

# Blossom Apartments

Specifications/ cut sheets of exterior elements for COA application: 6/14/2022

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# BOXIE SMALL WALL/CEILING



Featuring a thick, square polished pressed-glass shade suspended from a die-cast base, the modern Boxie's LED light source beautifully illuminates a space without calling attention to itself. It easily mounts to the ceiling or wall for ultimate flexibility.

## High quality LM80-tested LEDs

for consistent long-life performance and color

## Outstanding protection against the elements:

- Marine-grade powder coat finishes
- Stainless Steel mounting hardware
- Impact-resistant, UV stabilized frosted acrylic lensing

## Ceiling or wall mounting option

## SPECIFICATIONS

DELIVERED LUMENS	472.2 LED
WATTS	12 LED
VOLTAGE	120V, 277V (LED only)
DIMMING	ELV
LIGHT DISTRIBUTION	Symmetric
MOUNTING OPTIONS	Wall or Ceiling
CCT	3000K or 4000K
CRI	90+
COLOR BINNING	3 Step
BUG RATING	B1-U3-G1
DARK SKY	Compliant (Ceiling)
WET LISTED	IP65
GENERAL LISTING	ETL
CALIFORNIA TITLE 24	Can be used to comply with CEC 2016 Title 24 Part 6 for outdoor use. Registration with CEC Appliance Database not required.
START TEMP	-30°C
FIELD SERVICEABLE LED	No
CONSTRUCTION	Aluminum
HARDWARE	Stainless Steel
FINISH	Marine Grade Powder Coat
LED LIFETIME	L70; 70,000 Hours
WARRANTY*	5 Years
WEIGHT	4 lbs.



BOXIE SMALL  
shown in bronze



BOXIE SMALL  
shown in charcoal



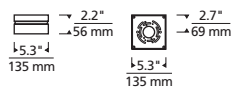
\* Visit [techlighting.com](http://techlighting.com) for specific warranty limitations and details.

## ORDERING INFORMATION

7000WBX	SHAPE	CRI/CCT	FINISH	VOLTAGE
	5 SMALL - 6"	930 90 CRI, 3000K 940 90 CRI, 4000K INC INCANDESCENT*	Z BRONZE H CHARCOAL	120 120V 277 277V

\*120V ONLY

# BOXIE SMALL WALL/CEILING



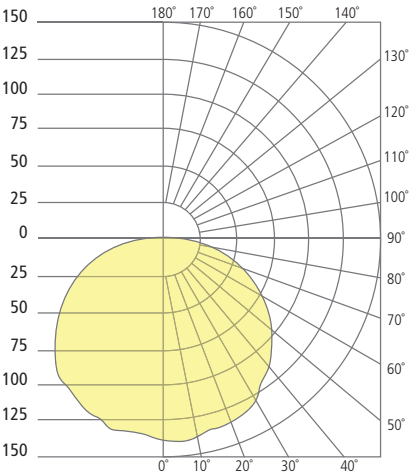
Boxie Small

## PHOTOMETRICS\*

\*For latest photometrics, please visit [www.techlighting.com/OUTDOOR](http://www.techlighting.com/OUTDOOR)

### BOXIE SMALL

Total Lumen Output: 472.2  
Total Power: 12  
Luminaire Efficacy: 39.35  
Color Temp: 2700K  
CRI: 90+  
BUG Rating: B1-U3-G1



## PROJECT INFO

FIXTURE TYPE & QUANTITY	JOB NAME & INFO	NOTES



GENERATION BRANDS  
7400 Linder Avenue, Skokie, Illinois 60077  
T 847.410.4400 F 847.410.4500



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# BOXIE LARGE WALL/CEILING



Featuring a thick, square polished pressed-glass shade suspended from a die-cast base, the modern Boxie's LED light source beautifully illuminates a space without calling attention to itself. It easily mounts to the ceiling or wall for ultimate flexibility.

## High quality LM80-tested LEDs

for consistent long-life performance and color

## Outstanding protection against the elements:

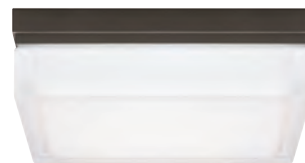
- Marine-grade powder coat finishes
- Stainless Steel mounting hardware
- Impact-resistant, UV stabilized frosted acrylic lensing

## Ceiling or wall mounting option

## SPECIFICATIONS

DELIVERED LUMENS	1192 LED
WATTS	23 LED
VOLTAGE	120V, 277V (LED only)
DIMMING	ELV
LIGHT DISTRIBUTION	Symmetric
MOUNTING OPTIONS	Wall or Ceiling
CCT	3000K or 4000K
CRI	90+
COLOR BINNING	3 Step
BUG RATING	B1-U3-G1
DARK SKY	Compliant (Ceiling)
WET LISTED	IP65
GENERAL LISTING	ETL
CALIFORNIA TITLE 24	Can be used to comply with CEC 2016 Title 24 Part 6 for outdoor use. Registration with CEC Appliance Database not required.
START TEMP	-30°C
FIELD SERVICEABLE LED	No
CONSTRUCTION	Aluminum
HARDWARE	Stainless Steel
FINISH	Marine Grade Powder Coat
LED LIFETIME	L70; 70,000 Hours
WARRANTY*	5 Years
WEIGHT	8 lbs.

\* Visit [techlighting.com](http://techlighting.com) for specific warranty limitations and details.



BOXIE LARGE  
shown in bronze



BOXIE LARGE  
shown in charcoal

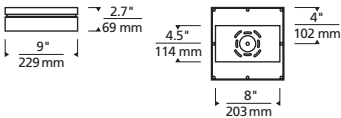


## ORDERING INFORMATION

7000WBX	SHAPE	CRI/CCT	FINISH	VOLTAGE
	L LARGE - 9"	930 90 CRI, 3000K 940 90 CRI, 4000K INC INCANDESCENT*	Z BRONZE H CHARCOAL	120 120V 277 277V

\*120V ONLY

# BOXIE LARGE WALL/CEILING

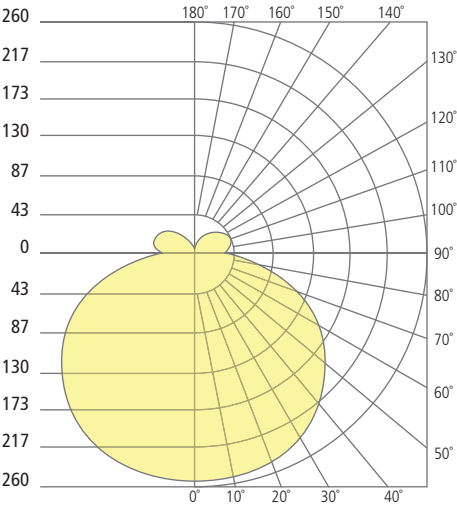


Boxie Large

## PHOTOMETRICS\*

\*For latest photometrics, please visit [www.techlighting.com/OUTDOOR](http://www.techlighting.com/OUTDOOR)

- BOXIE LARGE**  
Total Lumen Output: 1192  
Total Power: 23  
Luminaire Efficacy: 51.8  
Color Temp: 3000K  
CRI: 90+  
BUG Rating: B1-U3-G1



## PROJECT INFO

FIXTURE TYPE & QUANTITY	JOB NAME & INFO	NOTES

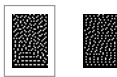


GENERATION BRANDS  
7400 Linder Avenue, Skokie, Illinois 60077  
T 847.410.4400 F 847.410.4500



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# Twilight



- Description
- Specifications
- Features
- Aesthetic Images

## Description

Like waning light, Twilight's backlit window transforms your outdoor lighting scheme from passable to poetry. Energy-efficient, long-lasting LEDs stationed inside bring reliable light from dusk until dawn.


- Where to Buy
- Downloads

## Specifications

Model	Color Temperature	Width	Height	Length	Voltage	Watts	Finish
WS-W5516	3000K	4"	16"	7"	120 VAC	23	BZ Bronze
WS-W5521	3000K	4"	21"	9"	120 VAC	32	BZ Bronze
WS-W5521	3000K	4"	21"	9"	120 VAC	32	BK Black
WS-W5516	3000K	4"	16"	7"	120 VAC	23	BK Black


## Features

- Aluminum hardware
- Up and down illumination
- No transformer or driver needed
- Dimmer: ELV
- CRI: 90



Hello, how may I help you?

Type and start





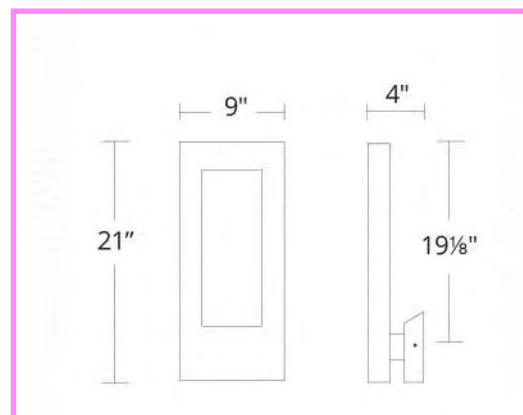
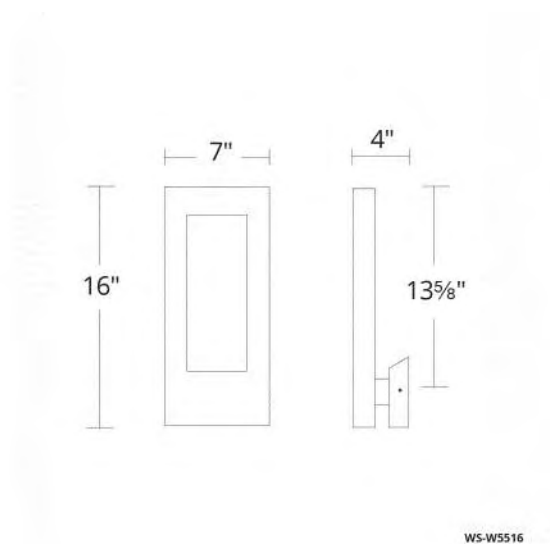
## CCT Chart



## Aesthetic Images



## Line Drawing



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Send us photos of your Modern Forms product in an application setting and we'll see about adding it to our site.

[Send Images](#)

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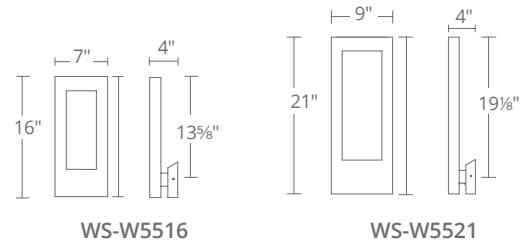


Fixture Type:

Catalog Number:

Project:

Location:



## PRODUCT DESCRIPTION

Waning light of day. Indirect LED illumination gives the illusion of twilight. Glare free illumination with ambient and down lighting for safety, security and architectural accent.

## FEATURES

- Weather-resistant powder coat
- Up and down illumination
- No transformer or driver needed
- Dimmer: ELV
- Rated Life: 54,000 hours
- Color temp: 3000K
- CRI: 90

## SPECIFICATIONS

**Construction:** Aluminum

**Light Source:** High output LED

**Finish:** Black (BK), Bronze (BZ)

**Standards:** ETL & cETL Wet Location listed, CEC Title 24 Compliant, IP65

## ORDER NUMBER

Model	Height	Wattage	Voltage	LED Lumens	Delivered Lumens	Finish
WS-W5516	16"	23W	120V	912	729	BK Black
WS-W5521	21"	32W	120V	1281	890	BZ Bronze

Example: WS-W5516-BZ

# Endurance Series

Commercial Mid-rise Windows Designed to Outlast the Rest

## Endurance—the Optimum in Mid-rise Performance

If you are building a mid-rise structure in the Western United States, you are probably specifying the *Endurance Series by VPI Quality Windows*. In a world where demanding specifications and uncompromising job site testing is the way of life, a commercially rated window is the only acceptable solution, as residential windows leave room for unwanted risk. VPI prides itself on superior product performance ratings in the lab and the field. These are the result of our engineering centric organization that is obsessive with safety, quality & customer service, day-in and day-out.

- Commercial profile design coupled with industry leading glazing system delivers the right balance of aesthetics & performance, at a great value
- Our manufacturing process is systematic, documented, controlled and constantly improving
- Structural performance & deflection are enhanced by commercial grade metal reinforcements interconnected throughout the window assembly
- Endless configuration possibilities with fixed, awning and/or casement windows, thanks to an intersecting integral bar system, all assembled within continuous frames – no mulling nightmares!
- Durable, co-extruded acrylic exterior finishes allow for color diversity without compromising structural and thermal performance
- Panel level window design that optimizes water intrusion and air infiltration/ex-filtration

*The evolution is complete for mid and high rise commercial and mixed use applications, the future belongs to the Endurance Series window system!*

***Specify the ideal mix of strength, energy performance and aesthetics with Endurance!***

**ENDURANCE**  
SERIES



VPI Quality Windows manufactures ENERGYSTAR® qualified products, that use less energy.

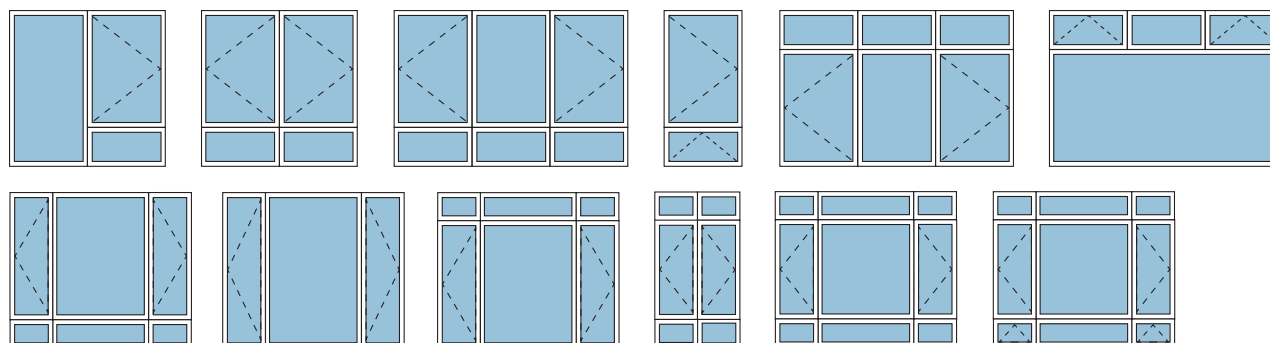
# Commercial-Rated Performance:

## Engineered for Mid-Rise Construction

PRODUCT	PERFORMANCE							
Casement/Awning	Test Size	AAMA	Infil	Exfil	Water	U-Factor*	SHGC*	VT*
Awning	46" x 32"	CW-PG60	<0.01	<0.01	9.20	0.26	0.18	0.42
Casement	36" x 60"	CW-PG70	<0.01	<0.01	10.66	0.26	0.18	0.42
Fixed	72" x 96"	CW-PG40	<0.01	<0.01	6.04	0.26	0.22	0.51
CPC	96" x 66"	CW-PG70	0.06	0.06	10.66	0.26	0.18	0.42
CPC-AT	108" x 96"	CW-PG40	0.16	0.11	6.04	0.26	0.18	0.42
CP-UT	72" x 78"	LC-PG60	<0.01	<0.01	9.20	0.26	0.18	0.42
Sliding	Test Size	AAMA	Infil	Exfil	Water	U-Factor	SHGC	VT
XO	71" x 56"	LC-PG50	0.08	0.07	7.52	0.28	0.22	0.51
XOX	108" x 66"	LC-PG50	0.05	0.04	7.52	0.28	0.22	0.51
XOXAT	108" x 96"	LC-PG50	0.05	0.04	7.52	0.28	0.22	0.51
SH	56" x 96"	CW-PG30	0.09	0.07	5.43	0.27	0.22	0.51
SH-AU	44" x 108"	LC-PG55	0.04	0.03	8.36	0.27	0.22	0.51
SH-PW-SH	108" x 96"	CW-PG30	0.06	0.05	6.90	0.27	0.22	0.51

\* Assumes Cardinal LoE 366

Some select configurations. Bring us your designs.



