

# UNIVERSAL SERIES™ WINDOW WALL

Boasting the best of both worlds—cost savings and uncompromising performance—Cascade'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 (Metric)

## COMPONENT R-VALUES

### VISION GLASS

<b>R-4.1</b> STANDARD DOUBLE GLAZING	<b>R-5.1</b> PREMIUM DOUBLE GLAZING	<b>R-7.1</b> STANDARD TRIPLE GLAZING	<b>R-7.7</b> PREMIUM TRIPLE GLAZING
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### OPAQUE GLASS

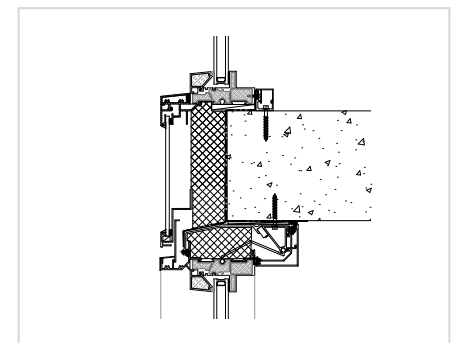
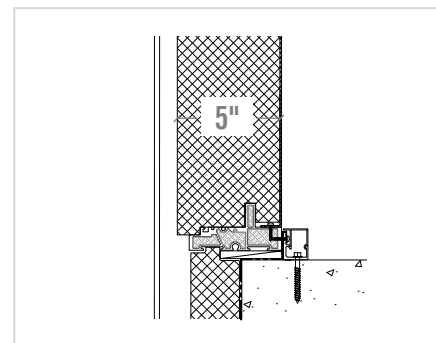
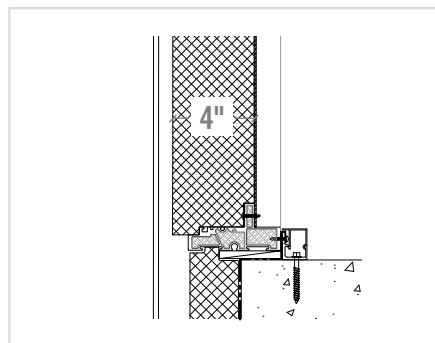
**SPANDREL -  
METAL BACKPAN (STANDARD)**  
4" INSULATION



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



**SLAB BYPASS -  
STANDARD**



# CASCADIA WINDOWS & DOORS

Universal Series™ Window Wall - Technical Data Sheet (Metric)



## 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 [W / M <sup>2</sup> -K]				
CARDINAL (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)	1.48	0.68	0.79	1.48	1.42	1.42	1.33	1.39
272 (#2)	1.42	0.41	0.72	1.42	1.36	1.39	1.29	1.35
270 (#2)	1.42	0.37	0.70	1.42	1.36	1.38	1.28	1.35
366 (#2)	1.36	0.27	0.65	1.36	1.36	1.36	1.26	1.32
452 (#2)	1.36	0.22	0.51	1.36	1.36	-	1.28	1.32
340 (#2)	1.36	0.18	0.39	1.42	1.36	1.37	1.27	1.33

OPTIONS W/ CAPILLARY TUBES – AIR FILL (ONE LOW-E ON SURFACES #2 / STAINLESS STEEL SPACER)								
272	1.70	0.41	0.72	1.65	1.53	1.53	0.75	1.53

PREMIUM DOUBLE GLAZED (TWO LOW-E ON SURFACES #2 & #4 / STAINLESS STEEL SPACER)								
180/i89	1.19	0.62	0.77	1.19	1.25	-	1.15	1.17
272/i89	1.14	0.41	0.70	1.19	1.19	-	1.12	1.15
270/i89	1.14	0.36	0.69	1.19	1.19	-	1.11	1.14
366/i89	1.14	0.27	0.63	1.14	1.19	-	1.10	1.12
452/i89	1.14	0.21	0.50	1.14	1.19	-	1.10	1.12
340/i89	1.14	0.17	0.38	1.14	1.19	-	1.11	1.13

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

# CASCADIA WINDOWS & DOORS

Universal Series™ Window Wall - Technical Data Sheet (Metric)



