

ANDERSEN® 400 SERIES WINDOW AND DOOR NFRC/ENERGY STAR® INFORMATION

This document provides NFRC certified U-Factor, Solar Heat Gain Coefficient (SHGC) and Visible Transmittance (VT) values for Andersen® products along with the corresponding ENERGY STAR® Version 6.0 (2015) climate zones in which the product and glass type are certified.

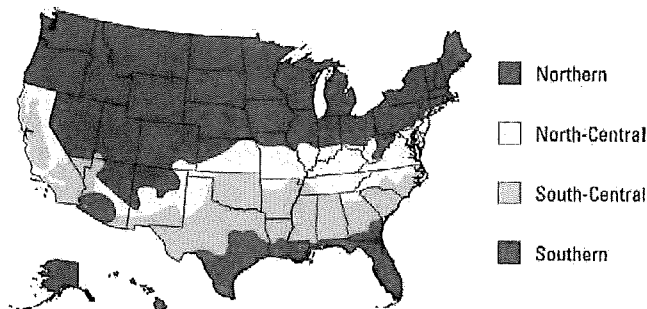


These products rated, certified and labeled by National Fenestration Rating Council® (NFRC) - a non-profit organization that provides fair, accurate and credible energy performance ratings for windows and doors.



Many of our products meet the stringent energy efficiency certification criteria set by the U.S. Environmental Protection Agency and the U.S. Department of Energy. The certification criteria is based on the heat gain and loss of each product in various regions of the country. Check the Andersen product performance available at [www.andersenwindows.com](http://www.andersenwindows.com) for units that are ENERGY STAR certified.

United States ENERGY STAR® Climate Zone Criteria



Windows

| Climate Zone  | U-Factor <sup>1</sup> | SHGC <sup>2</sup> |                               |
|---------------|-----------------------|-------------------|-------------------------------|
| Northern*     | ≤ 0.27                | Any               | Prescriptive                  |
|               | = 0.28                | ≥ 0.32            | Equivalent Energy Performance |
|               | = 0.29                | ≥ 0.37            |                               |
|               | = 0.30                | ≥ 0.42            |                               |
| North-Central | ≤ 0.30                | ≤ 0.40            |                               |
| South-Central | ≤ 0.30                | ≤ 0.25            |                               |
| Southern      | ≤ 0.40                | ≤ 0.25            |                               |

Air Leakage ≤ 0.3 cfm/ft²

<sup>1</sup> Btu/h ft²·°F

<sup>2</sup> Solar Heat Gain Coefficient

\* The effective date for the Northern Zone prescriptive and equivalent energy performance criteria for windows is January 1, 2016.

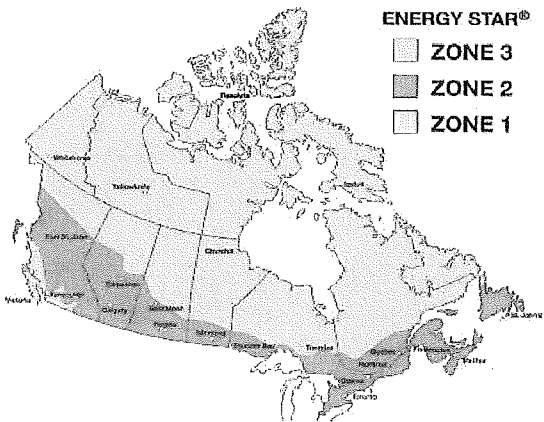
Doors

| Glazing Level | U-Factor <sup>1</sup> | SHGC <sup>2</sup>                                              |
|---------------|-----------------------|----------------------------------------------------------------|
| Opaque        | ≤ 0.17                | No Rating                                                      |
| ≤ ½ Lite      | ≤ 0.25                | ≤ 0.25                                                         |
| > ½ Lite      | ≤ 0.30                | Northern North-Central ≤ 0.40<br>Southern South-Central ≤ 0.25 |

Air Leakage for Sliding Doors ≤ 0.3 cfm/ft²

Air Leakage for Swinging Doors ≤ 0.5 cfm/ft²

Canada ENERGY STAR® Climate Zone Criteria



| Windows and Doors (effective February 1, 2015) |                          |                                  |    |                        |
|------------------------------------------------|--------------------------|----------------------------------|----|------------------------|
| Zone                                           | Heating Degree-Day Range | Minimum Energy Rating (unitless) | or | Maximum U-Factor W/m²K |
| 1                                              | < 3500                   | 25                               | or | 1.60                   |
| 2                                              | 3500 to < 6000           | 20                               | or | 1.40                   |
| 3                                              | ≥ 6000                   | 34                               | or | 1.20                   |

For NFRC certified total unit performance for units with capillary breather tubes, please refer to the High Altitude information section for each unit.