PRODUCT						
Window Type	Glass Configuration	Spacer Size	Argon	Lami	STC	OITC
AWN/CAS	1" - (1/4" - 0.030" - 1/2" AS - 1/4")	0.500	Yes	0.030	36	30
PW	1-3/8" - (1/4" - 0.030" - 13/16" AS - 9/32" - 0.060")	0.813	Yes	0.030/0.060	38	29
AWN-U	1-3/8" - (1/4" - 0.030" - 7/8" AS - 1/4" - 0.030")	0.875	Yes	0.030	41	33
XO	1" - (3/16" - 9/16" AS - 1/4" - 0.030")	0.563	Yes	0.030	36	29
SH	1" - (1/4" - 0.030" - 9/16" AS - 3/16")	0.563	Yes	0.030	35	29

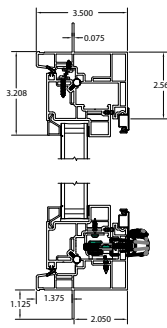
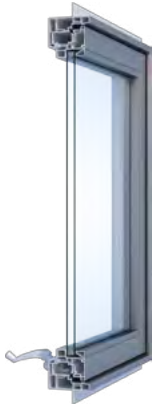
### Standard Configuration Features:

- **COMPRESSION-SEAL DESIGN** enhances protection against water intrusion, air infiltration, and allows ease of glass replacement
- **VINYL FRAMES** Increase thermal performance, add color options, and reduce condensation
- **FRAME AND SASH** have hollow compartments that allow for optimal reinforcement required in heavy commercial applications
- **FUSION WELDED CORNERS** provide environmental comfort and protect against leaks
- **AVAILABLE MULTIPLE LOCKING POINTS** ensure security and provide a triple weather seal for superior air and water resistance
- **EASY TO OPERATE HARDWARE** delivers a wide opening for emergency egress and cleaning
- **T-BAR** allows for freedom of design while maintaining structural and thermal performance

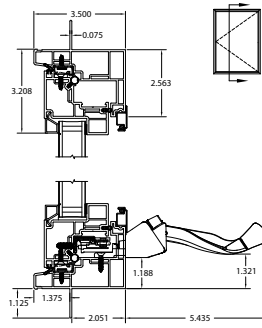
# Selected CAD Details

CAD files in DWG and PDF format and specifications for most products can be downloaded from [www.VPIwindows.com/cad](http://www.VPIwindows.com/cad)

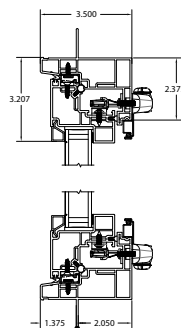
## Casement Awning 3½" Frame Depth



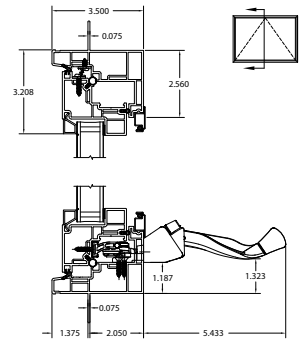
Casement Horizontal



Casement Vertical

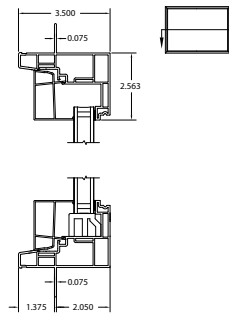


Awning Horizontal

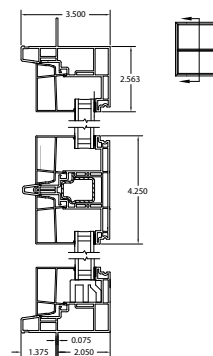


Awning Vertical

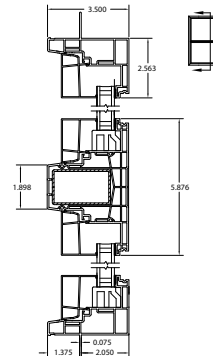
## Fixed Window 3½" Frame Depth



Picture Window Vertical  
Available with IGUs 3/4"–1-1/4"OA

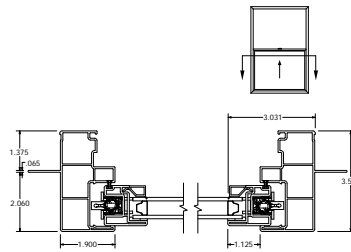


Picture Window Vertical  
with Narrow T-bar

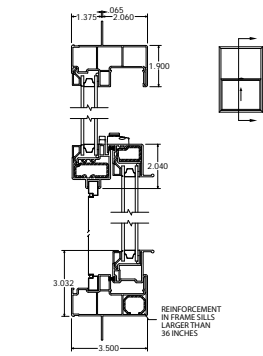


Picture Window Vertical  
with Wide T-bar

## Single Hung 3½" Frame Depth

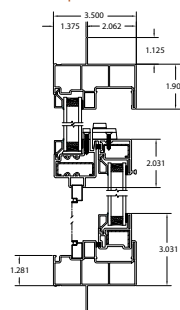
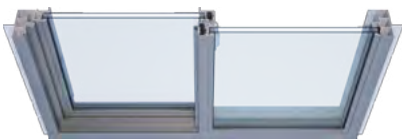


Single Hung Upper Horizontal Section

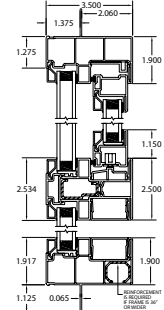


Single Hung Operable Vertical Section

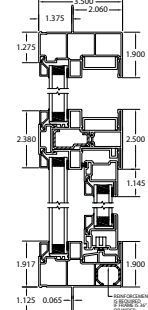
## Horizontal Slider 3½" Frame Depth



Horizontal Slider



Horizontal Slider  
Above Fixed



Horizontal Slider  
Below to Fixed

# Performance that Exceeds Expectations



## Just Ask Our Customers

*"VPI performance is better and more consistent than any of the vinyl window products we've used."*

*Lake Washington Windows.*

*"Thornton Place was the largest project to date for Walsh Seattle and was full of challenges. Your dedication and collaboration were instrumental... On behalf of a grateful Company, we thank you."*

*Walsh Construction.*

*"We are very satisfied with VPI. VPI window products demonstrate a blend of solid performance, high quality manufacturing and color options that are unique in the industry."*

*The Soltner Group, Architects Inc.*

## The Proof is in Our Performance

Backed by one of the strongest warranties in the business, including ten year seal failure coverage on most glass units, project owners can be confident that the Endurance Series™ will stand the test of time.



**ENDURANCE**  
SERIES

**vpi** Quality Windows

www.vpiwindows.com  
(800) 634-1478 | info@vpiwindows.com  
3420 E. Ferry, Spokane, WA 99202

# CARDINAL DOUBLE-PANE INSULATING GLASS PERFORMANCE DATA

3 mm / 13 mm airspace / 3 mm		Visible Light			SC	SHGC	Center of Glass U-Value BTU/(hr-ft <sup>2</sup> -°F)		Comfort Indoor Glass Temperature (°F)		UV Trans	Tdw ISO/CIE
Exterior Glass	Interior Glass	Trans- mittance	Reflectance Out	Reflectance In			Air	Argon	Winter	Summer		
Clear	Clear	82%	15%	15%	0.89	0.78	0.48	0.46	45	90	58%	75%
LoE-180® (#2)	Clear	79%	15%	15%	0.74	0.64	0.31	0.26	55	87	29%	63%
LoE <sup>2</sup> -272® (#2)	Clear	72%	11%	12%	0.47	0.41	0.30	0.25	56	84	16%	55%
LoE <sup>2</sup> -270® (#2)	Clear	70%	12%	13%	0.42	0.37	0.29	0.25	56	83	14%	53%
LoE <sup>3</sup> -366® (#2)	Clear	65%	11%	12%	0.31	0.27	0.29	0.24	56	83	5%	43%
LoE <sup>2</sup> -240® (#2)	Clear	40%	14%	10%	0.29	0.25	0.30	0.26	55	86	16%	35%
Clear	LoE-180® (#3)	79%	15%	15%	0.79	0.69	0.31	0.26	55	94	29%	63%
LoE <sup>2</sup> -180® (#2)	LoE-i89® (#4)	77%	15%	14%	0.72	0.62	0.24	0.21	46	105	27%	61%
LoE <sup>2</sup> -272® (#2)	LoE-i89® (#4)	70%	11%	11%	0.47	0.41	0.23	0.20	47	94	16%	53%
LoE <sup>2</sup> -270® (#2)	LoE-i89® (#4)	69%	12%	12%	0.41	0.36	0.23	0.20	47	93	14%	51%
LoE <sup>3</sup> -366® (#2)	LoE-i89® (#4)	63%	11%	11%	0.31	0.27	0.23	0.20	48	90	5%	41%
LoE <sup>2</sup> -240® (#2)	LoE-i89® (#4)	39%	14%	10%	0.28	0.24	0.24	0.21	47	95	15%	34%
Green	Clear	75%	13%	14%	0.69	0.60	0.48	0.45	45	99	34%	63%
Green	LoE <sup>2</sup> -180® (#3)	71%	13%	15%	0.57	0.50	0.31	0.26	55	92	16%	53%
Green	LoE <sup>2</sup> -272® (#3)	66%	10%	10%	0.48	0.42	0.30	0.25	56	97	11%	48%
Green	LoE <sup>2</sup> -270® (#3)	64%	11%	12%	0.45	0.39	0.29	0.24	56	97	10%	46%
Green	LoE <sup>3</sup> -366® (#3)	59%	10%	10%	0.40	0.35	0.29	0.24	56	100	3%	38%
Green	LoE <sup>2</sup> -240® (#3)	37%	9%	14%	0.48	0.42	0.30	0.26	55	117	10%	30%
Gray	Clear	57%	9%	13%	0.70	0.60	0.48	0.45	45	95	32%	50%
Gray	LoE <sup>2</sup> -180® (#3)	53%	9%	14%	0.56	0.49	0.31	0.26	55	93	17%	42%
Gray	LoE <sup>2</sup> -272® (#3)	50%	8%	9%	0.43	0.38	0.30	0.25	56	96	10%	38%
Gray	LoE <sup>2</sup> -270® (#3)	48%	8%	11%	0.40	0.35	0.29	0.25	56	97	9%	37%
Gray	LoE <sup>3</sup> -366® (#3)	45%	8%	10%	0.34	0.29	0.29	0.24	56	99	3%	30%
Gray	LoE <sup>2</sup> -240® (#3)	28%	7%	14%	0.44	0.38	0.30	0.26	55	116	9%	24%
Bronze	Clear	61%	10%	13%	0.72	0.62	0.48	0.45	45	94	31%	51%
Bronze	LoE <sup>2</sup> -180® (#3)	59%	10%	14%	0.61	0.53	0.31	0.26	55	93	17%	44%
Bronze	LoE <sup>2</sup> -272® (#3)	54%	8%	10%	0.45	0.39	0.30	0.25	56	96	10%	39%
Bronze	LoE <sup>2</sup> -270® (#3)	52%	9%	11%	0.42	0.36	0.29	0.25	56	97	9%	37%
Bronze	LoE <sup>3</sup> -366® (#3)	48%	8%	10%	0.35	0.31	0.29	0.24	56	99	3%	30%
Bronze	LoE <sup>2</sup> -240® (#3)	30%	8%	14%	0.46	0.40	0.30	0.26	55	117	9%	25%

## Notes:

- 1) Data was calculated using Window 6.3 computer program with NFRC 100-2010 environmental conditions.
- 2) Calculations based on 13 mm (1/2") airspace, 3 mm (1/8") glass, and 90% Argon gas fill level.
- 3) Comfort Indoor Glass Temperatures are for the center portion of the glass.

- 4) The UV Transmittance is determined as an average for wavelengths 310 -380 nm.
- 5) UV Damage Weighted Transmittance (Tdw) is the weighted average for wavelengths 300 - 700 nm (based on CIE 89/3).



**CARDINAL IG**  
A CARDINAL GLASS INDUSTRIES COMPANY

ENGINEERING THE FUTURE OF INSULATING GLASS

775 Prairie Center Drive, Eden Prairie, MN 55344 CARDINALCORP.COM

# Trifab™ VG (VersaGlaze™) — Interior Storefront

Trifab™ VG 450, 451 & 451T (Thermal) Framing Systems &

Trifab™ 451UT (Ultra Thermal) Framing System — Exterior Storefront

Design + Performance Versatility with  
Unmatched Fabrication Flexibility



Preston Pointe, Louisville, KY  
Architect: Potter & Associates Architects PLLC, Louisville, KY  
Glazing Contractor: Kentucky Mirror & Plate Glass Company, Louisville, KY

Trifab™ VersaGlaze™ is built on the proven and successful Trifab™ platform – with all the versatility its name implies. There are enough framing system choices, fabrication methods, design options and performance levels to please the most discerning building owner, architect and installer. The Trifab™ VersaGlaze™ family's newest addition, Trifab™ 451UT (Ultra Thermal) framing system, is designed for the most demanding thermal performance and employs a "dual" Isolock™ Thermal Break.

## Aesthetics

Trifab™ VersaGlaze™ framing systems offer designers a choice of front-, center-, back- or multi-plane glass applications. Structural silicone glazing (SSG) and Weatherseal glazing options further expand the designers' choices, allowing for a greater range of design possibilities for specific project requirements and architectural styles. All systems have a 4-1/2" frame depth – Trifab™ VersaGlaze™ 450 has 1-3/4" sightlines, while Trifab™ VersaGlaze™ 451/451T and Trifab™ 451UT have 2" sightlines.

With seamless incorporation of Kawneer entrances or windows, including GLASSvent™ visually frameless ventilators, Trifab™ VersaGlaze™ can be used on almost any project. These framing systems can also be packaged with Kawneer curtain walls and overhead glazing, thereby providing a full range of proven, and tested, quality products for the owner, architect and installer from a single source supplier.

## Economy

Trifab™ VersaGlaze™ 450/451/451T framing systems offer four fabrication choices to suit your project (Trifab™ 451UT available as screw spline fabrication only):

- **Screw Spline** – for economical continuous runs utilizing two piece vertical members that provide the option to pre-assemble units with controlled shop labor costs and smaller field crews for handling and installation.
- **Shear Block** – for punched openings or continuous runs using tubular moldings with shear block clips that provide tight joints for transporting large pre-assembled multi-lite units.
- **Stick** – for fast, easy field fabrication. Field measurements and material cuts can be done when metal is on the job.
- **Type B** – Same fabrication benefits as shear block except head and sill run through.

All systems can be flush glazed from either the inside or outside. The Weatherseal option provides an alternative to SSG vertical mullions for Trifab™ VersaGlaze™ 450/451/451T. This ABS/ASA rigid polymer



Brighton Landing, Cambridge, MA  
Architects: ADD Inc., Cambridge, MA  
Glazing Contractors: Ipswich Bay Glass Company, Inc., Rowley, MA

extrusion allows complete inside glazing and creates a flush glass appearance on the building exterior without the added labor of scaffolding or swing stages. Additionally, High-Performance (HP) Flashing options are engineered to eliminate perimeter sill fasteners and associated blind seals.

## For the Finishing Touch

Architectural Class I anodized aluminum finishes are available in clear and Permanodic™ color choices.

Painted finishes, including fluoropolymer, that meet AAMA 2605 are offered in many standard choices and an unlimited number of specially designed colors.

Solvent-free powder coatings add the green element with high performance, durability and scratch resistance that meet the standards of AAMA 2604.

## Performance

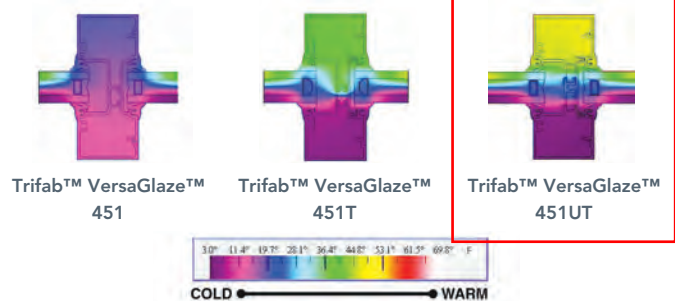
Kawneer's Isolock™ Thermal Break process creates a composite section, prevents dry shrinkage and is available on Trifab™ VersaGlaze™ 451T. For even greater thermal performance, a "dual" Isolock™ Thermal Break is used on Trifab™ 451UT.



Trifab™ 451UT uses a "dual" Isolock™ Thermal Break (right) and features a new HP (High Performance) sill design, which incorporates a screw-applied end dam (left), ensuring positive engagement and tight joints between the sill flashing and end dam.

U-factor, CRF values and STC ratings for Trifab™ VersaGlaze™ vary depending upon the glass plane application. Project specific U-factors can be determined for each individual project. (See the Kawneer Architectural Manual or Kawneer.com for additional information).

Thermal simulations showing temperature variations from exterior/cold side to interior/warm side.

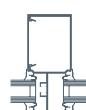


## PERFORMANCE TEST STANDARDS

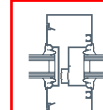
Air Infiltration	ASTM E 283
Water	AAMA 501, ASTM E 331
Structural	ASTM E 330
Thermal	AAMA 1503
Thermal Break	AAMA 505, AAMA TIR-A8
Acoustical	AAMA 1801, ASTM E 1425

## Trifab™ VersaGlaze™ 450/451/451T glazing options

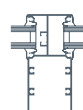
(note: Trifab™ 451UT available as center set glass plane only).



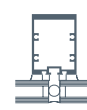
Front



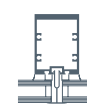
Center



Back



SSG



Weatherseal



Multi-Plane

Kawneer Company, Inc.  
Technology Park / Atlanta  
555 Guthridge Court  
Norcross, GA 30092

kawneer.com  
770 . 449 . 5555

**KAWNEER**  
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190, 350 AND 500 STANDARD ENTRANCES



# Single-Source Packages Generate Versatile First Impressions



Curtis Culwell Center  
Garland, Texas

ARCHITECT

HKS, Inc., Dallas, Texas

GLAZING CONTRACTOR

B & B Glass, Inc., Dallas, Texas

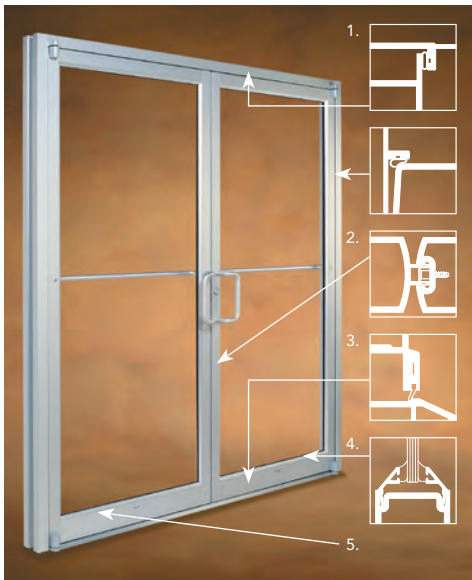
PHOTOGRAPHER

© Blake Marvin – HKS

Tough yet attractive, Kawneer's Standard Entrances are designed as a single-source package of door, door frame and hardware that is easily adaptable to custom requirements. Designed to complement new or remodel construction as well as modern or traditional architecture, they are engineered, constructed and tested to make a good first impression while withstanding the rigors of constant use by occupants and visitors.

## PERFORMANCE

To resist both lever arm and torsion forces that constantly act on any door, all three entrances feature welded corner construction with Sigma deep penetration and fillet welds plus mechanical fastenings at each corner – a total of 16 welds per door. Each door corner comes with a limited lifetime warranty, good for the life of the door under normal use. It is transferable from building owner to owner and is in addition to the standard two-year warranty covering material and workmanship of each Kawneer door.



1. Thermoplastic elastomer weatherstrip in blade stop of frame jams, header or transom bar.
2. Integral polymeric fin attached to adjustable astragal, creating an air barrier between pairs of doors.
3. Optional surface-applied bottom weatherstrip with flexible blade gasket. Extruded raised lip on threshold to provide continuous contact for bottom weatherstrip.
4. Standard 1/4" beveled glass stops to sheet water and dirt off without leaving residue.
5. Available in all finishes offered by Kawneer.

## GENERAL

- Heights vary up to 10'; widths range from approximately 3' to 4'
- Door frame face widths range to a maximum of 4", while depths range to 6"
- Door operation is single- or double-acting with maximum security locks or touch bar panics standard
- Architect's classic 1" round, bent bar push/pull hardware is available in various finishes and sizes
- Infills range from under 1/4" to more than 1"

## FOR THE FINISHING TOUCH

Architectural Class I anodized aluminum finishes are available in clear and Permanodic™ color choices.

Painted finishes, including fluoropolymer, that meet AAMA 2605 are offered in many standard choices and an unlimited number of specially designed colors.

Solvent-free powder coatings add the "green" element with high performance, durability and scratch resistance that meet the standards of AAMA 2604.

## ECONOMY

Kawneer's Sealair™ bulb neoprene weatherstripping forms a positive seal around the door frame and provides a substantial reduction in air infiltration, resulting in improved comfort and economies in heating and cooling costs. The system is wear- and temperature-resistant and replaces conventional weatherproofing. The bottom weatherstrip at the interior contains a flexible blade gasket to meet and contact the threshold, enhancing the air and water infiltration performance characteristics.

