

# UNIVERSAL SERIES™ WINDOW WALL

Boasting the best of both worlds—cost savings and uncompromising performance—Cascadia's Universal Series™ Window Wall allows architects and specifiers to substantially improve the overall thermal performance of commercial and high-rise buildings without sacrificing glazing area.

Designed and manufactured in North America, the Universal Series features an innovative, commercial-grade fiberglass frame boasting 150% improved thermal performance compared to traditional aluminum windows.

- Custom sizes & configurations
- AW Performance Class designation (casements, awnings, fixed windows)
- Low-VOC standard & custom colors meet AAMA 625 performance criteria
- Double (one Low-E) & Triple (two Low-E)
- LBC Red-List Declared

# CASCADIA WINDOWS & DOORS

Universal Series™ Window Wall - Technical Data Sheet

## COMPONENT R-VALUES

### VISION GLASS

|   |  |   |  |
|---|--|---|--|
| <b>R-4.1</b><br>STANDARD DOUBLE GLAZING | <b>R-5.1</b><br>PREMIUM DOUBLE GLAZING | <b>R-7.1</b><br>STANDARD TRIPLE GLAZING | <b>R-7.7</b><br>PREMIUM TRIPLE GLAZING |
|---|--|---|--|

### OPAQUE GLASS

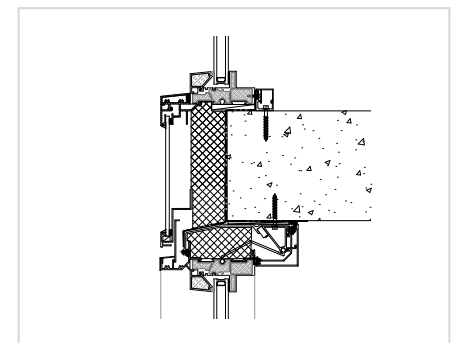
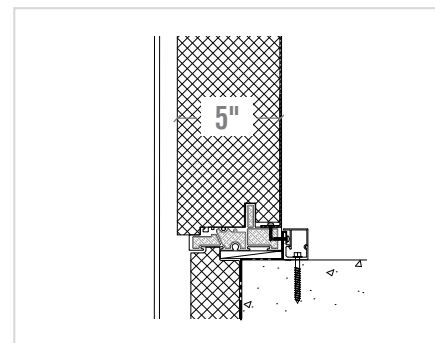
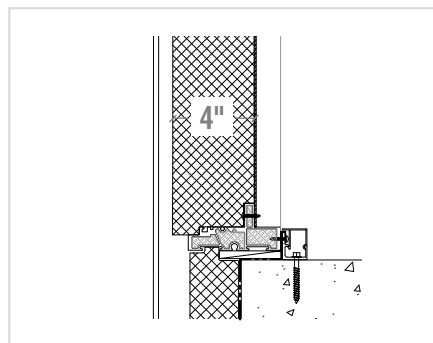
**SPANDREL -  
METAL BACKPAN (STANDARD)**  
4" INSULATION



