature: _____ Date: _____
(Homeowner)

Subscribed and sworn to before me this _____ day of _____ 20 ____ A.D. _____ County, Michigan
Signature: _____ My Commission Expires: _____
(Notary Public)

PERMIT APPLICANT SIGNATURE

I hereby certify that the information on this application is true and correct. I have reviewed all deed restrictions that may apply to this construction and am aware of my responsibility thereunder. I certify that the proposed work is authorized by the owner of the record and I have been authorized to make this application as the property owner(s) authorized agent. Further I agree to conform to all applicable laws and ordinances of jurisdiction. **I am aware that a permit will expire when no inspections are requested and conducted within 180 days of the date of issuance or the date of the previous inspection and that expired permits cannot be**

Print Name: Steven Burzynski Signature:  Date: 06/10/2022
(Permit Applicant)

Driver's License #: B624777067800 Expiration: 10-17-2022
Subscribed and sworn to before me this _____ day of _____ 20 ____ A.D. _____ County, Michigan
Signature: _____ My Commission Expires: _____
(Notary Public)

Section 23a of the state construction code act of 1972, 1972PA230, MCL 125.1523A, prohibits a person from conspiring to circumvent the licensing requirements of this state relating to persons who are to perform work on a residential building or a residential structure. Visitors of Section 23a are subject to civil fines.

This application can also be completed online. Visit detroitmi.gov/bseed/elaps for more information.





264 Executive Dr. Troy, MI 48083

Current conditions for 731 Covington:

- Steel single pane push out window with fixed transum painted brown to the exterior

Proposed Replacement Scope 731 Covington:

- Wood Aluminum clad case window with brown metal exterior, casement window and fixed transum. Grid pattern to match existing.
- See the attached quote for the photo of replacement widow







Replace 2 windows due to fire damage.













SOLD BY:
 ABC SUPPLY
 3497 DOLAN DR
 FLINT, MI 48509

SOLD TO:

CREATED DATE
6/9/2022
LATEST UPDATE
6/9/2022
OWNER
Rob Orr

Abbreviated Quote Report - Customer Pricing

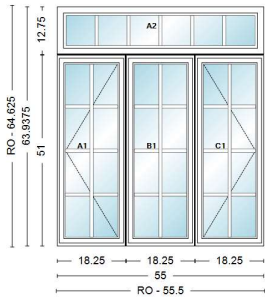
QUOTE NAME	PROJECT NAME	QUOTE NUMBER	CUSTOMER PO#	TRADE ID
Historical windows	Unassigned Project	2439394		

ORDER NOTES:	DELIVERY NOTES:

Item	Qty	Operation	Location	Unit Price	Ext. Price
100	1	Fixed / (Left-Stationary-Right)	None Assigned	\$3,229.96	\$3,229.96

RO Size = 55 1/2" x 64 1/2"

Unit Size = 55" x 63 15/16"



Mull: Factory Mull, Andersen Horizontal Priority T-Join Mull, 1/8 Non Reinforced Material, 3/16 Steel Horizontal Mull Material FLX 4' 7"X1' 3/4" / (PSC 1' 6 1/4"X4' 3"-PSC 1' 6 1/4"X4' 3"-PSC 1' 6 1/4"X4' 3"), Unit, Unit 1, 2, 3: 400 Series Casement, Unit 4: 400 Series Specialty Rectangle-CW, No Flange, Dark Bronze Exterior Frame, Dark Bronze Exterior Sash/Panel, Pine w/Dark Bronze - Painted Interior Frame, Unit 1: Left, Unit 2: Stationary, Unit 3: Right, Unit 4: Fixed, Hinge with Wash Mode, Dual Pane Low-E4 Standard Series Argon Fill Full Divided Light (FDL) Unit 1 Glass, 2 Glass, 3: 2 Wide, Unit 4: 6 Wide, Unit 1 Glass, 2 Glass, 3: 4 High, Unit 4: 1 High, Specified Equal Light Pattern, Dark Bronze, Pine w/Dark Bronze, Chamfer Exterior Grille Bar/ Chamfer Interior Grille Bar, 3/4" Grille Bar, Traditional Trim Stop Profile Stainless Glass / Grille Spacer, Traditional Folding, Oil Rubbed Bronze, Dark Bronze, Full Screen, Aluminum

Hardware: PSC Traditional Folding Oil Rubbed Bronze PN:9016724

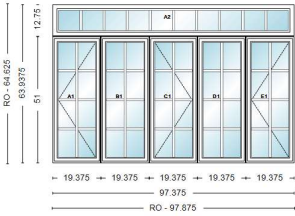
Insect Screen 1: 400 Series Casement, PSC 18.25 x 51 Full Screen Aluminum Dark Bronze

Hardware: PSC Traditional Folding Oil Rubbed Bronze PN:9016724

Insect Screen 1: 400 Series Casement, PSC 18.25 x 51 Full Screen Aluminum Dark Bronze

Unit #	U-Factor	SHGC	ENERGY STAR Clear Opening/Unit #	Width	Height	Area (Sq. Ft)	Comments:
A1	0.29	0.29	NO	A1	8.54800	46.1480	2.73940
B1	0.29	0.29		C1	8.54800	46.1480	2.73940
C1	0.29	0.29					
A2	0.28	0.3					

<u>Item</u>	<u>Qty</u>	<u>Operation</u>	<u>Location</u>	<u>Unit Price</u>	<u>Ext. Price</u>
200	1	Fixed / (Left-Stationary-Right-Stationary-Left)	None Assigned	\$5,233.82	\$5,233.82



RO Size = 97 7/8" x 64 1/2"

Unit Size = 97 3/8" x 63 15/16"

Mull: Factory Mull, Andersen Horizontal Priority T-Join Mull, 1/8 Non Reinforced Material, 3/16 Steel Horizontal Mull Material
 FLX 8' 1 3/8"X1' 3/4" / (PSC 1' 7 3/8"X4' 3"-PSC 1' 7 3/8"X4' 3"-PSC 1' 7 3/8"X4' 3"-PSC 1' 7 3/8"X4' 3"-PSC 1' 7 3/8"X4' 3"), Unit,
 Unit 1, 2, 3, 4, 5: 400 Series Casement, Unit 6: 400 Series Specialty Rectangle-CW, No Flange, Dark Bronze Exterior Frame, Dark
 Bronze Exterior Sash/Panel, Pine w/Dark Bronze - Painted Interior Frame, Unit 1, 5: Left, Unit 2, 4: Stationary, Unit 3: Right, Unit 6:
 Fixed, Hinge with Wash Mode, Dual Pane Low-E4 Standard Series Argon Fill Full Divided Light (FDL) Unit 1 Glass, 2 Glass, 3
 Glass, 4 Glass, 5: 2 Wide, Unit 6: 10 Wide, Unit 1 Glass, 2 Glass, 3 Glass, 4 Glass, 5: 4 High, Unit 6: 1 High, Specified Equal Light
 Pattern, Dark Bronze, Pine w/Dark Bronze, Chamfer Exterior Grille Bar/ Chamfer Interior Grille Bar, 3/4" Grille Bar, Traditional Trim
 Stop Profile Stainless Glass / Grille Spacer, Traditional Folding, Oil Rubbed Bronze, Dark Bronze, Full Screen, Aluminum

Hardware: PSC Traditional Folding Oil Rubbed Bronze PN:9016724

Insect Screen 1: 400 Series Casement, PSC 19.375 x 51 Full Screen Aluminum Dark Bronze

Hardware: PSC Traditional Folding Oil Rubbed Bronze PN:9016724

Insect Screen 1: 400 Series Casement, PSC 19.375 x 51 Full Screen Aluminum Dark Bronze

Hardware: PSC Traditional Folding Oil Rubbed Bronze PN:9016724

Insect Screen 1: 400 Series Casement, PSC 19.375 x 51 Full Screen Aluminum Dark Bronze

Unit #	U-Factor	SHGC	ENERGY STAR	Clear Opening/Unit #	Width	Height	Area (Sq. Ft)	Comments:
A1	0.29	0.29	NO	A1	9.67300	46.1480	3.09990	
B1	0.29	0.29		C1	9.67300	46.1480	3.09990	
C1	0.29	0.29		E1	9.67300	46.1480	3.09990	
D1	0.29	0.29						
E1	0.29	0.29						
A2	0.28	0.3						

SUB-TOTAL:	\$8,463.78
FREIGHT:	\$0.00
LABOR:	\$0.00
TAX:	\$507.83
TOTAL:	\$8,971.61

CUSTOMER SIGNATURE _____ DATE _____

* All graphics as viewed from the exterior. ** Rough opening dimensions are minimums and may need to be increased to allow for use of building wraps or flashings or sill panning or brackets or fasteners or other items.

Thank you for choosing Andersen Windows & Doors

400 SERIES



THE WINDOWS
CONTRACTORS
TRUST THE MOST.*

*2020 Andersen brand survey of U.S. contractors.

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For warranty information, visit andersenwindows.com/warranty.



Andersen Corporation, including its subsidiaries, has been named a 2021 ENERGY STAR Partner of the Year – Sustained Excellence Award winner, the highest honor given by ENERGY STAR, for continued leadership in protecting the environment through superior energy efficiency achievements.



*ENERGY STAR® is a registered trademark of the U.S. Environmental Protection Agency.



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You want to give your customers a home they love, and we're here to make that easy for you. That's why we're proud to offer you products that rate #1 in quality and performance,** and to be the #1 trusted and recommended window and door brand† by pros.

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Our most popular choice with homeowners and the windows contractors trust the most! Easy to install, low maintenance and with fewer callbacks, the 400 Series can be your go-to for pretty much any project.

*2020 Andersen brand surveys of U.S. contractors, builders and realtors.

**2020 Andersen brand surveys of U.S. contractors, builders and architects.

†2020 Andersen brand survey of U.S. contractors.

RELIABLE & ENERGY EFFICIENT

As our best-selling products, the 400 Series product line offers a distinct blend of design, reliability and trade confidence. Designed for easy installation for replacement, remodel or new construction projects, 400 Series products feature our Perma-Shield® exterior cladding that revolutionized the window industry. They're also backed by our renowned limited warranty and the largest service network in the industry.

ENERGY-SAVING GLASS FOR ANY CLIMATE

Andersen makes windows and patio doors with options that make them ENERGY STAR® v. 6.0 certified throughout the United States.

Visit andersenwindows.com/energystar for more information and to verify that the product with your glass option is certified in your area.



RIGOROUSLY TESTED

The exclusive Andersen Perma-Shield system gives our windows and doors a tough, protective shell that safeguards the wood inside. It repels water, resists dents* and stays beautiful for years.

LOW MAINTENANCE, NEVER NEEDS PAINTING

The Perma-Shield exteriors on Andersen 400 Series windows and doors offer superior weather resistance and are virtually maintenance free.



OPTIONS FOR THE HARSHTEST WEATHER

400 Series windows with Stormwatch® Protection meet building code requirements in coastal areas.** Products with Stormwatch Protection are energy efficient, resist the effects of salt water, and stand up to hurricane-force winds and wind-borne debris.** For details, visit andersenwindows.com/coastal.



QUALITY SO SOLID, THE WARRANTY IS TRANSFERABLE*

Many other window and door warranties end when a home is sold, but our coverage – 20 years on glass, 10 years on non-glass parts – transfers from each owner to the next. And because it's not prorated, the coverage offers full benefits year after year, owner after owner. So it can add real value when you decide to sell your home.



BUILT FOR YEARS TO COME*

Our products are built strong to last long. We use the right materials in the right places, including solid wood, fiberglass and our own Fibrex® composite material. These give our windows and doors superior strength, stability and long-term beauty.

KEEPS THE WEATHER OUT

Our weather-resistant construction and careful selection of weatherstrip by product type seals out drafts, wind and water whatever the weather.

*Visit andersenwindows.com/warranty for details.

**See your local code official for code requirements in your area.

"ENERGY STAR" is a registered trademark of the U.S. Environmental Protection Agency.

REPLACEMENT SOLUTIONS

Homeowners and realtors agree that Andersen products increase the value of a home by at least 10%*. So you're not just replacing their windows, you're upgrading their home.

INSERT WINDOWS



400 Series Woodwright® Double-Hung Insert Windows

The classic, traditional style of Woodwright full-frame windows in a time-saving insert.



400 Series Tilt-Wash Double-Hung Insert Windows

Our best-selling double-hung windows in an insert for easy replacement.

REPLACEMENT WINDOWS



400 Series Replacement Casement & Awning Windows

Available without an installation flange for easy window replacement from inside or outside. Feature predrilled, through-the-jamb installation holes for quick installation.

Our insert and replacement windows include flat self-hanging shims, backer rod, installation screws and complete instructions.



CUSTOM-SIZE FULL-FRAME WINDOWS

When the existing window frame is rotted or deteriorated, or you're modifying the size or shape of the existing window opening, our full-frame double-hung, casement, awning and specialty windows are available in custom sizes to fit your project.



CUSTOM-SIZE PATIO DOORS

Whether you need a hinged or gliding patio door for replacement, Andersen has a number of custom-size options to fit your project.



*2020 Andersen brand surveys of U.S. realtors and homeowners.

OVERALL BEST-IN-CLASS AMONG CONTRACTORS

FOR CLAD WOOD WINDOWS.*



*2020 Andersen brand survey of U.S. contractors.

PRODUCT OVERVIEW



Double-Hung Windows

Choose Woodwright® double-hung windows that replicate the look of traditional architecture or our best-selling tilt-wash double-hung windows that are extremely energy efficient. Both are available as full-frame or insert windows, and can be part of bay window combinations. Coordinating picture and transom windows are also available.



Woodwright full-frame windows come in a variety of shapes.



Our **Narroline® double-hung window conversion kit** can upgrade Andersen® Narroline double-hung windows to tilt-wash windows.



Specialty Windows

A collection of stylish shapes to help distinguish a home's style or create a delicate accent.



Complementary specialty windows offer 35 additional shapes and custom sizes.



Casement & Awning Windows

Casement and awning windows are energy efficient, and are built with our low-maintenance Perma-Shield® cladding. Available for new construction or replacement, as integral twin or triple units, or as part of bay or bow window combinations. Coordinating picture and transom windows are also available.

Complementary casement windows come in a variety of shapes and in French casement options.



Gliding Windows

Superior energy efficiency, reliable performance and uncommon beauty. Both sash on our gliding windows open for improved ventilation.



Frame any Frenchwood patio door with **Frenchwood patio door sidelights and transoms.**

Frenchwood® Gliding & Hinged Inswing Patio Doors

Wide wood profiles provide the authentic craftsmanship of traditional French doors, and our Perma-Shield exterior cladding protects the unit and offers low maintenance. Add blinds-between-the-glass to conveniently control light and privacy. To learn more about other traditional- and contemporary-style Andersen door options, visit andersenwindows.com/doors.



Complementary curved top patio doors, including Springline™ and arch hinged doors, are handcrafted and complement our 400 Series products.



EXTERIOR & INTERIOR OPTIONS

Our Perma-Shield® exterior cladding system, a time-tested Andersen innovation, offers low maintenance and durability while also providing an attractive appearance. The interiors of all 400 Series windows and patio doors are available in unfinished stain-grade pine or with a long-lasting, low-maintenance white finish. Select windows are also available with a dark bronze or black finish. 400 Series Woodwright® windows and Frenchwood® patio doors are also available with unfinished maple or oak interiors.

EXTERIOR COLORS**



INTERIOR OPTIONS**



Design your window at
andersenwindows.com/design-tool

*Visit andersenwindows.com/warranty for details.

**Some products are not available in all colors or wood species. See your Andersen supplier for details.

†Products with dark bronze and black interiors have matching exteriors; excludes complementary products.

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

EXTERIOR TRIM SYSTEM

Add curb appeal with Andersen® exterior trim. Our trim is made with Fibrex® composite material, an environmentally smart composite that contains 40% pre-consumer reclaimed wood fiber by weight. For details, see page 175.

Time saving and cost effective



No nail holes, no visible fasteners, no painting

Innovative attachment strip



Independent of water management system for easy installation

Style that gets noticed

Our wide trim profiles overlap the window frame to create clean lines without visible sealant joints. Mitered brick mould corners and butt joints on flat casing profiles reflect traditional corner joints.

Sandtone window with cocoa bean trim



Visit andersenwindows.com/exteriortrim to learn more.

EXTERIOR COLORS

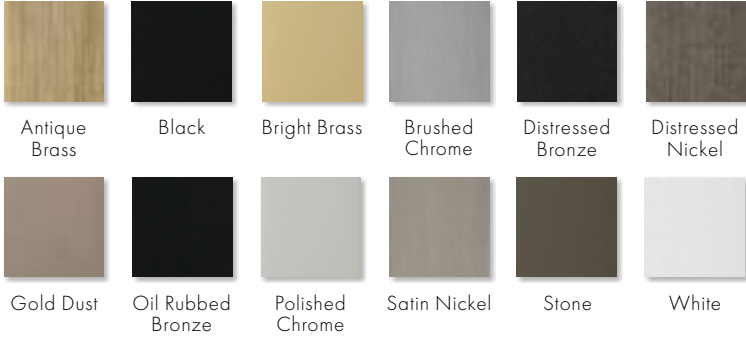


Printing limitations prevent exact duplication of colors. See your Andersen supplier for actual color samples.

WINDOW HARDWARE

Window hardware* enhances the overall design of a window and harmonizes with a home's décor. That's why we offer a broad range of hardware styles and finishes.

HARDWARE FINISHES



*Hardware is sold separately, except standard lock and keeper for double-hung windows. Printing limitations prevent exact replication of finishes. See your Andersen supplier for actual finish samples. Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.



Casement & Awning Windows



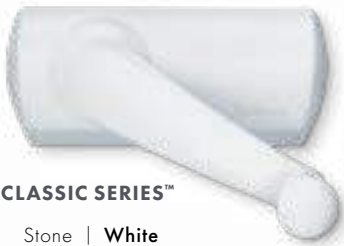
CONTEMPORARY FOLDING

Black | Bright Brass | Gold Dust | Oil Rubbed Bronze
Satin Nickel | Stone | White



TRADITIONAL FOLDING

Antique Brass | Black | Bright Brass | **Distressed Bronze**
Distressed Nickel | Gold Dust | Oil Rubbed Bronze
Satin Nickel | Stone | White



CLASSIC SERIES™

Stone | **White**



ESTATE™

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

Folding handles avoid interference with window treatments.

Gliding Windows



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

Bold name denotes finish shown.

Woodwright® Double-Hung Windows



Standard Lock & Keeper

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

Tilt-Wash Double-Hung Windows



Standard Lock & Keeper

Black | **Gold Dust** | Stone | White

Stone is standard with natural interior units.
White comes with prefinished white interiors.
Other finishes optional.



Optional Lock & Keeper

ESTATE™

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

Optional Estate lock and keeper is available only for 400 Series tilt-wash double-hung windows.
Estate lock and keeper reduces the clear opening height by 19/32" (15). Check with local building code officials to determine compliance with egress requirements.
Optional sash lifts shown on page 48 for Woodwright windows and page 76 for tilt-wash windows.

Hardware is sold separately, except standard lock and keeper for double-hung windows.

Dimensions in parentheses are in millimeters.

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

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

PATIO DOOR HARDWARE

Patio door hardware* is available in a variety of designs to match virtually any style. Anvers®, Yuma®, Newbury®, Covington™, Encino® and Whitmore® hardware options feature solid drop-forged brass for added strength, while Albany and Tribeca® hardware options are made of diecast zinc with durable powder-coated finishes. Also, look for additional hardware options such as exterior keyed locks and matching hinge finishes in the detailed product sections for each individual patio door.



ANVERS®

Bright Brass | Oil Rubbed Bronze
Satin Nickel

YUMA®

Distressed Bronze
Distressed Nickel

NEWBURY®

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

ALBANY

Black | **Gold Dust**
Stone | White

Bold name denotes finish shown.

HARDWARE FINISHES



*Hardware sold separately.

Matching hinges available for inswing patio doors; excludes FSB® hardware.

Mix-and-match interior and exterior style and finish options are available.

Bright brass and satin nickel finishes feature a 10-year limited warranty

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

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



Gliding

Hinged

COVINGTON™

Antique Brass | Bright Brass
Oil Rubbed Bronze



Gliding

Hinged

ENCINO®

Distressed Bronze
Distressed Nickel



Gliding

Hinged

WHITMORE®

Antique Brass | Bright Brass
Oil Rubbed Bronze | Satin Nickel



Gliding

Hinged

TRIBECA®

Black | Stone | White

FSB® HINGED PATIO DOOR HARDWARE

Durable stainless steel FSB hinged door hardware features clean lines and a sleek satin finish for a thoroughly modern look. Choose from four styles and two finishes.



Black
Anodized
Aluminum



Satin
Stainless
Steel



1035



1075



1076



1102**

*Hardware sold separately. **FSB style 1102 is not available in black anodized aluminum.
"FSB" is a registered trademark of Franz Schneider Brakel GmbH & Co.

GLASS OPTIONS

Andersen has the glass you need to get the performance you want. From SmartSun™ glass with HeatLock® coating that’s 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 selections that meet ENERGY STAR requirements in your area.

GLASS		ENERGY		LIGHT	
		U-Factor How well a product prevents heat from escaping.	Solar Heat Gain Coefficient How well a product blocks heat caused by sunlight.	Visible Light Transmittance How much visible light comes through a product.	UV Protection How well a product blocks ultraviolet rays.
Low-E4®	Outstanding overall performance for climates where both heating and cooling costs are a concern.	● ● ● ○	● ● ● ○	● ● ● ○	● ● ● ○
Low-E4 with HeatLock® Coating	Applied to the room-side surface, it reflects heat back into the home and improves U-Factor values.	● ● ● ●	● ● ● ○	● ● ● ○	● ● ● ○
SmartSun™	Thermal control similar to tinted glass, with visible light transmittance similar to Low-E4 glass.	● ● ● ○	● ● ● ●	● ● ● ○	● ● ● ●
SmartSun with HeatLock Coating	Applied to the room-side surface, it reflects heat back into the home and improves U-Factor values.	● ● ● ●	● ● ● ●	● ● ○ ○	● ● ● ●
Sun	Outstanding thermal control in southern climates where less solar heat gain is desired.	● ● ● ○	● ● ● ●	● ○ ○ ○	● ● ● ○
PassiveSun®	Ideal for northern, passive solar construction applications where solar heat gain is desired.	● ● ● ○	● ○ ○ ○	● ● ● ○	● ● ● ○
PassiveSun with HeatLock Coating	Applied to the room-side surface, it reflects heat back into the home and improves U-Factor values.	● ● ● ○	● ○ ○ ○	● ● ● ○	● ● ● ○
Clear Dual-Pane	High visibility with basic thermal performance.	● ○ ○ ○	○ ○ ○ ○	● ● ● ●	○ ○ ○ ○

Center of glass performance only. Ratings based on glass options as of May 2021. Visit andersenwindows.com/energystar for ENERGY STAR map and NFRC total unit performance data.

HEATLOCK TECHNOLOGY

Applied to the room-side glass surface, HeatLock coating reflects heat back into the home for improved performance.

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.



ADDITIONAL GLASS OPTIONS

Tempered safety glass is standard on patio doors and required for larger window sizes.

Laminated glass is available 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.



Cascade Fern Obscure



Reed Satin Etch

ART GLASS

With art glass panels from Andersen, you can add interest, create focal points and make your work stand out. See page 173 or visit andersenwindows.com/artglass for more information.

TIME-SAVING FILM

We protect our products during delivery and construction with translucent film on the glass that peels away for a virtually spotless window.

For more details on our glass options, visit andersenwindows.com/glass.



*Andersen 400 Series products only with SmartSun glass with HeatLock coating (argon gas blend), no grilles, no capillary breather tubes. Excludes patterned/textured glass. "ENERGY STAR" is a registered trademark of the U.S. Environmental Protection Agency.