<sup>1</sup>U-Factor defines the amount of heat loss through the total unit in BTU/hr\*ft²\*°F, metric in W/m²\*K. The lower the value, the less the heat is lost through the entire product.

<sup>2</sup>Solar Heat Gain Coefficient (SHGC) defines the fraction of solar radiation admitted through the glass both directly transmitted and absorbed and subsequently released inward. The lower the value, the less heat is transmitted through the product.

<sup>3</sup>Visible Transmittance (VT) measures how much light comes through a product (glass and frame). The higher the value, from 0 to 1, the more daylight the product lets in over the product's total unit area. Visible Transmittance is measured over the 380 to 760 nanometer portion of the solar spectrum.

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.

This data is accurate as of December 15, 2014. Due to ongoing product changes, updated test results or new industry standards or requirements, this data may change over time. Due to variations in dealer and distributor inventory levels, products that were manufactured before December 15, 2014 that were designed, tested and labeled with different NFRC values may still be available. Check the labels on the product packaging to confirm NFRC values. Ratings are for sizes specified by NFRC for testing and certification. Ratings may vary depending on use of tempered glass, different grille options, glass for high altitude, etc.

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This information is for reference only.  
Performance varies by unit size and options selected.  
For specific unit performance information, please contact your dealer or Andersen Sales Representative.