**SPANDREL -  
METAL BACKPAN (PREMIUM) -**  
5" INSULATION



**SLAB BYPASS -  
STANDARD**



# CASCADIA WINDOWS & DOORS

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## DOUBLE GLAZED - NFRC THERMAL PERFORMANCE SUMMARY VISION AREAS



| WINDOWS & DOORS - DOUBLE GLAZED  |                      |      |      |  |          |        |            |              |
|--|----------------------|------|------|--|----------|--------|------------|--------------|
| LOW-E OPTIONS  | CENTER-OF-GLASS DATA |      |      | U <sub>w</sub> (U-VALUE OF WINDOW) PER NFRC METHOD [BTU/HR*FT <sup>2</sup> *F] |          |        |            |              |
| CARDINAL<br>(90% ARGON FILL, UNO)  | U <sub>g</sub>       | SHGC | VT   | FIXED  | CASEMENT | AWNING | SWING DOOR | SLIDING DOOR |
| <b>STANDARD DOUBLE GLAZED (ONE LOW-E ON SURFACE #2 OR #3 / STAINLESS STEEL SPACER)</b>           |                      |      |      |  |          |        |            |              |
| 180 (#3)   | 0.26                 | 0.68 | 0.79 | 0.26   | 0.25     | 0.25   | 0.24       | 0.24         |
| 272 (#2)   | 0.25                 | 0.41 | 0.72 | 0.25   | 0.24     | 0.24   | 0.23       | 0.24         |
| 270 (#2)   | 0.25                 | 0.37 | 0.70 | 0.25   | 0.24     | 0.24   | 0.23       | 0.23         |
| 366 (#2)   | 0.24                 | 0.27 | 0.65 | 0.24   | 0.24     | 0.24   | 0.23       | 0.23         |
| 452 (#2)   | 0.24                 | 0.22 | 0.51 | 0.24   | 0.24     | -      | 0.23       | 0.23         |
| 340 (#2)   | 0.25                 | 0.18 | 0.39 | 0.25   | 0.24     | 0.25   | 0.23       | 0.23         |
| <b>OPTIONS W/ CAPILLARY TUBES – AIR FILL (ONE LOW-E ON SURFACES #2 / STAINLESS STEEL SPACER)</b> |                      |      |      |  |          |        |            |              |
| 272 (#2)   | 0.30                 | 0.41 | 0.72 | 0.29   | 0.27     | 0.27   | 0.25       | 0.25         |
| <b>PREMIUM DOUBLE GLAZED (TWO LOW-E ON SURFACES #2 &amp; #4 / STAINLESS STEEL SPACER)</b>        |                      |      |      |  |          |        |            |              |
| 180/i89  | 0.21                 | 0.62 | 0.77 | 0.21   | 0.22     | -      | 0.20       | 0.21         |
| 272/i89  | 0.20                 | 0.41 | 0.70 | 0.21   | 0.21     | -      | 0.20       | 0.20         |
| 270/i89  | 0.20                 | 0.36 | 0.69 | 0.21   | 0.21     | -      | 0.20       | 0.20         |
| 366/i89  | 0.20                 | 0.27 | 0.63 | 0.20   | 0.21     | -      | 0.19       | 0.20         |
| 452/i89  | 0.19                 | 0.21 | 0.50 | 0.20   | 0.21     | -      | 0.19       | 0.20         |
| 340/i89  | 0.20                 | 0.17 | 0.38 | 0.20   | 0.21     | -      | 0.19       | 0.20         |