BLINDS-BETWEEN-THE-GLASS

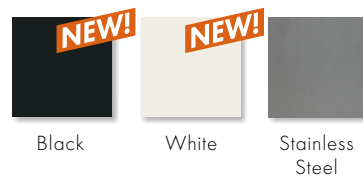
Conveniently located between the panes of insulated glass, and protected from dust and damage for long-lasting protection, blinds-between-the-glass is available on 400 Series Frenchwood® gliding or hinged inswing patio doors. Available in white, and can be ordered with any exterior door color with a pine or prefinished white interior.



GLASS SPACER OPTIONS

Black or white glass spacers are now available as a standard offering on select products, in addition to stainless steel glass spacers, to provide more ways to customize project designs and achieve a contemporary style. Colored glass spacers blend in with the color of the window or door for a sleek design, or serve as a shadow line.

Add full divided light grilles, and the grille spacer bar between the glass will match the selected glass spacer color.



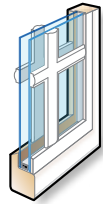


GRILLE OPTIONS

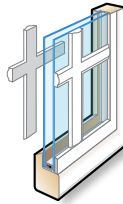
Grille patterns are available in widths and configurations to fit any architectural style or the taste of any customer. We can match virtually any existing grille pattern, and we'll even work with you and your customers to create custom patterns.



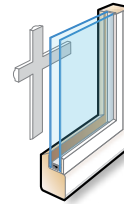
Permanent exterior
Permanent interior
with spacer



Permanent exterior
Permanent interior



Permanent exterior
Removable interior



Removable interior



Finelight
grilles-
between-
the-glass*

FULL DIVIDED LIGHT

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

SIMULATED DIVIDED LIGHT

Permanent grilles on the exterior and interior, with no spacer between the glass. We also offer permanent exterior grilles with removable interior grilles.

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 3/4" (19) widths.

Grille Bar Widths & Patterns



3/4" (19)



7/8" (22)



1 1/8" (29)



2 1/4" (57)

Actual width shown.

Our 2 1/4" (57) width grille can be positioned horizontally across the center of a casement window to simulate the look of a double-hung window.



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

*7/8" (22), 1 1/8" (29) and 2 1/4" (57) are not available in Finelight grilles-between-the-glass. Dimensions in parentheses are in millimeters.

INSECT SCREEN OPTIONS

Andersen® TruScene® insect screens provide more than 50% greater clarity than conventional Andersen insect screens for a beautifully unobstructed view. They let in 25% more fresh air* all while keeping out unwanted small insects.



TRUSCENE INSECT SCREENS

For casement and awning windows, TruScene insect screen frames are available in stone, white, dark bronze, black and natural pine veneer that can be stained to match the window. Insect screen frames for all other windows are installed on the exterior of the window and match the unit's exterior color.



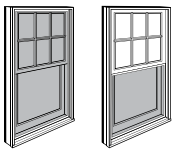
Pine | White | Stone | Dark Bronze | Black

CONVENTIONAL INSECT SCREENS

Conventional insect screen frames are available in white, stone, dark bronze and black for casement and awning windows. Insect screen frames for all other windows and doors are installed on the exterior of the window or door and match the unit's exterior color.

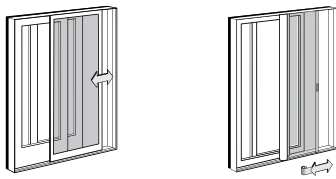
INSECT SCREEN CONFIGURATIONS

Windows

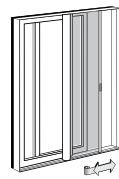


Full insect screens are available for Andersen venting windows. **Half insect screens** are also available for the lower sash of our Woodwright® and tilt-wash double-hung windows.

Gliding Patio Doors

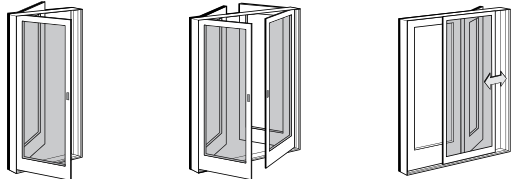


Gliding insect screens are available for two- and four-panel doors.



Retractable insect screens are installed on the exterior and opens side to side across the width of the opening. When not in use, it neatly retracts into a small canister. Available for two-panel doors.

Hinged Inswing Patio Doors



Hinged insect screens are available for single-panel doors.

Double-hinged insect screens are available for two-panel active-passive doors.

Gliding insect screens are available for all two- and three-panel doors.

*TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.



THE CLAD WOOD WINDOWS
**MORE CONTRACTORS
WOULD CHOOSE FOR
THEIR OWN HOME.***

*2020 Andersen brand survey of U.S. contractors.

COMPARISON CHART

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

FEATURES		WINDOWS								PATIO DOORS	
		Woodwright® Double-Hung Full-Frame	Woodwright Double-Hung Insert	Tilt-Wash Double-Hung Full-Frame	Tilt-Wash Double-Hung Insert	Narroline® Double-Hung Conversion Kit	Casement	Awning	Gliding	Frenchwood® Gliding	Frenchwood Hinged Inswing
Low-Maintenance Exteriors											
	White	●	●	●	●	●	●	●	●	●	●
	Canvas	●	●	●	●		●	●	●		
	Sandtone	●	●	●	●	●	●	●	●	●	●
	Terratone	●	●	●	●	●	●	●	●	●	●
	Dark Bronze	●	●	●	●		●	●	●		
	Forest Green	●	●	●	●		●	●	●	●	●
	Black	●	●	●	●		●	●	●		
Interiors											
	Pine	●	●	●	●	●	●	●	●	●	●
	Maple	●	●							●	●
	Oak	●	●							●	●
	White	●	●	●	●	●	●	●	●	●	●
	Sandtone								●		
	Dark Bronze			●	●		●	●	●		
	Black			●	●		●	●	●		
Easy Cleaning											
	Tilt-to-Clean Sash	●	●	●	●	●					
Grilles & Blinds											
	Full Divided Light	●	●	●	●	●	●	●	●	●	●
	Simulated Divided Light	●	●	●	●	●	●	●	●	●	●
	Finelight™ Grilles-Between-the-Glass	●	●	●	●	●	●	●	●	●	●
	Removable Interior Grilles	●	●	●	●	●	●	●	●	●	●
	Blinds-Between-the-Glass									●	●
High-Performance Glass Additional glass options are available. See page 12 for details. For patio doors, all glass options are tempered.											
	Low-E4®	●	●	●	●	●	●	●	●	●	●
	Low-E4 SmartSun™	●	●	●	●	●	●	●	●	●	●
	Low-E4 Sun	●	●	●	●	●	●	●	●	●	●
	Low-E4 PassiveSun	●	●	●	●	●	●	●	●	●	●
	Clear Dual-Pane						●	●			
	HeatLock® Coating	●	●	●	●	●	●	●	●	●	●
Performance Option											
	Stormwatch® Protection	PG upgrade		●			●	●			
Glass Spacers											
	Stainless Steel	●	●	●	●	●	●	●	●	●	●
	Black or White	●	●	●	●	●	●	●	●	●	●
Standard Sizes											
	Minimum Width	1'-9 5/8"	1'-4 1/2"	1'-9 5/8"	1'-9 1/4"	Fits Narroline double-hung windows made after 1967	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 5/8"	3'-9 5/8"	3'-8 7/8"		2'-11 15/16"	5'-11 7/8"	5'-11 1/4"	15'-9"	8'-11 1/8"
	Minimum Height	3'-0 7/8"	2'-3 3/4"	3'-0 7/8"	3'-0 3/8"		2'-0 1/8"	1'-5"	1'-10 1/4"	6'-7 1/2"	6'-7 1/2"
	Maximum Height	6'-4 7/8"	6'-5"	7'-8 7/8"	7'-6 5/8"		5'-11 7/8"	4'-0"	4'-11 1/4"	7'-11 1/2"	7'-11 1/2"
Custom Sizes											
		●	●	●	●		●	●		●	●

THE WINDOWS
**WITH FEWER
CALLBACKS.***
DESIGNED
FOR EASY
INSTALLATION.



*2020 Andersen brand survey of U.S. contractors.



CASEMENT & AWNING WINDOWS

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CUSTOM SIZING
in 1/8" (3) increments 

Dimensions in parentheses are in millimeters.

CASEMENT & AWNING WINDOWS

FEATURES

FRAME

A A seamless one-piece, rigid vinyl frame cover is secured to the exterior of the frame to protect the wood frame from moisture and maintain an attractive appearance while minimizing maintenance.

B The seamless rigid vinyl cover extends 1 3/8" (35) around the perimeter of the unit, creating a flange to help seal the unit to the structure.

C Wood frame members are treated with a water-repellent preservative for long-lasting protection and performance.

D Interior stops are unfinished pine. Low-maintenance prefinished white, dark bronze and black** interiors are also available.

SASH

E Rigid vinyl encases the entire sash – a vinyl weld protects each sash corner for superior weathertightness. It maintains an attractive appearance and minimizes maintenance.

F Wood core members provide excellent structural stability and energy efficiency.

G Vinyl closed-cell foam weatherstrip is factory installed on the perimeter of the sash.

GLASS

H In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

I A glazing bead and silicone provide superior weathertightness and durability.

J High-Performance options include:

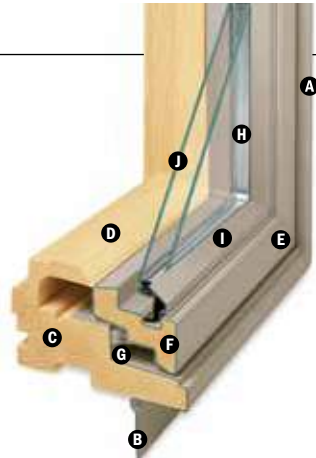
- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered 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 job site.

Patterned Glass

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



HARDWARE

Smooth Control Hardware System



The smooth control hardware system employs a worm gear drive for easy operation. Units with a wash mode have hinges that move the sash away from the frame to provide easier glass

cleaning. CXW15, CXW155, CXW16 and CXW25 sizes not available with wash mode. Hardware option and finish must be specified. Operator handle and cover sold separately.

Single-Actuation Casement Lock



On casement windows, a single-actuation lock easily releases all locking points on the casement sash while the reach-out action eliminates binding when closing. The lock handle is offered in finishes that coordinate with your specified hardware option.

Awning Sash Locks



Awning sash locks provide an added measure of security and weathertightness. Hardware style and finish options are compatible with Andersen® casement windows to ensure consistency in appearance when used in window combination designs.

StormWATCH[®] PROTECTION

400 Series casement and awning windows are available with Stormwatch® Protection. For more details, visit andersenwindows.com/coastal.

Performance Grade (PG) Upgrades

Performance upgrades are available for select sizes of standard, non-impact casement and awning windows,

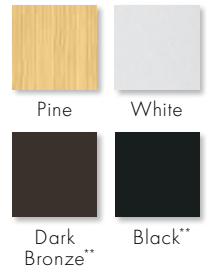
allowing these units to achieve higher performance ratings. Performance Grade (PG) ratings are more comprehensive than Design Pressure (DP) ratings for measuring product performance. Visit andersenwindows.com for up-to-date performance information of individual products. Contact your Andersen supplier for availability.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE OPTIONS Sold Separately



CONTEMPORARY FOLDING

Black | Bright Brass | Gold Dust
Oil Rubbed Bronze | **Satin Nickel**
Stone | White



TRADITIONAL FOLDING

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

Folding handles avoid interference with window treatments.



CLASSIC SERIES™

Stone | **White**



ESTATE™

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

HARDWARE FINISHES



*Visit andersenwindows.com/warranty for details.

**Products with dark bronze and black interiors have matching exteriors.

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.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified. Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

ACCESSORIES Sold Separately

FRAME

Extension Jamb



Standard jamb depth is 2 7/8" (73). Extension jambs are available in unfinished pine or prefinished white, dark bronze and black. Some sizes may be veneered.

Factory-applied and non-applied interior extension jambs are available in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Extension jambs can be factory applied to either three sides (stool and apron application) or four sides (picture frame casing).

Thick Replacement Extension Jambs

To help preserve original alignment of trim and paint lines in replacement situations, special 1 1/8" (29) thick replacement extension jambs are available. Factory-applied and non-applied extension jambs are available in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Non-applied extension jambs are available in 12' (3658) lineals. Detail on page 34.

Drywall Return Bead



A drywall return bead is available in a narrow or wide dimension with unfinished pine or prefinished white, dark bronze and black interiors. Can be ordered factory applied or in non-applied lineals. Detail on page 34.

HARDWARE

Corrosion-Resistant Components



Corrosion-resistant hinge and operator arm hardware is designed for applications in harsh and corrosive environments such as heavy industrial or coastal areas.*

Window Opening Control Device



A window opening control device is available, which limits sash travel to less than 4" (102) when the window is first opened. Available factory applied, or as a field-applied kit in white, stone and black.

Power Operator for Awning Windows



Awning windows can be ordered with an operator enhanced by PowerAssist™ technology that opens and closes the window with the touch of a button. Easy to install, the 24-volt system features a concealed window power drive, battery backup in case of a power outage and a moisture sensor that automatically closes the window when it rains. A wireless remote control is available (sold separately).

The PowerAssist system is controlled by a wall-mounted console, which includes a power box, battery, touch pad and mounting bracket. Windows can be ordered factory prepped to save time, or they can be ordered as a field kit. Power driver requires field installation. PowerAssist technology eliminates the need for sash locks. Available for windows up to 5' (1524) wide. Not available for units with Stormwatch® Protection or performance upgrades.

SPECIAL USE OPERATOR HANDLES

Available in Classic Series™ design only.

Compact Operator Handle



Specially designed for use in situations where blinds or other window treatments interfere with standard operator handle. Available in white or stone finish.

Easy-Grip Handle

Larger knob makes it easier to grip and operate. Available in white or stone finish.



Operator Spline Cover



An operator spline cover is an attractive cap that covers the roto operator stud when the handle has been removed to control access or operation of the window. The operator spline cover should not be used on any window designated or intended for emergency escape or rescue. Please consult your local building code official for local egress code requirements.

Metal T-Handle



Our smallest operator handle, the metal T-handle, may make it more difficult for young children (5 and under) to open the window. For more information on child safety, write:

Andersen Corporation
LookOut For Kids® Program
 100 Fourth Avenue North
 Bayport, MN 55003
 Call **800-313-8889** or email lofk@andersencorp.com.

GLASS

Andersen® Art Glass

Andersen art glass panels come in a variety of original patterns. See art glass section starting on page 173 for more information or visit andersenwindows.com/artglass.

INSECT SCREENS

TruScene® Insect Screens



Andersen TruScene insect screens let in over 25% more fresh air** and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects. For casement and awning windows, frames are available in white, stone, dark bronze and black, or with pine veneer frame interiors to blend with the wood interior of the window.

Conventional Insect Screens

Conventional insect screens have charcoal powder-coated aluminum screen mesh. Available with frames in white, stone, dark bronze and black.

GRILLES

Grilles are available in a variety of configurations and widths. For casement and awning window grille patterns, see page 34.

EXTERIOR TRIM

Available with Andersen exterior trim. See exterior trim section starting on page 175.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- 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.

*Visit andersenwindows.com/warranty for details.

**TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.

Dimensions in parentheses are in millimeters.

CASEMENT & AWNING WINDOWS

Alignment Grid for Standard-Size Casement, Awning, Picture, Transom, Half Circle, Quarter Circle and Arch Windows

	1'-5"	1'-8 1/2"	2'-0 1/8"	2'-4 3/8"	2'-7 1/2"	2'-9 3/4"	2'-11 15/16"	3'-4 3/4"	3'-4 13/16"	4'-0"								
Specialty	(432)	(521)	(613)	(721)	(800)	(857)	(913)	(1035)	(1037)	(1219)								
See the specialty window section starting on page 117 for these and other specialty shapes and sizes.			AFC106 AFC11	AFCW106 AFCW11	CTQC1	CTQCW1 CTQCX1	AFCP3006 AFCP301	CTQA3	CTCXW1	AFC206 AFC21								
Transom			CTC1	CTCW1 CTCX1						CTC2								
Transom	1'-0" (305)	CTR1510 CTR1810	CTR2010	CTR2410 CTR2810 CTR2910			CTR3010 PTR3010	CTR3410 CTR21810	PTR3510	CTR4010 PTR4010 CTR22010								
Awning																		
1'-5" (432)			AR21	AR251 AR281			AR31		AR351	AR41 AR221								
1'-8 1/2" (521)		AN21	AN251 AN281				AN31		AN351	AN41 AN221								
2'-0 1/8" (613)		A21	A251 A281				A31		A351	A41 A221								
2'-4 3/8" (721)		AW21	AW251 AW281				AW31		AW351	AW41 AW221								
2'-7 1/2" (800)			AX251 AX281				AX31		AX351	AX41								
2'-11 15/16" (913)				AXW281			AXW31		AXW351	AXW41								
3'-4 3/4" (1035)							A335		A3535									
Casement, Awning and Picture																		
2'-0 1/8" (613)	CR12	CN12	C12	CW12				CN22		C22								
2'-4 3/8" (721)	CR125	CN125	C125	CW125	CX125			CN225		C225								
2'-11 15/16" (913)	CR13	CN13	C13	CW13	CX13	CR23	CXW13	P3030	CN23	P3530	C23	P4030						
3'-4 13/16" (1037)	CR135	CN135	C135	CW135	CX135	CR235	CXW135	P3035	CN235	P3535	C235	P4035						
4'-0" (1219)	CR14	CN14	C14	A212	CW14	CX14	CR24	CXW14	A312	AP32V	P3040	CN24	AP352V	P3540	C24	AP42V	P4040	
4'-4 13/16" (1341)	CR145	CN145	C145	CW145	CX145	CR245	CXW145	P3045	CN245	P3545	C245	P4045						
4'-11 7/8" (1521)	CR15	CN15	C15	CW15	CX15	CR25	CXW15	PA3050*	P3050	CN25	PA3550*	P3550	C25	P4050				
5'-4 13/16" (1646)	CR155	CN155	C155	CW155	CX155	CR255	CXW155	P3055	CN255	PA3560	P3560	C255	P4055					
5'-11 7/8" (1826)	CR16	CN16	C16	A213	CW16	CX16	CR26	CXW16	PA3060	AXW312**	A313	P3060	CN26	PA3560	P3560	C26	PA4060	P4060

* Dimensions in parentheses are in millimeters.

* Actual height of 4'-11 13/16" (1519).

** Actual height of 5'-11 5/8" (1819).

4'-4 13/16" (1341)	4'-8 1/2" (1435)	4'-11 7/8" (1521)	5'-1" (1549)	5'-2 3/4" (1594)	5'-4 13/16" (1646)	5'-11 5/8" (1819)	5'-11 7/8" (1826)	7'-0 5/8" (2149)

Similar jamb profiles enable these standard-size windows to be combined in multiple combinations. Custom-size windows are also available.

Window widths and heights shown. See individual size charts for additional dimensions.

In addition to venting configurations shown, other standard configurations are available.

* Dimensions in parentheses are in millimeters.

CASEMENT & AWNING WINDOWS

Table of Casement and Transom Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-5"	1'-8 1/2"	2'-0 1/8"	2'-4 3/8"	2'-7 1/2"	2'-11 15/16"	2'-9 3/4"	3'-4 3/4"	4'-0"	4'-8 1/2"
	(432)	(521)	(613)	(721)	(800)	(913)	(857)	(1035)	(1219)	(1435)
Minimum Rough Opening	1'-5 1/2"	1'-9"	2'-0 5/8"	2'-4 7/8"	2'-8"	3'-0 1/2"	2'-10 1/4"	3'-5 1/4"	4'-0 1/2"	4'-9"
	(445)	(533)	(625)	(733)	(813)	(927)	(870)	(1048)	(1232)	(1448)
Unobstructed Glass (casement, single sash only)	12 5/8"	16 1/8"	19 3/4"	24"	27 1/8"	31 9/16"	12 5/8"	16 1/8"	19 3/4"	24"
	(321)	(410)	(502)	(610)	(689)	(802)	(321)	(410)	(502)	(610)
Unobstructed Glass (transom, single sash only)	12 3/16"	15 11/16"	19 5/16"	23 9/16"	26 11/16"	31 1/8"	28 15/16"	35 15/16"	43 3/16"	51 11/16"
	(310)	(398)	(491)	(599)	(678)	(791)	(735)	(913)	(1097)	(1313)

CUSTOM WIDTHS – 17" to 84 5/8"										
1'-0"										
	CTR1510	CTR1810	CTR2010	CTR2410	CTR2810	CTR3010	CTR2910	CTR3410	CTR4010	CTR4810
1'-0"										
	CTR21810	CTR22010	CTR22410							

CUSTOM WIDTHS – 17" to 35 15/16"										
CUSTOM HEIGHTS – 24 1/8" to 71 7/8"										
2'-0 1/8"										
	CR12	CN12	C12	CW12*				CN22	C22	CW22*
2'-4 3/8"										
	CR125	CN125	C125	CW125*	CX125			CN225	C225	CW225*
2'-11 15/16"										
	CR13	CN13	C13	CW13*	CX13	CXW13	CR23	CN23	C23	CW23*
3'-4 13/16"										
	CR135	CN135	C135	CW135*	CX135°	CXW135°	CR235	CN235	C235	CW235*
4'-0"										
	CR14	CN14	C14	CW14*	CX14°	CXW14°	CR24	CN24	C24	CW24*
4'-4 13/16"										
	CR145	CN145	C145	CW145*	CX145°	CXW145°	CR245	CN245	C245	CW245*
4'-11 7/8"										
	CR15	CN15	C15	CW15*	CX15°	CXW15**	CR25	CN25	C25	CW25*
5'-4 13/16"										
	CR155	CN155	C155	CW155*	CX155°	CXW155**	CR255	CN255	C255	CW255*
5'-11 7/8"										
	CR16	CN16	C16	CW16*	CX16°	CXW16**	CR26	CN26	C26	CW26*

*"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.

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" (610) with appropriate hinge specified. See tables on pages 29-30.

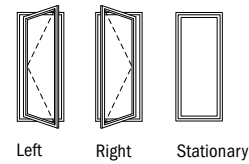
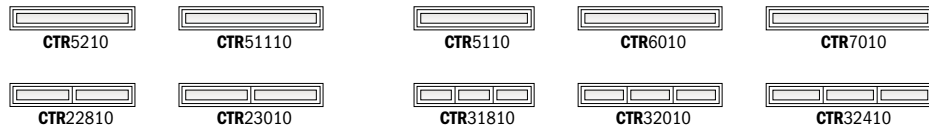
* Meet clear opening width of 20" (508) using hinge with wash mode and control bracket (bracket can be pivoted for cleaning position) and meet clear opening width of 22" (559) using hinge for widest clear opening.

** Available with straight-arm operators (hinged for widest clear opening) only.

5'-2 3/4" (1594)	5'-11 5/8" (1819)	5'-1" (1549)	5'-11 7/8" (1826)	7'-0 5/8" (2149)
5'-3 1/4" (1607)	6'-0 1/8" (1832)	5'-1 1/2" (1562)	6'-0 3/8" (1838)	7'-1 1/8" (2162)
27 1/8" (689)	31 9/16" (802)	16 1/8" (410)	19 3/4" (502)	24" (610)
57 15/16" (1472)	66 13/16" (1697)	56 3/16" (1427)	67 1/16" (1703)	79 13/16" (2027)



Custom-size windows are available in 1/8" (3) increments. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. **Single windows only.** See page 33 for custom sizes and specifications.