## 190 NARROW STILE ENTRANCE

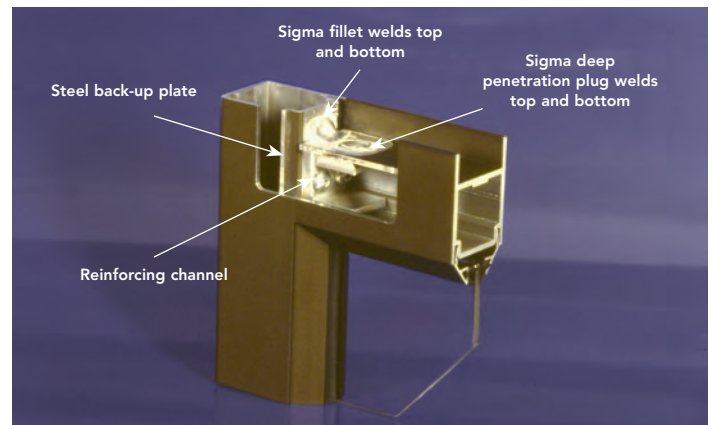
- Is engineered for moderate traffic in applications such as stores, offices and apartment buildings
- Vertical stile measures 2-1/8", top rail 2-1/4" and bottom rail 3-7/8"
- Results in a slim look that meets virtually all construction requirements

## 350 MEDIUM STILE ENTRANCE

- Provides extra strength for applications such as schools, institutions and other high-traffic applications
- Vertical stiles and top rails measure 3-1/2"
- Bottom rail measures 6-1/2" for extra durability

## 500 WIDE STILE ENTRANCE

- Creates a monumental visual statement for applications such as banks, libraries and public buildings
- Vertical stiles and top rail measures 5"; bottom rail measures 6-1/2"
- Results in superior strength for buildings experiencing heavy traffic conditions



250T/350T/500T INSULPOUR™ THERMAL ENTRANCES

Exterior Storefront  
Doors



# Redefining Thermal Entrances with IsoPour™ Technology



Ask more from your door, and get it all with Kawneer's new Insulpour™ Thermal Entrances, featuring IsoPour™ technology. This innovative product offering gives architects, developers, owners, and glazing contractors the ability to create a true thermally broken entrance system. It's an ideal solution for high-end commercial and multifamily facilities looking to improve thermal control in common areas with moderate to high traffic.

By merging industry-proven pour and debridge and polymer isolator technologies, Kawneer's IsoPour™ Thermal Break technology creates thermally broken assemblies for enhanced building energy efficiencies with higher structural performance. Insulpour™ Thermal Entrances simultaneously provide additional design flexibility through multiple door cross-rail and bottom rail choices along with dual finish capabilities for the door and door frame.

### PERFORMANCE, STRENGTH & SECURITY

The door and frame both leverage IsoPour™ Thermal Break technology, enabling high thermal performance. Specifically aimed at quelling concerns about cold spots and thermal bridging from architects and specifiers, Insulpour™ Thermal Entrances feature a true thermally broken door header, which significantly mitigates the formation of condensation when used with a concealed overhead closer.

For added strength, the 2-1/4" (57.2 mm) deep door has a stout 1/8" (3.2 mm) wall thickness, and the dual-welded corner construction of Insulpour™ Thermal Entrances adds long-term performance. Each door corner comes with a limited lifetime warranty, good for the life of the door under normal use operation. It is transferable from building owner to owner and is provided in addition to the standard two-year warranty covering material and workmanship of each Kawneer door.

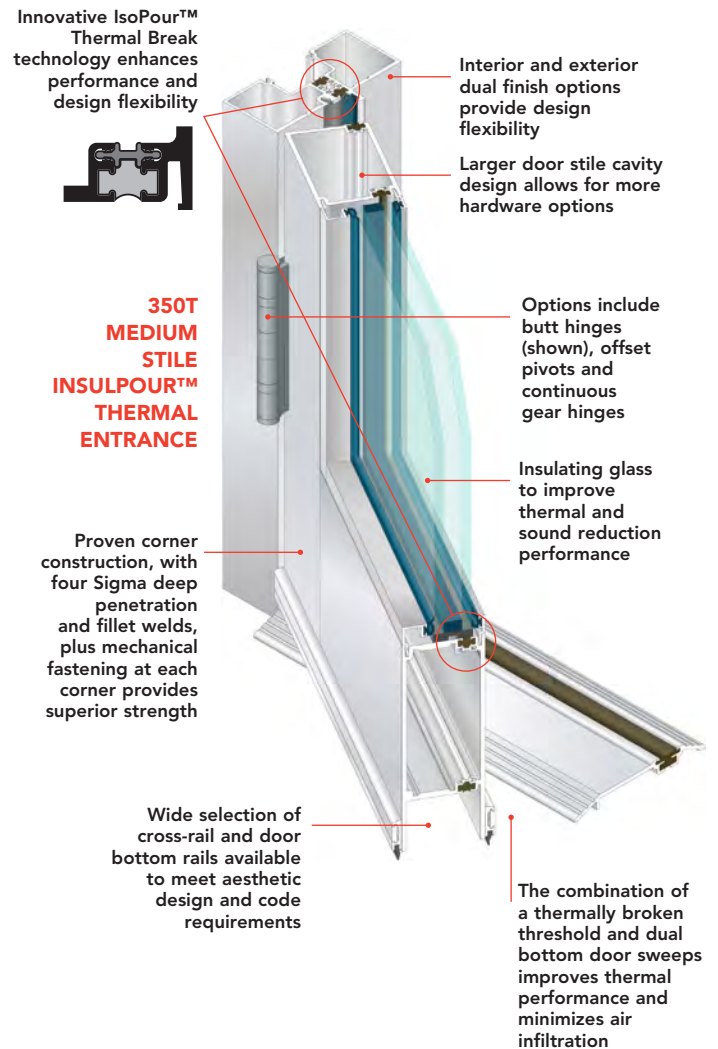
Insulpour™ Thermal Entrances meet ASTM E1996 hurricane impact resistant requirements up to Zone 4 and Level D, and have undergone shock tube testing for blast mitigation. Contact your local Kawneer sales representative for limitations and specific application requirements.

### AESTHETICS & DESIGN FLEXIBILITY

With sightlines that match standard, non-thermally broken entrances, Insulpour™ Thermal Entrances offer 250T narrow, 350T medium and 500T wide stile options.

	VERTICAL STILE	TOP	BOTTOM RAIL
250T Narrow Stile	2-1/2" (63.5 mm)	2-15/16" (74.6 mm)	3-7/8" (98.4 mm)
350T Medium Stile	3-1/2" (88.9 mm)	3-1/2" (88.9 mm)	6-1/2" (165.1 mm)
500T Wide Stile	5" (127 mm)	5" (127 mm)	6-1/2" (165.1 mm)

The unique thermal break design allows for a wider choice of locking option hardware than previous thermal entrance designs. Coupled with various cross-rail sizes and multiple bottom rail heights of 7-1/2", 10" and 12", Insulpour™ Thermal Entrances give architects, designers and building owners more opportunities to bring their vision to life.



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trademarks of Kawneer Company, Inc.

Kawneer Company, Inc.  
Technology Park / Atlanta

555 Guthridge Court  
Norcross, GA 30092

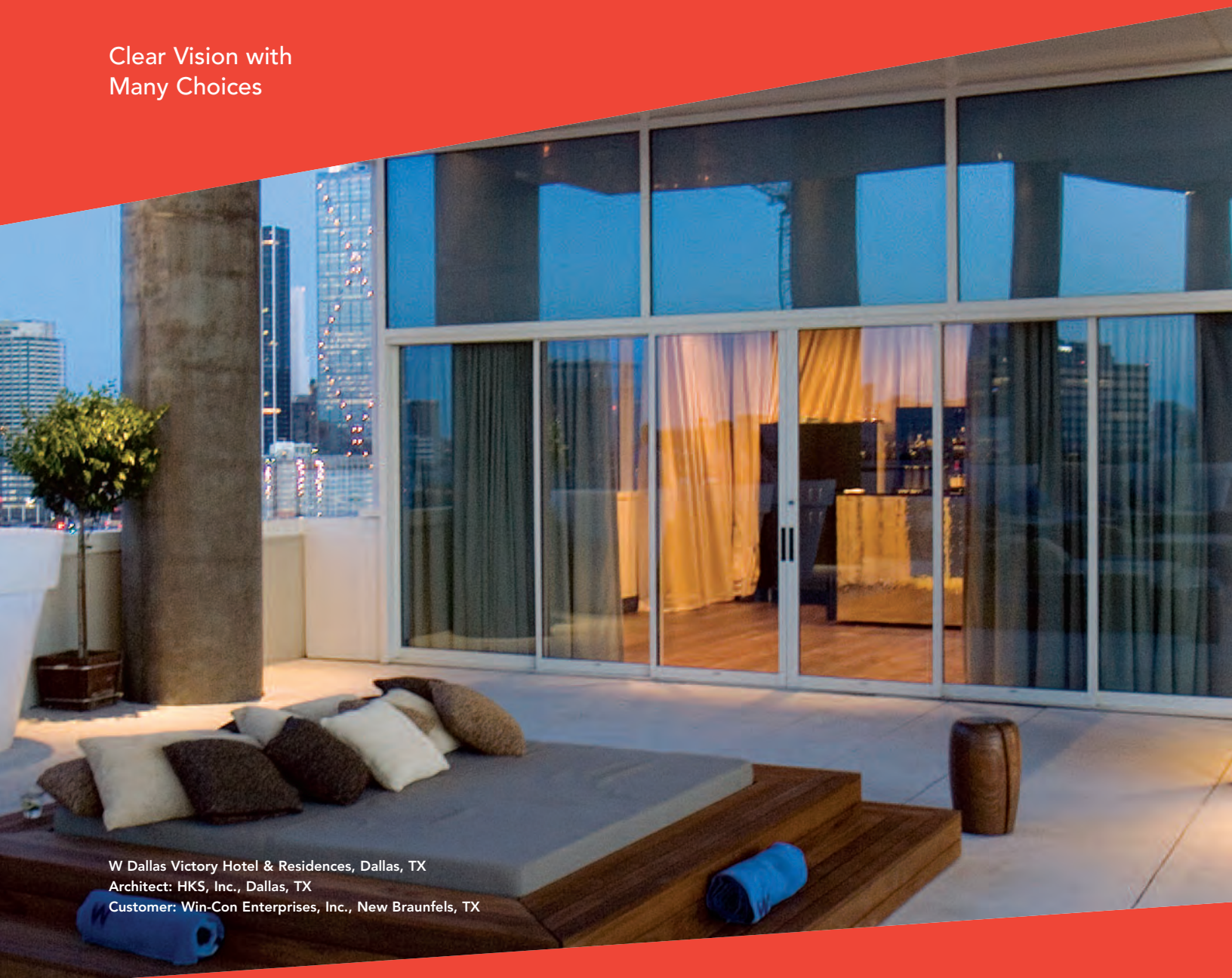
770.449.5555  
kawneer.com



ARCHITECTURAL SYSTEMS | ENTRANCES + FRAMING | CURTAIN WALLS | WINDOWS

# 1010 and 1040 Sliding Mall Fronts

Clear Vision with  
Many Choices

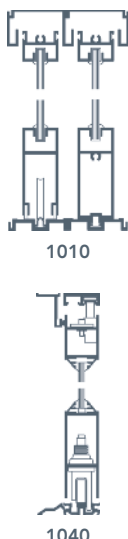


W Dallas Victory Hotel & Residences, Dallas, TX  
Architect: HKS, Inc., Dallas, TX  
Customer: Win-Con Enterprises, Inc., New Braunfels, TX

For single and multi-track, interior and exterior applications, Kawneer Sliding Mall Fronts meet almost any construction or design requirements. They are available with both fixed and operable panels and accept glazing infills from less than 1/4" up to 1" (6.4 to 25.4). Panel sizes are product specific, but generally heights range from approximately 7' to 12' (2134 to 3658) and widths range from 3' to 8' (914 to 2438).

The 1010 Sliding Mall Front has a low-profile multi-track that can be recessed or surface applied. Its parallel stacking is ideal for such interior applications as enclosed shopping malls, sliding room dividers, educational partitions and sound control panels. Movable panels can be stacked in line behind a wall, a fixed end panel or in an adjacent pocket. Standard quality features such as adjustable steel ball bearing tandem roller assemblies and a maximum-security Adams Rite hook-bolt cylinder lock provide unequaled value with price economy.

The **1040 Sliding Mall Front** is a single-track unit with three stacking options – parallel staggered, parallel even and perpendicular 90 degree – for both interior and exterior applications such as enclosed shopping malls, movable walls and sliding room dividers. The single-track, combined with the concealed or remote staking operation, allows optimum use of valuable front space while providing an uncluttered, wide-open appearance. The heavy-duty aluminum framing permits the use of larger panel sections with maximum structural integrity. Welded Dual Moment corner construction with four Sigma deep penetration and fillet welds, and additional mechanical fastening all provide one of the strongest door constructions in the industry. Other standard features include cast manganese bronze track diverters, needle-bearing caster assemblies and Adams Rite maximum-security cylinder locks. The low-profile track may be either recessed or surface applied, and a draining track with gutter is available for exterior applications.



### For the Finishing Touch

Architectural Class I anodized aluminum finishes are available in clear and Permanodic® color choices.

Painted finishes, including fluoropolymer, that meet or exceed AAMA 2605 are offered in many standard choices and an unlimited number of specially-designed colors.

Solvent-free powder coatings add the “green” element with high performance, durability and scratch resistance that meet the standards of AAMA 2604.

**Note:** Numbers in parentheses ( ) are millimeters unless otherwise noted.



**Target Center (Timberwolves Arena), Minneapolis, MN**  
**Architect:** KMR Architects, Ltd., Minneapolis, MN  
**Glazing Contractor:** Gateway ACG, Inc., St. Paul, MN



**Fort Worth Outlet Square, Tandy Industries, Fort Worth, TX**  
**Architect:** KVG Gideon Toal, Fort Worth, TX  
**Glazing Contractor:** Guardian Storefronts, Red Oak, TX

Kawneer Company, Inc.  
 Technology Park / Atlanta  
 555 Guthridge Court  
 Norcross, GA 30092

[kawneer.com](http://kawneer.com)  
 770 . 449 . 5555

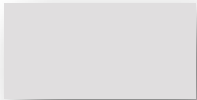
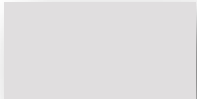


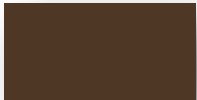


 **KAWNEER**  
 AN ALCOA COMPANY



### Kawneer Anodize finishes

Kawneer gives you a wide variety of anodized finishes with attractive alternatives. The benefit of a durable, anodized finish is married to the beauty of some very dynamic and exciting colors.

At the start of every design, there's a choice of how you want to finish. Contact your Kawneer sales rep for the information on these and other finishes available from Kawneer.

	KAWNEER FINISH NO.	COLOR	ALUMINUM ASSOCIATION SPECIFICATION	OTHER COMMENTS
	#14	CLEAR	AA-M10C22A41	Architectural Class I (.7 mils minimum)
	#17	CLEAR	AA-M10C22A31	Architectural Class II (.4 mils minimum)
	#18	CHAMPAGNE	AA-M10C22A44	Architectural Class I (.7 mils minimum)
	#26	LIGHT BRONZE	AA-M10C22A44	Architectural Class I (.7 mils minimum)
	#28	MEDIUM BRONZE	AA-M10C22A44	Architectural Class I (.7 mils minimum)
	#40	DARK BRONZE	AA-M10C22A44	Architectural Class I (.7 mils minimum)
	#29	BLACK	AA-M10C22A44	Architectural Class I (.7 mils minimum)

# Custom C.I.™

COMMERCIAL | RESIDENTIAL



*Custom C.I.™ is the largest windloaded aluminum and glass overhead sectional door available on the market.*

It was designed to meet the needs of large openings where it can be manufactured up to a maximum width of 30'-2" wide. Since 1958, ArmRLite has been consistently manufacturing the Custom C.I.™ Model and has never compromised on the quality of our doors. Because of this, ArmRLite is able to produce replacement sections for any of our welded models, regardless of purchase date.

- Maximum Width of 30'-2"
- Windload Available
- 20-Year Welded Frame Warranty\*
- Lifetime Residential Warranty\*

MATERIAL	6063-T6 Alloy
CONSTRUCTION METHOD	Heli-Arc Welding
TOP RAIL	4½" or 7½"
BOTTOM RAIL	4½" or 7½"
END STILES	3⅜", 4½" or 7½"
CENTER STILES	3⅜"
MEETING RAILS	3⅞" wide per pair
FRAME THICKNESS	1¾"

\*Except the top section when trolley operated.



## Custom Garage Door Options

Due to our exclusive welded construction, ArmRLite's aluminum overhead sectional doors are capable of the highest degree of customization. Many of the options listed below are exclusive to ArmRLite due to our superior construction method.



### GLASS GLAZING OPTIONS

DSB / Annealed  
Tempered / Safety  
Acrylic  
Laminated  
Insulated  
Hurricane / Impact

Acoustical\*  
Frosted  
Tinted  
Polycarbonate  
Custom

#### GLASS THICKNESS:

1/8" non-insulated  
1/4" non-insulated  
7/16" insulated  
5/8" insulated  
1" insulated



### INTERIOR PANEL OPTIONS

**Solid**

Perforated

Stamped Panel Designs

Operable / Inoperable Louvers

Insulated

Mesh

Custom Panels



### FINISH OPTIONS

**Anodized Finishes:** The standard finish is clear anodized aluminum. Optional anodized finishes include **dark bronze** and black anodized in stock for an upgrade. Custom Anodized finishes are available such a champagne bronze, medium bronze, ETC. Anodized finishes are the most resilient in corrosive environments. Includes a 20-year finish warranty except on installations within 1 mile of saltwater.

**Fluoropon® Finishes:** Upgrade option featuring hundreds of colors including metallic and non-metallic options. Custom color matches are also available upon request. Includes a 20-year finish warranty except on installations within 1 mile of saltwater.

**RAL Powdercoat:** Upgrade option featuring over 150 color choices to be selected from RAL color chart. Includes a 1-year finish warranty except on installations within 1 mile of saltwater.

**Faux Wood:** Upgrade option featuring 6 faux wood finishes. Includes a 10-year warranty except on installations within 1 mile of saltwater.



### CUSTOM OPTIONS

Step-Over Pass Door/ADA Pass Door\*

Sloping Bottom

Awning Windows

Mail Slots

Energy Efficiency Package

Motor or Manual Operation

Corrosion Resistant Package

High Cycle Springs

Exhaust Ports

Matching Transoms, Side Lites, Entrance Doors and gates

\*Please consult with ArmRLite regarding limitations.