## 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 [W / M <sup>2</sup> -K]				
CARDINAL (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	0.74	0.56	0.70	0.85	0.97	0.96	0.85	0.85
272/180	0.74	0.37	0.63	0.79	0.97	0.95	0.84	0.84
270/180	0.74	0.33	0.62	0.79	0.97	0.95	0.84	0.84
366/180	0.74	0.25	0.57	0.79	0.97	0.94	0.83	0.83
340/180	0.74	0.16	0.34	0.79	0.97	0.94	0.83	0.83
<b>OPTIONS W/ CAPILLARY TUBES – AIR FILL (TWO LOW-E ON SURFACES #2 &amp; #5 / STAINLESS STEEL SPACER)</b>								
366/180	0.91	0.25	0.57	0.97	1.02	1.05	0.94	0.96
<b>STANDARD TRIPLE GLAZED (TWO LOW-E ON SURFACES #2 &amp; #5 / TRISEAL SUPER SPACER)</b>								
180/180	0.74	0.56	0.70	0.79	0.91	0.94	0.83	0.84
272/180	0.74	0.37	0.63	0.79	0.91	0.93	0.82	0.82
270/180	0.74	0.33	0.62	0.79	0.91	0.93	0.82	0.82
366/180	0.74	0.25	0.57	0.79	0.91	0.92	0.81	0.81
340/180	0.74	0.16	0.34	0.79	0.91	0.92	0.81	0.82
<b>PREMIUM TRIPLE GLAZED (THREE LOW-E ON SURFACES #2, #4 &amp; #6 / STAINLESS STEEL SPACER)</b>								
180/180/i89	0.68	0.53	0.68	0.74	0.91	0.91	0.78	0.78
272/180/i89	0.62	0.36	0.62	0.74	0.91	0.90	0.77	0.77
270/180/i89	0.62	0.32	0.60	0.74	0.91	0.90	0.77	0.77
366/180/i89	0.62	0.24	0.56	0.74	0.91	0.90	0.77	0.76
340/180/i89	0.62	0.15	0.33	0.74	0.91	0.90	0.77	0.77
<b>TRIPLE GLAZED (THREE LOW-E ON SURFACES #2, #4 &amp; #6 / TRISEAL SUPER SPACER)</b>								
180/180/i89	0.68	0.53	0.68	0.74	0.91	0.89	0.77	0.77
272/180/i89	0.62	0.36	0.62	0.74	0.85	0.88	0.76	0.76
270/180/i89	0.62	0.32	0.60	0.74	0.85	0.88	0.76	0.75
366/180/i89	0.62	0.24	0.56	0.74	0.85	0.87	0.75	0.75
340/180/i89	0.62	0.15	0.33	0.74	0.85	0.88	0.75	0.75

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

# CASCADIA WINDOWS & DOORS

Universal Series™ Window Wall - Technical Data Sheet (Metric)



## NAFS KEY PERFORMANCE DATA - VISION AREAS

TYPE		TESTED SIZE [MM]	DESIGN WIND PRESSURE PA (PSF)	WATER INFILTRATION PA (PSF)	NAFS DESIGNATORS	AIR INFILTRATION [L/s*M <sup>2</sup> ]	AIR EXFILTRATION [L/s*M <sup>2</sup> ]
OUTSWING	CASEMENT	1524 x 914	2880 (60)	730 (15)	AW-PG60-C	0.01	0.06
	CASEMENT	914 x 1524	2880 (60)	730 (15)	CW-PG60-C	0.06	0.02
	AWNING	1524 x 914	2880 (60)	730 (15)	AW-PG60-AP	0.05	0.29
	AWNING	2134 x 914	2880 (60)	730 (15)	CW-PG60-AP	0.00	0.00
	AWNING	1219 x 2134	2640 (55)	730 (15)	CW-PG55-AP	0.01	0.01
	AWNING	1930 x 1524	1680 (35)	730 (15)	CW-PG35-AP	0.00	0.00
FIXED	FIXED	1930 x 3048	2880 (60)	730 (15)	AW-PG60-FW	0.01	0.01
	FIXED	3658 x 1524	4800 (100)	730 (15)	CW-PG100-FW	0.00	0.00
	FIXED	2591 x 2134	4320 (95)	730 (15)	CW-PG95-FW	0.00	0.00
DOORS	OUTSWING (SINGLE)	1524 x 3048	1920 (40)	730 (15)	CW-PG40-SHD	0.21	0.18
	OUTSWING (DOUBLE)	2438 x 2743	960 (20)	730 (15)	R-PG20-SHD	0.21	0.18
	INSWING (SINGLE)	1524 x 3048	2160 (45)	730 (15)	R-PG45-DASHD	0.09	0.03
	INSWING (DOUBLE)	2438 x 2743	1680 (35)	730 (15)	R-PG35-SHD	0.02	0.02
	SLIDING (SINGLE)	2438 x 2438	2160 (45)	730 (15)	CW-PG45-SD	0.05	0.07
	SLIDING (DOUBLE)	6096 x 2743	960 (20)	730 (15)	R-PG20-SD	0.01	0.02
	SLIDING (DOUBLE)	5029 x 2438	30 (1440)	730 (15)	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.

Air Infiltration and Exfiltration tests the overall assembly at 75 Pa. All windows meet and surpass the US and Canadian air leakage performance requirements for A3/Fixed

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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) 1" IGU NOMINAL	Double 6/6	Center-of-glass	35	28
GLASS-ONLY (CALCULATED VALUES) 1" IGU NOMINAL	Double 6Lami/6	Center-of-glass	38	31
GLASS-ONLY (CALCULATED VALUES) 1" IGU NOMINAL	Double 6Lami/6Lami	Center-of-glass	40	34
GLASS-ONLY (CALCULATED VALUES) 1.25" IGU NOMINAL	Double 6/6	Center-of-glass	38	31
GLASS-ONLY (CALCULATED VALUES) 1.25" IGU NOMINAL	Double 6Lami/6	Center-of-glass	39	32
GLASS-ONLY (CALCULATED VALUES) 1.25" IGU NOMINAL	Double 6Lami/6Lami	Center-of-glass	41	35