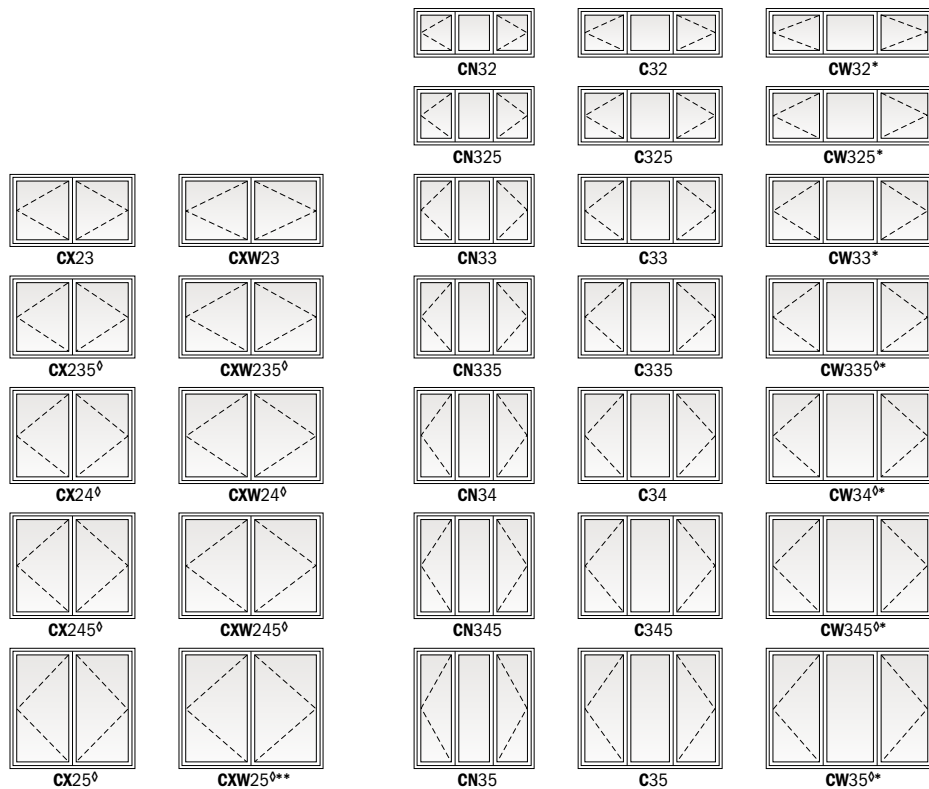


Choose left, right or stationary as viewed from the exterior. In addition to venting shown in table, other standard configurations are available for single, twin and triple windows. Transom (CTR) windows are stationary only.

Twin and triple windows shown have one continuous outer frame.

Transom (CTR) windows can be used over casement or awning windows, and may be rotated 90° and used as a sidelight with casement, awning or picture windows.

Grille patterns shown on page 34.



*"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.

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) with appropriate hinge specified. See tables on pages 29-30.

* Meet clear opening width of 20" (508) using hinge with wash mode and control bracket (bracket can be pivoted for cleaning position) and meet clear opening width of 22" (559) using hinge for widest clear opening.

** Available with straight-arm operators (hinged for widest clear opening) only.

CASEMENT & AWNING WINDOWS

Table of Awning Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	2'-0 1/8" (613)	2'-4 3/8" (721)	2'-7 1/2" (800)	2'-11 15/16" (913)	3'-4 13/16" (1037)	4'-0" (1219)	4'-4 13/16" (1341)	4'-11 7/8" (1521)	5'-4 13/16" (1646)	5'-11 7/8" (1819)
Minimum Rough Opening	2'-0 5/8" (625)	2'-4 7/8" (733)	2'-8" (813)	3'-0 1/2" (927)	3'-5 3/8" (1051)	4'-0 1/2" (1232)	4'-5 3/8" (1356)	5'-0 3/8" (1534)	5'-5 3/8" (1660)	6'-0 3/8" (1832)
Unobstructed Glass (single sash only)	19 5/16" (491)	23 9/16" (598)	26 11/16" (678)	31 1/8" (791)	36" (914)	43 3/16" (1097)	48" (1219)	55 1/16" (1399)	60" (1524)	67 1/16" (1703)

CUSTOM WIDTHS – 24 1/8" to 71 7/8"

CUSTOM HEIGHTS – 17" to 35 15/16"

1'-5" (432)	AR21	AR251	AR281	AR31	AR351	AR41	AR451	AR51	AR551	AR61
1'-8 1/2" (521)	AN21	AN251	AN281	AN31	AN351	AN41	AN451	AN51	AN551	AN61
2'-0 1/8" (613)	A21	A251	A281	A31	A351	A41	A451	A51	A551	A61
2'-4 3/8" (721)	AW21	AW251	AW281	AW31	AW351	AW41	AW451	AW51	AW551	AW61
2'-7 1/2" (800)		AX251	AX281	AX31	AX351	AX41	AX451	AX51	AX551	AX61
2'-11 15/16" (913)				AXW281	AXW31	AXW351	AXW41	AXW451	AXW51	
3'-4 3/4" (1035)				A335	A3535					
4'-0" (1219)				AP32V	AP352V	AP42V				

CUSTOM WIDTHS – 59 7/8" to 71 7/8" stationary only

CUSTOM HEIGHTS – 31 1/2" to 35 15/16" stationary only

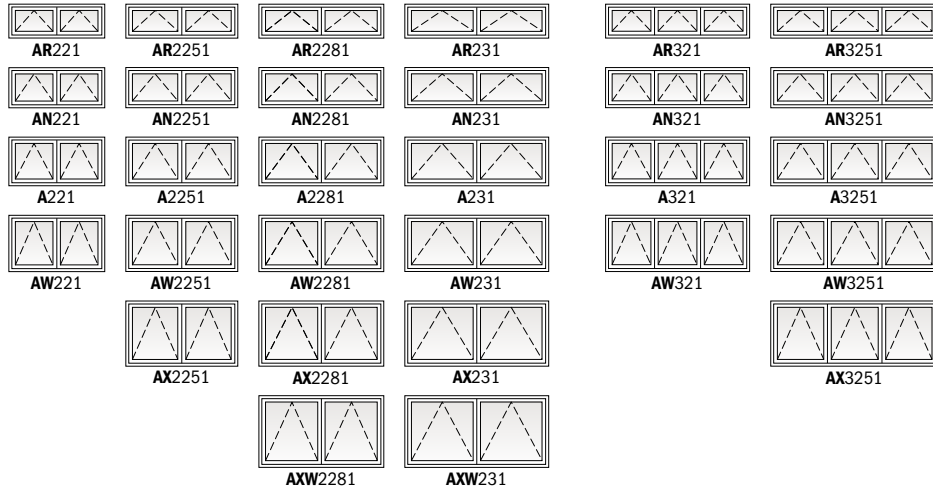
	AXW551	AXW61
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CUSTOM WIDTHS – 24 1/8" to 48" venting only

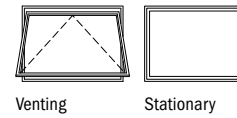
Window Dimension	2'-0 1/8" (613)	2'-11 15/16" (913)	2'-11 15/16" (913)	3'-4 13/16" (1037)	4'-0" (1219)	2'-0 1/8" (613)	2'-11 15/16" (913)
Minimum Rough Opening	2'-0 5/8" (625)	3'-0 1/2" (927)	3'-0 1/2" (927)	3'-5 3/8" (1051)	4'-0 1/2" (1232)	2'-0 5/8" (625)	3'-0 1/2" (927)
4'-0" (1219)	A212 (A21/A21)		A312 (A31/A31)				
4'-11 13/16" (1519)			PA3050 (AXW31/A31)	PA3550 (AXW351/A351)			
5'-11 5/8" (1826)			PA3060 (AP32V/A31)	PA3560 (AP352V/A351)	PA4060 (AP42V/A41)	A213 (A21/A21/A21)	A313 (A31/A31/A31)

* "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.

4'-0" (1219)	4'-8 1/2" (1435)	5'-2 3/4" (1594)	5'-11 5/8" (1826)	5'-11 7/8" (1826)	7'-0 5/8" (2149)
4'-0 1/2" (1232)	4'-9" (1448)	5'-3 1/4" (1607)	6'-0 1/8" (1832)	6'-0 3/8" (1838)	7'-1 1/8" (2162)
19 5/16" (491)	23 9/16" (598)	26 11/16" (678)	31 1/8" (1703)	19 5/16" (491)	23 9/16" (598)



Custom-size windows are available in 1/8" (3) increments. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. **Single windows only.** See page 33 for custom sizes and specifications.



Choose venting or stationary. **AXW551** and **AXW61** windows are stationary only. In addition to venting shown in table, other standard configurations are available for twin, triple and stacked windows.

Twin, triple and stacked windows shown have one continuous outer frame.

Awning windows must be installed to vent as shown, and should not be rotated and used as a hopper.

Transom (CTR) windows (shown on pages 24-25) can be used over casement or awning windows, and may be rotated 90° and used as a sidelight with casement, awning or picture windows.

Grille patterns shown on page 34.

*"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.

CASEMENT & AWNING WINDOWS

Table of Picture and Transom Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Unit Dimension	2'-11 15/16" (913)	3'-4 13/16" (1037)	4'-0" (1219)	4'-4 13/16" (1341)	4'-11 7/8" (1521)	5'-4 13/16" (1646)	5'-11 7/8" (1826)
Minimum Rough Opening	3'-0 1/2" (927)	3'-5 3/8" (1051)	4'-0 1/2" (1232)	4'-5 3/8" (1356)	5'-0 3/8" (1534)	5'-5 3/8" (1660)	6'-0 3/8" (1838)
Unobstructed Glass	31 1/8" (791)	36" (914)	43 3/16" (1097)	48" (1219)	55 1/16" (1399)	60" (1524)	67 1/16" (1703)

		CUSTOM WIDTHS – 36" to 71 7/8"						
		CUSTOM WIDTHS – 35 15/16" to 59 7/8"					CUSTOM WIDTHS – 60" to 71 7/8"	
1'-0" (305)	1'-0 1/2" (318)	12"					12"	
2'-11 15/16" (913)	3'-0 1/2" (927)	PTR3010	PTR3510	PTR4010	PTR4510	PTR5010	PTR5510	PTR6010
3'-4 13/16" (1037)	3'-5 3/8" (1051)	P3030	P3530	P4030	P4530	P5030	P5530	P6030
4'-0" (1219)	4'-0 1/2" (1232)	P3035	P3535	P4035	P4535	P5035	P5535	P6035
4'-4 13/16" (1341)	4'-5 3/8" (1356)	P3040	P3540	P4040	P4540	P5040	P5540	P6040
4'-11 7/8" (1521)	5'-0 3/8" (1534)	P3045	P3545	P4045	P4545	P5045	P5545	P6045
5'-4 13/16" (1646)	5'-5 3/8" (1660)	P3050	P3550	P4050	P4550	P5050	P5550	P6050
5'-11 7/8" (1826)	6'-0 3/8" (1838)	P3055	P3555	P4055	P4555	P5055		
	67 1/16" (1703)	P3060	P3560	P4060	P4560	P5060		



Custom-size windows are available in 1/8" (3) increments. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. See page 33 for custom sizes and specifications.

Picture (P) and transom (PTR) windows may be rotated 90° to align with casement or awning windows.

Grille patterns shown on page 34.

• "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.

Casement Window Opening and Area Specifications

Window Number	Clear Opening Area		Clear Opening in Full Open Position			Glass Area Sq. Ft./ (m ²)	Vent Area		Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
	Hinge for Widest Clear Opening Sq. Ft./ (m ²)	Hinge with Wash Mode Sq. Ft./ (m ²)	Hinge for Widest Clear Opening Inches/(mm)	Hinge with Wash Mode Inches/(mm)	Height Inches/(mm)		Hinge for Widest Clear Opening Sq. Ft./ (m ²)	Hinge with Wash Mode Sq. Ft./ (m ²)		
CR12	—	1.0 (0.09)	—	7 9/16" (186)	19 1/4" (489)	1.7 (0.16)	—	1.5 (0.14)	60 9/16" (1538)	2.8 (0.26)
CR125	—	1.2 (0.11)	—	7 9/16" (186)	23 7/16" (595)	2.0 (0.19)	—	1.8 (0.17)	56 3/8" (1432)	3.3 (0.31)
CR13	—	1.6 (0.15)	—	7 9/16" (186)	31 1/16" (789)	2.7 (0.25)	—	2.4 (0.22)	48 3/4" (1238)	4.2 (0.39)
CR135	—	1.8 (0.17)	—	7 9/16" (186)	35 15/16" (913)	3.1 (0.29)	—	2.7 (0.25)	43 7/8" (1114)	4.8 (0.45)
CR14	—	2.2 (0.20)	—	7 9/16" (186)	43 1/8" (1095)	3.8 (0.35)	—	3.3 (0.31)	36 11/16" (932)	5.7 (0.53)
CR145	—	2.4 (0.22)	—	7 9/16" (186)	47 15/16" (1218)	4.2 (0.39)	—	3.6 (0.33)	31 7/8" (810)	6.2 (0.58)
CR15	—	2.8 (0.26)	—	7 9/16" (186)	55" (1397)	4.8 (0.45)	—	4.2 (0.39)	24 13/16" (630)	7.1 (0.66)
CR155	—	3.1 (0.29)	—	7 9/16" (186)	59 15/16" (1522)	5.2 (0.48)	—	4.5 (0.42)	19 7/8" (505)	7.7 (0.72)
CR16	—	3.4 (0.32)	—	7 9/16" (186)	67" (1702)	5.9 (0.55)	—	5.1 (0.47)	12 13/16" (325)	8.5 (0.79)
CR23	—	1.6 (0.15)	—	7 9/16" (186)	31 1/16" (789)	5.4 (0.50)	—	4.7 (0.44)	48 3/4" (1238)	8.4 (0.78)
CR235	—	1.8 (0.17)	—	7 9/16" (186)	35 15/16" (913)	6.3 (0.59)	—	5.4 (0.50)	43 7/8" (1114)	9.6 (0.89)
CR24	—	2.2 (0.20)	—	7 9/16" (186)	43 1/8" (1095)	7.6 (0.71)	—	6.5 (0.60)	36 11/16" (932)	11.3 (1.05)
CR245	—	2.4 (0.22)	—	7 9/16" (186)	47 15/16" (1218)	8.4 (0.78)	—	7.3 (0.68)	31 7/8" (810)	12.4 (1.15)
CR25	—	2.8 (0.26)	—	7 9/16" (186)	55" (1397)	9.6 (0.89)	—	8.3 (0.77)	24 13/16" (630)	14.2 (1.32)
CR255	—	3.1 (0.29)	—	7 9/16" (186)	59 15/16" (1522)	10.5 (0.98)	—	9.1 (0.85)	19 7/8" (505)	15.4 (1.43)
CR26	—	3.4 (0.32)	—	7 9/16" (186)	67" (1702)	11.7 (1.09)	—	10.2 (0.95)	12 13/16" (325)	17.0 (1.58)
CN12	—	1.5 (0.14)	—	10 13/16" (275)	19 1/4" (489)	2.2 (0.20)	—	1.9 (0.18)	60 9/16" (1538)	3.4 (0.32)
CN125	—	1.8 (0.17)	—	10 13/16" (275)	23 7/16" (595)	2.6 (0.24)	—	2.3 (0.21)	56 3/8" (1432)	4.0 (0.37)
CN13	—	2.3 (0.21)	—	10 13/16" (275)	31 1/16" (789)	3.5 (0.33)	—	3.1 (0.29)	48 3/4" (1238)	5.1 (0.47)
CN135	—	2.7 (0.25)	—	10 13/16" (275)	35 15/16" (913)	4.0 (0.37)	—	3.6 (0.33)	43 7/8" (1114)	5.8 (0.54)
CN14	—	3.2 (0.30)	—	10 13/16" (275)	43 1/8" (1095)	4.8 (0.45)	—	4.3 (0.40)	36 11/16" (932)	6.8 (0.63)
CN145	—	3.6 (0.33)	—	10 13/16" (275)	47 15/16" (1218)	5.4 (0.50)	—	4.8 (0.45)	31 7/8" (810)	7.5 (0.70)
CN15	—	4.1 (0.38)	—	10 13/16" (275)	55" (1397)	6.2 (0.58)	—	5.5 (0.51)	24 13/16" (630)	8.5 (0.79)
CN155	—	4.5 (0.42)	—	10 13/16" (275)	59 15/16" (1522)	6.7 (0.62)	—	6.0 (0.56)	19 7/8" (505)	9.2 (0.86)
CN16	—	5.0 (0.47)	—	10 13/16" (275)	67" (1702)	7.5 (0.70)	—	6.7 (0.62)	12 13/16" (325)	10.2 (0.95)
CN22	—	1.5 (0.14)	—	10 13/16" (275)	19 1/4" (489)	4.4 (0.41)	—	3.8 (0.35)	60 9/16" (1538)	6.8 (0.63)
CN225	—	1.8 (0.17)	—	10 13/16" (275)	23 7/16" (595)	5.2 (0.48)	—	4.6 (0.43)	56 3/8" (1432)	8.0 (0.74)
CN23	—	2.3 (0.21)	—	10 13/16" (275)	31 1/16" (789)	7.0 (0.65)	—	6.2 (0.58)	48 3/4" (1238)	10.2 (0.95)
CN235	—	2.7 (0.25)	—	10 13/16" (275)	35 15/16" (913)	8.0 (0.74)	—	7.2 (0.67)	43 7/8" (1114)	11.5 (1.07)
CN24	—	3.2 (0.30)	—	10 13/16" (275)	43 1/8" (1095)	9.7 (0.90)	—	8.6 (0.80)	36 11/16" (932)	13.6 (1.26)
CN245	—	3.6 (0.33)	—	10 13/16" (275)	47 15/16" (1218)	10.7 (0.99)	—	9.6 (0.89)	31 7/8" (810)	15.0 (1.39)
CN25	—	4.1 (0.38)	—	10 13/16" (275)	55" (1397)	12.3 (1.14)	—	11.0 (1.02)	24 13/16" (630)	16.9 (1.57)
CN255	—	4.5 (0.42)	—	10 13/16" (275)	59 15/16" (1522)	13.4 (1.25)	—	12.0 (1.12)	19 7/8" (505)	18.4 (1.71)
CN26	—	5.0 (0.47)	—	10 13/16" (275)	67" (1702)	15.0 (1.39)	—	13.4 (1.25)	12 13/16" (325)	20.3 (1.89)
CN32	—	1.5 (0.14)	—	10 13/16" (275)	19 1/4" (489)	6.6 (0.61)	—	3.8 (0.35)	60 9/16" (1538)	10.2 (0.95)
CN325	—	1.8 (0.17)	—	10 13/16" (275)	23 7/16" (595)	7.8 (0.73)	—	4.6 (0.43)	56 3/8" (1432)	12.0 (1.12)
CN33	—	2.3 (0.21)	—	10 13/16" (275)	31 1/16" (789)	10.5 (0.98)	—	6.2 (0.58)	48 3/4" (1238)	15.3 (1.42)
CN335	—	2.7 (0.25)	—	10 13/16" (275)	35 15/16" (913)	12.0 (1.12)	—	7.2 (0.67)	43 7/8" (1114)	17.4 (1.62)
CN34	—	3.2 (0.30)	—	10 13/16" (275)	43 1/8" (1095)	14.4 (1.34)	—	8.6 (0.80)	36 11/16" (932)	20.4 (1.90)
CN345	—	3.6 (0.33)	—	10 13/16" (275)	47 15/16" (1218)	16.2 (1.51)	—	9.6 (0.89)	31 7/8" (810)	22.5 (2.09)
CN35	—	4.1 (0.38)	—	10 13/16" (275)	55" (1397)	18.6 (1.73)	—	11.0 (1.02)	24 13/16" (630)	25.5 (2.37)
CN355	—	4.5 (0.42)	—	10 13/16" (275)	59 15/16" (1522)	20.1 (1.87)	—	12.0 (1.11)	19 7/8" (505)	27.6 (2.57)
CN36	—	5.0 (0.47)	—	10 13/16" (275)	67" (1702)	22.5 (2.09)	—	13.4 (1.24)	12 13/16" (325)	30.6 (2.84)
C12	2.5 (0.23)	1.9 (0.18)	18 5/16" (465)	14 7/16" (367)	19 1/4" (489)	2.6 (0.24)	2.5 (0.23)	2.4 (0.22)	60 9/16" (1538)	4.0 (0.37)
C125	3.0 (0.28)	2.4 (0.22)	18 5/16" (465)	14 7/16" (367)	23 7/16" (595)	3.2 (0.30)	3.0 (0.28)	2.9 (0.27)	56 3/8" (1432)	4.7 (0.44)
C13	4.0 (0.37)	3.1 (0.29)	18 5/16" (465)	14 7/16" (367)	31 1/16" (789)	4.3 (0.40)	4.0 (0.37)	3.9 (0.36)	48 3/4" (1238)	6.0 (0.56)
C135	4.6 (0.43)	3.6 (0.33)	18 5/16" (465)	14 7/16" (367)	35 15/16" (913)	4.9 (0.46)	4.6 (0.43)	4.5 (0.42)	43 7/8" (1114)	6.8 (0.63)
C14	5.5 (0.51)	4.3 (0.40)	18 5/16" (465)	14 7/16" (367)	43 1/8" (1095)	5.9 (0.55)	5.5 (0.51)	5.4 (0.50)	36 11/16" (932)	8.0 (0.74)
C145	6.1 (0.57)	4.8 (0.45)	18 5/16" (465)	14 7/16" (367)	47 15/16" (1218)	6.6 (0.61)	6.1 (0.57)	6.0 (0.56)	31 7/8" (810)	8.8 (0.82)
C15	7.0 (0.65)	5.5 (0.51)	18 5/16" (465)	14 7/16" (367)	55" (1397)	7.5 (0.70)	7.0 (0.65)	6.9 (0.64)	24 13/16" (630)	10.0 (0.93)
C155	7.6 (0.71)	6.0 (0.56)	18 5/16" (465)	14 7/16" (367)	59 15/16" (1522)	8.2 (0.76)	7.6 (0.71)	7.5 (0.70)	19 7/8" (505)	10.9 (1.01)
C16	8.5 (0.79)	6.7 (0.62)	18 5/16" (465)	14 7/16" (367)	67" (1702)	9.2 (0.86)	8.5 (0.79)	8.4 (0.78)	12 13/16" (325)	12.0 (1.12)
C22	2.5 (0.23)	1.9 (0.18)	18 5/16" (465)	14 7/16" (367)	19 1/4" (489)	5.2 (0.48)	5.0 (0.46)	4.8 (0.45)	60 9/16" (1538)	8.0 (0.74)
C225	3.0 (0.28)	2.4 (0.22)	18 5/16" (465)	14 7/16" (367)	23 7/16" (595)	6.4 (0.59)	6.0 (0.56)	5.8 (0.54)	56 3/8" (1432)	9.4 (0.87)
C23	4.0 (0.37)	3.1 (0.29)	18 5/16" (465)	14 7/16" (367)	31 1/16" (789)	8.5 (0.79)	7.9 (0.73)	7.8 (0.73)	48 3/4" (1238)	12.0 (1.12)
C235	4.6 (0.43)	3.6 (0.33)	18 5/16" (465)	14 7/16" (367)	35 15/16" (913)	9.9 (0.92)	9.2 (0.86)	9.0 (0.84)	43 7/8" (1114)	13.6 (1.26)
C24	5.5 (0.51)	4.3 (0.40)	18 5/16" (465)	14 7/16" (367)	43 1/8" (1095)	11.8 (1.10)	11.0 (1.02)	10.8 (1.00)	36 11/16" (932)	16.0 (1.49)
C245	6.1 (0.57)	4.8 (0.45)	18 5/16" (465)	14 7/16" (367)	47 15/16" (1218)	13.1 (1.22)	12.2 (1.13)	12.0 (1.12)	31 7/8" (810)	17.6 (1.64)
C25	7.0 (0.65)	5.5 (0.51)	18 5/16" (465)	14 7/16" (367)	55" (1397)	15.1 (1.40)	14.0 (1.30)	13.8 (1.28)	24 13/16" (630)	20.0 (1.86)

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

continued on next page

CASEMENT & AWNING WINDOWS

Casement Window Opening and Area Specifications (continued)