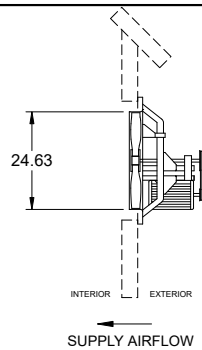


## Model: SBE-3H24-10

Sidewall Belt Drive Fan

Motor Access From Ext. of Bldg.

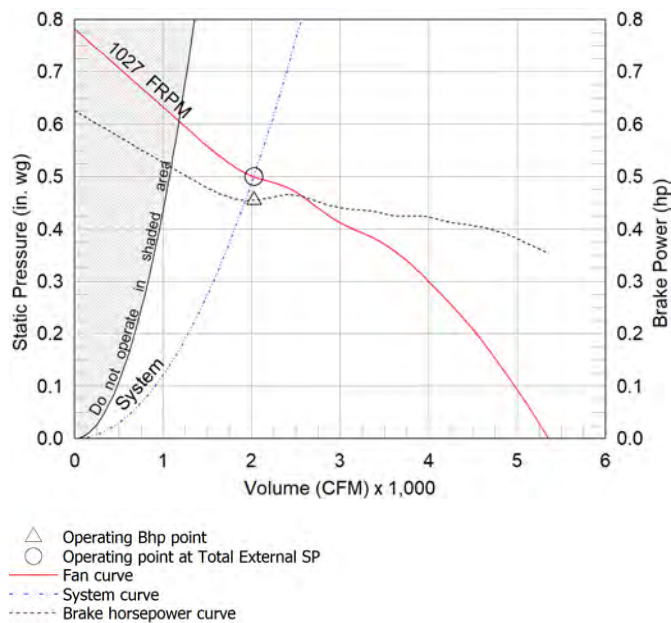
Dimensional	
Quantity	2
Weight w/o Acc's (lb)	92
Weight w/ Acc's (lb)	92
Max T Motor Frame Size	145
Wall Opening (in.)	26.5 x 26.5



Performance	
Requested Volume (CFM)	2,025
Actual Volume (CFM)	2,025
Total External SP (in. wg)	0.5
Fan RPM	1027
Operating Power (hp)	0.46
Elevation (ft)	30
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Drive Loss (%)	8.8
Tip Speed (ft/min)	6,451
Static Eff. (%)	38

Motor	
Motor Mounted	Yes
Size (hp)	1
Voltage/Cycle/Phase	208/60/3
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	NEMA Premium
Windings	1
NEC FLA* (Amps)	4.6

MOTOR AND DRIVES EXPOSED TO WEATHER CONDITIONS  
PROTECTION FROM WEATHER IS REQUIRED AND PROVIDED BY OTHERS



### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	80	80	80	79	76	72	68	64	81	70	17.4

### Notes:

All dimensions shown are in units of in.  
\*NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2014. Actual motor FLA may vary, for sizing thermal overload, consult factory.  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International  
Sones - calculated using AMCA 301 at 5 ft  
The motor provided on this fan is inverter ready and meets NEMA MG1 Part 31.4.4.2





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## Model: SBE-3H24-10

### Sidewall Belt Drive Fan

Tags: SPF-1 SPF-2

#### Standard Construction Features:

- Galvanized steel fan panel - Die formed, galvanized steel drive frame assembly
- Fabricated steel propeller for Levels 1 and 2, welded and painted steel for Level 3
- Adjustable motor pulley - Ball bearing motors - Fan shaft mounted in ball bearing pillow blocks - Static resistant belts - Corrosion resistant fasteners

#### Selected Options & Accessories:

NEMA Premium Efficient Motor - meets NEMA Table 12-12

Motor VFD Rated without Shaft Grounding Protection

UL/cUL 705 Listed - "Power Ventilators"

Airflow Direction: Supply

Motor Access: From Ext. of Bldg.

Bearings with Grease Fittings

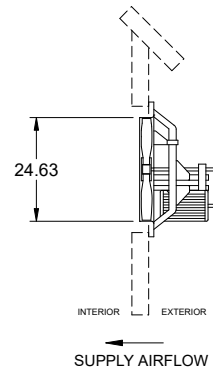
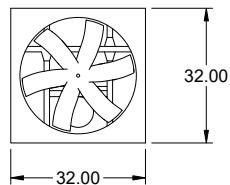
Unit Warranty: 1 Yr (Standard)



## Assembly Drawing

Type: Sidewall Belt Drive Fan

DRAWING VIEWED FROM INTERIOR



MOTOR AND DRIVES EXPOSED TO WEATHER CONDITIONS

WALL OPENING 26.5 SQ.

MOTOR IS ACCESSIBLE FROM EXTERIOR OF BUILDING

THIS IS A SUPPLY FAN DUE TO MOTOR ORIENTATION

MOTOR AND DRIVES EXPOSED TO WEATHER CONDITIONS

PROTECTION FROM WEATHER IS REQUIRED AND PROVIDED BY OTHERS

THIS FAN CAN POTENTIALLY CARRY RAIN OR SNOW INTO THE BUILDING

PROTECTION FROM WEATHER IS REQUIRED AND PROVIDED BY OTHERS

Notes: All dimensions shown are in units of in..

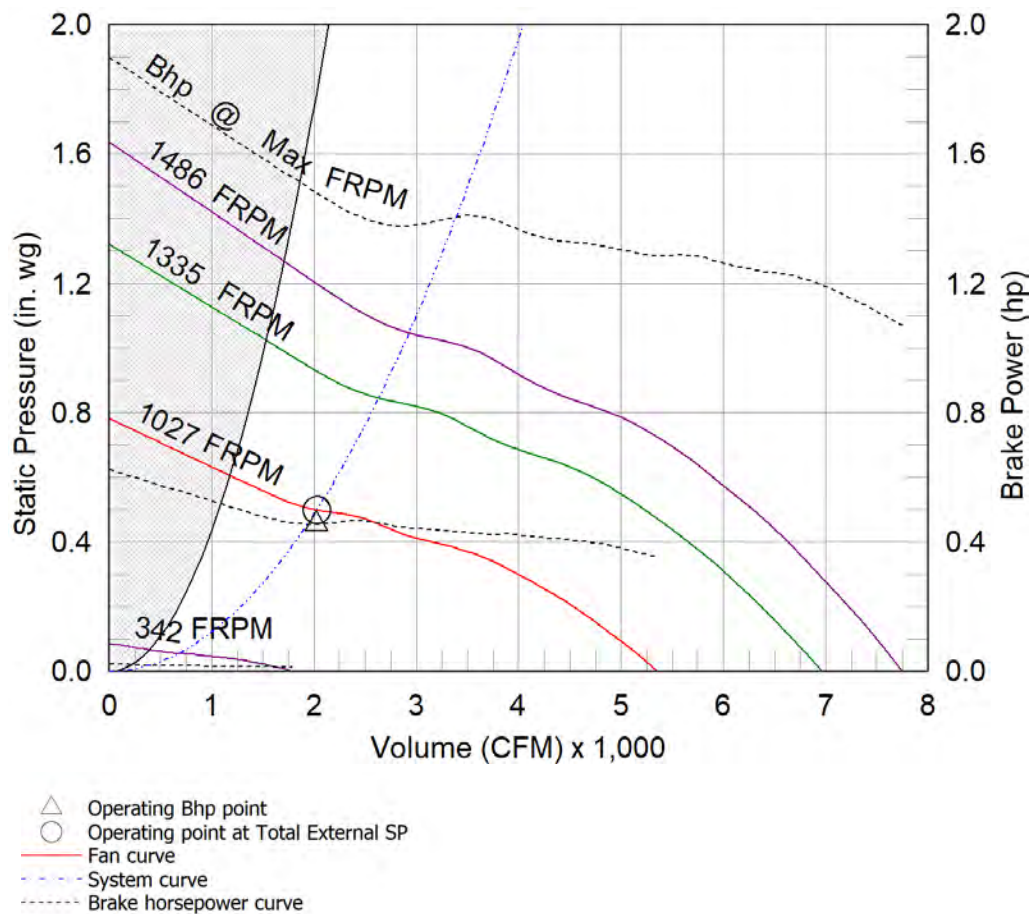


## SBE-3H24-10

## Min/Max Fan Curve

**Performance**

Requested Volume (CFM)	Actual Volume (CFM)	Total External SP (in. wg)	Fan RPM	Operating Power (hp)
2,025	2,025	0.5	1027	0.46





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## Warranty

### 1 Yr (Standard)

WARRANTY AND LIABILITY: SELLER warrants to Buyer that products manufactured are free from defects in material and workmanship for a period of 1 Yr (Standard) from the date of shipment. SELLER's obligations and liabilities under this warranty are limited to furnishing FOB factory or warehouse at SELLER's designated shipping point, freight allowed to Buyer's city, (or point of export for shipments outside the conterminous United States) replacement equipment (or at the option of SELLER parts therefore) for all Seller's products not conforming to this warranty and which have been returned to the manufacturer. No liability whatever shall attach to SELLER until said products have been paid for and such liability shall be strictly limited to the purchase price of the equipment shown to be defective. Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by SELLER prove defective during this period, they should be returned to the nearest authorized motor service station. SELLER will not be responsible for any removal or installation costs. Electrical components, excluding motors, are warranted only to the extent warranted by the original manufacturer. To the extent that SELLER is entitled to pass through a warranty of the original equipment manufacturer of the electrical goods sold, SELLER will pass through such warranties to Buyer. The legal remedies described in this Warranty are the sole exclusive remedy of Buyer. SELLER MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED, REGARDING ITS PRODUCTS, OR ITS SELECTION AND APPLICATION, INCLUDING, BUT NOT LIMITED TO, COMPLIANCE WITH BUILDING CODES, SAFETY CODES, LAWS, MERCHANTABILITY OR FITNESS OR A PARTICULAR PURPOSE. This warranty is extended solely to the Buyer. It is nontransferable and non-assignable, and the Buyer shall not permit or authorize its employees, agents, representatives or customers to claim, represent or imply that this limited warranty extends or is available to anyone other than the Buyer. ANY MISUSE, NEGLIGENCE, FAILURE TO FOLLOW INSTRUCTIONS OR MANUALS OF INSTALLATION OF MAINTENANCE REPAIR, SERVICE, RELOCATION OR ALTERATION TO OR OF, OR OTHER TAMPERING WITH, THE PRODUCTS PERFORMED BY ANY PERSON OR ENTITY OTHER THAN SELLER WITHOUT SELLER'S PRIOR WRITTEN APPROVAL OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY SELLER, SHALL IMMEDIATELY VOID AND CANCEL ALL WARRANTIES WITH RESPECT TO THE AFFECTED PRODUCTS. THE WARRANTY AND LIABILITY SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES WHETHER IN CONTRACT OR IN NEGLIGENCE, EXPRESSED OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. SELLER PROVIDES NO INDEPENDENT WARRANTY FOR THIRD PARTY PRODUCTS OR COMPONENTS SOLD TOGETHER OR INCORPORATED WITH SELLER'S PRODUCT(S). THE SELLER HAS THE RIGHT TO SETTLE ANY AND ALL DISPUTES REGARDING THE WARRANTY.



## AMCA



AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) includes transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to sone ratings only.



Performance	
Quantity	1
Volume (CFM)	11,784
Total External SP (in. wg)	1.055
Total TP (in. wg)	1.22
Operating Power (hp)	2.69
Required Power (hp)	2.69
Fan RPM	1170
Elevation (ft)	30
Start-up Temp.(F)	70
Operating Temp.(F)	70

Fan Configuration	
Size	90
Arrangement	4
Discharge Position	Horizontal
Mounting	Base Mount
Material Type	Steel
Casing Style	Vane Section
Impeller Material	Aluminum

Equipment Weights	
Fan (LMD)(lb)	530
Motor/Drive (lb)	294
Accessories (lb)	36

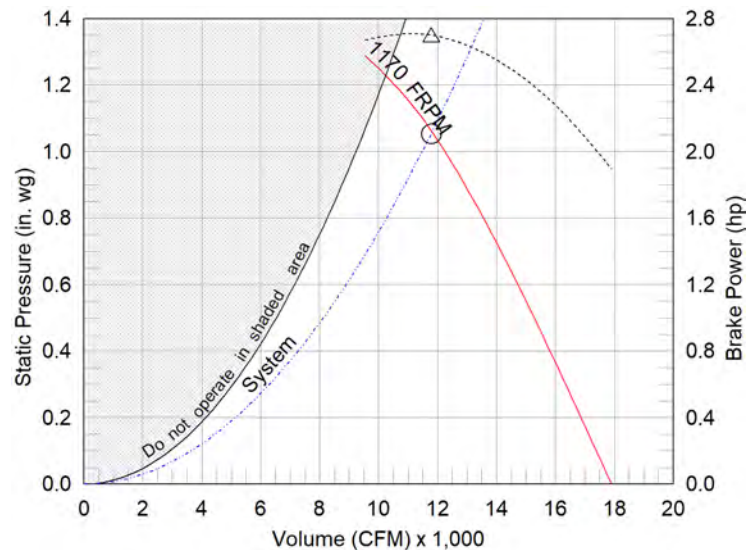
Misc Fan Data	
FEG	80
Outlet Velocity (ft/min)	1,633
Static Efficiency (%)	73
Tip Speed (ft/min)	11,143

Motor and Drives	
Motor	Included
Size (hp)	7 1/2
RPM	1170
Enclosure	TEFC
V/C/P	208/60/3
Frame Size	254T
Max Frame Size	326

## Model: AX-90-275-0615-B75

### Medium Pressure Axial Direct Drive

#### Operating Performance



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve
- | Min. Damper Volume

#### Static Pressure Calculations

External SP	1 in. wg
Direct Drive RPM Static Adj	0.055 in. wg
Total External SP	1.055 in. wg

#### Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA
Inlet	86	87	88	88	85	81	76	72	90	78

LwA - A weighted sound power level, based on ANSI S1.4

dBA - A weighted sound pressure level, based on 11.5 dB attenuation per octave band at 5 ft. dBA levels are not licensed by AMCA International





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## Model: AX-90-275-0615-B75

Medium Pressure Axial Direct Drive

### Standard Construction Features:

CASING: Continuously welded heavy gauge steel coated with Permator coating - Inlet and outlet flanges with mounting holes - Corrosion resistant fasteners - Motor support rigidly formed and welded to the casing

PROPELLER: Cast aluminum airfoil blade and hub - Manually adjustable blade pitch

### Selected Options & Accessories:

NEMA Premium Efficient Motor - meets NEMA Table 12-12

Motor VFD Rated without Shaft Grounding Protection

Motor with Class B or Greater Insulation

Extended Motor Leads

Coating - Permator, Concrete Gray-RAL 7023, Fan and Attached Accessories

UL/cUL-705 - "Power Ventilators"

Bolt-on Straightening Vane Section

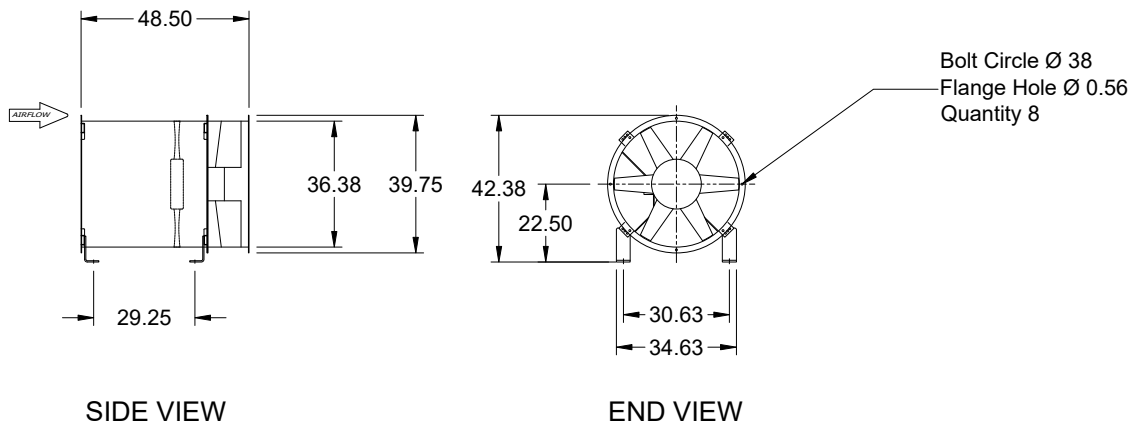
Mounting Support - Universal

Unit Warranty: 1 Yr (Standard)



Model: AX-90-275-0615-B75

Medium Pressure Axial Direct Drive



0.69 DIA. MOUNTING HOLES  
END VIEW SHOWS FROM OUTLET END OF UNIT

Notes: All dimensions shown are in units of in.

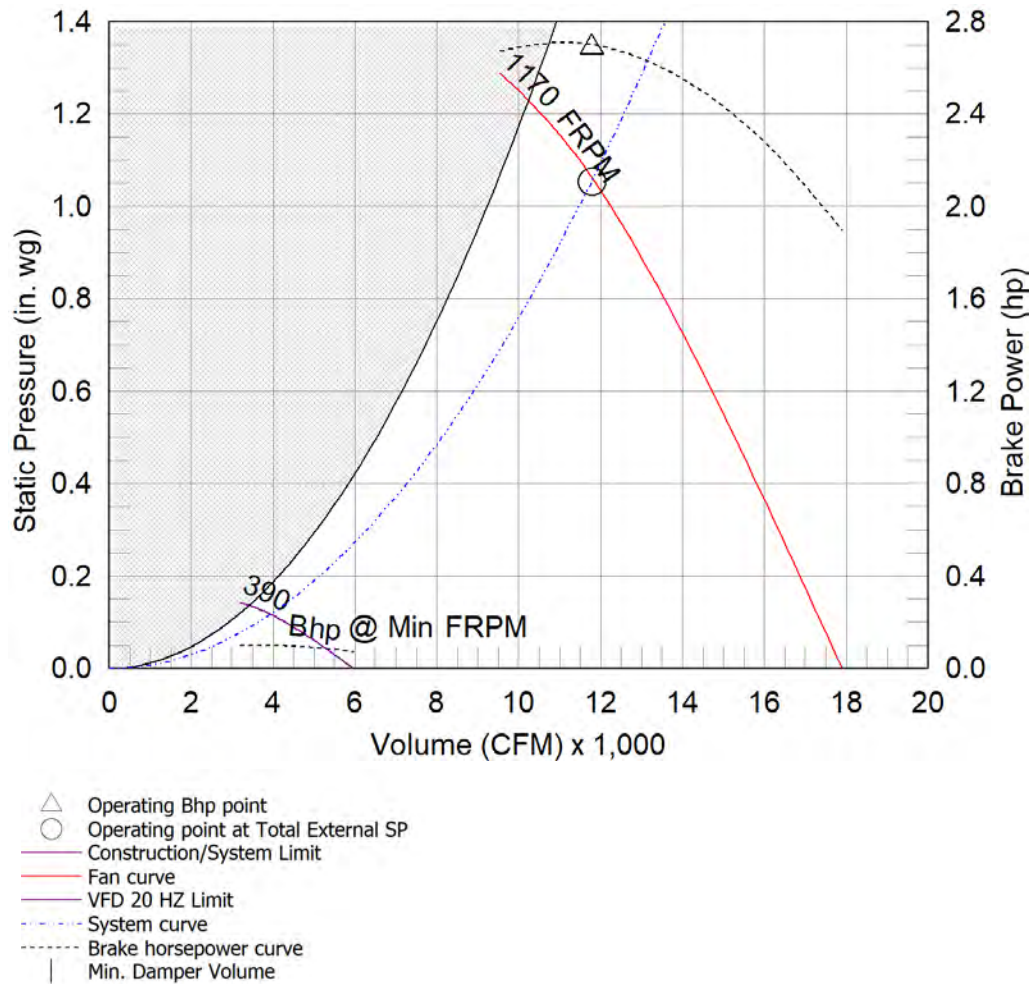


AX-90-275-0615-B75

Min/Max Fan Curve

**Performance**

Requested Volume (CFM)	Actual Volume (CFM)	External SP (in. wg)	Total SP (in. wg)	Fan RPM	Operating Power (hp)
11,475	11,784	1	1.055	1170	2.69





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### Warranty - 1 Yr (Standard)

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Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by SELLER prove defective during this period, they should be returned to the nearest authorized motor service station. SELLER will not be responsible for any removal or installation costs.