**NOTE:** Triple Glazed information can be found on page 4

# CASCADIA WINDOWS & DOORS

Universal Series™ Window Wall - Technical Data Sheet



## TRIPLE GLAZED - NFRC THERMAL PERFORMANCE SUMMARY VISION AREAS



| WINDOWS & DOORS - TRIPLE GLAZED   |                      |      |      |  |          |        |            |              |
|---|----------------------|------|------|--|----------|--------|------------|--------------|
| LOW-E OPTIONS   | CENTER-OF-GLASS DATA |      |      | U <sub>w</sub> (U-VALUE OF WINDOW) PER NFRC METHOD [BTU/HR*FT <sup>2</sup> *F] |          |        |            |              |
| CARDINAL<br>(90% ARGON FILL, UNO)   | U <sub>g</sub>       | SHGC | VT   | FIXED  | CASEMENT | AWNING | SWING DOOR | SLIDING DOOR |
| <b>STANDARD TRIPLE GLAZED (TWO LOW-E ON SURFACES #2 &amp; #5 / STAINLESS STEEL SPACER)</b>                |                      |      |      |  |          |        |            |              |
| 180/180   | 0.13                 | 0.56 | 0.70 | 0.15   | 0.17     | 0.17   | 0.15       | 0.15         |
| 272/180   | 0.13                 | 0.37 | 0.63 | 0.14   | 0.17     | 0.17   | 0.15       | 0.15         |
| 270/180   | 0.13                 | 0.33 | 0.62 | 0.14   | 0.17     | 0.17   | 0.15       | 0.15         |
| 366/180   | 0.13                 | 0.25 | 0.57 | 0.14   | 0.17     | 0.17   | 0.15       | 0.15         |
| 340/180   | 0.13                 | 0.16 | 0.34 | 0.14   | 0.17     | 0.17   | 0.15       | 0.15         |
| <b>OPTIONS W/ CAPILLARY TUBES – AIR FILL (TWO LOW-E ON SURFACES #2 &amp; #5 / STAINLESS STEEL SPACER)</b> |                      |      |      |  |          |        |            |              |
| 366/180   | 0.16                 | 0.25 | 0.57 | 0.17   | 0.18     | 0.18   | 0.17       | 0.17         |
| <b>STANDARD TRIPLE GLAZED (TWO LOW-E ON SURFACES #2 &amp; #5 / TRISEAL SUPER SPACER)</b>                  |                      |      |      |  |          |        |            |              |
| 180/180   | 0.13                 | 0.56 | 0.70 | 0.15   | 0.16     | 0.17   | 0.15       | 0.15         |
| 272/180   | 0.13                 | 0.37 | 0.63 | 0.14   | 0.16     | 0.16   | 0.14       | 0.14         |
| 270/180   | 0.13                 | 0.33 | 0.62 | 0.14   | 0.16     | 0.16   | 0.14       | 0.14         |
| 366/180   | 0.13                 | 0.25 | 0.57 | 0.14   | 0.16     | 0.16   | 0.13       | 0.13         |
| 340/180   | 0.13                 | 0.16 | 0.34 | 0.14   | 0.16     | 0.16   | 0.14       | 0.14         |
| <b>PREMIUM TRIPLE GLAZED (THREE LOW-E ON SURFACES #2, #4 &amp; #6 / STAINLESS STEEL SPACER)</b>           |                      |      |      |  |          |        |            |              |
| 180/180/i89   | 0.12                 | 0.53 | 0.68 | 0.13   | 0.16     | 0.16   | 0.14       | 0.14         |
| 272/180/i89   | 0.11                 | 0.36 | 0.62 | 0.13   | 0.16     | 0.16   | 0.14       | 0.14         |
| 270/180/i89   | 0.11                 | 0.32 | 0.60 | 0.13   | 0.16     | 0.16   | 0.14       | 0.14         |
| 366/180/i89   | 0.11                 | 0.24 | 0.56 | 0.13   | 0.16     | 0.16   | 0.13       | 0.13         |
| 340/180/i89   | 0.11                 | 0.15 | 0.33 | 0.13   | 0.16     | 0.16   | 0.14       | 0.14         |
| <b>PREMIUM TRIPLE GLAZED (THREE LOW-E ON SURFACES #2, #4 &amp; #6 / TRISEAL SUPER SPACER)</b>             |                      |      |      |  |          |        |            |              |
| 180/180/i89   | 0.12                 | 0.53 | 0.68 | 0.13   | 0.16     | 0.16   | 0.14       | 0.14         |
| 272/180/i89   | 0.11                 | 0.36 | 0.62 | 0.13   | 0.15     | 0.16   | 0.13       | 0.13         |
| 270/180/i89   | 0.11                 | 0.32 | 0.60 | 0.13   | 0.15     | 0.15   | 0.13       | 0.13         |
| 366/180/i89   | 0.11                 | 0.24 | 0.56 | 0.13   | 0.15     | 0.15   | 0.13       | 0.13         |
| 340/180/i89   | 0.11                 | 0.15 | 0.33 | 0.13   | 0.15     | 0.15   | 0.13       | 0.13         |