Window Number	Clear Opening Area		Clear Opening in Full Open Position			Glass Area Sq. Ft./ (m ²)	Vent Area		Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
	Hinge for Widest Clear Opening Sq. Ft./ (m ²)	Hinge with Wash Mode Sq. Ft./ (m ²)	Hinge for Widest Clear Opening Inches/(mm)	Hinge with Wash Mode Inches/(mm)	Height Inches/(mm)		Hinge for Widest Clear Opening Sq. Ft./ (m ²)	Hinge with Wash Mode Sq. Ft./ (m ²)		
C255	7.6 (0.71)	6.0 (0.56)	18 5/16" (465)	14 7/16" (367)	59 15/16" (1522)	16.4 (1.52)	15.3 (1.42)	15.0 (1.39)	19 7/8" (505)	21.6 (2.01)
C26	8.5 (0.79)	6.7 (0.62)	18 5/16" (465)	14 7/16" (367)	67" (1702)	18.4 (1.71)	17.1 (1.59)	16.8 (1.56)	12 13/16" (325)	24.0 (2.23)
C32	2.5 (0.23)	1.9 (0.18)	18 5/16" (465)	14 7/16" (367)	19 1/4" (489)	7.8 (0.73)	5.0 (0.46)	4.8 (0.45)	60 3/16" (1538)	12.0 (1.12)
C325	3.0 (0.28)	2.4 (0.22)	18 5/16" (465)	14 7/16" (367)	23 7/16" (595)	9.6 (0.89)	6.0 (0.56)	5.8 (0.54)	56 3/8" (1432)	14.1 (1.31)
C33	4.0 (0.37)	3.1 (0.29)	18 5/16" (465)	14 7/16" (367)	31 1/16" (789)	12.8 (1.19)	7.9 (0.73)	7.8 (0.73)	48 3/4" (1238)	17.9 (1.66)
C335	4.6 (0.43)	3.6 (0.33)	18 5/16" (465)	14 7/16" (367)	35 15/16" (913)	14.8 (1.38)	9.2 (0.86)	9.0 (0.84)	43 7/8" (1114)	20.4 (1.90)
C34	5.5 (0.51)	4.3 (0.40)	18 5/16" (465)	14 7/16" (367)	43 1/8" (1095)	17.7 (1.64)	11.0 (1.02)	10.8 (1.00)	36 11/16" (932)	24.0 (2.23)
C345	6.1 (0.57)	4.8 (0.45)	18 5/16" (465)	14 7/16" (367)	47 15/16" (1218)	19.7 (1.83)	12.2 (1.13)	12.0 (1.12)	31 7/8" (810)	26.4 (2.45)
C35	7.0 (0.65)	5.5 (0.51)	18 5/16" (465)	14 7/16" (367)	55" (1397)	22.6 (2.10)	14.0 (1.30)	13.8 (1.28)	24 13/16" (630)	29.9 (2.78)
CW12*	3.0 (0.28)	2.5 (0.23)	22 9/16" (573)	18 11/16" (475)	19 1/4" (489)	3.2 (0.30)	3.0 (0.28)	3.0 (0.28)	60 9/16" (1538)	4.8 (0.45)
CW125*	3.7 (0.34)	3.0 (0.28)	22 9/16" (573)	18 11/16" (475)	23 7/16" (595)	3.9 (0.36)	3.7 (0.34)	3.6 (0.33)	56 3/8" (1432)	5.6 (0.52)
CW13*	4.9 (0.46)	4.0 (0.37)	22 9/16" (573)	18 11/16" (475)	31 1/16" (789)	5.2 (0.48)	4.9 (0.46)	4.8 (0.45)	48 3/4" (1238)	7.1 (0.66)
CW135 0*	5.7 (0.53)	5.1 (0.47)	22 9/16" (573)	20" (508)	36 3/8" (924)	6.0 (0.56)	5.7 (0.53)	5.5 (0.51)	43 7/8" (1114)	8.0 (0.74)
CW14 0*	6.8 (0.63)	6.0 (0.56)	22 9/16" (573)	20" (508)	43 1/8" (1095)	7.2 (0.67)	6.8 (0.63)	6.6 (0.61)	36 11/16" (932)	9.5 (0.88)
CW145 0*	7.5 (0.70)	6.7 (0.62)	22 9/16" (573)	20" (508)	47 15/16" (1218)	8.0 (0.74)	7.5 (0.70)	7.3 (0.68)	31 7/8" (810)	10.4 (0.97)
CW15 0*	8.6 (0.80)	7.6 (0.71)	22 9/16" (573)	20" (508)	55" (1397)	9.2 (0.86)	8.6 (0.80)	8.4 (0.78)	24 13/16" (630)	11.8 (1.10)
CW155 0*	9.4 (0.87)	8.3 (0.77)	22 9/16" (573)	20" (508)	59 15/16" (1522)	10.0 (0.93)	9.4 (0.87)	9.1 (0.85)	19 7/8" (505)	12.8 (1.19)
CW16 0*	10.5 (0.98)	9.3 (0.86)	22 9/16" (573)	20" (508)	67" (1702)	11.2 (1.04)	10.5 (0.98)	10.2 (0.95)	12 13/16" (325)	14.2 (1.32)
CW22*	3.0 (0.28)	2.5 (0.23)	22 9/16" (573)	18 11/16" (475)	19 1/4" (489)	6.4 (0.59)	6.0 (0.56)	6.0 (0.56)	60 9/16" (1538)	9.6 (0.89)
CW225*	3.7 (0.34)	3.0 (0.28)	22 9/16" (573)	18 11/16" (475)	23 7/16" (595)	7.8 (0.72)	7.4 (0.69)	7.2 (0.67)	56 3/8" (1432)	11.2 (1.04)
CW23*	4.9 (0.46)	4.0 (0.37)	22 9/16" (573)	18 11/16" (475)	31 1/16" (789)	10.4 (0.97)	9.8 (0.91)	9.6 (0.89)	48 3/4" (1238)	14.1 (1.31)
CW235 0*	5.7 (0.53)	5.1 (0.47)	22 9/16" (573)	20" (508)	36 3/8" (924)	12.0 (1.12)	11.4 (1.06)	11.1 (1.03)	43 7/8" (1114)	16.0 (1.49)
CW24 0*	6.8 (0.63)	6.0 (0.56)	22 9/16" (573)	20" (508)	43 1/8" (1095)	14.4 (1.34)	13.5 (1.25)	13.1 (1.22)	36 11/16" (932)	18.8 (1.75)
CW245 0*	7.5 (0.70)	6.7 (0.62)	22 9/16" (573)	20" (508)	47 15/16" (1218)	16.0 (1.49)	15.0 (1.39)	14.6 (1.36)	31 7/8" (810)	20.8 (1.93)
CW25 0*	8.6 (0.80)	7.6 (0.71)	22 9/16" (573)	20" (508)	55" (1397)	18.3 (1.70)	17.3 (1.61)	16.7 (1.55)	24 13/16" (630)	23.5 (2.18)
CW255 0*	9.4 (0.87)	8.3 (0.77)	22 9/16" (573)	20" (508)	59 15/16" (1522)	20.0 (1.86)	18.8 (1.75)	18.2 (1.69)	19 7/8" (505)	25.6 (2.38)
CW26 0*	10.5 (0.98)	9.3 (0.86)	22 9/16" (573)	20" (508)	67" (1702)	22.3 (2.07)	21.0 (1.95)	20.4 (1.90)	12 13/16" (325)	28.2 (2.62)
CW32*	3.0 (0.28)	2.5 (0.23)	22 9/16" (573)	18 11/16" (475)	19 1/4" (489)	9.6 (0.89)	6.0 (0.56)	6.0 (0.56)	60 9/16" (1538)	14.4 (1.34)
CW325*	3.7 (0.34)	3.0 (0.28)	22 9/16" (573)	18 11/16" (475)	23 7/16" (595)	11.7 (1.09)	7.4 (0.69)	7.2 (0.67)	56 3/8" (1432)	16.8 (1.56)
CW33*	4.9 (0.46)	4.0 (0.37)	22 9/16" (573)	18 11/16" (475)	31 1/16" (789)	15.6 (1.45)	9.8 (0.91)	9.6 (0.89)	48 3/4" (1238)	21.1 (1.96)
CW335 0*	5.7 (0.53)	5.1 (0.47)	22 9/16" (573)	20" (508)	36 3/8" (924)	18.0 (1.67)	11.4 (1.06)	11.1 (1.03)	43 7/8" (1114)	24.0 (2.23)
CW34 0*	6.8 (0.63)	6.0 (0.56)	22 9/16" (573)	20" (508)	43 1/8" (1095)	21.6 (2.01)	13.6 (1.26)	13.1 (1.22)	36 11/16" (932)	28.2 (2.62)
CW345 0*	7.5 (0.70)	6.7 (0.62)	22 9/16" (573)	20" (508)	47 15/16" (1218)	24.0 (2.23)	15.0 (1.39)	14.6 (1.36)	31 7/8" (810)	31.0 (2.88)
CW35 0*	8.6 (0.80)	7.6 (0.71)	22 9/16" (573)	20" (508)	55" (1397)	27.6 (2.56)	17.2 (1.60)	16.7 (1.55)	24 13/16" (630)	35.2 (3.27)
CX125	4.2 (0.39)	3.5 (0.33)	25 11/16" (653)	21 13/16" (554)	23 7/16" (595)	4.4 (0.41)	4.2 (0.39)	4.1 (0.38)	56 3/8" (1432)	6.2 (0.58)
CX13	5.5 (0.52)	4.7 (0.44)	25 11/16" (653)	21 13/16" (554)	31 1/16" (789)	5.9 (0.54)	5.5 (0.52)	5.4 (0.51)	48 3/4" (1238)	7.9 (0.73)
CX135 0	6.4 (0.60)	5.4 (0.51)	25 11/16" (653)	21 13/16" (554)	35 15/16" (913)	6.8 (0.63)	6.4 (0.60)	6.3 (0.59)	43 7/8" (1114)	8.9 (0.83)
CX14 0	7.7 (0.72)	6.5 (0.61)	25 11/16" (653)	21 13/16" (554)	43 1/8" (1095)	8.1 (0.76)	7.7 (0.72)	7.6 (0.70)	36 11/16" (932)	10.5 (0.98)
CX145 0	8.6 (0.80)	7.3 (0.67)	25 11/16" (653)	21 13/16" (554)	47 15/16" (1218)	9.0 (0.84)	8.6 (0.80)	8.4 (0.78)	31 7/8" (810)	11.6 (1.07)
CX15 0	9.8 (0.91)	8.3 (0.77)	25 11/16" (653)	21 13/16" (554)	55" (1397)	10.4 (0.96)	9.8 (0.91)	9.7 (0.90)	24 13/16" (630)	13.1 (1.22)
CX155 0	10.7 (0.99)	9.1 (0.84)	25 11/16" (653)	21 13/16" (554)	59 15/16" (1522)	11.3 (1.05)	10.7 (0.99)	10.5 (0.98)	19 7/8" (505)	14.2 (1.32)
CX16 0	12.0 (1.11)	10.1 (0.94)	25 11/16" (653)	21 13/16" (554)	67" (1702)	12.6 (1.17)	12.0 (1.11)	11.8 (1.09)	12 13/16" (325)	15.7 (1.46)
CX23	5.5 (0.52)	4.7 (0.44)	25 11/16" (653)	21 13/16" (554)	31 1/16" (789)	11.7 (1.09)	11.1 (1.03)	10.9 (1.01)	48 3/4" (1238)	15.7 (1.46)
CX235 0	6.4 (0.60)	5.4 (0.51)	25 11/16" (653)	21 13/16" (554)	35 15/16" (913)	13.6 (1.26)	12.8 (1.19)	12.6 (1.17)	43 7/8" (1114)	17.8 (1.65)
CX24 0	7.7 (0.72)	6.5 (0.61)	25 11/16" (653)	21 13/16" (554)	43 1/8" (1095)	16.3 (1.51)	15.4 (1.43)	15.1 (1.41)	36 11/16" (932)	20.9 (1.94)
CX245 0	8.6 (0.80)	7.3 (0.67)	25 11/16" (653)	21 13/16" (554)	47 15/16" (1218)	18.1 (1.68)	17.1 (1.59)	16.8 (1.56)	31 7/8" (810)	23.0 (2.14)
CX25 0	9.8 (0.91)	8.3 (0.77)	25 11/16" (653)	21 13/16" (554)	55" (1397)	20.7 (1.93)	19.6 (1.82)	19.3 (1.79)	24 13/16" (630)	26.1 (2.42)
CXW13 0	6.5 (0.60)	5.6 (0.53)	30 1/8" (765)	26 1/4" (667)	31 1/16" (789)	6.8 (0.63)	6.5 (0.60)	6.1 (0.57)	48 3/4" (1238)	9.0 (0.84)
CXW135 0	7.5 (0.70)	6.6 (0.61)	30 1/8" (765)	26 1/4" (667)	35 15/16" (913)	7.9 (0.73)	7.5 (0.70)	7.0 (0.65)	43 7/8" (1114)	10.2 (0.95)
CXW14 0	9.0 (0.84)	7.9 (0.73)	30 1/8" (765)	26 1/4" (667)	43 1/8" (1095)	9.5 (0.88)	9.0 (0.84)	8.4 (0.78)	36 11/16" (932)	12.0 (1.12)
CXW145 0	10.0 (0.93)	8.8 (0.82)	30 1/8" (765)	26 1/4" (667)	47 15/16" (1218)	10.5 (0.98)	10.0 (0.93)	9.4 (0.87)	31 7/8" (810)	13.2 (1.23)
CXW15 0**	11.5 (1.07)	—	30 1/8" (765)	—	55" (1397)	12.1 (1.12)	11.5 (1.07)	—	24 13/16" (630)	14.9 (1.38)
CXW155 0**	12.6 (1.17)	—	30 1/8" (765)	—	59 15/16" (1522)	13.1 (1.22)	12.6 (1.17)	—	19 7/8" (505)	16.2 (1.51)
CXW16 0**	14.0 (1.30)	—	30 1/8" (765)	—	67" (1702)	14.7 (1.37)	14.0 (1.30)	—	12 13/16" (325)	17.9 (1.66)
CXW23	6.5 (0.60)	5.6 (0.53)	30 1/8" (765)	26 1/4" (667)	31 1/16" (789)	13.6 (1.26)	13.0 (1.21)	12.2 (0.57)	48 3/4" (1238)	17.9 (1.66)
CXW235 0	7.5 (0.70)	6.5 (0.61)	30 1/8" (765)	26 1/4" (667)	35 15/16" (913)	15.8 (1.47)	15.0 (1.39)	14.0 (0.57)	43 7/8" (1114)	20.3 (1.89)
CXW24 0	9.0 (0.84)	7.9 (0.73)	30 1/8" (765)	26 1/4" (667)	43 1/8" (1095)	19.0 (1.77)	18.0 (1.67)	16.8 (0.57)	36 11/16" (932)	23.9 (2.22)
CXW245 0	10.0 (0.93)	8.7 (0.81)	30 1/8" (765)	26 1/4" (667)	47 15/16" (1218)	21.0 (1.95)	20.0 (1.86)	18.8 (0.57)	31 7/8" (810)	26.3 (2.44)
CXW25 0**	11.5 (1.07)	—	30 1/8" (765)	—	55" (1397)	24.2 (2.25)	23.0 (2.14)	—	24 13/16" (630)	29.8 (2.77)

*"Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).

†Dimensions in parentheses are in millimeters or square meters.

0Meet 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) with appropriate hinge specified.

**Meet clear opening width of 20" (508) using hinge with wash mode and control bracket (bracket can be pivoted for cleaning position) and meet clear opening width of 22" (559) using hinge for widest clear opening.

**Available with straight-arm operators (hinged for widest clear opening) only.

Awning Window Opening and Area Specifications

Window Number	Clear Opening Area Sq. Ft./ (m²)	Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m²)	Vent Area Sq. Ft./ (m²)	Top of Subfloor to Top of Inside Sill Stop Inches/ (mm)	Overall Window Area Sq. Ft./ (m²)
		Width Inches/ (mm)	Depth Inches/ (mm)				
AR21	0.9 (0.08)	19 1/2" (495)	6 3/8" (162)	1.7 (0.16)	0.9 (0.08)	67 7/16" (1713)	2.8 (0.26)
AR251	1.1 (0.10)	23 3/4" (603)	6 3/8" (162)	2.0 (0.19)	1.1 (0.10)	67 7/16" (1713)	3.3 (0.31)
AR281	1.2 (0.11)	26 7/8" (683)	6 3/8" (162)	2.3 (0.21)	1.2 (0.11)	67 7/16" (1713)	3.7 (0.34)
AR31	1.4 (0.13)	31 5/16" (795)	6 3/8" (162)	2.7 (0.25)	1.4 (0.13)	67 7/16" (1713)	4.2 (0.39)
AR351	1.6 (0.15)	36 3/16" (919)	6 3/8" (162)	3.1 (0.29)	1.6 (0.15)	67 7/16" (1713)	4.8 (0.45)
AR41	1.9 (0.18)	43 3/8" (1102)	6 3/8" (162)	3.8 (0.35)	1.9 (0.18)	67 7/16" (1713)	5.7 (0.53)
AR451	2.1 (0.20)	48 3/16" (1224)	6 3/8" (162)	4.2 (0.39)	2.1 (0.20)	67 7/16" (1713)	6.2 (0.58)
AR51	2.5 (0.23)	55 1/2" (1410)	6 3/8" (162)	4.8 (0.45)	2.5 (0.23)	67 7/16" (1713)	7.1 (0.66)
AR551	2.7 (0.25)	60 3/16" (1529)	6 3/8" (162)	5.2 (0.48)	2.7 (0.25)	67 7/16" (1713)	7.7 (0.72)
AR61	3.0 (0.28)	67 1/2" (1715)	6 3/8" (162)	5.9 (0.55)	3.0 (0.28)	67 7/16" (1713)	8.5 (0.79)
AR221	0.9 (0.08)	19 1/2" (495)	6 3/8" (162)	3.4 (0.32)	1.7 (0.16)	67 7/16" (1713)	5.6 (0.52)
AR2251	1.1 (0.10)	23 3/4" (603)	6 3/8" (162)	4.0 (0.37)	2.1 (0.20)	67 7/16" (1713)	6.6 (0.61)
AR2281	1.2 (0.11)	26 7/8" (683)	6 3/8" (162)	4.6 (0.43)	2.4 (0.22)	67 7/16" (1713)	7.4 (0.69)
AR231	1.4 (0.13)	31 5/16" (795)	6 3/8" (162)	5.4 (0.50)	2.8 (0.26)	67 7/16" (1713)	8.4 (0.78)
AR321	0.9 (0.08)	19 1/2" (495)	6 3/8" (162)	5.1 (0.47)	2.6 (0.24)	67 7/16" (1713)	8.4 (0.78)
AR3251	1.1 (0.10)	23 3/4" (603)	6 3/8" (162)	6.0 (0.56)	3.2 (0.29)	67 7/16" (1713)	9.9 (0.92)
AN21	0.9 (0.08)	19 1/2" (495)	6 7/16" (164)	2.2 (0.20)	0.9 (0.08)	63 15/16" (1624)	3.4 (0.32)
AN251	1.1 (0.10)	23 3/4" (603)	6 7/16" (164)	2.6 (0.24)	1.1 (0.10)	63 15/16" (1624)	4.0 (0.37)
AN281	1.2 (0.11)	26 7/8" (683)	6 7/16" (164)	3.0 (0.28)	1.2 (0.11)	63 15/16" (1624)	4.5 (0.42)
AN31	1.4 (0.13)	31 5/16" (795)	6 7/16" (164)	3.5 (0.33)	1.4 (0.13)	63 15/16" (1624)	5.1 (0.47)
AN351	1.6 (0.15)	36 3/16" (919)	6 7/16" (164)	4.0 (0.37)	1.6 (0.15)	63 15/16" (1624)	5.8 (0.54)
AN41	1.9 (0.18)	43 3/8" (1102)	6 7/16" (164)	4.8 (0.45)	1.9 (0.18)	63 15/16" (1624)	6.8 (0.63)
AN451	2.2 (0.20)	48 3/16" (1224)	6 7/16" (164)	5.4 (0.50)	2.2 (0.20)	63 15/16" (1624)	7.5 (0.70)
AN51	2.5 (0.23)	55 1/2" (1410)	6 7/16" (164)	6.2 (0.58)	2.5 (0.23)	63 15/16" (1624)	8.5 (0.79)
AN551	2.7 (0.25)	60 3/16" (1529)	6 7/16" (164)	6.7 (0.62)	2.7 (0.25)	63 15/16" (1624)	9.2 (0.86)
AN61	3.0 (0.28)	67 1/2" (1715)	6 7/16" (164)	7.5 (0.70)	3.0 (0.28)	63 15/16" (1624)	10.2 (0.95)
AN221	0.9 (0.08)	19 1/2" (495)	6 7/16" (164)	4.4 (0.41)	1.7 (0.16)	63 15/16" (1624)	6.8 (0.63)
AN2251	1.1 (0.10)	23 3/4" (603)	6 7/16" (164)	5.2 (0.48)	2.1 (0.20)	63 15/16" (1624)	8.0 (0.74)
AN2281	1.2 (0.11)	26 7/8" (683)	6 7/16" (164)	6.0 (0.56)	2.4 (0.22)	63 15/16" (1624)	9.0 (0.84)
AN231	1.4 (0.13)	31 5/16" (795)	6 7/16" (164)	7.0 (0.65)	2.8 (0.26)	63 15/16" (1624)	10.2 (0.95)
AN321	0.9 (0.08)	19 1/2" (495)	6 7/16" (164)	6.6 (0.61)	2.6 (0.24)	63 15/16" (1624)	10.2 (0.95)
AN3251	1.1 (0.10)	23 3/4" (603)	6 7/16" (164)	7.8 (0.73)	3.2 (0.30)	63 15/16" (1624)	12.0 (1.12)
A21	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	2.6 (0.24)	0.9 (0.08)	60 5/16" (1532)	4.0 (0.37)
A251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	3.2 (0.30)	1.1 (0.10)	60 5/16" (1532)	4.8 (0.45)
A281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	3.7 (0.34)	1.2 (0.11)	60 5/16" (1532)	5.3 (0.49)
A31	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	4.3 (0.40)	1.4 (0.13)	60 5/16" (1532)	6.0 (0.56)
A351	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	4.9 (0.46)	1.6 (0.15)	60 5/16" (1532)	6.8 (0.63)
A41	2.0 (0.18)	43 3/8" (1102)	6 1/2" (165)	5.9 (0.55)	2.0 (0.18)	60 5/16" (1532)	8.0 (0.74)
A451	2.2 (0.20)	48 3/16" (1224)	6 1/2" (165)	6.6 (0.61)	2.2 (0.20)	60 5/16" (1532)	8.8 (0.82)
A51	2.5 (0.23)	55 1/2" (1410)	6 1/2" (165)	7.5 (0.70)	2.5 (0.23)	60 5/16" (1532)	10.0 (0.93)
A551	2.7 (0.25)	60 3/16" (1529)	6 1/2" (165)	8.2 (0.76)	2.7 (0.25)	60 5/16" (1532)	10.9 (1.01)
A61	3.0 (0.28)	67 1/2" (1715)	6 1/2" (165)	9.2 (0.86)	3.0 (0.28)	60 5/16" (1532)	12.0 (1.12)
A221	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	5.2 (0.48)	1.8 (0.16)	60 5/16" (1532)	8.0 (0.74)
A2251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	6.4 (0.60)	2.1 (0.20)	60 5/16" (1532)	9.6 (0.89)
A2281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	7.4 (0.69)	2.4 (0.23)	60 5/16" (1532)	10.6 (0.99)
A231	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	8.6 (0.80)	2.8 (0.26)	60 5/16" (1532)	12.0 (1.12)
A321	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	7.8 (0.73)	2.6 (0.25)	60 5/16" (1532)	12.0 (1.12)
A3251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	9.6 (0.89)	3.2 (0.30)	60 5/16" (1532)	14.4 (1.34)
AW21	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	3.2 (0.30)	0.9 (0.08)	56 1/16" (1424)	4.8 (0.45)
AW251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	3.9 (0.36)	1.1 (0.10)	56 1/16" (1424)	5.6 (0.52)
AW281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	4.4 (0.41)	1.2 (0.11)	56 1/16" (1424)	6.2 (0.58)
AW31	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	5.2 (0.48)	1.4 (0.13)	56 1/16" (1424)	7.1 (0.66)
AW351	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	6.0 (0.56)	1.6 (0.15)	56 1/16" (1424)	8.0 (0.74)
AW41	2.0 (0.18)	43 3/8" (1102)	6 1/2" (165)	7.2 (0.67)	2.0 (0.18)	56 1/16" (1424)	9.5 (0.88)
AW451	2.2 (0.20)	48 3/16" (1224)	6 1/2" (165)	8.0 (0.74)	2.2 (0.20)	56 1/16" (1424)	10.4 (0.97)
AW51	2.5 (0.23)	55 1/2" (1410)	6 1/2" (165)	9.2 (0.86)	2.5 (0.23)	56 1/16" (1424)	11.8 (1.10)
AW551	2.7 (0.25)	60 3/16" (1529)	6 1/2" (165)	10.0 (0.93)	2.7 (0.25)	56 1/16" (1424)	12.8 (1.19)
AW61	3.0 (0.28)	67 1/2" (1715)	6 1/2" (165)	11.2 (1.04)	3.0 (0.28)	56 1/16" (1424)	14.2 (1.32)
AW221	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	6.4 (0.60)	1.8 (0.16)	56 1/16" (1424)	9.6 (0.89)
AW2251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	7.8 (0.73)	2.1 (0.20)	56 1/16" (1424)	11.2 (1.04)

* Top of Subfloor to Top of Inside Sill Stop* is calculated based upon a structural header height of 6'-10 1/2" (2096).