Electrical components, excluding motors, are warranted only to the extent warranted by the original manufacturer. To the extent that SELLER is entitled to pass through a warranty of the original equipment manufacturer of the electrical goods sold, SELLER will pass through such warranties to Buyer.

ANY MISUSE, NEGLIGENCE, FAILURE TO FOLLOW INSTRUCTIONS OR MANUALS OF INSTALLATION OF MAINTENANCE REPAIR, SERVICE, RELOCATION OR ALTERATION TO OR OF, OR OTHER TAMPERING WITH, THE PRODUCTS PERFORMED BY ANY PERSON OR ENTITY OTHER THAN SELLER WITHOUT SELLER'S PRIOR WRITTEN APPROVAL OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY SELLER, SHALL IMMEDIATELY VOID AND CANCEL ALL WARRANTIES WITH RESPECT TO THE AFFECTED PRODUCTS.

THE WARRANTY AND LIABILITY SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES WHETHER IN CONTRACT OR IN NEGLIGENCE, EXPRESSED OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. SELLER PROVIDES NO INDEPENDENT WARRANTY FOR THIRD PARTY PRODUCTS OR COMPONENTS SOLD TOGETHER OR INCORPORATED WITH SELLER'S PRODUCT(S).



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## AMCA



AMCA Licensed for Air Performance Without Appurtenances and Accessories. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only. Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (BHP/kW) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product.



# HardiePanel® Vertical Siding

MULTIFAMILY / COMMERCIAL INSTALLATION REQUIREMENTS

EFFECTIVE DECEMBER 2020

**IMPORTANT: FAILURE TO FOLLOW JAMES HARDIE WRITTEN INSTALLATION INSTRUCTIONS AND COMPLY WITH APPLICABLE BUILDING CODES MAY VIOLATE LOCAL LAWS, AFFECT BUILDING ENVELOPE PERFORMANCE AND MAY AFFECT WARRANTY COVERAGE. FAILURE TO COMPLY WITH ALL HEALTH AND SAFETY REGULATIONS WHEN CUTTING AND INSTALLING THIS PRODUCT MAY RESULT IN PERSONAL INJURY. BEFORE INSTALLATION, CONFIRM YOU ARE USING THE CORRECT HARDIEZONE® PRODUCT INSTRUCTIONS BY VISITING [HARDIEZONE.COM](http://HARDIEZONE.COM) OR CALL 1-866-942-7343 (866-9-HARDIE).**

## STORAGE & HANDLING:

Store flat and keep dry and covered prior to installation. Installing siding wet or saturated may result in shrinkage at butt joints. Carry planks on edge. Protect edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.



## CUTTING INSTRUCTIONS

### OUTDOORS

1. Position cutting station so that airflow blows dust away from the user and others near the cutting area.
2. Cut using one of the following methods:
  - a. Best: Circular saw equipped with a HardieBlade® saw blade and attached vacuum dust collection system. Shears (manual, pneumatic or electric) may also be used, not recommended for products thicker than 7/16 in.
  - b. Better: Circular saw equipped with a dust collection feature (e.g. Roan® saw) and a HardieBlade saw blade.
  - c. Good: Circular saw equipped with a HardieBlade saw blade.

### INDOORS

DO NOT grind or cut with a power saw indoors. Cut using shears (manual, pneumatic or electric) or the score and snap method, not recommended for products thicker than 7/16 in.

- DO NOT dry sweep dust; use wet dust suppression or vacuum to collect dust.
- For maximum dust reduction, James Hardie recommends using the "Best" cutting practices. Always follow the equipment manufacturer's instructions for proper operation.
- For best performance when cutting with a circular saw, James Hardie recommends using HardieBlade® saw blades.
- Go to [jameshardiepros.com](http://jameshardiepros.com) for additional cutting and dust control recommendations.

**IMPORTANT:** The Occupational Safety and Health Administration (OSHA) regulates workplace exposure to silica dust. For construction sites, OSHA has deemed that cutting fiber cement with a circular saw having a blade diameter less than 8 inches and connected to a commercially available dust collection system per manufacturer's instructions results in exposures below the OSHA Permissible Exposure Limit (PEL) for respirable crystalline silica, without the need for additional respiratory protection.

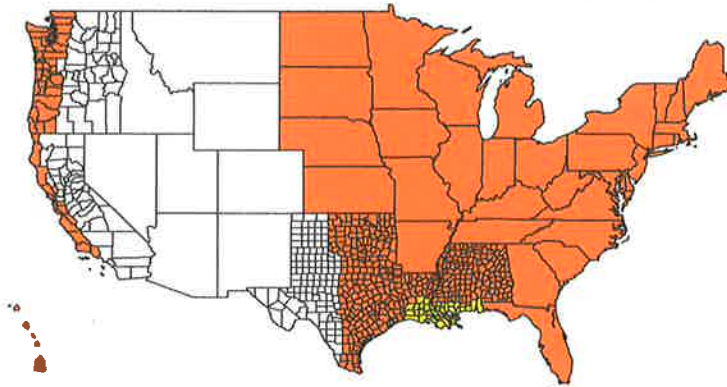
If you are unsure about how to comply with OSHA silica dust regulations, consult a qualified industrial hygienist or safety professional, or contact your James Hardie technical sales representative for assistance. James Hardie makes no representation or warranty that adopting a particular cutting practice will assure your compliance with OSHA rules or other applicable laws and safety requirements.

## GENERAL REQUIREMENTS:

- Refer to table 1 for multifamily/commercial drainage requirements for James Hardie® vertical siding.
- HardiePanel® vertical siding can be installed over furring strips (in accordance with local building code requirements). HardiePanel vertical siding can be installed over braced wood or steel studs, 20 gauge (0.836 mm) minimum to 16 gauge (1.367 mm) maximum, spaced a maximum of 610mm (24 in) o.c
- Consult ESR1844 for fastener schedule as well as additional technical information at [www.jameshardiecommercial.com](http://www.jameshardiecommercial.com).
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. The manufacturer will assume no responsibility for water infiltration.
- Information on installing James Hardie products over non-nailable substrates (ex: gypsum, foam, etc.) can be located in JH Tech Bulletin 19 at [www.jamehardie.com](http://www.jamehardie.com)
- Do not install James Hardie products such that they may remain in contact with standing water.
- HardiePanel vertical siding may be installed on vertical wall applications only.
- DO NOT use HardiePanel vertical siding in Fascia or Trim applications.
- The designer and/or architect shall take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin #8 "Expansion Characteristics of James Hardie® Siding Products" at [www.jameshardiecommercial.com](http://www.jameshardiecommercial.com).
- James Hardie Building Products provides installation /wind load information for buildings with a maximum mean roof height of 85 feet. For information on installations above 60 feet, please contact JH technical support.
- Minimum standard panel design size is 12" x 16". Note: Panels may be notched and cut to size to fit between windows, doors, corners, etc.

**Table 1: HardiePanel® Vertical Siding Wall Drainage Requirements**

All national, state, and local building codes must be followed, and where they are more stringent than James Hardie Installation requirements, state and local requirements will take precedence. Consult the "Exterior Wall Drainage Requirements" bulletin at [www.jameshardiecommercial.com](http://www.jameshardiecommercial.com) for additional guidance and a more detailed list of drainage required areas.



## MINIMUM REQUIREMENTS BY STATE/COUNTY

**A** WRB<sup>1</sup> Dry Climates

**B** DRAINAGE PLANE (E.G. DRAINABLE WRB) WITH 90% DRAINAGE EFFICIENCY<sup>2</sup>  
Moist and Marine Climates

**C** RAINSCREEN (MIN. 3/8 IN. AIR GAP)<sup>3</sup>  
Severe Wind Driven Rain Climate

<sup>1</sup> Water-resistive Barrier and drainage requirements as defined by building code.

<sup>2</sup> Water-resistive Barrier as defined by local building code that is manufactured in a manner to enhance drainage; must meet minimum 90% drainage efficiency when tested in accordance with ASTM E2273 or other recognized national standards.

<sup>3</sup> Water-resistive Barrier (WRB) as defined by building code and a minimum 3/8 in. (10mm) air space between the WRB and the panel siding (formed by minimum 3/8 in. furring).

SMOOTH | SELECT CEDARMILL® | SELECT SIERRA 8 | STUCCO

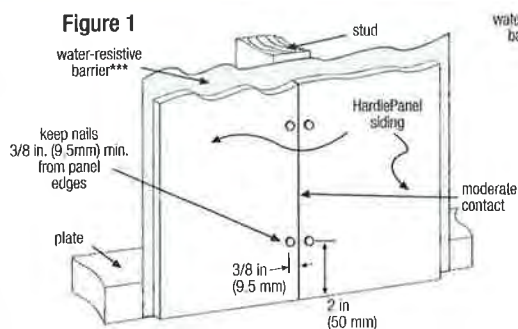


Visit [jameshardiepros.com](http://jameshardiepros.com) for the most recent version.

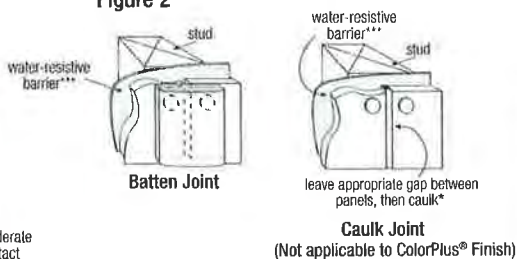
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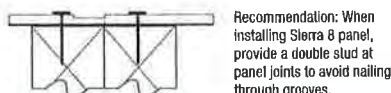
**Table 1 Cont.**  
**A: Water Resistant Barrier Condition**



**Figure 2**

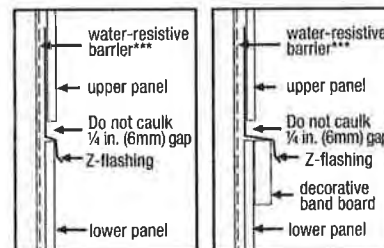


**Figure 4**

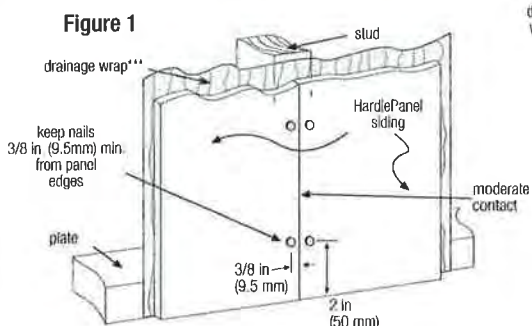


Recommendation: When installing Sierra 8 panel, provide a double stud at panel joints to avoid nailing through grooves.

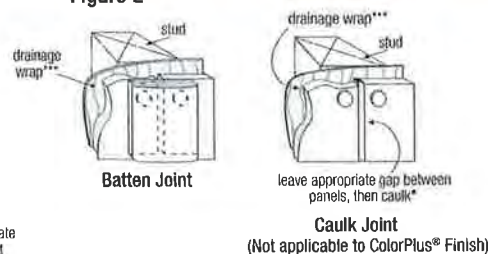
**Figure 3**



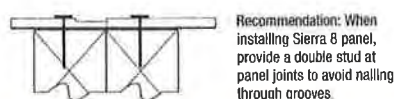
**B: Drainage Plane/Wrap Condition**



**Figure 2**

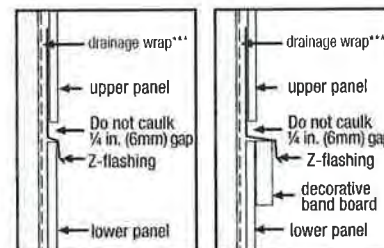


**Figure 4**

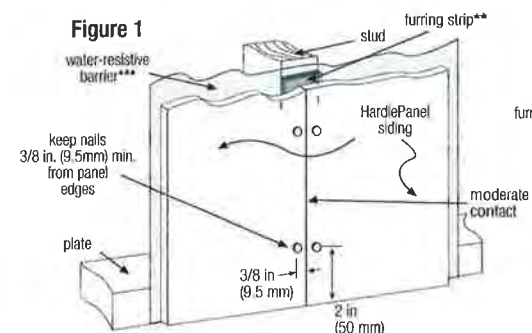


Recommendation: When installing Sierra 8 panel, provide a double stud at panel joints to avoid nailing through grooves.

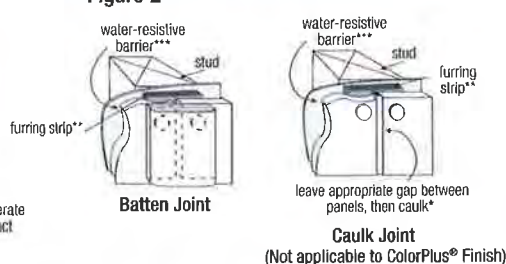
**Figure 3**



**C: Furring/Rainscreen Condition**



**Figure 2**

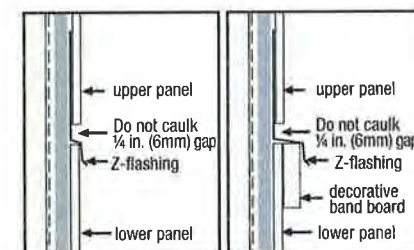


**Figure 4**



Recommendation: When installing Sierra 8 panel, provide a double stud at panel joints to avoid nailing through grooves.

**Figure 3**



\* Apply caulk in accordance with caulk manufacturer's written application instructions.

\*\* Furring as prescribed in Table 1.

\*\*\* WRB or Drainage Plane as prescribed in Table 1.

## INSTALLATION:

### Fastener

Position fasteners 3/8 in from panel edges and no closer than 2 in away from corners. Do not nail into corners.

- HardiePanel vertical siding must be joined on stud.
- Double stud may be required to maintain minimum edge nailing distances.
- When screws are used to attach panels to steel studs/furring, the screws shall have wing tips. If screws do not have wing tips, then pre-drilling is required. (Not applicable when using pins)

Follow screw chart for pre-drilling:

**SCREW CHART**

SCREW	PRE-DRILL	HEAD DIAMETER
No. 8	7/32 in	Min 0.323 in
No. 10	1/4 in	Min 0.323 in

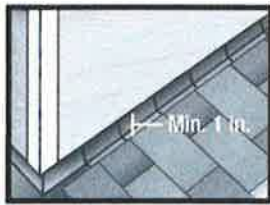
### Joint Treatment

- Vertical Joints - Install panels in moderate contact (fig. 1), alternatively joints may also be covered with battens, PVC or metal jointers or caulked (Not applicable to ColorPlus® Finish) (fig. 2).
- Horizontal Joints - Provide Z-flashing at all horizontal joints (fig. 3).

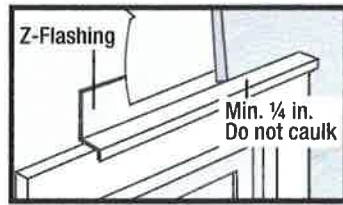


## CLEARANCE AND FLASHING REQUIREMENTS

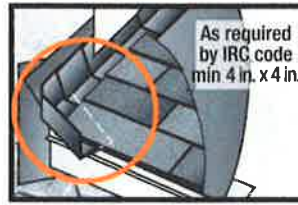
**Figure 5**  
Roof to Wall



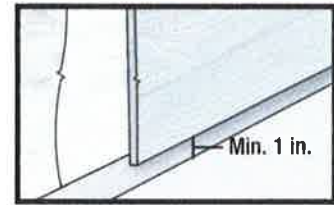
**Figure 6**  
Horizontal Flashing



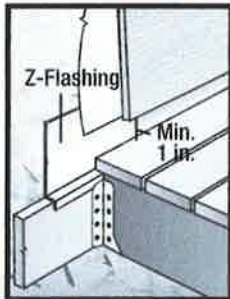
**Figure 7**  
Kickout Flashing



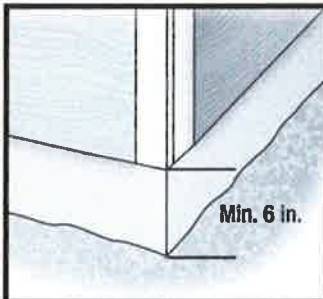
**Figure 8**  
Slabs, Path, Steps to Siding



**Figure 9**  
Deck to Wall



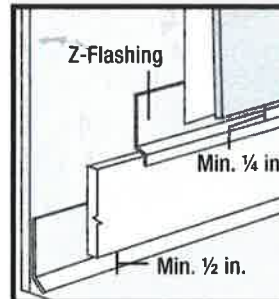
**Figure 10**  
Ground to Siding



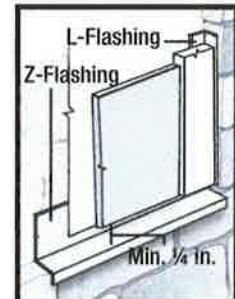
**Figure 11**  
Gutter to Siding



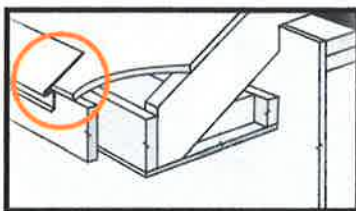
**Figure 12**  
Sheltered Areas



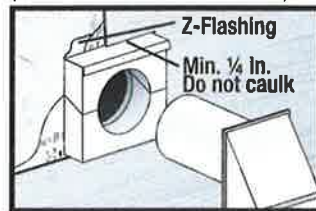
**Figure 13**  
Mortar/Masonry



**Figure 14**  
Drip Edge



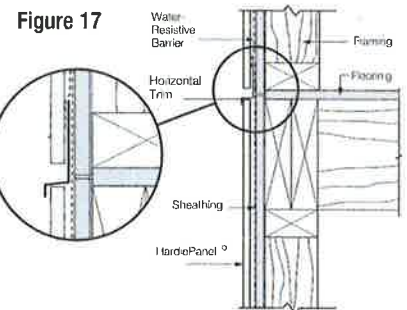
**Figure 15**  
Block Penetration  
(Recommended in HZ10 zones)



**Figure 16**  
Valley/Shingle Extension



Do not bridge floors with HardiePanel® siding. Horizontal joints should always be created between floors, see below).