| Andersen®<br>Product Line &<br>Product Type | Andersen<br>Glass<br>Type              | Grille Type                                                 | NFRC Certified<br>Products<br>Directory Number | U-Factor* | U-Factor<br>Metric | SHGC* | VT*  | Canada ER | Air Infiltration | U.S.<br>ENERGY<br>STAR<br>v 6.0 |         |         |       | Canada<br>ENERGY<br>STAR<br>v 4.1 |        |        |
|---------------------------------------------|----------------------------------------|-------------------------------------------------------------|------------------------------------------------|-----------|--------------------|-------|------|-----------|------------------|---------------------------------|---------|---------|-------|-----------------------------------|--------|--------|
|                                             |                                        |                                                             |                                                |           |                    |       |      |           |                  | North                           | Central | Central | South | Zone 1                            | Zone 2 | Zone 3 |
|                                             |                                        |                                                             |                                                |           |                    |       |      |           |                  |                                 |         |         |       |                                   |        |        |
| 400 Series<br>Casement                      | Low-E4®                                | 2.2 Annealed Glass - w/ No Grilles and Grilles Less Than 1" |                                                |           |                    |       |      |           |                  |                                 |         |         |       |                                   |        |        |
|                                             |                                        | No Grilles                                                  | AND-N-1-01145-00001                            | 0.28      | 1.59               | 0.32  | 0.54 | 23        | < 0.2            | N                               | NC      | -       | -     | Z1                                | -      | -      |
|                                             |                                        | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01145-00002                            | 0.28      | 1.59               | 0.29  | 0.49 | 22        | < 0.2            | -                               | NC      | -       | -     | Z1                                | -      | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01163-00001                            | 0.29      | 1.65               | 0.29  | 0.49 | 20        | < 0.2            | -                               | NC      | -       | -     | -                                 | -      | -      |
|                                             | Low-E4®<br>Sun                         | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01151-00001                            | 0.28      | 1.59               | 0.29  | 0.49 | 22        | < 0.2            | -                               | NC      | -       | -     | Z1                                | -      | -      |
|                                             |                                        | No Grilles                                                  | AND-N-1-01146-00001                            | 0.28      | 1.59               | 0.20  | 0.30 | 17        | < 0.2            | -                               | NC      | SC      | S     | Z1                                | -      | -      |
|                                             |                                        | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01146-00002                            | 0.28      | 1.59               | 0.18  | 0.27 | 15        | < 0.2            | -                               | NC      | SC      | S     | -                                 | -      | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01164-00001                            | 0.29      | 1.65               | 0.18  | 0.27 | 14        | < 0.2            | -                               | NC      | SC      | S     | -                                 | -      | -      |
|                                             | Low-E4®<br>SmartSun™                   | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01152-00001                            | 0.28      | 1.59               | 0.18  | 0.27 | 15        | < 0.2            | -                               | NC      | SC      | S     | -                                 | -      | -      |
|                                             |                                        | No Grilles                                                  | AND-N-1-01147-00001                            | 0.27      | 1.53               | 0.21  | 0.49 | 18        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | -      | -      |
|                                             |                                        | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01147-00002                            | 0.27      | 1.53               | 0.19  | 0.44 | 17        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | -      | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01165-00001                            | 0.28      | 1.59               | 0.19  | 0.44 | 16        | < 0.2            | -                               | NC      | SC      | S     | Z1                                | -      | -      |
|                                             | Low-E4®<br>PassiveSun®                 | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01153-00001                            | 0.27      | 1.53               | 0.19  | 0.44 | 17        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | -      | -      |
|                                             |                                        | No Grilles                                                  | AND-N-1-01144-00001                            | 0.29      | 1.65               | 0.52  | 0.60 | 34        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | Z3     |
|                                             |                                        | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01144-00002                            | 0.29      | 1.65               | 0.48  | 0.54 | 31        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01162-00001                            | 0.29      | 1.65               | 0.48  | 0.54 | 31        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | -      |
|                                             | Low-E4®<br>w/ HeatLock™                | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01150-00001                            | 0.29      | 1.65               | 0.48  | 0.54 | 31        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | -      |
|                                             |                                        | No Grilles                                                  | AND-N-1-01246-00001                            | 0.24      | 1.36               | 0.31  | 0.53 | 28        | < 0.2            | N                               | NC      | -       | -     | Z1                                | Z2     | -      |
|                                             |                                        | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01246-00002                            | 0.24      | 1.36               | 0.28  | 0.48 | 26        | < 0.2            | N                               | NC      | -       | -     | Z1                                | Z2     | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01255-00001                            | 0.26      | 1.48               | 0.28  | 0.48 | 24        | < 0.2            | N                               | NC      | -       | -     | Z1                                | -      | -      |
|                                             | Low-E4®<br>SmartSun™<br>w/ HeatLock™   | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01249-00001                            | 0.24      | 1.36               | 0.28  | 0.48 | 26        | < 0.2            | N                               | NC      | -       | -     | Z1                                | Z2     | -      |
|                                             |                                        | No Grilles                                                  | AND-N-1-01247-00001                            | 0.24      | 1.36               | 0.21  | 0.48 | 22        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | Z2     | -      |
|                                             |                                        | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01247-00002                            | 0.24      | 1.36               | 0.19  | 0.43 | 21        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | Z2     | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01256-00001                            | 0.25      | 1.42               | 0.19  | 0.43 | 20        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | -      | -      |
|                                             | Low-E4®<br>PassiveSun®<br>w/ HeatLock™ | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01250-00001                            | 0.24      | 1.36               | 0.19  | 0.43 | 21        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | Z2     | -      |
|                                             |                                        | No Grilles                                                  | AND-N-1-01245-00001                            | 0.25      | 1.42               | 0.48  | 0.59 | 36        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | Z3     |
|                                             |                                        | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01245-00002                            | 0.25      | 1.42               | 0.44  | 0.53 | 34        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | Z3     |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01254-00001                            | 0.26      | 1.48               | 0.44  | 0.53 | 33        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | -      |
|                                             | Low-E4®<br>SmartSun™                   | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01248-00001                            | 0.25      | 1.42               | 0.44  | 0.53 | 34        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | Z3     |
|                                             |                                        | 2.2 Annealed Glass - w/ Grilles 1" or Greater               |                                                |           |                    |       |      |           |                  |                                 |         |         |       |                                   |        |        |
|                                             | Low-E4®                                | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01145-00003                            | 0.28      | 1.59               | 0.26  | 0.44 | 20        | < 0.2            | -                               | NC      | -       | -     | Z1                                | -      | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01169-00001                            | 0.29      | 1.65               | 0.26  | 0.44 | 19        | < 0.2            | -                               | NC      | -       | -     | -                                 | -      | -      |
|                                             |                                        | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01157-00001                            | 0.29      | 1.65               | 0.29  | 0.49 | 20        | < 0.2            | -                               | NC      | -       | -     | -                                 | -      | -      |
|                                             | Low-E4®<br>Sun                         | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01146-00003                            | 0.28      | 1.59               | 0.17  | 0.25 | 15        | < 0.2            | -                               | NC      | SC      | S     | -                                 | -      | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01170-00001                            | 0.29      | 1.65               | 0.17  | 0.25 | 13        | < 0.2            | -                               | NC      | SC      | S     | -                                 | -      | -      |
|                                             |                                        | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01158-00001                            | 0.30      | 1.70               | 0.18  | 0.27 | 13        | < 0.2            | -                               | NC      | SC      | S     | -                                 | -      | -      |
|                                             | Low-E4®<br>SmartSun™                   | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01147-00003                            | 0.27      | 1.53               | 0.18  | 0.40 | 17        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | -      | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01171-00001                            | 0.28      | 1.59               | 0.18  | 0.40 | 15        | < 0.2            | -                               | NC      | SC      | S     | -                                 | -      | -      |
|                                             |                                        | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01159-00001                            | 0.29      | 1.65               | 0.19  | 0.44 | 15        | < 0.2            | -                               | NC      | SC      | S     | -                                 | -      | -      |
|                                             | Low-E4®<br>PassiveSun®                 | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01144-00003                            | 0.29      | 1.65               | 0.43  | 0.49 | 29        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01168-00001                            | 0.29      | 1.65               | 0.43  | 0.49 | 29        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | -      |
|                                             |                                        | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01156-00001                            | 0.30      | 1.70               | 0.48  | 0.54 | 30        | < 0.2            | N                               | -       | -       | -     | Z1                                | Z2     | -      |
|                                             | Low-E4®<br>w/ HeatLock™                | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01246-00003                            | 0.24      | 1.36               | 0.26  | 0.43 | 25        | < 0.2            | N                               | NC      | -       | -     | Z1                                | Z2     | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01258-00001                            | 0.26      | 1.48               | 0.26  | 0.43 | 22        | < 0.2            | N                               | NC      | -       | -     | Z1                                | -      | -      |
|                                             |                                        | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01252-00001                            | 0.25      | 1.42               | 0.28  | 0.48 | 25        | < 0.2            | N                               | NC      | -       | -     | Z1                                | -      | -      |
|                                             | Low-E4®<br>SmartSun™<br>w/ HeatLock™   | Simulated Divided Lite or Installed Interior Removable      | AND-N-1-01247-00003                            | 0.24      | 1.36               | 0.17  | 0.39 | 20        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | Z2     | -      |
|                                             |                                        | Full Divided Lite                                           | AND-N-1-01259-00001                            | 0.25      | 1.42               | 0.17  | 0.39 | 19        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | -      | -      |
|                                             |                                        | Finelight™ (grilles-between-the-glass)                      | AND-N-1-01253-00001                            | 0.25      | 1.42               | 0.19  | 0.43 | 20        | < 0.2            | N                               | NC      | SC      | S     | Z1                                | -      | -      |