• Dimensions in parentheses are in millimeters or square meters.

continued on next page

Picture Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m²)	Overall Window Area Sq. Ft./ (m²)
P3030	6.8 (0.63)	9.0 (0.84)
P3035	7.8 (0.73)	10.2 (0.95)
P3040	9.4 (0.87)	12.0 (1.12)
P3045	10.4 (0.97)	13.2 (1.23)
P3050	12.0 (1.12)	14.9 (1.38)
P3055	13.0 (1.21)	16.2 (1.51)
P3060	14.6 (1.36)	17.9 (1.66)
P3530	7.8 (0.73)	10.2 (0.95)
P3535	9.0 (0.84)	11.6 (1.08)
P3540	10.8 (1.00)	13.6 (1.26)
P3545	12.1 (1.12)	15.0 (1.39)
P3550	13.8 (1.28)	17.0 (1.58)
P3555	15.1 (1.40)	18.4 (1.71)
P3560	16.8 (1.56)	20.4 (1.90)
P4030	9.4 (0.87)	12.0 (1.12)
P4035	10.8 (1.00)	13.6 (1.26)
P4040	13.0 (1.21)	16.0 (1.49)
P4045	14.5 (1.35)	17.6 (1.64)
P4050	16.6 (1.54)	20.0 (1.86)
P4055	18.1 (1.68)	21.6 (2.01)
P4060	20.2 (1.88)	24.0 (2.23)
P4530	10.4 (0.97)	13.2 (1.23)
P4535	12.1 (1.12)	15.0 (1.39)
P4540	14.5 (1.35)	17.6 (1.64)
P4545	16.1 (1.50)	19.4 (1.80)
P4550	18.4 (1.71)	22.0 (2.04)
P4555	20.1 (1.87)	23.8 (2.21)
P4560	22.4 (2.08)	26.4 (2.45)
P5030	12.0 (1.12)	14.9 (1.38)
P5035	13.8 (1.28)	17.0 (1.58)
P5040	16.6 (1.54)	20.0 (1.86)
P5045	18.4 (1.71)	22.0 (2.04)
P5050	21.1 (1.96)	24.9 (2.31)
P5055	23.0 (2.14)	26.9 (2.50)
P5060	25.7 (2.39)	29.9 (2.78)
P5530	13.0 (1.21)	16.2 (1.51)
P5535	15.1 (1.40)	18.4 (1.71)
P5540	18.1 (1.68)	21.6 (2.01)
P5545	20.1 (1.87)	23.8 (2.21)
P5550	23.0 (2.14)	26.9 (2.50)
P6030	14.6 (1.36)	17.9 (1.66)
P6035	16.8 (1.56)	20.4 (1.90)
P6040	20.2 (1.88)	24.0 (2.23)
P6045	22.4 (2.08)	26.4 (2.45)
P6050	25.7 (2.39)	29.9 (2.78)

* Dimensions in parentheses are in square meters.

CASEMENT & AWNING WINDOWS

Awning Window Opening and Area Specifications *(continued)*

Window Number	Clear Opening Area Sq. Ft./ (m ²)	Clear Opening in Full Open Position		Glass Area Sq. Ft./ (m ²)	Vent Area Sq. Ft./ (m ²)	Top of Subfloor to Top of Inside Sill Stop Inches/(mm)	Overall Window Area Sq. Ft./ (m ²)
		Width Inches/(mm)	Depth Inches/(mm)				
AW2281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	8.8 (0.82)	2.4 (0.23)	56 1/16" (1424)	12.4 (1.15)
AW231	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	10.4 (0.97)	2.8 (0.26)	56 1/16" (1424)	14.2 (1.32)
AW321	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	9.6 (0.89)	2.6 (0.25)	56 1/16" (1424)	14.4 (1.34)
AW3251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	11.7 (1.09)	3.2 (0.30)	56 1/16" (1424)	16.8 (1.56)
AX251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	4.4 (0.41)	1.1 (0.10)	53 15/16" (1370)	6.2 (0.58)
AX281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	5.0 (0.47)	1.2 (0.11)	53 15/16" (1370)	6.9 (0.64)
AX31	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	5.9 (0.54)	1.4 (0.13)	53 15/16" (1370)	7.9 (0.73)
AX351	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	6.8 (0.63)	1.6 (0.15)	53 15/16" (1370)	8.9 (0.83)
AX41	2.0 (0.18)	43 3/8" (1102)	6 1/2" (165)	8.1 (0.76)	2.0 (0.18)	53 15/16" (1370)	10.5 (0.98)
AX451	2.2 (0.20)	48 3/16" (1224)	6 1/2" (165)	9.0 (0.84)	2.2 (0.20)	53 15/16" (1370)	11.6 (1.07)
AX51	2.5 (0.23)	55 1/2" (1410)	6 1/2" (165)	10.4 (0.96)	2.5 (0.23)	53 15/16" (1370)	13.1 (1.22)
AX551	2.7 (0.25)	60 3/16" (1529)	6 1/2" (165)	11.3 (1.05)	2.7 (0.25)	53 15/16" (1370)	14.2 (1.32)
AX61	3.0 (0.28)	67 1/2" (1715)	6 1/2" (165)	12.6 (1.17)	3.0 (0.28)	53 15/16" (1370)	15.7 (1.46)
AX2251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	8.9 (0.82)	2.1 (0.20)	53 15/16" (1370)	12.4 (1.15)
AX2281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	10.0 (0.93)	2.4 (0.23)	53 15/16" (1370)	13.8 (1.28)
AX231	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	11.7 (1.09)	2.8 (0.26)	53 15/16" (1370)	15.7 (1.46)
AX3251	1.1 (0.10)	23 3/4" (603)	6 1/2" (165)	13.3 (1.24)	3.2 (0.30)	53 15/16" (1370)	18.6 (1.73)
AXW281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	5.8 (0.54)	1.2 (0.11)	48 1/2" (1232)	7.9 (0.73)
AXW31	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	6.8 (0.63)	1.4 (0.13)	48 1/2" (1232)	9.0 (0.84)
AXW351	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	7.9 (0.73)	1.6 (0.15)	48 1/2" (1232)	10.2 (0.95)
AXW41	2.0 (0.18)	43 3/8" (1102)	6 1/2" (165)	9.5 (0.88)	2.0 (0.18)	48 1/2" (1232)	12.0 (1.12)
AXW451	2.2 (0.20)	48 3/16" (1224)	6 1/2" (165)	10.5 (0.98)	2.2 (0.20)	48 1/2" (1232)	13.2 (1.23)
AXW51	2.5 (0.23)	55 1/2" (1410)	6 1/2" (165)	12.1 (1.12)	2.5 (0.23)	48 1/2" (1232)	14.9 (1.38)
AXW551	2.7 (0.25)	60 3/16" (1529)	6 1/2" (165)	13.1 (1.22)	2.7 (0.25)	48 1/2" (1232)	16.2 (1.51)
AXW61	3.0 (0.28)	67 1/2" (1715)	6 1/2" (165)	14.7 (1.37)	3.0 (0.28)	48 1/2" (1232)	17.9 (1.66)
AXW2281	1.2 (0.11)	26 7/8" (683)	6 1/2" (165)	11.6 (1.08)	2.4 (0.23)	48 1/2" (1232)	15.8 (1.47)
AXW231	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	13.6 (1.26)	2.8 (0.26)	48 1/2" (1232)	18.0 (1.67)
A335*	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	7.0 (0.65)	1.3 (0.12)	43 11/16" (1110)	10.2 (0.95)
A3535	1.6 (0.14)	36 3/16" (919)	6 1/2" (165)	8.1 (0.75)	1.6 (0.15)	43 11/16" (1110)	11.5 (1.07)
AP32V	1.4 (0.12)	31 5/16" (795)	6 1/2" (165)	9.4 (0.87)	1.4 (0.13)	36 7/16" (926)	12.0 (1.12)
AP352V	1.6 (0.14)	36 3/16" (919)	6 1/2" (165)	10.9 (1.01)	1.6 (0.15)	36 7/16" (926)	13.6 (1.26)
AP42V	2.0 (0.17)	43 3/8" (1102)	6 1/2" (165)	13.1 (1.22)	2.0 (0.18)	36 7/16" (926)	16.0 (1.49)
A212	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	5.2 (0.48)	1.8 (0.16)	60 5/16" (1532)	8.0 (0.74)
A213	0.9 (0.08)	19 1/2" (495)	6 1/2" (165)	7.8 (0.73)	2.6 (0.25)	60 5/16" (1532)	12.0 (1.12)
A312	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	8.6 (0.80)	2.8 (0.26)	60 5/16" (1532)	12.0 (1.12)
A313	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	12.9 (1.20)	4.2 (0.39)	60 5/16" (1532)	18.0 (1.67)
PA3050**	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	4.3 (0.40)	1.4 (0.13)	60 5/16" (1532)	6.0 (0.56)
PA3060**	1.4 (0.13)	31 5/16" (795)	6 1/2" (165)	4.3 (0.40)	1.4 (0.13)	60 5/16" (1532)	6.0 (0.56)
PA3550**	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	4.9 (0.46)	1.6 (0.15)	60 5/16" (1532)	6.8 (0.63)
PA3560**	1.6 (0.15)	36 3/16" (919)	6 1/2" (165)	4.9 (0.46)	1.6 (0.15)	60 5/16" (1532)	6.8 (0.63)
PA4060**	2.0 (0.18)	43 3/8" (1102)	6 1/2" (165)	5.9 (0.55)	2.0 (0.18)	60 5/16" (1532)	8.0 (0.74)
AXW312	1.4 (0.13)	31 1/3" (795)	6 1/2" (165)	13.6 (1.26)	2.8 (0.26)	48 1/2" (1232)	18.0 (1.67)

*"Top of Subfloor to Top of Inside Sill Stop" is calculated based upon a structural header height of 6'-10 1/2" (2096).

*Dimensions in parentheses are in millimeters or square meters.

*Clear opening area of 5.8 sq. ft. or 0.54 m² and clear opening height of 26 1/2" (673) can be obtained by detaching operator from sash.

**Dimensions and calculations are for bottom venting sash.

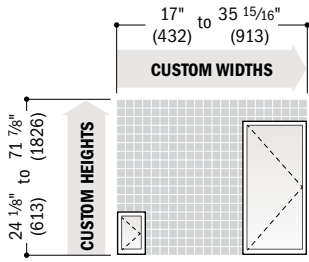
Transom Window Area Specifications

Window Number	Glass Area Sq. Ft./ (m ²)	Overall Window Area Sq. Ft./ (m ²)
CTR1510	0.7 (0.07)	1.4 (0.13)
CTR1810	0.8 (0.07)	1.7 (0.16)
CTR21810	1.7 (0.16)	3.4 (0.32)
CTR31810	2.6 (0.24)	5.1 (0.47)
CTR2010	1.0 (0.09)	2.0 (0.19)
CTR22010	2.1 (0.19)	4.0 (0.37)
CTR32010	3.1 (0.29)	6.0 (0.56)
CTR2410	1.2 (0.11)	2.4 (0.22)
CTR22410	2.5 (0.24)	4.7 (0.44)
CTR32410	3.8 (0.35)	7.1 (0.66)
CTR2810	1.4 (0.13)	2.6 (0.24)
CTR22810	2.9 (0.27)	5.2 (0.49)
CTR3010	1.6 (0.15)	3.0 (0.28)
CTR23010	3.3 (0.31)	6.0 (0.55)
CTR5110	2.8 (0.26)	5.1 (0.47)
CTR2910	1.5 (0.14)	2.8 (0.26)
CTR3410	1.8 (0.17)	3.4 (0.32)
CTR4010	2.2 (0.20)	4.0 (0.37)
CTR4810	2.6 (0.24)	4.7 (0.44)
CTR5210	2.9 (0.27)	5.2 (0.48)
CTR51110	3.4 (0.32)	6.0 (0.56)
CTR6010	3.4 (0.32)	6.0 (0.56)
CTR7010	4.0 (0.37)	7.1 (0.66)
PTR3010	1.6 (0.15)	3.0 (0.28)
PTR3510	1.8 (0.17)	3.4 (0.32)
PTR4010	2.2 (0.20)	4.0 (0.37)
PTR4510	2.4 (0.22)	4.4 (0.41)
PTR5010	2.8 (0.26)	5.0 (0.47)
PTR5510	3.0 (0.28)	5.4 (0.50)
PTR6010	3.4 (0.32)	6.0 (0.56)

*Dimensions in parentheses are in square meters.

Custom Sizes and Specification Formulas

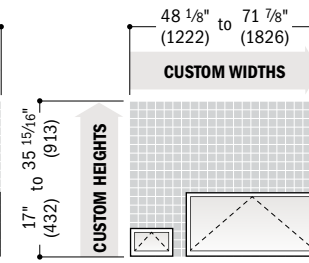
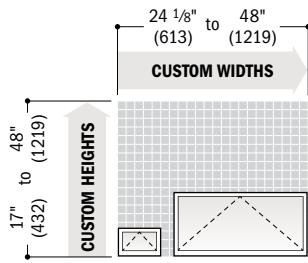
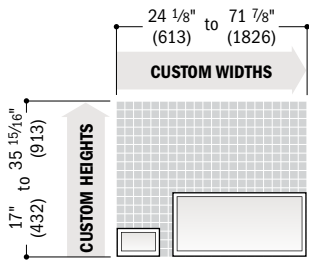
Casement Windows (stationary and venting)



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. Custom sizing is available for single windows only. To achieve custom-size 2- or 3-wide combinations, join custom-size single windows. For minimum rough opening dimensions for joined windows, see specific joining instruction guides. Measurement guide for custom-size windows can be found at andersenwindows.com/measure.

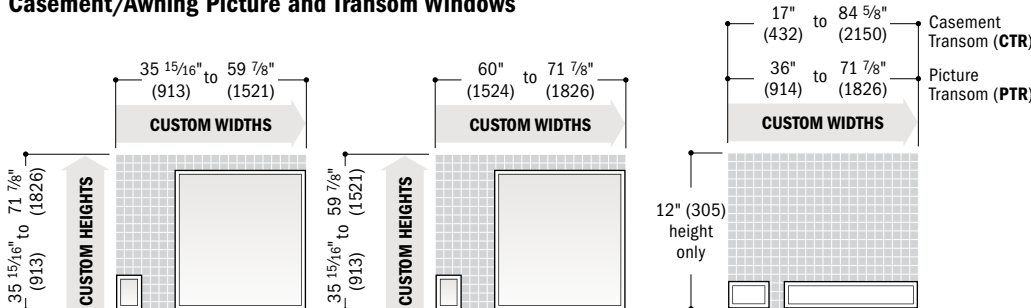
	Clear Opening Width = window width - 5.81" (148) = (window width - 9.66" (245)) x 1.07 = window width - 9.70" (246) Height = window height - 4.43" (113) = window height - 4.85" (123)	Width ≥ 24 1/8" (613) (hinge for widest clear opening) Width ≥ 28 3/8" (721) (hinge with wash mode and control bracket) Width ≥ 17" (432) (hinge with wash mode) Height ≥ 40 13/16" (1037) and < 48" (1219); Width ≥ 28 3/8" (721) and < 31 1/2" (800) All other window heights	Min. R.O. Width = window width + 1/2" (13) Height = window height + 1/2" (13)
	Vent Opening Width = window width - 5.81" (148) = window width - 6.10" (155) Height = window height - 4.43" (113) = window height - 4.85" (123)	Width ≥ 24 1/8" (613) (hinge for widest clear opening) Width ≥ 17" (432) (hinge with wash mode) Height ≥ 40 13/16" (1037) and < 48" (1219); Width ≥ 28 3/8" (721) and < 31 1/2" (800) All other window heights	Unobst. Gls. Width = window width - 4.40" (112) Height = window height - 4.95" (126)

Awning Windows (stationary and venting)



	Clear Opening Width = window width - 4.53" (115) Depth = 6.38" (162) = 6.44" (164) = 6.50" (165) Height ≥ 17" (432) and < 20 1/2" (521) Height ≥ 20 1/2" (521) and < 24 1/8" (613) All other window heights	Min. R.O. Width = window width + 1/2" (13) Height = window height + 1/2" (13)
	Vent Opening Width = window width - 4.53" (115) Depth = 6.38" (162) = 6.44" (164) = 6.50" (165) Height ≥ 17" (432) and < 20 1/2" (521) Height ≥ 20 1/2" (521) and < 24 1/8" (613) All other window heights	Unobst. Gls. Width = window width - 4.81" (122) Height = window height - 4.51" (115)

Casement/Awning Picture and Transom Windows



Min. R.O. Width = window width - 1/2" (13) Height = window height - 1/2" (13)
Unobst. Gls. Width = window width - 4.80" (122) Height = window height - 4.80" (122)

• 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. **Min. R.O.** (minimum rough opening) formulas provide minimum rough opening width and height dimensions. **Unobst. Gls.** (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 custom-size windows.

CASEMENT & AWNING WINDOWS

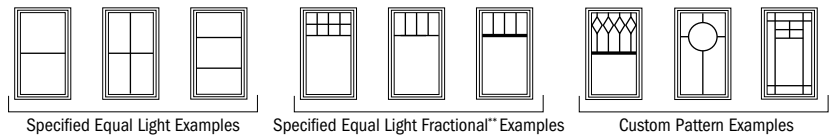
Grille Patterns

	Diamond*	Prairie A	Specified Equal Light with Simulated Meeting Rail	Colonial	Modified Colonial	Modified Colonial with Simulated Meeting Rail	Tall Fractional	Tall Fractional with Simulated Meeting Rail	Short Fractional	Short Fractional with Simulated Meeting Rail	Victorian
Casement											
Awning											
Picture											
Transom											

*Available only in Simulated Divided Light (SDL) configuration and only in 3/4" (19) and 7/8" (22) widths.

Number of lights and overall pattern varies with window size.

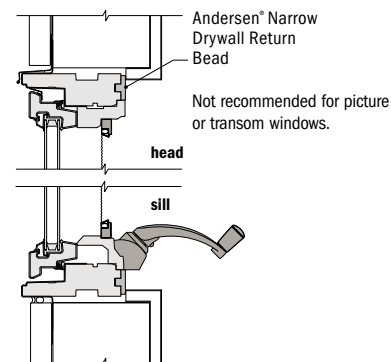
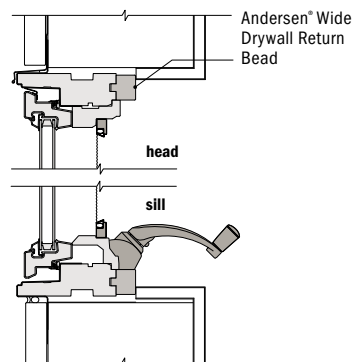
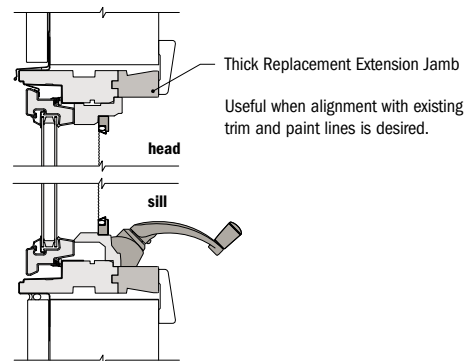
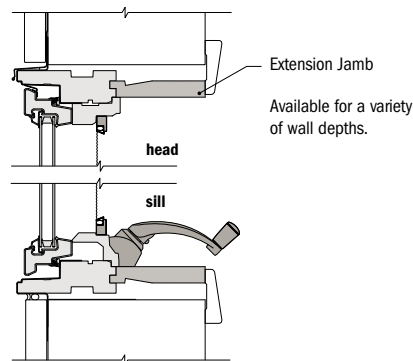
Patterns not available in all configurations. Specified equal light and custom patterns are also available. For more grille options, see page 14 or visit andersenwindows.com/grilles.



**Daylight opening dimensions are available at 8" (203), 10" (254), 12" (305), center and custom dimensions.

Interior Trim Options

Extension jamb and drywall return bead applications shown. See page 21 for more information.



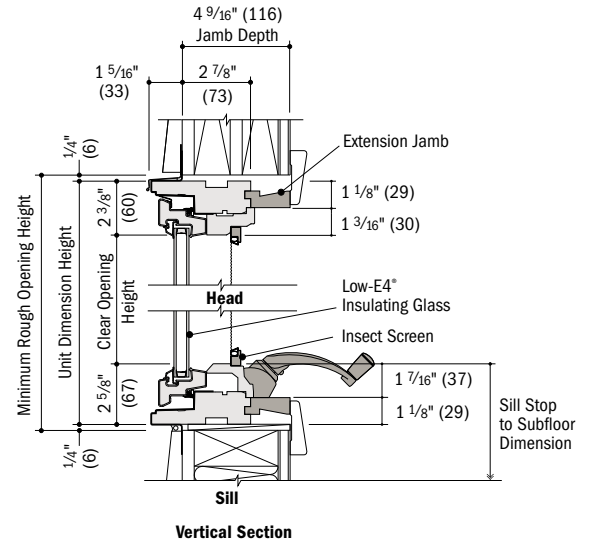
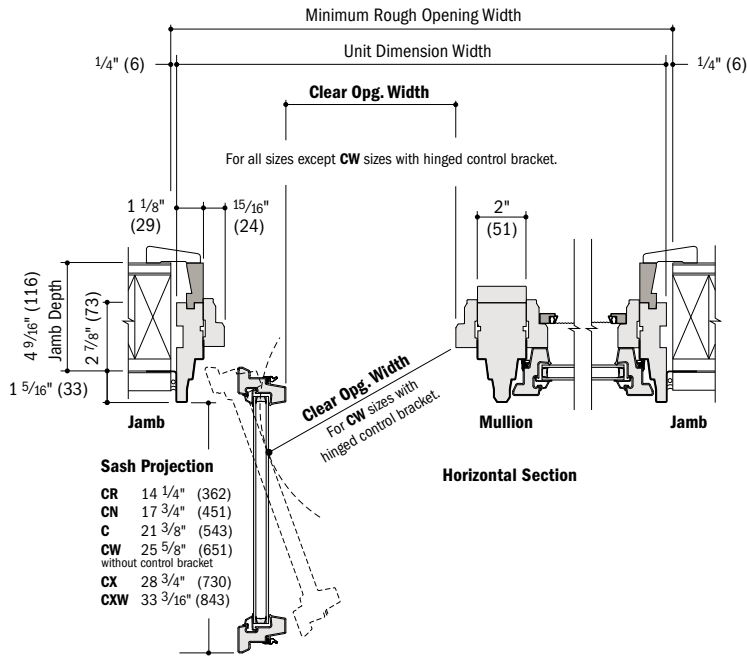
* Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.