## GENERAL FASTENING REQUIREMENTS

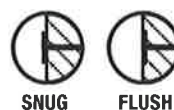
Refer to the applicable ESR report online to determine which fastener meets your wind load design criteria.

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion; use quality, hot-dipped galvanized nails. The manufacturer makes no warranty or representation with respect to the corrosion resistance or performance of fasteners. Stainless steel fasteners are recommended when installing James Hardie products near the ocean, large bodies of water, or in very humid climates.

**Note:** When utilizing express seam joints, ensure adequate nailable substrate width is available.

Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5

- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- NOTE:** Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult James Hardie Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space).
- NOTE:** Whenever a structural member is present, HardiePlank should be fastened with even spacing to the structural member. The tables allowing direct to OSB or plywood should only be used when traditional framing is not available.



**DO NOT**



**IF, THEN**



**DO NOT**



**IF, THEN ADDITIONAL NAIL**



**DO NOT USE**





## BLOCKED PENETRATIONS

Penetrations such as hose bibs and holes 1 ½" or larger such as dryer vents are recommended to have a block of trim around point of penetration.

## PNEUMATIC FASTENING

James Hardie products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer; does not apply for installation to steel framing).

## CUT EDGE TREATMENT

Caulk, paint or prime all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

## CAULKING

For best results, use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher, such as Quad® Max or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions. **Note: DO NOT caulk nail heads when using ColorPlus products; refer to the ColorPlus touch-up section.**

## PAINTING

DO NOT use stain on James Hardie products. James Hardie products must be painted within 180 days. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates, refer to paint manufacturer's specifications. Back-rolling is recommended if a paint sprayer is used.

## COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

- Care should be taken when handling and cutting James Hardie ColorPlus products.
- Laminate sheet must be removed immediately after installation of each course. Gently wipe any residue or construction dust left on the product using a soft cloth.
- Touch up nicks, scrapes and nail heads using the ColorPlus Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with new HardiePanel siding with ColorPlus Technology.
- Terminate non-factory cut edges into trim where possible, and caulk. Color matched caulks are available from your ColorPlus product dealer.
- Treat all other non-factory cut edges using the ColorPlus Technology edge coat, available from your ColorPlus product dealer.

Problems with appearance or performance arising from use of third party touch-up paints or paints used as touch-up that are not James Hardie touch-up, will not be covered under the James Hardie ColorPlus Limited Finish Warranty.

Not all designs will be suitable for every application.

## REPAINTING JAMES HARDIE SIDING AND TRIM PRODUCTS WITH COLORPLUS TECHNOLOGY

When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:

- Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
- Repriming is normally not necessary
- 100% acrylic topcoats are recommended
- DO NOT use stain or oil/alkyd base paints on James Hardie products
- Apply finish coat in accordance with paint manufacturer's written instructions regarding coverage, application methods, and application temperature

COM1302 - P4/4 12/20

### SILICA WARNING

**DANGER:** May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product. Refer to the current product Safety Data Sheet before use. The hazard associated with fiber cement arises from crystalline silica present in the dust generated by activities such as cutting, machining, drilling, routing, sawing, crushing, or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. When doing any of these activities in a manner that generates dust you must (1) comply with the OSHA standard for silica dust and/or other applicable law, (2) follow James Hardie cutting instructions to reduce or limit the release of dust; (3) warn others in the area to avoid breathing the dust; (4) when using mechanical saw or high speed cutting tools, work outdoors and use dust collection equipment; and (5) if no other dust controls are available, wear a dust mask or respirator that meets NIOSH requirements (e.g. N-95 dust mask). During clean-up, use a well maintained vacuum and filter appropriate for capturing fine (respirable) dust or use wet clean-up methods - never dry sweep.

**WARNING:** This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. For more information go to [P65Warnings.ca.gov](http://P65Warnings.ca.gov).

**RECOGNITION:** In accordance with ICC-ES Evaluation Report ESR-1844, HardiePanel® vertical siding is recognized as a suitable alternate to that specified in the 2006, 2009, 2012 & 2015 International Residential Code for One- and Two-Family Dwellings and the 2006, 2009, 2012 & 2015 International Building Code. HardiePanel vertical siding is also recognized for application in the following: City of Los Angeles Research Report No. 24862, State of Florida Product Approval FL#13223, Miami-Dade County Florida NOA No. 17-0406.06, U.S. Dept. of HUD Materials Release 1263f, Texas Department of Insurance Product Evaluation EC-23, City of New York MEA 223-93-M, and California DSA PA-019. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.



Includes: HardiePlank® HZ10® Lap Siding, HardiePanel® HZ10® Vertical Siding, HardieShingle® HZ10® Siding, HardieSoffit® HZ10® Panels

Effective July 2020



**1. LIMITED WARRANTY.** James Hardie Building Products Inc. ("Hardie") warrants, for a period of thirty (30) years (the "Limited Warranty Period") that when manufactured, the HardiePlank® HZ10® Lap Siding, HardiePanel® HZ10® Vertical Siding, HardieShingle® HZ10® Siding, and HardieSoffit® HZ10® Panels (the "Product") comply with ASTM C1186, will resist damage caused by hail or termite attacks, and is free from defects in material and workmanship. This Limited Warranty extends only to (i) the first retail purchaser of the Product and the first transferee; or (ii) the first owner of the structure to which the Product is applied and the first transferee (each a "Covered Person"), where the Product is installed in an approved HZ10 product zone defined in Section 2.

**2. LIMITED WARRANTY COVERAGE AREA.** Approved HZ10 product zone shall mean Puerto Rico, and within the United States, the states of AL, AR, FL, GA, HI, LA, MS, OK, TX, SC, as well as limited areas of AZ, CA, KY, NC, NM, NV, OR, TN, VA and WA. For a list of covered ZIP codes in the states of AZ, CA, KY, NC, NM, NV, OR, TN, VA and WA, please consult [www.hardiezone.com](http://www.hardiezone.com) or call 1-866-9-HARDIE.

**3. WHAT WE WILL DO.** If during the Limited Warranty Period, the Product is defective in material or workmanship, Hardie will, in its sole discretion, either repair or replace the defective portion of the Product, or, during the first (1<sup>st</sup>) through the thirtieth (30<sup>th</sup>) year, reimburse the Covered Person for up to twice the original retail cost of the defective portion of the Product. After the 30<sup>th</sup> year, this Limited Warranty will expire and shall no longer be applicable. If the original retail cost cannot be established by the Covered Person to Hardie's reasonable satisfaction, the cost shall be determined by Hardie in its sole and reasonable discretion. Hardie's repair or replacement of the defective portion of the Product or reimbursement pursuant to Section 3 of this Limited Warranty is the exclusive remedy for the Covered Person for

any warranty claim under Section 1. Hardie will not reimburse or pay any costs in connection with labor or accessory materials.

**4. WHAT YOU MUST DO/CONDITIONS OF LIMITED WARRANTY.** Warranty coverage under this Limited Warranty shall be subject to the following terms and conditions:

- a) A Covered Person must provide written notice to Hardie within thirty (30) days after discovery of any claimed defect covered by this Limited Warranty. The notice must describe the location and details of the claimed defect and any additional information necessary for Hardie to investigate the claim. Photos of the Product, showing the claimed defect must accompany the notice. A claimant under this Limited Warranty must provide proof to Hardie that such claimant is a Covered Person as defined in Section 1 above.
- b) The Product must be installed according to Hardie's printed installation instructions and must comply with all building codes adopted by federal, state or local governments or government agencies applicable to the installation.
- c) Upon discovery of a claimed defect, a Covered Person must immediately, and at a Covered Person's own expense, provide for protection of all property that could be affected until the claimed defect is remedied, if applicable. Before any permanent repair to the Product, a Covered Person must allow Hardie or Hardie's authorized agent to enter the property and structure where the Product is installed, if applicable, and examine, photograph and take samples of the Product. Any repairs initiated by or on behalf of a Covered person without prior authorization from Hardie may void the warranty.

## Homeowner Care and Maintenance Tips

### PATCHING

Fill dents, chips and cracks using a good quality cement patching compound (acrylic mortar patch), which can be found at your local Home Center or Hardware Store.

### PRODUCT REPLACEMENT

Replace siding and trim products in accordance with James Hardie's written installation instructions.

### CAULK REPLACEMENT

When caulk is in need of replacing, carefully remove existing caulk and replace with a high quality, paintable latex caulk. For best results, use a latex caulk that complies with ASTM C834 or better. Caulking should be applied in accordance with the caulking manufacturer's written application instructions.

### PAINT MAINTENANCE

Remove any damaged, chipped or cracked paint. Prior to repainting, make sure that the surface area is properly prepped for paint. Repaint immediately using a good quality 100% acrylic paint. For best results, please refer to your paint manufacturer's written specifications for application rates and required topcoats.

Call 1-800-9-HARDIE or visit [www.JamesHardiePros.com](http://www.JamesHardiePros.com) to obtain written installation requirements or for more detailed technical information.

**5. WHAT IS NOT COVERED.** This Limited Warranty does not cover damage or defects resulting from or in any way attributable to: (a) The improper storage, shipping, handling or installation of the Product (including, without limitation, failure of the Product to be installed in strict compliance with the Conditions of Limited Warranty set forth in Section 4(b) of this Limited Warranty) and/or improper installation of studs or other accessories; (b) Further processing, modification or alteration of the Product after shipping from Hardie; (c) Neglect, abuse, or misuse; (d) Repair or alteration inconsistent with Hardie instructions; (e) Settlement or structural movement and/or movement of materials to which the Product is attached; (f) Damage from incorrect design of the structure; (g) Damage resulting from water infiltration; (h) Exceeding the maximum designed wind loads; (i) Acts of God including, but not limited to, tornados, hurricanes, floods, earthquakes, severe weather or other natural phenomena (including, but not limited to, unusual climate conditions); (j) Efflorescence, peeling or performance of any third party paints, stains and/or coatings; (k) Growth of mold, mildew, fungi, bacteria, or any organism on any surface of the Product (whether on the exposed or unexposed surfaces); (l) Lack of proper maintenance; and/or (m) Any cause other than material or manufacturing defects attributable to Hardie.

**6. LIMITATION OF WARRANTY.** THE ABOVE LIMITED WARRANTY IS THE EXCLUSIVE WARRANTY FOR THE PRODUCT. HARDIE DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE OR OTHERWISE. In the event that applicable consumer law prohibits the disclaimer of an implied warranty, the above Limited Warranty shall not extend the time period of any such implied warranty. Some states do not allow limitations for consumers on how long an implied warranty lasts, so the above limitation may not apply to you. This Limited Warranty gives you specific legal rights, and you may have additional rights, which vary from state to state.

**7. LIMITATION OF LIABILITY.** IN NO EVENT SHALL HARDIE BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, INCLUDING BUT NOT LIMITED TO, ANY CLAIMS OF PROPERTY DAMAGE, BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, TORT, OR ANY OTHER LEGAL THEORY. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

**8. NO WAIVER.** Hardie may, in its sole discretion, extend benefits beyond what is covered under this Limited Warranty. Any such extension shall apply only to the specific instance in which it is granted, and shall not constitute a waiver of Hardie's right to strictly enforce the exclusions, disclaimers, and limitations set forth herein for any or all other circumstances.

**9. ENTIRE AGREEMENT.** This Limited Warranty contains and represents the only warranty extended by Hardie for the Product. No employee or agent of Hardie or any other party is authorized to make any other warranty in addition to those made in this Limited Warranty. This Limited Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

**10. MODIFICATION OR DISCONTINUATION OF PRODUCT.** Hardie reserves the right to discontinue or modify the Product at any time without notice. In the event that repair or replacement of the Product pursuant to this Limited Warranty is not possible, Hardie will fulfill any repair or replacement obligation under this Limited Warranty with a product of equal or greater value.

**11. HOW TO OBTAIN LIMITED WARRANTY SERVICE.** For warranty services, call 866-375-8603 or write Warranty Department, James Hardie Building Products, Inc., 10901 Elm Avenue, Fontana, California 92337.

## COMPLETE AND SAVE FOR YOUR OWN RECORDS

Name of Owner \_\_\_\_\_  
 Installation Address \_\_\_\_\_  
 Name of Installing Contractor \_\_\_\_\_  
 Date Installed \_\_\_\_\_ Contractor Phone Number \_\_\_\_\_

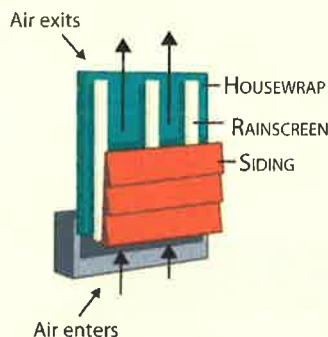


## HOW IT WORKS

**R**ainscreen is part of a wall system that includes an air gap between the siding and the water-resistive barrier (housewrap).

Almost every rainscreen wall needs:

- Water resistant barrier (WRB)
- Air gap between WRB and back of siding
- Flashings at all penetrations and vulnerable areas
- Weep holes at the bottom of the wall



**A**fter installation, rainscreen provides a break between the back of siding and the WRB. This gap allows moisture held in the siding and sheathing to be redistributed to adjacent materials by evaporation and diffusion. Rainscreen installation also provides a path for liquid water to drain down to weep holes at the bottom of the wall and if there is an opening at the top of the gap, provides a path for moving ventilating air.

## BORATE WARRANTY INFORMATION



**S**illBor® Borate Pressure-Treated Wood is backed by a lifetime limited warranty against damage from termites and fungal decay through Arch Wood Protection, Inc., A Lonza Company. To view full warranty information please visit:

<http://www.sillbor.com/warranty/limited-warranty.aspx>



### Building Relationships

2685 Index St. Washougal, WA 98671  
503-224-8330 Portland • 800-833-0838 USA  
800-562-8044 WA • fax 800-858-3879  
[www.exteriorwood.com](http://www.exteriorwood.com)

7



## Rainscreen

Product of Exterior Wood, Inc.

*An Economical  
Green*



## CHOICE



## EXTERIOR WOOD

Building Relationships

*An Economical*

*Green Choice...*

*Rainscreen*



## ABOUT OUR PRODUCT

**A**s we move forward in our effort to make today's living spaces more efficient, technology has changed the way we build. Gone are the days of housewrap and siding, giving way to a more advanced system of water disbursement. Plywood **rainscreen** strips offer a modern yet economical way to meet this growing need.

**A** building consists of the following: an exterior veneer, a water resistive barrier, a minimum 1/8" gap, and integrated flashings. When properly assembled together, provide a means of draining water that enters the assembly to the exterior.



Available  
Sizes  
3/4"  
1/2"  
3/8"

**R**ainscreen is intended to be used in weather-shielded, above ground application. It is naturally clear in appearance, so a blue dye is used to distinguish borate-treated **rainscreen** from untreated material.

## RAINSCREEN - THE RIGHT CHOICE...



**B**orate-treated **rainscreen** is the economical, environmentally friendly choice. It is pressure-impregnated with preservative which increases protection against rot and termites, extending the life of the product. Borate-treated **rainscreen** provides an extra element of durability, and is a cost effective alternative to composite type products.

**R**ainscreen treated with borate is also a safe and green choice for building projects. Borates are naturally-occurring deposits of boron

and oxygen. Although they are EPA-registered pesticides, they are also approved for use where human contact is frequent. Some examples include personal uses such as hand soap, contact lens cleaner and cosmetics. Borates in treated **rainscreen** do not contain volatile organic compounds so air quality is not affected by the preservative.

**W**hen considering your next building project, go with an economical, green choice... **Rainscreen!**

## INSTALLATION GUIDELINES

### HANDLING, CUTTING, END SEALING:

Borate-treated wood can be drilled, sawn, glued, and finished with standard wood-working tools. No end cut sealer is necessary for crosscutting or bored holes.

### HARDWARE:

**Rainscreen** treated with the DOT type of borates, has been found to be no more corrosive than traditional CCA treated wood. Code-compliant hardware is adequate. The use of non-galvanized hardware of sizes and types approved by model code are acceptable when attaching to studs or other framing members. Providing the wood will remain dry in service, protected from weather and water.

### CONSTRUCTION PRACTICES:

Borate-treated wood is intended for above ground use, protected from the weather. During jobsite installation, it is best to keep borate-treated wood off the ground and covered. Normal exposure to the weather during installation does not affect the long term performance of **rainscreen** treated with borate.





CERACLAD  
Rain Screen Exterior Siding System



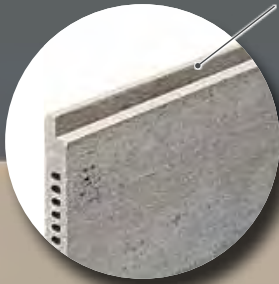
CERACLAD

SUPERIOR CLADDING SOLUTIONS  
FOR SUSTAINABLE BUILDINGS AND  
A HEALTHY LIVING ENVIRONMENT

**MORE CHOICES!**



The shiplap and the factory applied gasket ensure a tight seal between joints.



Outside



Our proprietary clips provide quick and accurate assembly of the system every time.

Moisture

**CERACLAD**  
siding panels

Vapor

Water-resistant  
breathable building  
paper

Thermal barrier

**CERACLAD**  
panel clip

Air cavity

Inside

Moisture

**CERACLAD**  
starter bar

Air flow

Our customers love  
a good thing.