**NOTE:** Double Glazed information can be found on page 3

# CASCADIA WINDOWS & DOORS

Universal Series™ Window Wall - Technical Data Sheet



## NAFS KEY PERFORMANCE DATA - VISION AREAS

| WINDOWS  |                   |                      |                               |                             |                  |                           |                           |
|----------|-------------------|----------------------|-------------------------------|-----------------------------|------------------|---------------------------|---------------------------|
|          | TYPE              | TESTED SIZE [INCHES] | DESIGN WIND PRESSURE PSF (PA) | WATER INFILTRATION PSF (PA) | NAFS DESIGNATORS | AIR INFILTRATION [L/S*M2] | AIR EXFILTRATION [L/S*M2] |
| OUTSWING | CASEMENT          | 36" x 60"            | 60 (2880)                     | 15 (730)                    | AW-PG60-C        | 0.01                      | 0.06                      |
|          | CASEMENT          | 36" x 60"            | 60 (2880)                     | 15 (730)                    | CW-PG60-C        | 0.06                      | 0.02                      |
|          | AWNING            | 60" X 36"            | 60 (2880)                     | 15 (730)                    | AW-PG60-AP       | 0.05                      | 0.29                      |
|          | AWNING            | 84" x 36"            | 60 (2880)                     | 15 (730)                    | CW-PG60-AP       | 0.00                      | 0.00                      |
|          | AWNING            | 48" x 84"            | 55 (2640)                     | 15 (730)                    | CW-PG55-AP       | 0.01                      | 0.01                      |
| FIXED    | FIXED             | 76" x 120"           | 60 (2880)                     | 15 (730)                    | AW-PG60-FW       | 0.01                      | 0.01                      |
|          | FIXED             | 144" x 60"           | 100 (4800)                    | 15 (730)                    | CW-PG100-FW      | 0.00                      | 0.00                      |
|          | FIXED             | 102" x 84"           | 95 (4320)                     | 15 (730)                    | CW-PG95-FW       | 0.00                      | 0.00                      |
| DOORS    | OUTSWING (SINGLE) | 60" x 120"           | 40 (1920)                     | 15 (730)                    | CW-PG40-SHD      | 0.21                      | 0.18                      |
|          | OUTSWING (DOUBLE) | 96" x 108"           | 20 (960)                      | 15 (730)                    | R-PG20-SHD       |                           |                           |
|          | INSWING (SINGLE)  | 60" x 120"           | 45 (2160)                     | 15 (730)                    | R-PG45-DASHD     | 0.09                      | 0.03                      |
|          | INSWING (DOUBLE)  | 96" x 108"           | 35 (1680)                     | 15 (730)                    | R-PG35-SHD       | 0.02                      | 0.02                      |
|          | SLIDING           | 96" x 96"            | 45 (2160)                     | 15 (730)                    | CW-PG45-SD       | 0.05                      | 0.07                      |
|          | SLIDING (DOUBLE)  | 240" x 108"          | 20 (960)                      | 15 (730)                    | R-PG20-SD        | 0.01                      | 0.02                      |
|          | SLIDING (DOUBLE)  | 198" x 96"           | 30 (1440)                     | 15 (730)                    | CW-PG30-SD       | 0.00                      | 0.00                      |

**NOTE:** Dimensions above indicate NAFS performance tested sizes which may exceed common size limits available. For minimum/maximum sizes available, please consult Cascadia's Vent Size Charts.

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## ACOUSTIC PERFORMANCE

| WINDOWS   |                    |                 |     |      |
|---|--------------------|-----------------|-----|------|
|   | GLAZING            | SAMPLE SIZE     | STC | OITC |
| FIXED WINDOW (ASTM E90)                             | Double 6/4         | 47.25" x 59.00" | 34  | 28   |
| FIXED WINDOW (ASTM E90)                             | Triple 6Lami/4/6   | 47.25" x 59.00" | 37  | 27   |
| TILT & TURN (ASTM E90)                              | Double 6/4         | 47.25" x 59.00" | 35  | 28   |
| TILT & TURN (ASTM E90)                              | Triple 6Lami/4/6   | 47.25" x 59.00" | 37  | 28   |
| GLASS-ONLY (CALCULATED VALUES)<br>1" IGU NOMINAL    | Double 6/6         | Center-of-glass | 35  | 28   |
| GLASS-ONLY (CALCULATED VALUES)<br>1" IGU NOMINAL    | Double 6Lami/6     | Center-of-glass | 38  | 31   |
| GLASS-ONLY (CALCULATED VALUES)<br>1" IGU NOMINAL    | Double 6Lami/6Lami | Center-of-glass | 40  | 34   |
| GLASS-ONLY (CALCULATED VALUES)<br>1.25" IGU NOMINAL | Double 6/6         | Center-of-glass | 38  | 31   |
| GLASS-ONLY (CALCULATED VALUES)<br>1.25" IGU NOMINAL | Double 6Lami/6     | Center-of-glass | 39  | 32   |
| GLASS-ONLY (CALCULATED VALUES)<br>1.25" IGU NOMINAL | Double 6Lami/6Lami | Center-of-glass | 41  | 35   |