• Dimensions in parentheses are in millimeters.

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

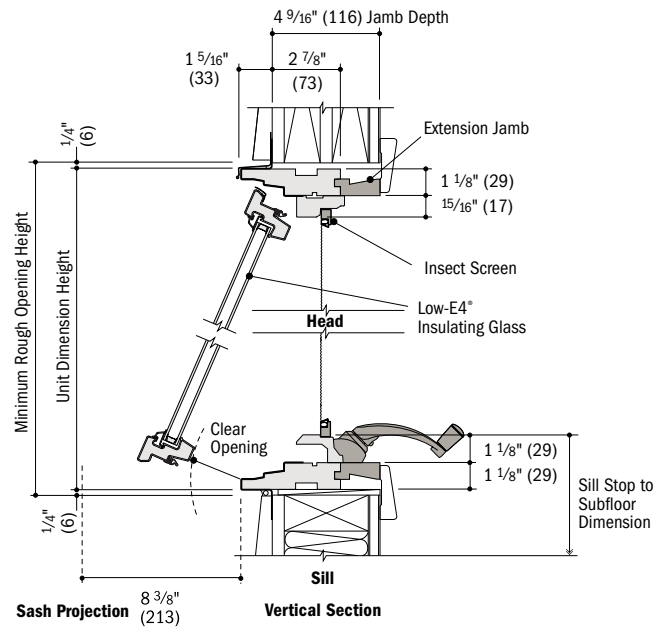
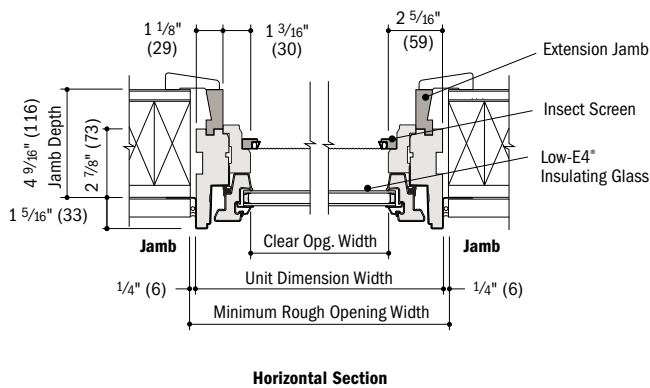
Casement Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Awning Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

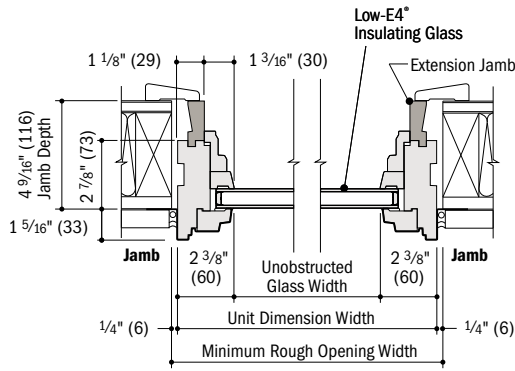


- 4 9/16" (116) overall jamb depth and 2 7/8" (73) base jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- Dimensions in parentheses are in millimeters.
- Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill 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.

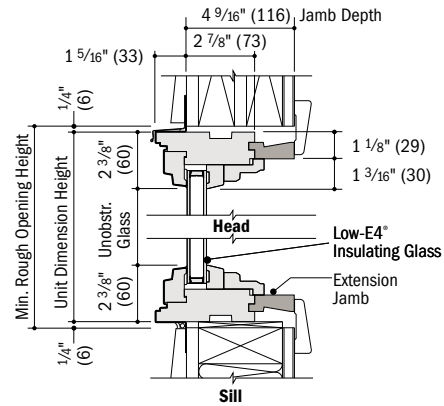
CASEMENT & AWNING WINDOWS

Picture and Transom Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Horizontal Section



Vertical Section

Horizontal (stack) Joining Detail

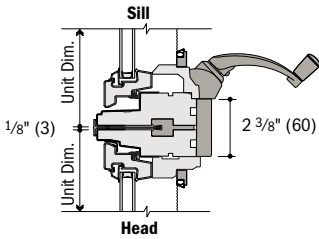
Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Overall Window Dimension Height

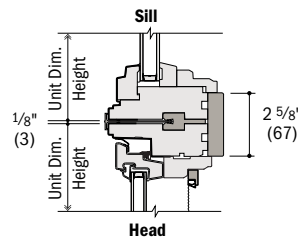
Sum of individual window heights plus 1/8" (3) for each join.

Overall Rough Opening Height

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



Vertical Section
Casement over Awning

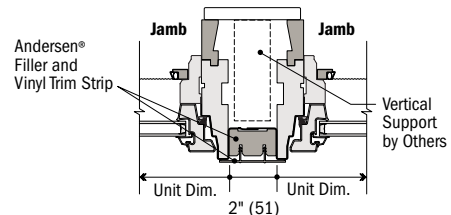


Vertical Section
Picture over Casement

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.



Horizontal Section
Casement and Casement

Vertical (ribbon) Joining Detail

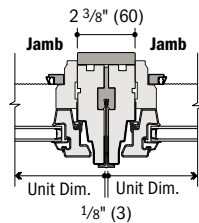
Scale 1 1/2" (38) = 1'-0" (305) – 1:8

Overall Window Dimension Width

Sum of individual window widths plus 1/8" (3) for each join.

Overall Rough Opening Width

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



Horizontal Section
Casement to Casement

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

- 4 9/16" (116) overall jamb depth and 2 7/8" (73) base jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- Dimensions in parentheses are in millimeters.
- **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill 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.



REPLACEMENT CASEMENT & AWNING WINDOWS

Custom Sizes 40
Grille Patterns 34
Window Details 35-36
Product Performance 197

CUSTOM SIZING
in 1/8" (3) increments 

Dimensions in parentheses are in millimeters.

REPLACEMENT CASEMENT & AWNING WINDOWS

FEATURES

FRAME

A A seamless one-piece, rigid vinyl frame cover is secured to the exterior of the frame to protect the wood frame from moisture and maintain an attractive appearance while minimizing maintenance.

B Pre-drilled, through-the-jamb installation holes allow for quick and easy installation.

C Wood frame members are treated with a water-repellent preservative for long-lasting protection and performance.

D Interior stops are unfinished pine. Low-maintenance prefinished white, dark bronze and black** interiors are also available.

SASH

E Rigid vinyl encases the entire sash – a vinyl weld protects each sash corner for superior weathertightness. It maintains an attractive appearance and minimizes maintenance.

F Wood core members provide excellent structural stability and energy efficiency.

G Vinyl closed-cell foam weatherstrip is factory installed on the perimeter of the sash.

GLASS

H In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

I A glazing bead and silicone provide superior weathertightness and durability.

J High-Performance options include:

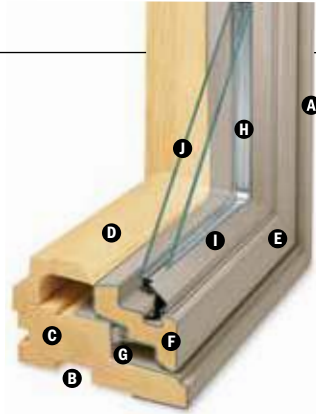
- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered 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 job site.

Patterned Glass

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



HARDWARE

Smooth Control Hardware System



The smooth control hardware system employs a worm gear drive for easy operation. Units with a wash mode have hinges that move the sash away from the frame to provide easier glass

cleaning. CXW15, CXW155, CXW16 and CXW25 sizes not available with wash mode. Hardware option and finish must be specified. Operator handle and cover sold separately.

Single-Actuation Casement Lock



On casement windows, a single-actuation lock easily releases all locking points on the casement sash while the reach-out action eliminates binding when closing. The lock handle is offered in finishes that coordinate with your specified hardware option.

Awning Sash Locks



Awning sash locks provide an added measure of security and weathertightness. Hardware style and finish options are compatible with Andersen® casement windows to ensure consistency in appearance when used in window combination designs.

INSTALLATION

Included Installation Materials

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

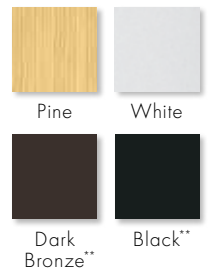


EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE OPTIONS Sold Separately



CONTEMPORARY FOLDING

Black | Bright Brass | Gold Dust
Oil Rubbed Bronze | **Satin Nickel**
Stone | White



TRADITIONAL FOLDING

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

Folding handles avoid interference with window treatments.



CLASSIC SERIES™

Stone | **White**



ESTATE™

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

HARDWARE FINISHES



*Visit andersenwindows.com/warranty for details.

**Products with dark bronze and black interiors have matching exteriors.

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.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. All wood interiors are unfinished unless a finish is specified. Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

ACCESSORIES Sold Separately

FRAME

Extension Jamb



Standard jamb depth is 2 7/8" (73). Extension jambs are available in unfinished pine or prefinished white, dark bronze and black. Some sizes may be veneered.

Factory-applied and non-applied interior extension jambs are available in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Extension jambs can be factory applied to either three sides (stool and apron application) or four sides (picture frame casing).

Thick Replacement Extension Jambs



To help preserve original alignment of trim and paint lines in replacement situations, special 1 1/8" (29) thick replacement extension jambs are available. Factory-applied and non-applied extension jambs are available in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Non-applied extension jambs are available in 12' (3658) lineals. Detail on page 34.

Drywall Return Bead



A drywall return bead is available in a narrow or wide dimension with unfinished pine or prefinished white, dark bronze and black interiors. Can be ordered factory applied or in non-applied lineals. Detail on page 34.

HARDWARE

Corrosion-Resistant Components



Corrosion-resistant hinge and operator arm hardware is designed for applications in harsh and corrosive environments such as heavy industrial or coastal areas.

Window Opening Control Device



A window opening control device is available, which limits sash travel to less than 4" (102) when the window is first opened. Available factory applied, or as a field-applied kit in stone, white and black.

Power Operator for Awning Windows



Awning windows can be ordered with an operator enhanced by PowerAssist™ technology that opens and closes the window with the touch of a button. Easy to install, the 24-volt system features a concealed window power drive, battery backup in case of a power outage and a moisture sensor that automatically closes the window when it rains. A wireless remote control is available (sold separately).

The PowerAssist system is controlled by a wall-mounted console, which includes a power box, battery, touch pad and mounting bracket. Windows can be ordered factory prepped to save time, or they can be ordered as a field kit. Power driver requires field installation. PowerAssist technology eliminates the need for sash locks. Available for windows up to 5' (1524) wide. Not available for units with Stormwatch® Protection or performance upgrades.

SPECIAL USE OPERATOR HANDLES

Available in Classic Series™ design only.

Compact Operator Handle



Specially designed for use in situations where blinds or other window treatments interfere with standard operator handle. Available in white or stone finish.

Easy-Grip Handle

Larger knob makes it easier to grip and operate. Available in white or stone finish.



Operator Spline Cover



An operator spline cover is an attractive cap that covers the roto operator stud when the handle has been removed to control access or operation of the window. The operator spline cover should not be used on any window designated or intended for emergency escape or rescue. Please consult your local building code official for local egress code requirements.

Metal T-Handle



Our smallest operator handle, the metal T-handle, may make it more difficult for young children (5 and under) to open the window. For more information on child safety, write:

Andersen Corporation
LookOut For Kids® Program
 100 Fourth Avenue North
 Bayport, MN 55003
 Call 800-313-8889 or email
lofk@andersencorp.com.

GLASS

Andersen® Art Glass

Andersen art glass panels come in a variety of original patterns. See art glass section starting on page 173 for more information or visit andersenwindows.com/artglass.

INSECT SCREENS

TruScene® Insect Screens



Andersen TruScene insect screens let in over 25% more fresh air** and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects. For casement and awning windows, frames are available in white, stone, dark bronze and black, or with pine veneer frame interiors to blend with the wood interior of the window.

Conventional Insect Screens

Conventional insect screens have charcoal powder-coated aluminum screen mesh. Available with frames in white, stone, dark bronze and black.

GRILLES

Grilles are available in a variety of configurations and widths. For casement and awning window grille patterns, see page 34.

EXTERIOR TRIM

Available with Andersen exterior trim. See exterior trim section starting on page 175.

CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- 400 Series windows in Terratone color may be painted any color lighter than Terratone color using quality oil-based or latex paint.
- Do not paint 400 Series windows in white, canvas, Sandtone, dark bronze, forest green or black exterior colors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- 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.

400 Series Replacement Casement & Awning Windows

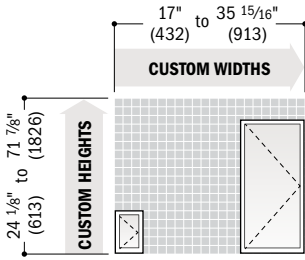
*Visit andersenwindows.com/warranty for details.

**TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens. Dimensions in parentheses are in millimeters.

REPLACEMENT CASEMENT & AWNING WINDOWS

Replacement Sizes and Specification Formulas

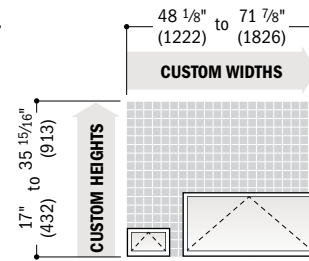
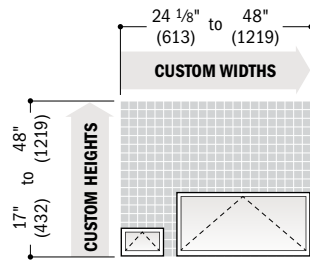
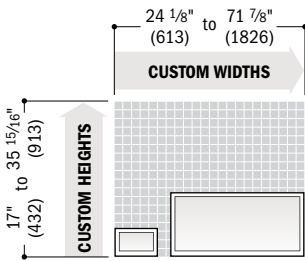
Casement Windows (stationary and venting)



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. Custom sizing is available for single windows only. To achieve custom-size 2- or 3-wide combinations, join custom-size single windows. For minimum rough opening dimensions for joined windows, see specific joining instruction guides. Measurement guide for custom-size windows can be found at andersenwindows.com/measure. Thick replacement extension jambs are available to preserve original alignment of trim and paint lines. Shown on page 39; see page 34 for detail.

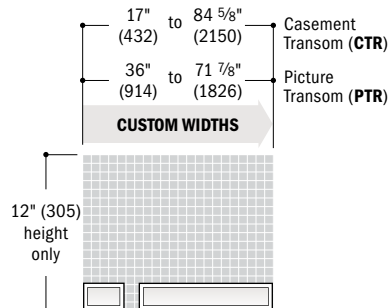
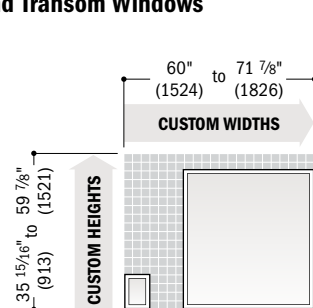
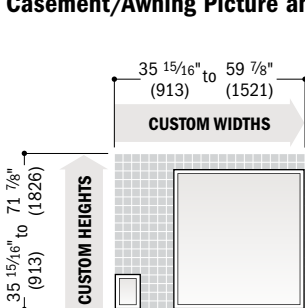
Clear Opening	Width = window width - 5.81" (148) = (window width - 9.66" (245)) x 1.07 = window width - 9.70" (246)	Height = window height - 4.43" (113) = window height - 4.85" (123)	Width ≥ 24 1/8" (613) (hinge for widest clear opening) Width ≥ 28 3/8" (721) (hinge with wash mode and control bracket) Width ≥ 17" (432) (hinge with wash mode)	Height ≥ 40 13/16" (1037) and < 48" (1219); Width ≥ 28 3/8" (721) and < 31 1/2" (800) All other window heights	Min. R.O.	Width = window width + 1/2" (13) Height = window height + 1/2" (13)
Vent Opening	Width = window width - 5.81" (148) = window width - 6.10" (155)	Height = window height - 4.43" (113) = window height - 4.85" (123)	Width ≥ 24 1/8" (613) (hinge for widest clear opening) Width ≥ 17" (432) (hinge with wash mode)	Height ≥ 40 13/16" (1037) and < 48" (1219); Width ≥ 28 3/8" (721) and < 31 1/2" (800) All other window heights	Unobst. Gls.	Width = window width - 4.40" (112) Height = window height - 4.95" (126)

Awning Windows (stationary and venting)



Clear Opening	Width = window width - 4.53" (115)	Depth = 6.38" (162) = 6.44" (164) = 6.50" (165)	Height ≥ 17" (432) and < 20 1/2" (521) Height ≥ 20 1/2" (521) and < 24 1/8" (613) All other window heights	Min. R.O.	Width = window width + 1/2" (13) Height = window height + 1/2" (13)
Vent Opening	Width = window width - 4.53" (115)	Depth = 6.38" (162) = 6.44" (164) = 6.50" (165)	Height ≥ 17" (432) and < 20 1/2" (521) Height ≥ 20 1/2" (521) and < 24 1/8" (613) All other window heights	Unobst. Gls.	Width = window width - 4.81" (122) Height = window height - 4.51" (115)

Casement/Awning Picture and Transom Windows



Min. R.O.	Width = window width - 1/2" (13) Height = window height - 1/2" (13)
Unobst. Gls.	Width = window width - 4.80" (122) Height = window height - 4.80" (122)

* 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. **Min. R.O.** (minimum rough opening) formulas provide minimum rough opening width and height dimensions. **Unobst. Gls.** (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 custom-size windows.



COMPLEMENTARY CASEMENT WINDOWS

Custom Sizes 44
Window Details 45-46
Product Performance 197

CUSTOM SIZING
in 1/8" (3) increments 

Dimensions in parentheses are in millimeters.

COMPLEMENTARY CASEMENT WINDOWS

FEATURES

FRAME

A Heavy-duty extruded aluminum cladding protects the frame exterior, providing low-maintenance durability. Standard cladding finish meets AAMA 2604. An optional finish that meets the AAMA 2605 standard is also available.

B Wood frame members are treated with a water-repellent preservative for long-lasting protection and performance.

C Interior stops are unfinished. Low-maintenance prefinished white, dark bronze and black interiors are also available.

Installation flange extends 1 1/2" (38) around the perimeter of the unit for positioning and locating. Installation clips are standard for increased structural anchoring to building members. Mounted around the frame perimeter, the clips rotate into position and can be bent into place against the framing members to suit all jamb conditions.



HARDWARE

Smooth Control Hardware System



The smooth control hardware system employs a worm gear drive for easy operation. Units with a wash mode have hinges that move the sash away from the frame to provide easier glass cleaning on rectangular units. Arch and Springline™ casement units use the same smooth control hardware system with stainless steel butt hinges for smooth operation. Hardware option and finish must be specified. Operator handle and cover sold separately.

Single-Actuation Casement Lock



A single-actuation lock easily releases all locking points on the casement sash while the reach-out action eliminates binding when closing. The lock handle is offered in finishes that coordinate with your specified hardware option.

SASH

D Wood core members provide excellent structural stability and energy efficiency.

E Heavy-duty extruded aluminum cladding protects the sash exterior, providing low-maintenance durability.

F Weatherstrip throughout the unit provides a long-lasting, energy-efficient seal. Rain skirt is factory installed on the perimeter of the sash.

GLASS

G In addition to stainless steel glass spacers, black or white glass spacers are now available to allow the spacer to blend in with the unit color.

H Silicone glazing bead combined with two-sided silicone tape provide superior weathertightness.

I High-Performance options include:

- Low-E4® glass
- Low-E4 HeatLock® glass
- Low-E4 SmartSun™ glass
- Low-E4 SmartSun HeatLock glass
- Low-E4 Sun glass

Tempered 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 job site.

Patterned Glass

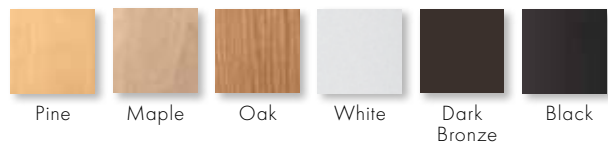
Patterned glass options are available. See page 12 for more details.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS



INTERIOR OPTIONS



HARDWARE OPTIONS Sold Separately



CONTEMPORARY FOLDING

Black | Bright Brass | Gold Dust
Oil Rubbed Bronze | **Satin Nickel**
Stone | White



TRADITIONAL FOLDING

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

Folding handles avoid interference with window treatments.



CLASSIC SERIES™

Stone | White



ESTATE™

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

Bold name denotes finish shown.

HARDWARE FINISHES



*Visit andersenwindows.com/warranty for details.

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.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

All wood interiors are unfinished unless a finish is specified.

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

FRENCH CASEMENT



Andersen® complementary French casements allow both sash to swing outward from the center, eliminating a center mullion post. They offer smooth operating multi-point locking mechanisms and hinges. The multi-point lock is activated with a single turn of a handle that simultaneously secures both sash. French casement windows have a unique locking handle that's available in antique brass, black, bright brass, brushed chrome, oil rubbed bronze, polished chrome, satin nickel, stone and white finishes.

ACCESSORIES Sold Separately

FRAME

Extension Jamb



Complementary casement jamb depth is 3 3/8" (86). Extension base jams are available in 1/16" (1.5) increments between 4 9/16" (116) and 7 1/8" (181). Additional dimensions are available. Contact your Andersen supplier for more information. Extension jams are available in unfinished pine or prefinished white, dark bronze and black. Available for job site application or can be factory applied.

HARDWARE

Corrosion-Resistant Components



Corrosion-resistant hinge and operator arm hardware is designed for applications in harsh and corrosive environments such as heavy industrial or coastal areas.* Shown above on a 400 Series casement window.

Window Opening Control Device



A window opening control device is available, which limits sash travel to less than 4" (102) when the window is first opened. Available factory applied, or as a field-applied kit in stone, white and black. Not available for French casement windows.

SPECIAL USE OPERATOR HANDLES

Available in Classic Series™ design only.

Compact Operator Handle



Specially designed for use in situations where blinds or other window treatments interfere with standard operator handle. Available in white or stone finish.

Easy-Grip Handle

Larger knob makes it easier to grip and operate. Available in white or stone finish.



Operator Spline Cover



An operator spline cover is an attractive cap that covers the roto operator stud when the handle has been removed to control access or operation of the window. The operator spline cover should not be used on any window designated or intended for emergency escape or rescue. Please consult your local building code official for local egress code requirements.

Metal T-Handle



Our smallest operator handle, the metal T-handle, may make it more difficult for young children (5 and under) to open the window. For more information on child safety, write:

Andersen Corporation
LookOut For Kids® Program
 100 Fourth Avenue North
 Bayport, MN 55003
 Call 800-313-8889 or email
 lofk@andersencorp.com.

INSECT SCREENS

TruScene® Insect Screens



Andersen TruScene insect screens let in over 25% more fresh air** and provide 50% greater clarity than conventional Andersen insect screens, all while keeping out unwanted small insects. For complementary casement windows, TruScene frames are available in white, stone, dark bronze and black as well as pine, maple and oak wood veneers.

Conventional Insect Screens

Conventional insect screens have black fiberglass screen mesh. Optional charcoal powder-coated aluminum screen mesh is available. Frames are available in white, stone, dark bronze and black.

CAUTION:

- 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.

400 Series Complementary Casement Windows

*Visit andersenwindows.com/warranty for details.

**TruScene insect screens let in over 25% more fresh air than standard Andersen fiberglass insect screens.

Dimensions in parentheses are in millimeters.