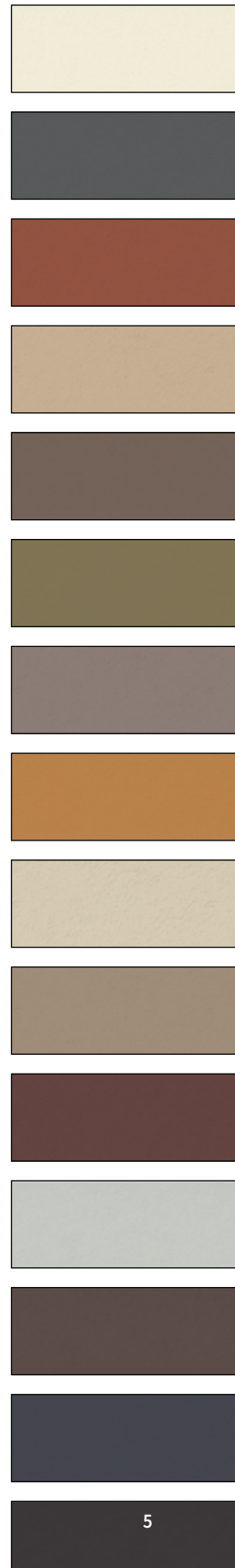
## THE CERACLAD SYSTEM

The **CERACLAD** Rainscreen Exterior Siding System is an advanced ceramic-coated construction assembly that incorporates proven rain-shielding technology. Developed for use in commercial and residential buildings, the system consists of pre-finished siding panels and innovative mounting clips and accessories that are manufactured and designed for durability, flexibility and ease of installation.

Our exclusive technology combines a durable weather-resistant exterior with an internal ventilation layer that allows moisture to escape. Proven in continuous use for over 35 years, the **CERACLAD** system offers

long-term protection against water infiltration, stands up to UV rays, and guards against dry rot. The result is high-performance, low-maintenance exterior walls that are as beautiful as they are durable. Buildings constructed with **CERACLAD** ceramic siding reflect the quality, care, and sophisticated design that go into everything we manufacture.

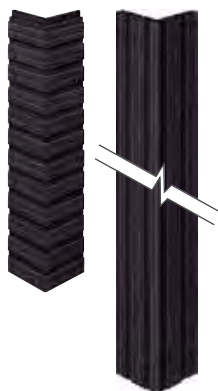
**CERACLAD** siding panels also come in a wide range of rich textures, handsome styles and beautiful colors. And our exclusive **CREATIV™** custom color program allows you to order your components in colors that will match your exact specifications.



# Cast Stripe

**CERACLAD Cast Stripe** is available in these 4 ceramic colors plus our **CREATIV™** custom color program.

Custom color samples can be requested at <https://ceraclad.com/creativ-custom-color>



Pearl  
NH3121U



Ash  
NH31213U



Charcoal  
NH31215U



Amber  
NH31216U

BASIC SPECIFICATIONS	
<b>Panel Type</b>	Extruded
<b>Application Method</b>	Vertical or Horizontal
<b>Coating Options</b>	Ceramic (4 colors) Creativ™ Custom Colors
<b>Dimensions</b>	W: 18" (455 mm) L: 10' (3030 mm) T: 5/8" (16 mm)
<b>Coverage</b>	15 ft <sup>2</sup> (1.38 m <sup>2</sup> )
<b>Weight</b>	44 lb. (21 kg)
The ceramic coating is super weather resistant, low maintenance, and backed by a 20-year limited warranty.	
Please visit our website for additional CERACLAD product information including: <ul style="list-style-type: none"> <li>• Product samples</li> <li>• Custom color samples</li> <li>• Specifications</li> <li>• CAD details</li> <li>• Product performance and approval documents</li> <li>• MSDS</li> </ul>	



Charcoal | NH31215U

1. The product color tones on this sheet may appear slightly different from the actual products. Final color selection should be made from product samples.
2. Colors and textures are subject to change.
3. Damage caused by any product installation, repair, or replacement that is not in accordance with KMEW's technical manual, as well as damage caused by product installation on inappropriate buildings/structures, is specifically excluded from warranty coverage. Please review KMEW's technical manual and website for this product.



# EXTERIOR OVERVIEW

DIVISION 07-42 SOLID PHENOLIC EXTERIOR CLADDING



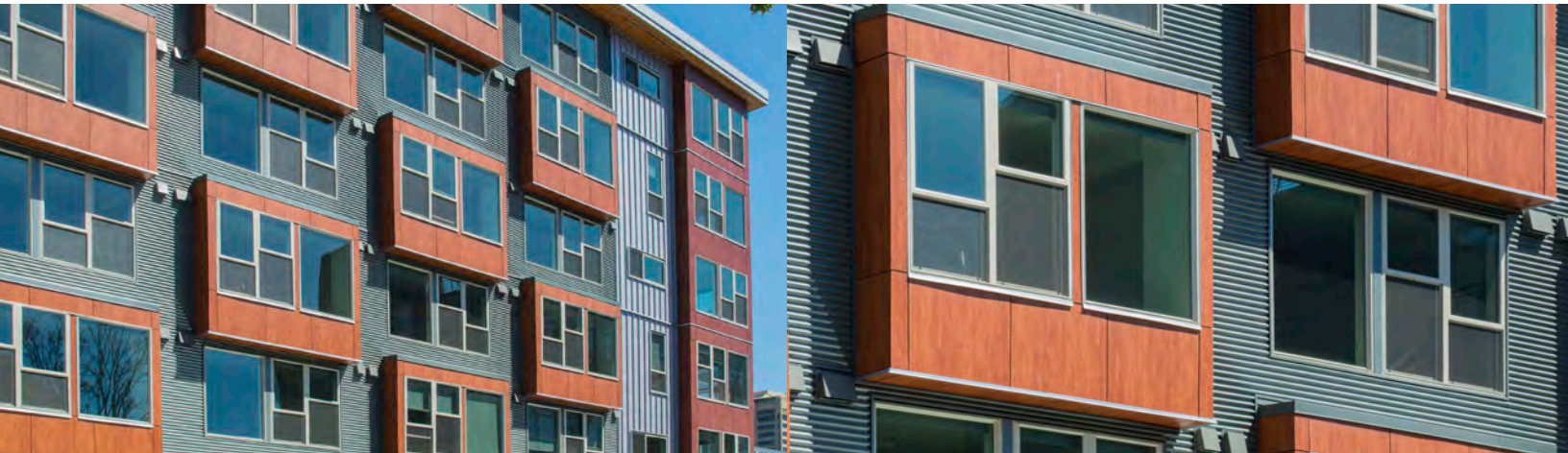
STILLAGUAMISH ADMINISTRATION BUILDING

## About Stonewood Panels

- Solid phenolic panels for use as open joint exterior cladding
- Manufactured and customer service in Wisconsin, USA
- Low minimum order requirements
- Competitive pricing and reliable on-time delivery
- Standard ten year warranty

## Cladding Built to Last

- Non-porous surface, easy to clean and graffiti resistant
- Passed stringent NFPA 285 Standard Fire test
- Simplified long-term maintenance, replace singular panels as required
- Available with Class A or B fire rating

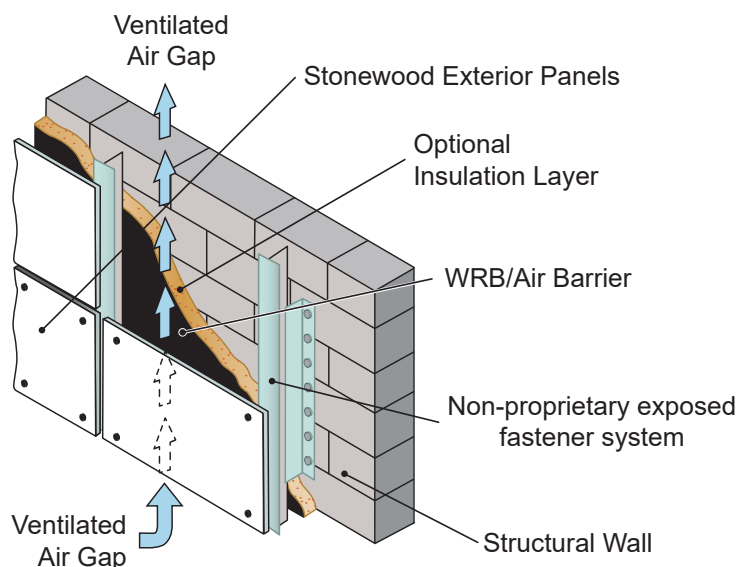


## Straightforward Installation

- Attach using non-proprietary exposed fastener system
- Field or factory fabrication
- Self-edging or traditional edge treatments

## Panels for Every Purpose

- Suited for all construction types: commercial, hospitality, mixed-use, municipal, multi-family, healthcare and institutional
- In-house CNC routers available to shape panels to specific specifications
- Extensive Design Offering



## Stonewood used as rain screen cladding in ventilated facade system

Stonewood panels are an ideal choice for improving moisture management and energy efficiency using rain screen design.

Rain screen design provides a cavity between the exterior cladding and the main structure of the wall. The cavity allows for free drainage of any water which may penetrate the cladding and an air space to promote rapid drying. It also prevents thermal bridging which in turn improves energy efficiency and reduces condensation providing a healthier building.

## Environmentally Responsible

- Proudly offered with Forest Stewardship Council® certification
- Production energy sourced from in-house scrap materials
- Contributes to LEED credits in multiple categories

## FSC® Certified



The mark of  
responsible forestry  
FSC® C115183

In March 2013 Fibersin achieved FSC certification. Fibersin Stonewood Architectural Panels, both exterior and interior, are available with Forest Stewardship Council™ certification.

## Stonewood Exterior Panel Testing

Description	Information	Class A	Class B
Flame Spread Index - ASTM E-84 (BLDG)	Tests were performed on a 0.25" panel.	0	60
Smoke Developed Values - ASTM E-84 (BLDG)	Class B is considered to be the Standard Product.	10	200
Assembly Fire Test/ Fire Propagation	NFPA 285	PASS	

Property	Direction	Class A	Class B
Flexural Strength ASTM D-790 (PSI)	Machine Direction	18,000	20,000
	Cross Direction	12,000	16,000
Flexural Modulus ASTM D-790 (PSI)	Machine Direction	1.5 x 10 <sup>6</sup>	1.9 x 10 <sup>6</sup>
	Cross Direction	1.1 x 10 <sup>6</sup>	1.3 x 10 <sup>6</sup>
Tensile Modulus ASTM D-638 (PSI)	Machine Direction	15,000	18,000
	Cross Direction	10,000	12,000

<sup>1</sup> Test Method: ASTM E84-13a and ASTM E84-12 Standard Test Method for Surface Burning Characteristics of Building Materials. Also known as NFPA 255, UL 723, and UBC 8-1.

Visit [Stonewoodpanels.com](http://Stonewoodpanels.com) for:



Comprehensive Testing Data



Installation Instructions



Details

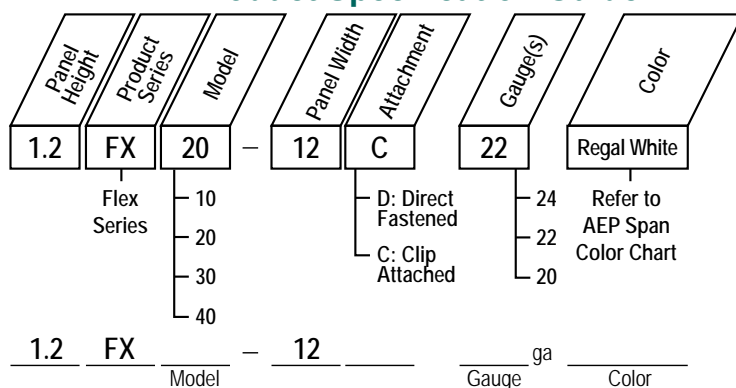
# Flex Series



Flex Series is a concealed fastener metal wall collection which offers design flexibility. Ideal for vertical and horizontal wall, fascia, and equipment screen applications.

**Flex Series** panels are available with a high performance clip, offering unlimited thermal movement while reducing chances of oil canning.

## Product Specification Guide



## standard features

- Available in two panel attachment configurations - a directly attached fastening flange or clip interlocking hem.
- Two clip options enable panels to be installed flush to substrate or with a 1/2" standoff.
- Panels can be used in a rainscreen system.
- Available in 24ga and 22ga in standard finishes and 20ga in ZINCALUME® Plus. - Refer to AEP Span Color Charts for full range of color options, prints, textures, finishes and paint systems.
- Custom colors, thick film primer and/or clear coat paint finishes available. Subject to 3,000 square feet minimum order.
- Custom manufactured sheet lengths from 5'-0" to 30'-0" maximum.
- ASTM E1592 (wind uplift), ASTM E283 (air infiltration), ASTM E331 (water infiltration) tested.
- Panel evaluated by accredited third party. All structural performance data is contained within an IBC/IRC 2018 code compliance report #ER-0309.



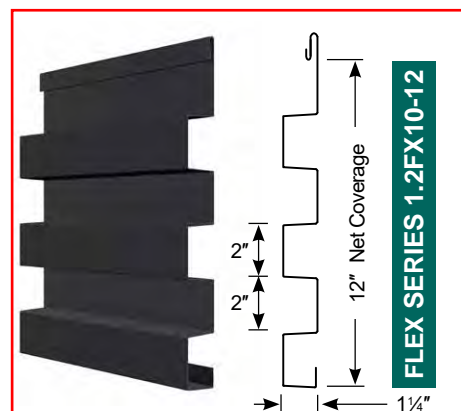
Shown with flush clip



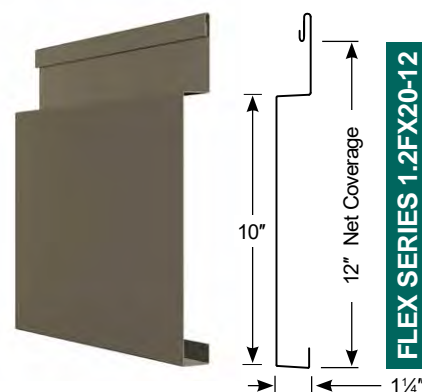
Shown with standoff clip



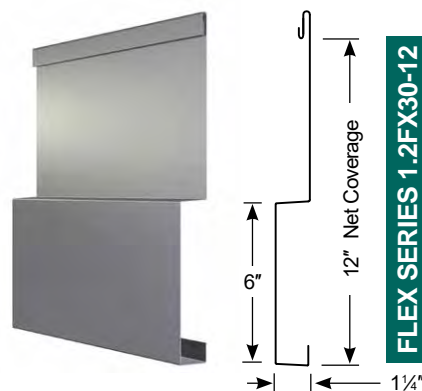
Shown as direct fastened



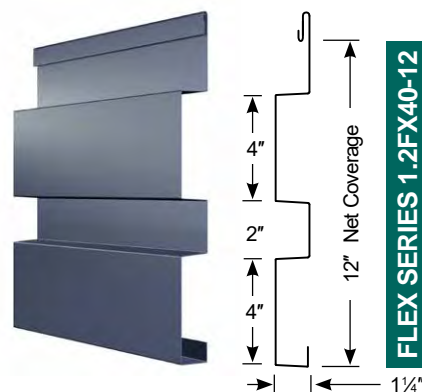
FLEX SERIES 1.2FX10-12



FLEX SERIES 1.2FX20-12



FLEX SERIES 1.2FX30-12



FLEX SERIES 1.2FX40-12

**Oil Canning** : All flat metal surfaces can display waviness commonly referred to as "oil canning". "Oil canning" is an inherent characteristic of steel products, not a defect, and therefore is not a cause for panel rejection.

# Flex Series

## Flex Series 1.2FX10-12 - Properties and Allowable Inward Loads (See notes on back)

Properties									Standard Finishes	
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft²)	I+ (in⁴/ft)	S+ (in⁴/ft)	I- (in⁴/ft)	S- (in⁴/ft)	Metallic Coating	Paint System
24	0.0232	50	65	1.76	0.1349	0.1360	0.1315	0.1527	AZ50	Cool Dura Tech™ 5000 (polyvinylidene fluoride) or Cool Dura Tech™ mx (metallic polyvinylidene)
22	0.0294	50	65	2.22	0.1763	0.1909	0.1721	0.2160	AZ50	
20	0.0354	40	55	2.66	0.2150	0.2614	0.2117	0.2902	G90	

Gauge	Span	Cond.	Allowable Inward Loads (lbs/ft²) per Span (ft.-in.)						
			2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
24	Single Span	ASD, W/Ω	679	302	170	109	75	55	42
		L/180	1474	437	184	94	55	34	23
	Double Span	ASD, W/Ω	539	318	184	119	83	61	46
		L/180	3551	1052	444	227	132	83	55
	Triple Span	ASD, W/Ω	613	389	227	147	103	76	59
		L/180	2782	824	348	178	103	65	43
22	Single Span	ASD, W/Ω	953	423	238	152	106	78	60
		L/180	1927	571	241	123	71	45	30
	Double Span	ASD, W/Ω	832	445	258	167	117	86	66
		L/180	4641	1375	580	297	172	108	73
	Triple Span	ASD, W/Ω	946	541	316	207	145	107	82
		L/180	3636	1077	454	233	135	85	57
20	Single Span	ASD, W/Ω	1044	464	261	167	116	85	65
		L/180	2349	696	294	150	87	55	37
	Double Span	ASD, W/Ω	936	471	275	178	125	93	71
		L/180	>5k	1677	707	362	210	132	88
	Triple Span	ASD, W/Ω	1064	568	336	221	156	115	88
		L/180	4433	1313	554	284	164	103	69

## Flex Series 1.2FX20-12 - Properties and Allowable Inward Loads (See notes on back)

Properties									Standard Finishes	
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft²)	I+ (in⁴/ft)	S+ (in⁴/ft)	I- (in⁴/ft)	S- (in⁴/ft)	Metallic Coating	Paint System
24	0.0232	50	65	1.40	0.0803	0.0496	0.0986	0.0742	AZ50	Cool Dura Tech™ 5000 (polyvinylidene fluoride) or Cool Dura Tech™ mx (metallic polyvinylidene)
22	0.0294	50	65	1.76	0.1083	0.0715	0.1347	0.1060	AZ50	
20	0.0354	40	55	2.11	0.1407	0.1029	0.1710	0.1505	G90	

Gauge	Span	Cond.	Allowable Inward Loads (lbs/ft²) per Span (ft.-in.)						
			2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
24	Single Span	ASD, W/Ω	248	110	62	40	28	20	15
		L/180	877	260	110	56	32	20	14
	Double Span	ASD, W/Ω	180	120	86	56	39	29	23
		L/180	2113	626	264	135	78	49	33
	Triple Span	ASD, W/Ω	204	136	102	69	49	36	27
		L/180	1655	490	207	106	61	39	26
22	Single Span	ASD, W/Ω	357	159	89	57	40	29	22
		L/180	1183	350	148	76	44	28	18
	Double Span	ASD, W/Ω	277	185	121	79	55	41	32
		L/180	2849	844	356	182	106	66	45
	Triple Span	ASD, W/Ω	315	210	146	97	69	51	39
		L/180	2232	661	279	143	83	52	35
20	Single Span	ASD, W/Ω	411	183	103	66	46	34	26
		L/180	1537	455	192	98	57	36	24
	Double Span	ASD, W/Ω	312	208	133	88	62	47	35
		L/180	3702	1097	463	237	137	86	58
	Triple Span	ASD, W/Ω	355	236	159	107	76	57	44
		L/180	2900	859	363	186	107	68	45