This information is for reference only.

Performance varies by unit size and options selected.

For specific unit performance information, please contact your dealer or Andersen Sales Representative.

# 400 SERIES CASEMENT & AWNING WINDOWS



## Casement Window Opening and Area Specifications

| Window Number | Clear Opening Area                                              |                                                       | Clear Opening in Full Open Position              |                                        |                       | Glass Area<br>Sq. Ft./ (m <sup>2</sup> ) | Vent Area                                                       |                                                       | Top of Subfloor<br>to Top of Inside<br>Sill Stop<br>Inches/(mm) | Overall Window<br>Area<br>Sq. Ft./ (m <sup>2</sup> ) |
|---------------|-----------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------|----------------------------------------|-----------------------|------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------|
|               | Hinge for Widest<br>Clear Opening<br>Sq. Ft./ (m <sup>2</sup> ) | Hinge with<br>Wash Mode<br>Sq. Ft./ (m <sup>2</sup> ) | Hinge for Widest<br>Clear Opening<br>Inches/(mm) | Hinge with<br>Wash Mode<br>Inches/(mm) | Height<br>Inches/(mm) |                                          | Hinge for Widest<br>Clear Opening<br>Sq. Ft./ (m <sup>2</sup> ) | Hinge with<br>Wash Mode<br>Sq. Ft./ (m <sup>2</sup> ) |                                                                 |                                                      |
| CR12          | —                                                               | 1.0 (0.09)                                            | —                                                | 7 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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 5/16" (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.

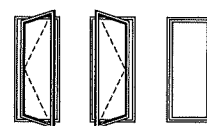
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**ANDERSEN™**  
 WINDOWS & DOORS

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

[illegible]

**Single windows only.**



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.

- "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.

• Dimensions in parentheses are in millimeters.

♦Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m<sup>2</sup>, clear opening width of 20" (508) and clear opening height of 24" (610) 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.

# 400 SERIES CASEMENT & AWNING WINDOWS

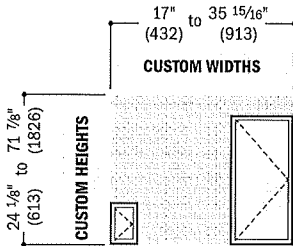


## Custom Sizes and Specification Formulas



Available in 1/8" (3) increments between minimum and maximum widths and heights. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. Some restrictions apply; contact your Andersen supplier. 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](http://andersenwindows.com/measure).

## Casement Windows (stationary and venting)



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

\* 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](http://andersenwindows.com/measure) for detailed instructions on how to properly measure for custom-size windows.

# 400 SERIES CASEMENT & AWNING WINDOWS

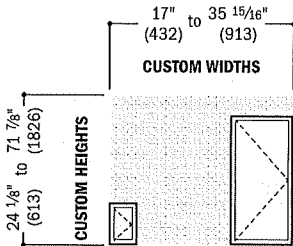


## Custom Sizes and Specification Formulas



Available in 1/8" (3) increments between minimum and maximum widths and heights. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. Some restrictions apply; contact your Andersen supplier. 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](http://andersenwindows.com/measure).

## Casement Windows (stationary and venting)



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

\* 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](http://andersenwindows.com/measure) for detailed instructions on how to properly measure for custom-size windows.