COMPLEMENTARY CASEMENT WINDOWS

Shapes and Sizes

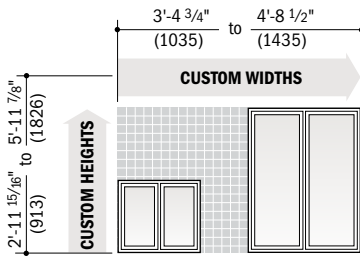
Standard sizes are available for French, Springline™ French and Arch French casement windows. Springline, Springline flanker, twin Springline, arch, twin and triple arch, trapezoid, unequal leg arch and rectangular casement window standard sizes are also available. For casement picture and transom window sizes, contact your Andersen supplier.

Custom Sizes

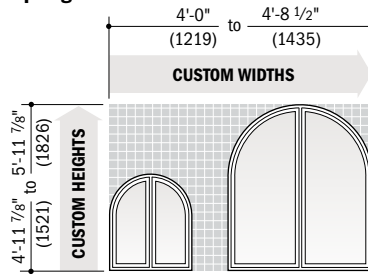


Choose left, right or stationary as viewed from the exterior. Custom-size windows are available in 1/8" (3) increments between minimum and maximum widths and heights.

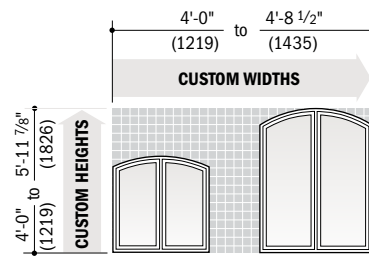
French Casement



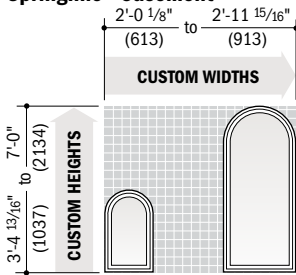
Springline™ French Casement



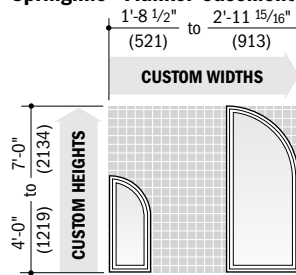
Arch French Casement



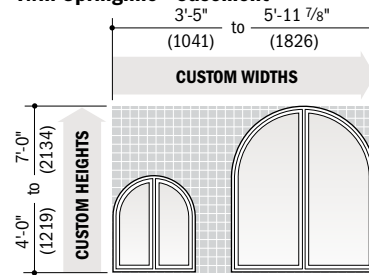
Springline™ Casement*



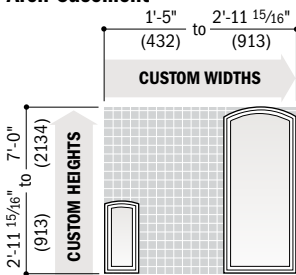
Springline™ Flanker Casement*



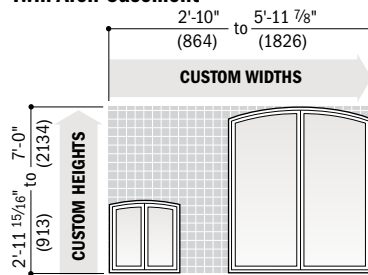
Twin Springline™ Casement*



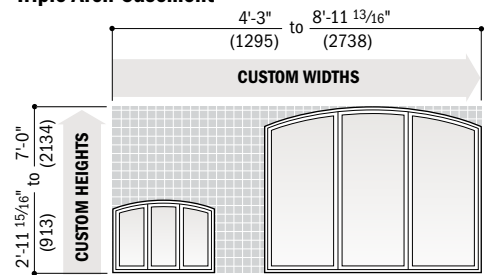
Arch Casement*



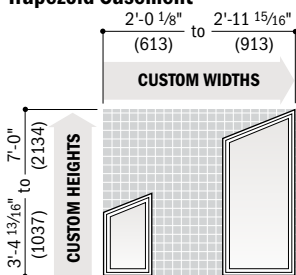
Twin Arch Casement*



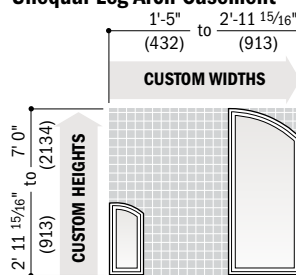
Triple Arch Casement*



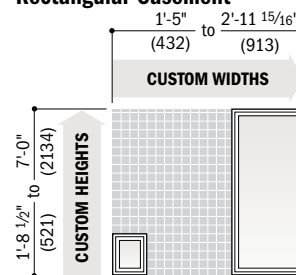
Trapezoid Casement*



Unequal Leg Arch Casement



Rectangular Casement



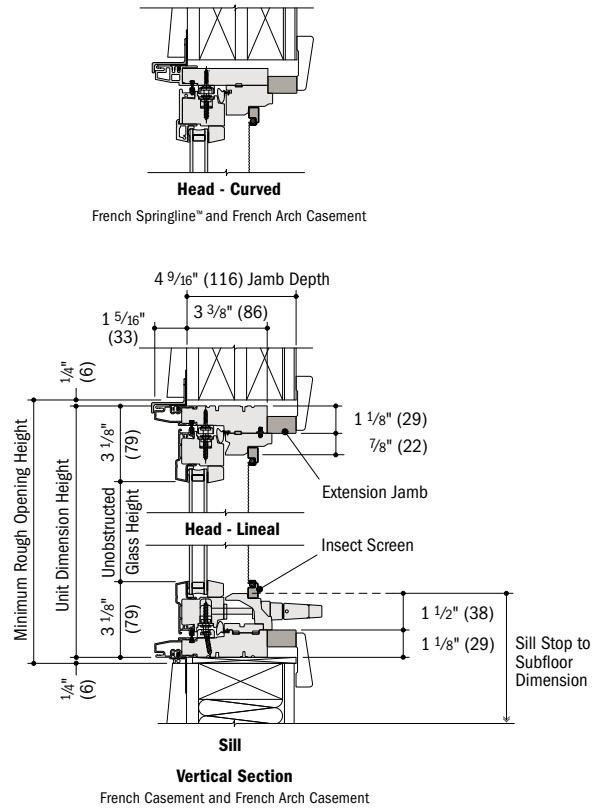
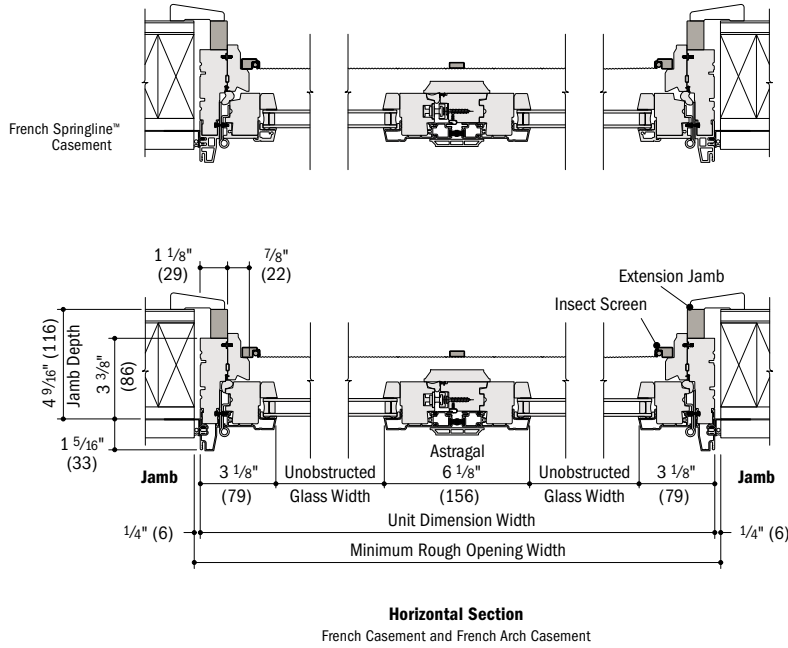
* Rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 210-211 for more details.

• Dimensions in parentheses are in millimeters.

*For exterior wall cladding that extends beyond the face of the window, there may be a reduction in the amount of opening "swing" when the top of the sash touches the wall cladding.

Clad Complementary Venting French Casement Window Details

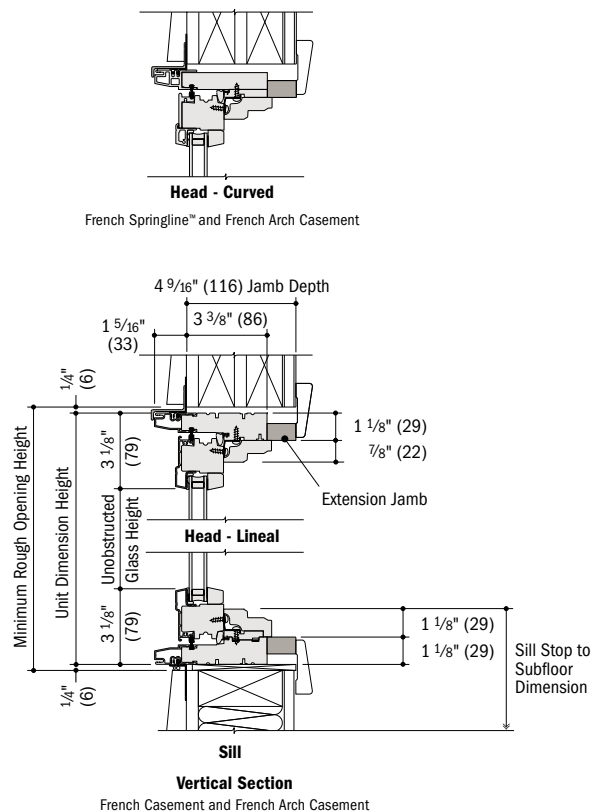
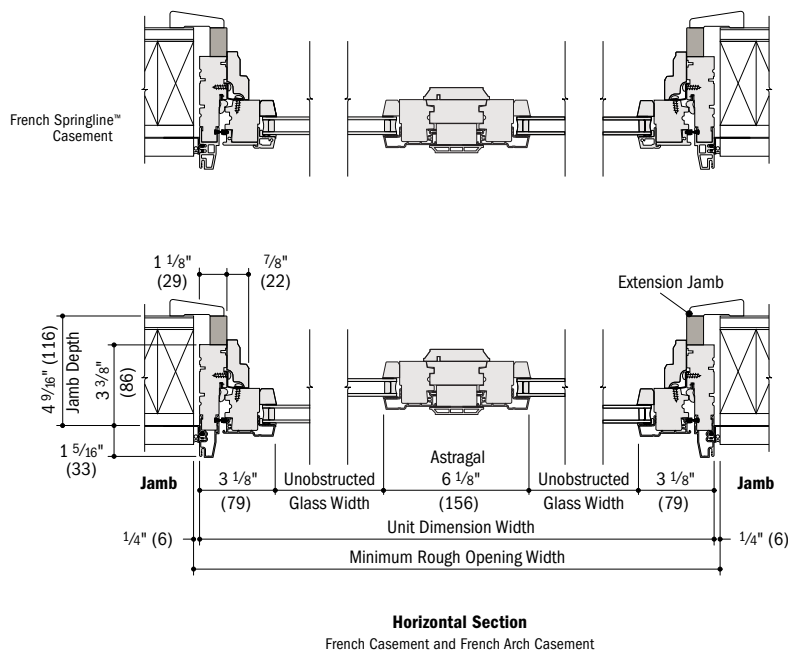
Scale 1 1/2" (38) = 1'-0" (305) – 1:8



400 Series
Complementary
Casement Windows

Clad Complementary Stationary French Casement Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8

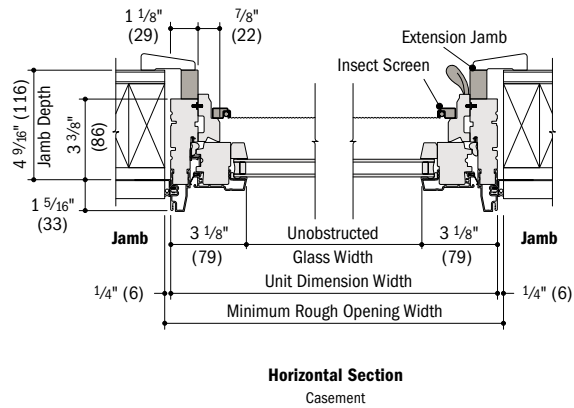
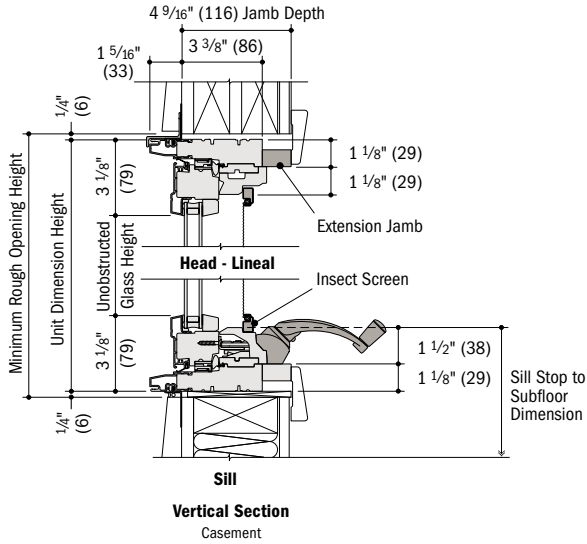
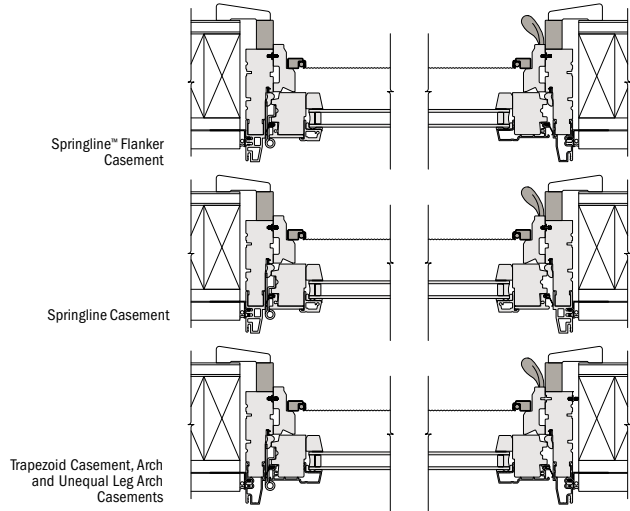
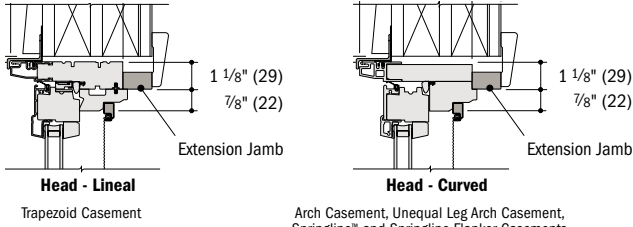


- 4 9/16" (116) overall jamb depth and 3 3/8" (86) base jamb depth measurement is from back side of installation flange.
- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- Dimensions in parentheses are in millimeters.
- **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill 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 unit installation guides at andersenwindows.com.

COMPLEMENTARY CASEMENT WINDOWS

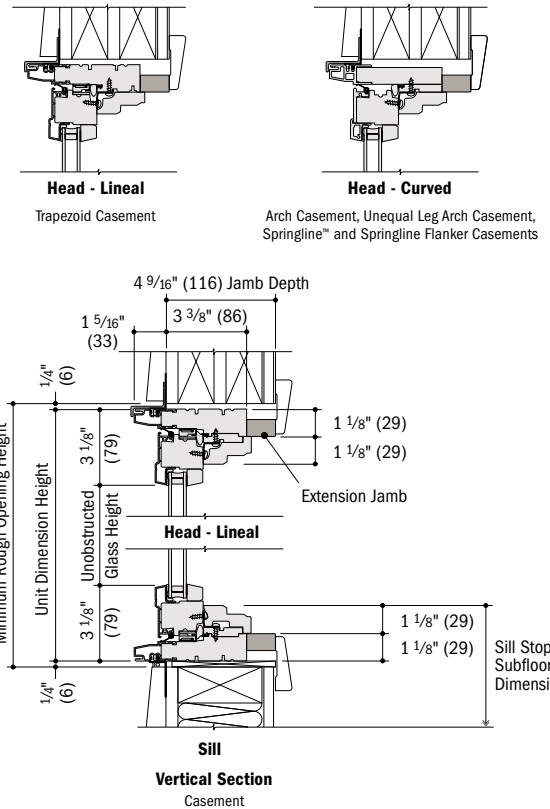
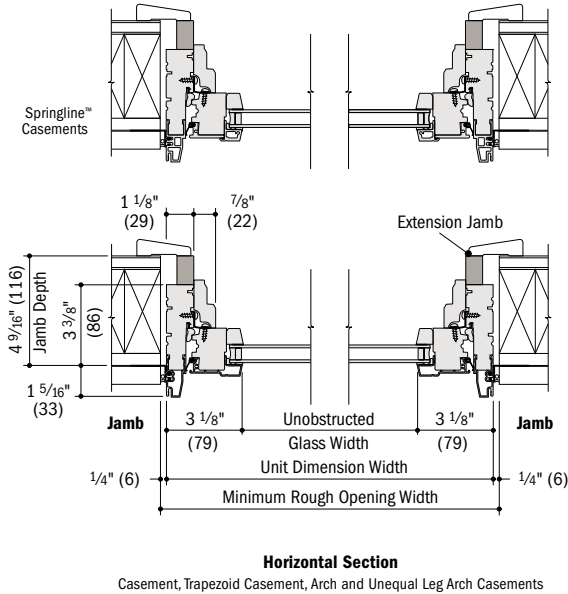
Clad Complementary Venting Casement Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



Clad Complementary Stationary Casement Window Details

Scale 1 1/2" (38) = 1'-0" (305) – 1:8



• 4 9/16" (116) overall jamb depth and 3 3/8" (86) base jamb depth measurement is from back side of installation flange.
 • Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
 • Dimensions in parentheses are in millimeters.
 • **Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill 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 unit installation guides at andersenwindows.com.

About the NFRC

The National Fenestration Rating Council (NFRC) is a nonpartisan coalition of professionals whose purpose is to provide fair, accurate and credible energy performance ratings for fenestration products. NFRC’s membership includes manufacturers, suppliers, designers, specifiers, utility companies, government agencies and other building industry representatives.

Andersen Corporation is a founding member of the NFRC and continues to support its work by providing fair, accurate and credible energy performance ratings to consumers and the building industry. If you have any questions about the NFRC, its program or energy performance ratings, write them at: NFRC, 6305 Ivy Lane, Suite 140, Greenbelt, MD 20770. Phone: 301-589-1776 Website: www.nfrc.org

About the Label


Look for this certification label on every window and patio door you buy. The NFRC section was designed by the National Fenestration Rating Council to provide accurate information that helps you promote the energy efficiency of the homes you build. These ratings allow you – and your customers – to measure and compare the energy performance of similar products. If the product does not have this label, the NFRC has not verified its claims.

Combination Designs,
Product Performance
& Installation

Do not remove until final code inspection. Save label for future reference.


ENERGY STAR® Certified in Highlighted Regions
Certifié ENERGY STAR dans les régions en surbrillance

Canada
energystar.gc.ca




ENERGY STAR

U.S. / É.U.
energystar.gov




ER/RE 18

DO NOT REMOVE UNTIL FINAL INSPECTION / NE PAS RETIRER AVANT L'INSPECTION FINALE



National Fenestration Rating Council®
CERTIFIED



ANDERSEN
WINDOWS & DOORS

400 Series Casement Window
AND-N-1-01592-00001
Vinyl-Clad Wood Frame, Dual-Pane Low-E SmartSun
Glazing with Argon
Product Type: Casement


ENERGY PERFORMANCE RATINGS

U-Factor	Solar Heat Gain Coefficient
0.27 (U.S./I-P)	0.21
1.53 (Metric/SI)	

ADDITIONAL PERFORMANCE RATINGS

Visible Transmittance	
0.49	

Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information.
www.nfrc.org



WINDOW & DOOR MANUFACTURERS ASSOCIATION
WDMA
Hallmark Certified
www.wdma.com

Licensee: 129-H-861
Andersen Corporation
400 Series Casement Window
Manufacturer stipulates Hallmark Certification as indicated below.

STANDARD	RATING
AAMA/WDMA/CSA 101/1.S.2/A440-11	Class LC-PG50 Size Tested 55" x 71" DP+50/-50
AAMA/WDMA/CSA 101/1.S.2/A440-08	Class LC-PG50 Size Tested 55" x 71" DP+50/-50
AAMA/WDMA/CSA 101/1.S.2/A440-08 A440S1-09	Class LC-PG50 - 1435mm x 1622mm Positive/Negative Design Pressure (DP) = 2400 Pa/-2400 Pa Water Penetration Resistance Test Pressure = 360 Pa Canadian Air Infiltration/Exfiltration = A3

FL 12496
Glazing: 2.2mm AN outer/2.3mm HS inner

WARNING
This product can expose you to chemicals including titanium dioxide, which is known in the state of California to cause cancer, and methanol, which is known to the state of California to cause birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov

Meets or exceeds CEC & IECC Air Infiltration Requirements of 0.2 CFM/sq. ft. or lower.
WDMA Hallmark Certification Program. Complies with HUD UM Bulletin No. 111.

U-Factor indicates how well a product prevents heat from escaping (the lower the number, the better).

Visible Transmittance refers to how much visible light comes through a product (the closer to 1.0, the more light is transmitted).

WDMA Hallmark Certification verifies the performance ratings of this product were tested by an independent testing laboratory and verified by a third-party certification program.

Test Standards

Energy Rating (ER) represents “Energy Rating” and is a rating used in Canada for product comparison purposes (the higher the ER number, the more energy saved during the heating season).

ENERGY STAR® Climate Zone Map is based on U-Factor and solar heat gain coefficient criteria for specific ENERGY STAR climate zones within the United States and Canada. The shading of the map shows which climate zone(s) a particular product and glass type is ENERGY STAR certified in.

Solar Heat Gain Coefficient measures how well a product blocks heat caused by sunlight (the lower the number, the more it will help reduce the use of air conditioning and as a result, reduce electrical bills and energy use).

Performance Grade (PG) and Design Pressure (DP) Ratings

Glass Construction used with this product type.

• NFRC ratings are based on modeling by a third-party agency as validated by an independent test lab in compliance with NFRC program and procedural requirements.
• “ENERGY STAR” is a registered trademark of the U.S. Environmental Protection Agency.

INSTALLATION ACCESSORIES

Optional accessories available for the installation of Andersen® windows and patio doors. Keep instruction guidelines and safety information in mind when considering the installation and use of any Andersen product. For questions, contact your local Andersen supplier.

COIL STOCK



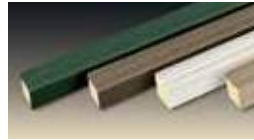
Andersen aluminum coil stock can be ordered to match any of our 11 exterior trim colors. Made from .018" thick aluminum, coil stock is available in 24" (610) x 50' (15240) rolls. Color-matched 1 1/4" (32)-long stainless steel trim nails are also available and can be ordered in 1 lb/454 kg boxes.

FIBREX® TRIM BOARD



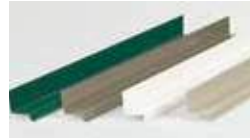
Available in the same 11 colors as our exterior trim, this solid cellular Fibrex trim board can be cut or ripped to size, and be fastened using nails or screws. 3 1/2" (89) x 3/4" (19) thick in 10' (3048) lengths.

AUXILIARY CASING



Made of cellular Fibrex material. Available in white, canvas, Sandtone, Terratone, forest green, dark bronze and black. 1 3/16" (30) x 1 3/16" (30) in 150" (3810) lengths.

DRIP CAP



Included on 400 Series windows with vertical (ribbon) joins. Heavy 24-gauge corrosion-resistant aluminum construction. Available in 6' (1829), 10' (3048) and 12'-7 1/2" (3848) lengths, and in any of our 11 exterior trim colors.

EXTENSION JAMBS



Available for most Andersen products. See product sections for details.

VINYL CHANNELS



Rigid vinyl "J" and "h" channels are available in white, Sandtone and Terratone. "J" and "h" channels are 1/2" (13) deep and come in 150" (3810) lengths. "J" channels are 3/4" (19) wide and "h" channels are 1" (25) wide. "H" channels are 3/4" (19) deep and come in 84" (2134) and 150" (3810) lengths. White "H" channels are 3/4" (19) wide. Sandtone and Terratone "H" channels are 1" (25) wide.

COLOR-MATCHED SEALANT

Color-matched sealant is available in Andersen exterior colors. This high-quality sealant can be used during the installation of all Andersen products.

INSTALLATION INFORMATION

ROUGH OPENINGS

The purpose of a rough opening is to allow for proper spacing between the window or patio door unit and the building structure. The space is required for locating, leveling and squaring the unit during installation and to provide an area for insulation. A rough opening that is incorrectly sized may affect unit operation and may not allow for adequate fastening of the unit to the building structure. Andersen rough opening dimensions are provided as a guideline to help determine the minimum amount of space needed between the window or patio door and the building structure. See appropriate product sections for rough opening guidelines for each product.

Keep in mind that rough opening dimensions may need to be altered from published guidelines, depending on installation methods, joining methods, replacement methods, etc. For example, flashing systems can reduce the amount of available rough opening space and should be factored in when calculating rough opening dimensions. The use of support or joining materials will encroach on the rough opening and may require additional rough opening space between the unit and the building structure, depending on the thickness of the flashing system and joining materials used. To facilitate drainage, the rough opening sill plate should never slope toward the interior. For challenging environments and other information, refer to EEBA's (Energy and Environmental Building Association) Water Management Guide (www.eeba.org).

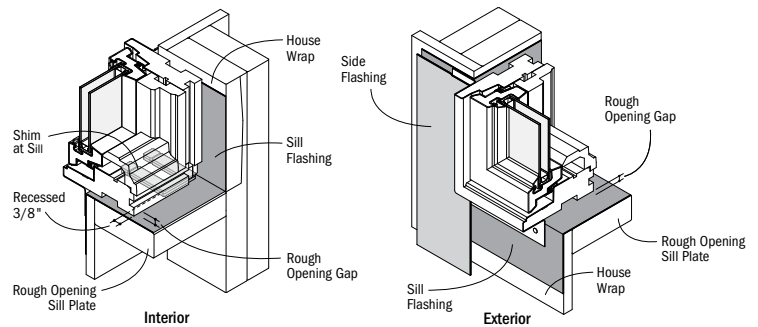
IMPORTANCE OF PROPER INSTALLATION

Proper installation and maintenance of Andersen products is essential to attain optimum performance and operation. Installation instructions that provide guidelines for proper installation are typically provided with Andersen products. They are also available by visiting andersenwindows.com. Remember that every installation is different, and Andersen strongly recommends consultation with the local supplier or an experienced contractor, architect or structural engineer prior to the installation of any Andersen product. The method of attachment for Andersen products, fastener selection and code compliance is the responsibility of the architect, building owner, contractor, installer and/or consumer. For more complete installation details, visit andersenwindows.com or see your Andersen supplier.

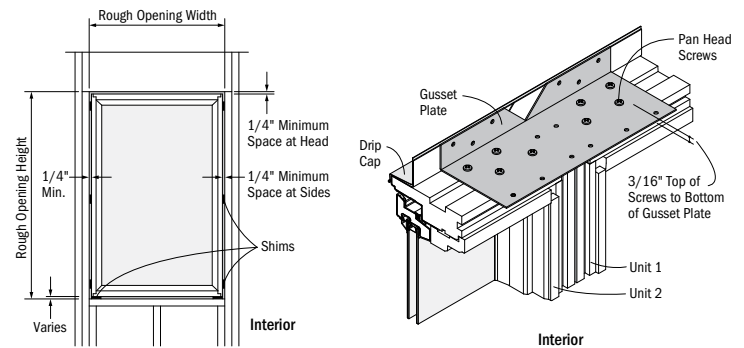
GENERAL NOTES

When ordering, make certain you specify, then verify, the exact product, unit dimensions, configuration requirements, color and options you desire on each window or patio door. Before installing the product, we suggest you verify that it includes the features and options you ordered. Visit andersenwindows.com for product installation and joining guides. Printing limitations prohibit exact color duplication of products. View actual samples for building specifications. Andersen Corporation reserves the right to change details, specifications or sizes without notice. The customer assumes all risk of alterations made to Andersen products.

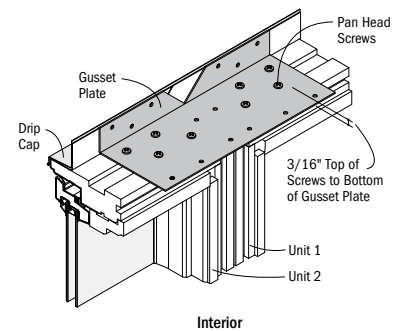
Dimensions in parentheses are in millimeters.



Example of window sill flashing in a membrane drainage system.



Example of window unit installed using Andersen published minimum rough opening dimensions.



Example of two units joined together with the use of gusset plates and pan head screws that will require additional rough opening space.

CODES

Appropriate selection of Andersen products that conform to all applicable laws, ordinances, building codes and safety requirements is the sole responsibility of the architect, designer, building owner and/or contractor. Check with your local building code officials for specific information. Unit wind load, performance grade and energy performance information is provided on pages 181-209. For up-to-date product performance information, visit andersenwindows.com. The performance of any building system depends on the design and construction of the building system in its entirety, which should meet building code requirements, as well as address product and material limitations, and local environment and climate.

DRIP CAPS

Drip caps are a specific type of flashing or trim used at the head of a window or door to direct water from the drainage plane out beyond the face of the unit.

FLASHING

Flashing is an important element in a building's water management system. It is used to shed and direct water to the building exterior or to the drainage plane. Flashing materials are typically applied starting from the bottom and working upward, with each successive layer overlapping the previous one in shingle fashion. Water infiltration problems in any type of building can be reduced by properly flashing and/or sealing around all building openings, including windows and doors.

USE OF SHIMS

Shims are used along the side jambs of windows and doors to center the unit in the rough opening and to position it plumb, level and square. In addition, shims are always required for windows under the sill at the side jambs to lift it off the rough opening sill plate. Shims also enable a straight frame for proper weatherstrip contact and unit operation. If not placed properly, unit performance and operation can be affected. Use waterproof shims capable of supporting the weight of the product. When using tapered shims, use them in pairs with the tapers opposing each other to avoid tilting the unit or twisting (rotating) of the jambs.

SEALANTS

Sealants are elastic materials used to block the passage of water and/or air while allowing movement between the two sides of the joint. A sealant should bond tightly, and be able to expand and contract to accommodate joint movement without cracking or tearing away from the substrate. Surfaces must be clean, dry and sound for adequate sealant adhesion. Choose a sealant that is compatible with, and that will adhere adequately to, all building materials used in the window and patio door area. Proper sealant joint design is based upon the expected movement of adjacent materials and the movement capability of the sealant. A general rule of thumb is that the depth of the sealant joint should be equal to half the width ($D = W/2$), but generally not less than $1/4"$ (6) or more than $1/2"$ (13). Foam-plastic backer rod can be used to limit the depth of the sealant joint, to provide a backstop for tooling the sealant without damage to the bond. It also acts as a bond breaker to help minimize stress in the sealant. Sealants should be maintained seasonally, and repaired and/or replaced as needed.

Dimensions in parentheses are in millimeters.

GENERAL INSTALLATION GUIDELINES

1. Read and follow the installation guide in its entirety.
 2. Decide whether you are integrating to a surface barrier or a membrane drainage system before installing the product. The appropriate method for your installation may vary based on building design, application and industry practices.
 3. Make certain the drainage plane is continuous (proper overlaps to shed water, taped seams, etc.).
 4. Andersen products should be installed only in the vertical position.
 5. Check the rough opening to make sure it is sized properly, is square and is level.
 6. Install the window or door plumb.
 7. Install the window or door level.
 8. Install the window or door square. Diagonal measurements should be within $1/8"$ (3).
 9. Follow installation instructions to properly locate shims and to make sure that units are plumb, level and square. Shims are always required under the window jambs at the sill and along the jambs on the sides for windows and doors.
 10. Check for squareness of unit before final anchoring of the product into the wall.
 11. Anchor unit as directed with appropriate fasteners.
 12. Integrate the window and door into the drainage plane of the wall using quality flashing and sealing materials. All flashing materials should be properly overlapped to shed water.
 13. Allow $1/4"$ (6) minimum space for a sealant joint around perimeter of unit between exterior finish materials and unit.
 14. Insulate and seal the interior cavity between the window or door frame and the rough opening.
 15. Check operation before application of interior trim.
 16. Stain and/or seal all unfinished wood surfaces promptly to minimize moisture absorption.
3. In wall construction utilizing brick facades, leave adequate clearance between sill, jambs and brick for sealing and dimensional change of framework.
 4. Acid solutions commonly used to wash brick and other masonry materials will damage glass, fasteners, hardware and metal flashing. Protect unit and follow cleaning product instructions carefully. Damage caused by acid solution is not covered under the Andersen limited warranty.
 5. Andersen windows may be combined in almost unlimited ribbons or stacks if each unit is positively secured to structural elements on opposing sides and if the proper joining system is used. See page 181 for more information.

SAFETY GLASS

Unless specifically ordered, Andersen windows are not made with safety glass and, if broken, the glass could fragment, causing injury. Andersen windows may be ordered with tempered glass which may reduce the likelihood of injury when broken. All Andersen patio doors are made with tempered glass. Differences in appearance between tempered and non-tempered glass can be expected. Slight visual distortions may be noticeable and occur normally as a result of the tempering process. Building codes require safety glass in locations adjacent to or near doors and other locations.

WINDOW AND PATIO DOOR SAFETY

Windows may provide a secondary avenue of escape or rescue in an emergency, such as a fire. Every family should develop an escape plan and make sure family members know how to escape from the home in an emergency. In your plan, include two ways to escape from every room in case one way is blocked by fire or smoke, and make sure you have a designated meeting place outside. A window or a patio door is an alternate means of escape or rescue. Practice your plan until each member of the family understands it and is able to escape without assistance. Remember, you may not be able to reach children during a fire emergency. Teach children – even very young children – that they must escape from a fire in the home and never hide from the fire or from emergency personnel.

LOOKOUT FOR KIDS® PROGRAM

The Consumer Product Safety Commission has said: "Keep children away from open windows to prevent falls. Don't depend on insect screens to keep the child from falling out of the window. They are designed to keep insects out, not children in. Avoid placing furniture near windows to keep children from climbing to a window seat or sill." In an effort to educate consumers about the potential for child falls from windows, Andersen Corporation created the LookOut For Kids Program. It combines a window and door safety brochure and specific product instructions to help make window and door safety an important priority for consumers. For more information on child safety, write:

Andersen Corporation
LookOut For Kids Program
100 Fourth Avenue North
Bayport, MN 55003
Call 800-313-8889 or email
lofk@andersencorp.com

**LOOK
OUT!**
for kids®

EXTERIOR PAINTING/SEALING OF ANDERSEN® PRODUCTS

The exterior of some Andersen products may be painted or stained. However, improper painting and staining may cause damage to vinyl, aluminum and other exterior materials. Please refer to the individual product sections for details on painting Andersen product exteriors.

CAUTIONS

1. Do not apply any type of film to insulating glass. Thermal stress and glass damage can result. Andersen Corporation is not responsible for product performance when films are applied to Andersen products.
2. The use of removable insulating materials such as insulated window coverings, shutters and other shading devices may also cause thermal stress conditions and/or deformation of protective vinyl. In addition, excessive condensation may result, which can have a deteriorating effect on the window or door unit(s) involved. Andersen Corporation is not responsible for product performance when these kinds of materials or devices are applied to or used in conjunction with Andersen products.

Andersen® windows and patio doors can make significant contributions to the success of sustainable design strategies

As a charter member of the U.S. Green Building Council, we're active supporters of certified green buildings. Our products can help customers in pursuing green building programs, such as Leadership in Energy and Environmental Design (LEED®), the National Green Building Standard, Green Globes, GreenStar and more. Below is an overview of how our products may assist project teams with pursuing LEED v4 or the NAHB National Green Building Standard rating systems. More detailed credit summaries, as well as information about how Andersen products can support earlier versions of LEED certification (e.g., LEED v3 or LEED 2008), are available at andersenwindows.com.

LEED V4 FOR BUILDING DESIGN AND CONSTRUCTION: NEW CONSTRUCTION AND MAJOR RENOVATIONS

Integrative Process Credit:

Energy & Atmosphere

- Minimum energy performance prerequisite
- Optimize energy performance credit
- Renewable energy production credit
- Green power and carbon offsets credit

Materials & Resources

- Construction and demolition waste management planning credit
- Building product disclosure and optimization sourcing of raw materials credit
- Construction and demolition waste management credit

Indoor Environmental Quality

- Minimum indoor air quality performance prerequisite
- Minimum acoustic performance prerequisite – schools
- Enhanced indoor air quality strategies credit
- Low-emitting materials credit
- Thermal comfort credit
- Daylight credit
- Quality views credit
- Acoustic performance credit (option 2)

LEED V4 FOR BUILDING DESIGN AND CONSTRUCTION: HOMES AND MULTI-FAMILY MIDRISES

Energy & Atmosphere

- Minimum energy performance prerequisite
- Education of the homeowner, tenant or building prerequisite
- Annual energy use credit
- Building orientation for passive solar credit
- Air infiltration credit
- Windows credit

Materials & Resources

- Durability management prerequisite
- Environmentally preferable products credit
- Construction waste management credit

Indoor Environmental Quality

- Ventilation prerequisite
- Low-emitting products credit

ANSI ICC/ASHRAE 700-2015 NATIONAL GREEN BUILDING STANDARD

NGBS section numbers are referenced in parentheses.

Resource Efficiency

- Prefinished materials (601.7)
- Flashing (602.12)
- Exterior doors, including storm doors (602.1.10)
- Recycled construction materials (605.3)
- Bio-based products (606.1)
- Wood-based products (606.2)
- Manufacturer's environmental management system concepts (611.1)

Energy Efficiency

- Mandatory requirements (701.1)
- Building thermal envelope air sealing (701.4.3.1)
- Multi-family air leakage alternative (701.4.3.3)
- Fenestration air leakage (701.4.3.4)
- ICC IECC analysis (702.2.1)
- Energy performance analysis (702.2.2)
- UA improvement (703.2.1)
- Fenestration (703.2.5)
- Sun-tempered design (703.7.1)
- Passive cooling design (703.7.3)
- Passive solar heating design (703.7.4)

Indoor Environmental Quality

- Wood materials (901.4)
- Interior architectural coatings (901.9)
- Interior adhesives & sealants (901.9)
- Operable windows & sliding glass doors (902.1.5)

Energy Efficient

- Homeowner's manual (1001.1)
- Building construction manual (1002.1)



THE ENVIRONMENT HAS A BUSINESS PARTNER

Respect for the environment is nothing new at Andersen. For more than a century, it has been part of who we are. Our commitment to recycle and reclaim materials began simply because it was good business. Now it's part of our broader commitment to sustainability and responsible stewardship of all of our resources. Andersen is committed to providing you with long-lasting,* energy-efficient windows and patio doors. Visit andersenwindows.com/sustainability for more information.



Andersen® products are certified under the National Fenestration Rating Council (NFRC) voluntary third-party certification program designed to ensure accurate energy performance ratings and labeling.



Andersen was one of the first U.S. window manufacturers to receive the Forest Stewardship Council® (FSC®) Chain-of-Custody certification (FSC CO16636). This certification is awarded to companies that meet FSC standards for traceability in their wood supply chain. Ask your sales representative about the availability of FSC certified products.



The Window & Door Manufacturers Association (WDMA) Hallmark Certification program includes product testing and quality-control process audits to verify that Andersen windows and doors are produced in conformance with the industry standards for air, water resistance and structural performance.



Andersen was the first window manufacturer to certify our products for indoor air quality, beginning in 2008. Our Indoor Advantage™ Gold certification by SCS Global Services (SCS) meets the rigorous high standards for healthier indoor air quality set by California Specification 01350.



Under U.S. Green Building Council (USGBC) guidelines, Andersen is able to claim a percentage of material in its Fibrex® product as pre-consumer recycled content. SCS Global Services (SCS) has certified this amount for Andersen.



Andersen Corporation is proud to be an ENERGY STAR® partner. For over 115 years, Andersen has built a reputation for environmental stewardship and energy-efficient products. In fact, Andersen has been part of the ENERGY STAR program since it started and was the first window manufacturer to be named an ENERGY STAR National Window Partner of the Year in 1999.

*Visit andersenwindows.com/warranty for details.
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89 400 Series Tilt-Wash Double-Hung Insert Windows	87 400 Series Narroline® Double-Hung Window Conversion Kit	75 400 Series Tilt-Wash Double-Hung Full-Frame Windows	67 400 Series Woodwright® Double-Hung Insert Windows	47 400 Series Woodwright® Double-Hung Full-Frame Windows	41 400 Series Complementary Casement Windows	37 400 Series Replacement Casement & Awning Windows	19 400 Series Casement & Awning Windows
163 400 Series Complementary Curved Top Patio Doors	159 400 Series Frenchwood Patio Door Sidelights & Transoms	149 400 Series Frenchwood Hinged Inswing Patio Doors	141 400 Series Frenchwood® Gliding Patio Doors	137 400 Series Complementary Specialty Windows	117 400 Series Specialty Windows	111 400 Series Gliding Windows	97 400 Series Bay & Bow Windows
					181 Combination Designs, Product Performance & Installation		
					175 Exterior Trim		
					173 Art Glass		



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PDF NAVIGATION TIPS

Welcome to an overview of the enhanced navigation tools available in this PDF. Here are some simple tips on PDF navigation. Before you begin be sure you are using the latest version of Adobe Acrobat Reader DC, available at - <https://get.adobe.com/reader/>

To watch a 3-minute tutorial on navigating catalog PDFs, go to: <https://youtu.be/sWWnYn6ON3Y>

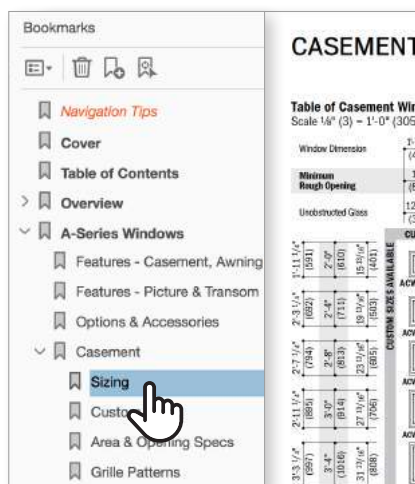
BOOKMARK NAVIGATION

1

Acrobat will display the bookmarks panel when you open the PDF.

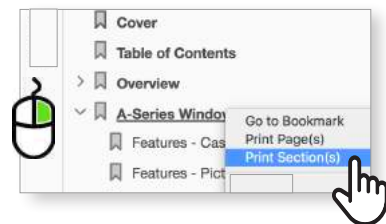
Bookmarks are the easiest way to find specific product information.

Select a topic and that page will be displayed.



2

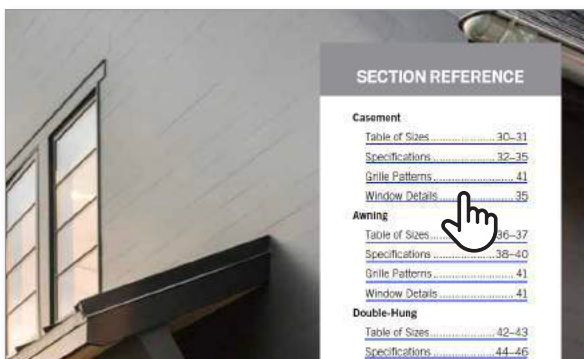
If you need to print a specific section, **right click on that section** within in the bookmarks panel and choose “**Print Section.**”



LINKS AND URL NAVIGATION

1

You can also use the **embedded links** to navigate between sections. All links are underlined in blue.



2

Website links automatically open in your web browser.



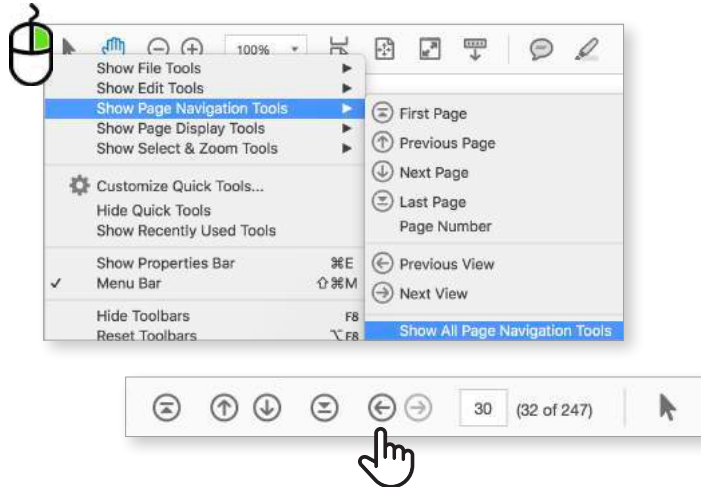
Add additional navigation tools by adjusting the default settings in Acrobat.

TOOL BAR NAVIGATION

1

To add a **“Jump Back” Button** to your tool bar, **Right click on tool bar**, select **Show Page Navigation Tools** and choose **Show All Page Navigation Tools**.

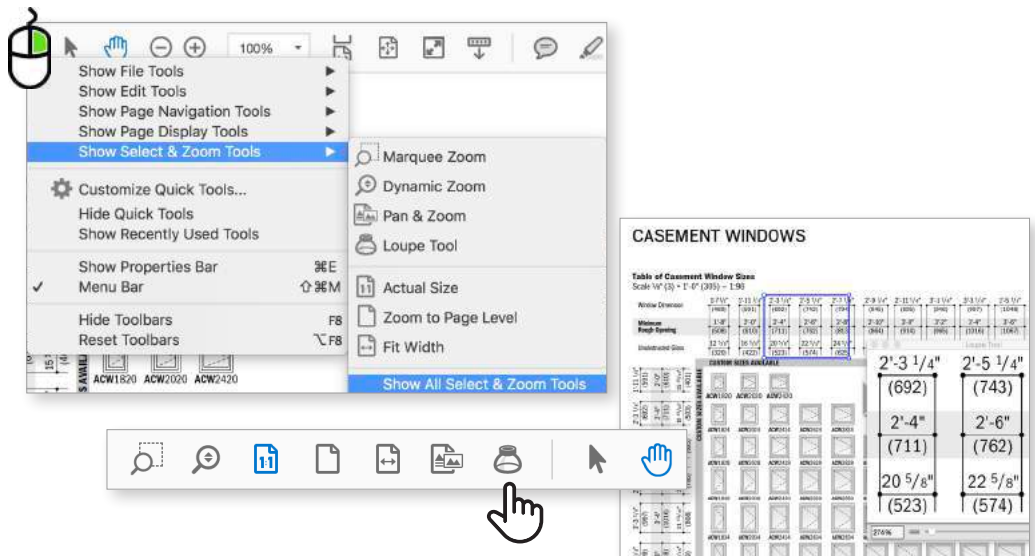
Right and left facing arrows are added to the tool bar allowing you to go back or forward to the last page you viewed.



2

Another helpful tool is the **Loupe Tool**. It allows you to zoom in on the page without having to increase the page size.

To add a **Loupe Tool** to your tool bar, **right click on tool bar**, select **Show Select & Zoom Tools** and then choose **Show All Select & Zoom Tools**.



3

You can also use the **commenting tools**. Add a post-it-note with your comments or highlight important information.

Be sure to save the file.



To watch a 3-minute tutorial on navigating catalog PDFs, go to: <https://youtu.be/sWWnYn60N3Y>

We are always looking for ways to improve.

Please send feedback to webmarketing@andersencorp.com.