## Flex Series 1.2FX30-12 - Properties and Allowable Inward Loads (See notes on back)

Properties									Standard Finishes	
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft <sup>2</sup> )	I+ (in <sup>4</sup> /ft)	S+ (in <sup>3</sup> /ft)	I- (in <sup>4</sup> /ft)	S- (in <sup>3</sup> /ft)	Metallic Coating	Paint System
24	0.0232	50	65	1.40	0.0933	0.0524	0.0954	0.0734	AZ50	Cool Dura Tech™ 5000 (polyvinylidene fluoride) or Cool Dura Tech™ mx (metallic polyvinylidene)
22	0.0294	50	65	1.76	0.1265	0.2488	0.1287	0.1056	AZ50	
20	0.0354	40	55	2.11	0.1652	0.1072	0.1633	0.1524	G90	

Gauge	Span	Cond.	Allowable Inward Loads (lbs/ft²) per Span (ft.-in.)						
			2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
24	Single Span	ASD, W/Ω	262	116	65	42	29	21	16
		L/180	1020	302	127	65	38	24	16
	Double Span	ASD, W/Ω	180	120	85	56	39	29	22
		L/180	2456	728	307	157	91	57	38
	Triple Span	ASD, W/Ω	204	136	102	68	48	35	28
		L/180	1924	570	241	123	71	45	30
22	Single Span	ASD, W/Ω	426	284	213	170	138	101	78
		L/180	1382	410	173	88	51	32	22
	Double Span	ASD, W/Ω	277	185	120	79	55	41	32
		L/180	3330	987	416	213	123	78	52
	Triple Span	ASD, W/Ω	315	210	145	96	69	51	39
		L/180	2609	773	326	167	97	61	41
20	Single Span	ASD, W/Ω	428	190	107	68	48	35	27
		L/180	1805	535	226	116	67	42	28
	Double Span	ASD, W/Ω	312	208	135	89	64	47	36
		L/180	4348	1288	543	278	161	101	68
	Triple Span	ASD, W/Ω	355	236	161	108	77	58	44
		L/180	3406	1009	426	218	126	79	53

## Flex Series 1.2FX40-12 - Properties and Allowable Inward Loads (See notes on back)

Properties									Standard Finishes	
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft <sup>2</sup> )	I+ (in <sup>4</sup> /ft)	S+ (in <sup>3</sup> /ft)	I- (in <sup>4</sup> /ft)	S- (in <sup>3</sup> /ft)	Metallic Coating	Paint System
24	0.0232	50	65	1.58	0.1148	0.0953	0.1243	0.1174	AZ50	Cool Dura Tech™ 5000 (polyvinylidene fluoride) or Cool Dura Tech™ mx (metallic polyvinylidene)
22	0.0294	50	65	1.99	0.1533	0.1362	0.1645	0.1665	AZ50	
20	0.0354	40	55	2.38	0.1960	0.1930	0.2047	0.2334	G90	

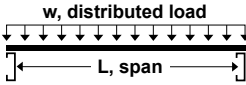
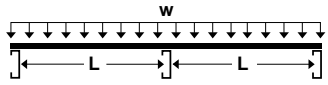
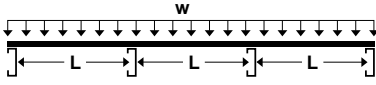
Gauge	Span	Cond.	Allowable Inward Loads (lbs/ft²) per Span (ft.-in.)						
			2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
24	Single Span	ASD, W/Ω	476	211	119	76	53	39	30
		L/180	1254	372	157	80	46	29	20
	Double Span	ASD, W/Ω	359	240	140	90	63	47	36
		L/180	3021	895	378	193	112	70	47
	Triple Span	ASD, W/Ω	408	272	171	112	79	58	45
		L/180	2367	701	296	151	88	55	37
22	Single Span	ASD, W/Ω	680	302	170	109	76	55	42
		L/180	1675	496	209	107	62	39	26
	Double Span	ASD, W/Ω	555	335	196	128	89	66	51
		L/180	4034	1195	504	258	149	94	63
	Triple Span	ASD, W/Ω	631	404	239	158	111	82	63
		L/180	3160	936	395	202	117	74	49
20	Single Span	ASD, W/Ω	770	342	193	123	86	63	48
		L/180	2141	635	268	137	79	50	33
	Double Span	ASD, W/Ω	624	365	216	142	99	74	57
		L/180	>5k	1528	645	330	191	120	81
	Triple Span	ASD, W/Ω	709	436	262	174	122	91	71
		L/180	4041	1197	505	259	150	94	63

## Outward Load Capacity

Panel / Gauge	Maximum* Negative (Outward) Uniform Load Capacity (lbs/ft <sup>2</sup> ) / Span (ft. - in.)						
	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"
1.2FX10-12d, 20-24ga (DIRECT FASTENED)	100	93	87	80	73	67	60
1.2FX20/30/40-12d, 20-24ga (DIRECT FASTENED)	89	81	74	67	60	53	45
1.2FX10/20/30/40-12c, 24ga (CLIP ATTACHED)	87	78	69	60	51	42	33
1.2FX10/20/30/40-12c, 20-22ga (CLIP ATTACHED)	86	81	76	72	67	62	57

\* Maximum allowable outward load capacities are shown and dependent upon fastener-to-substrate capacities. Refer to IAPMO-UES report #ER-0309 for specific product system capacities.

## Table Notes

Inward Loads	Single Span		<b>NOTES:</b> The values $W/\Omega$ (ASD) are based on allowable panel strength. L/180 values based on allowable service load deflections. The moments of inertia, $I_+$ and $I_-$ , presented for determining deflection are: $(2I_{\text{Effective}} + I_{\text{Gross}})/3$ Values are based on AISI S100-16/S1-18. Specifications subject to change without notice.
	Double Span		
	Triple Span		





# EURO VISTA SLIDE™

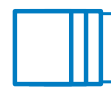
THERMALLY BROKEN LIFT & SLIDE SLIDING DOORS

euro-wall®

[www.euro-wall.com](http://www.euro-wall.com)  
888.989.EURO (3876)



FOLDING



SLIDING



STACKING



PIVOT

# SYSTEM THRESHOLDS

## Maximum / Minimum Specifications

Max Panel Weight:	500 lbs each panel
Min Panel Width:	24"
Max Panel Width:	96"
Min Panel Height:	32"
Max Panel Height:	166"
Panel Thickness:	1.75"
Max # of Panels:	8

**NOTE:** When using maximum panel widths & heights, panels may exceed maximum panel weight of 500 lbs. Calculated weight check should be done. For installations in Florida, please see the Florida Product Approval for usage and limitations.

## SYSTEM HIGHLIGHTS

### Extrusions

Extruded aluminum 6063-T5 with door panel corner keys for strength and security

### Hardware

Stainless steel, steel components with corrosion resistant material - salt spray tested 500 hours

### Flush or Low Profile Sill

Flush track with finished floor height or 3/8" exposed track - no sill riser required for water rating

### Hidden Pockets

Pocket configuration option allows panels to slide into the wall, completely disappearing from view

### U Factor

Lowest U factor for any available impact rated lift and slide panel

### Track Options

2 track - 5 track options for flexible panel configurations

### Matching Fixed Units

To match profile and glass

### Largest Impact Rated Panel Sizes

Thermal and non-thermal 13'+ tall panels - the tallest HVHZ impact tested and Florida Product Approved lift and slide panels available

### Thermally Broken Option

Impact rated thermally broken panel option - the largest impact tested thermally broken panels available

### Aesthetics

Wood cladding option available

### Corner Units

90° postless corner units (all impact tested / Florida Product Approved)

### Long Lasting Finish

Standard finish coating is AAMA 2605, the highest quality finish available

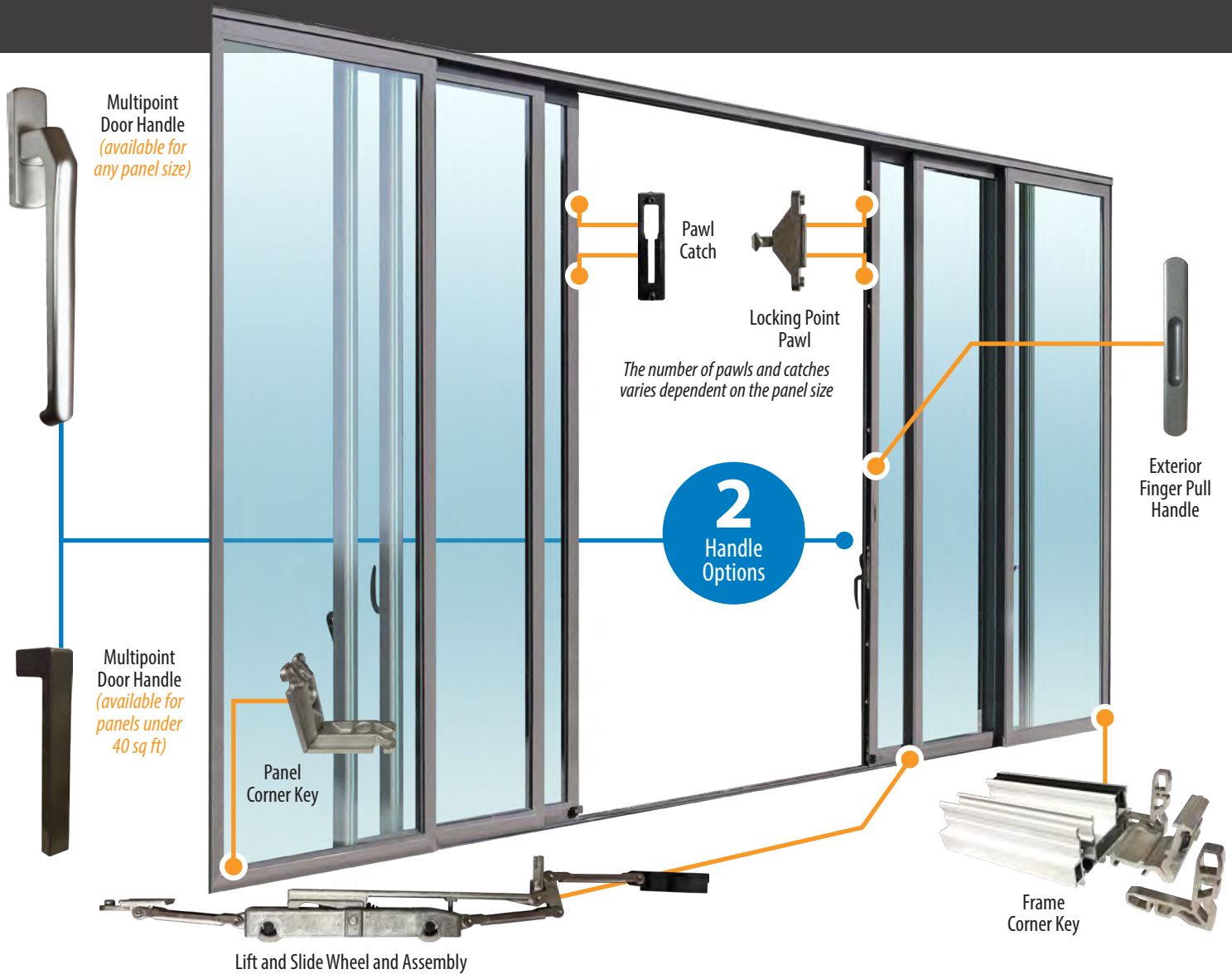
### Under Pressure

Up to 15 lbs of water protection without sill riser

### Unhindered View

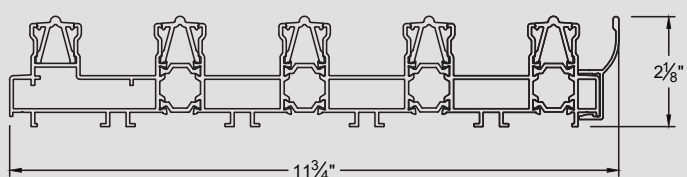
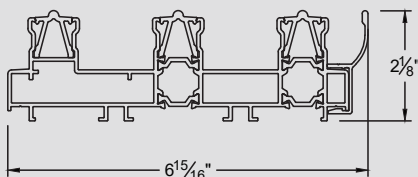
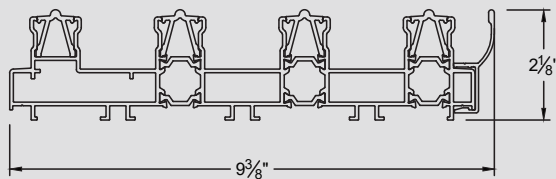
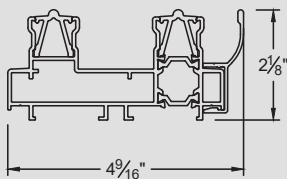
Highest glass to frame ratio available

# SYSTEM COMPONENTS



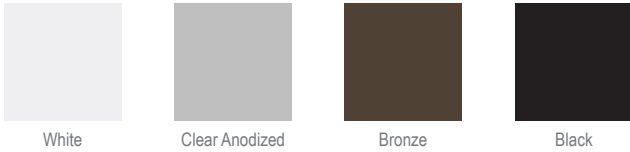
## TRACK OPTIONS

The Euro Vista Slide comes in a 2 track, 3 track, 4 track or 5 track configuration.



# PANEL FINISH OPTIONS

## STANDARD FRAME & DOOR PANEL FINISHES



White

Clear Anodized

Bronze

Black

## STANDARD FRAME & DOOR PANEL FINISHES

- Powder coat or Kynar® finishes available
- Custom powder coat or Kynar® finishes available
- Manufacturer color match options
- Custom wood grain finishes available

## INTERIOR WOOD CLAD FINISH OPTION

- Mahogany / sapele
- White oak
- Additional wood species available



# HARDWARE / HANDLE FINISH OPTIONS

## MULTIPOINT LOCK HANDLE



AVAILABLE  
FOR PANELS  
UNDER  
40 SQ. FT

### Available Finishes

**Silver**  
**White**  
**Bronze**  
**Black**

*Custom Colors Available*

## MULTIPOINT LOCK HANDLE



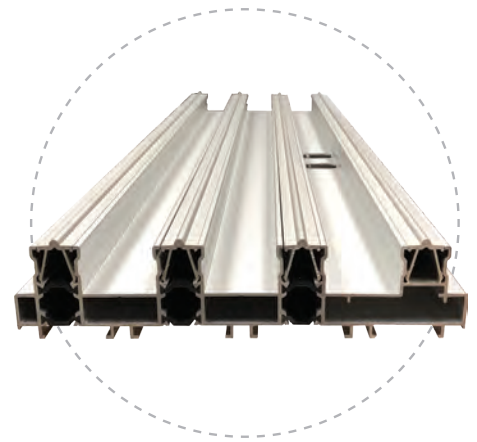
AVAILABLE  
FOR ANY  
PANEL SIZE

### Available Finishes

**Brushed Satin**  
**Bronze**  
**White**

*Custom Colors Available*

## SILL / TRACK



### Available Finishes

**Clear Anodized**  
**White**  
**Bronze**  
**Black**

*Custom Colors Available*

## GLAZING OPTIONS

Available glass for the Euro Vista Slide are:

- Insulated Glass
- Impact Insulated Glass

# SUPERIOR BY DESIGN

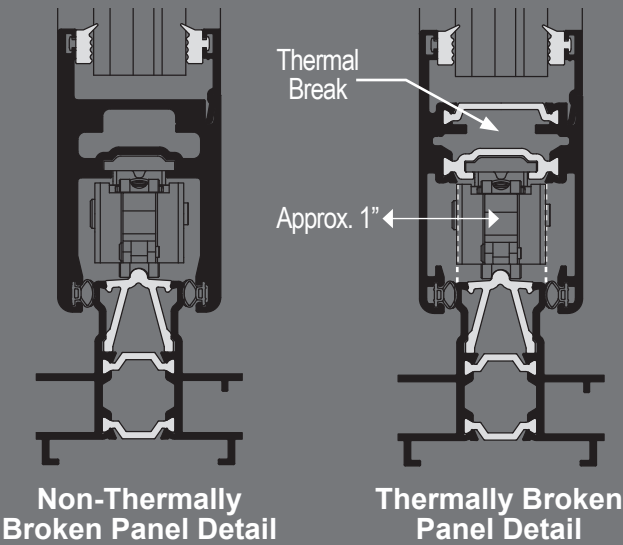
# EURO VISTA SLIDE™ SILL PROFILE DETAILS



**Hidden Track System  
Split View**

*For weather challenged climates, the flush and low profile hidden track systems are manufactured to meet water rating specifications. Additionally, Euro-Wall EXCLUSIVELY manufactures a water rated hidden flush sill.*

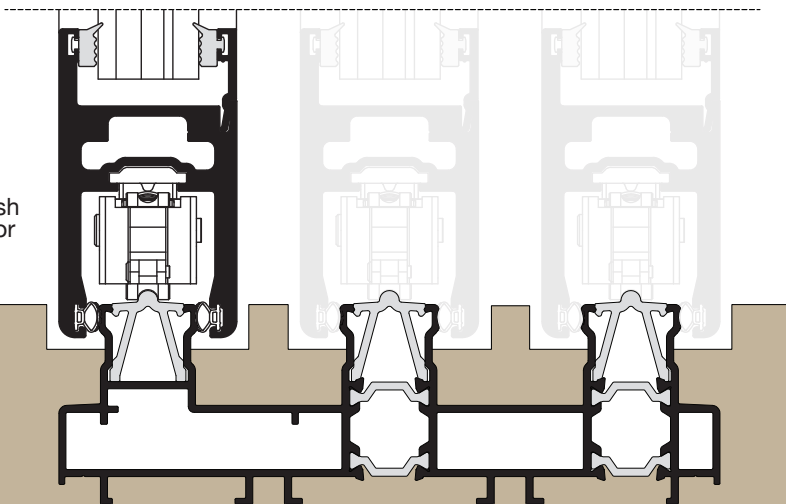
## NON-THERMALLY BROKEN & THERMALLY BROKEN PANEL OPTIONS



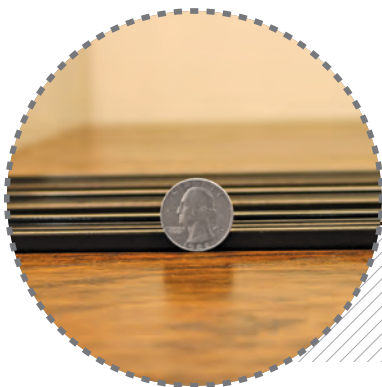
## FLUSH SILL Hidden Track System Cross Section



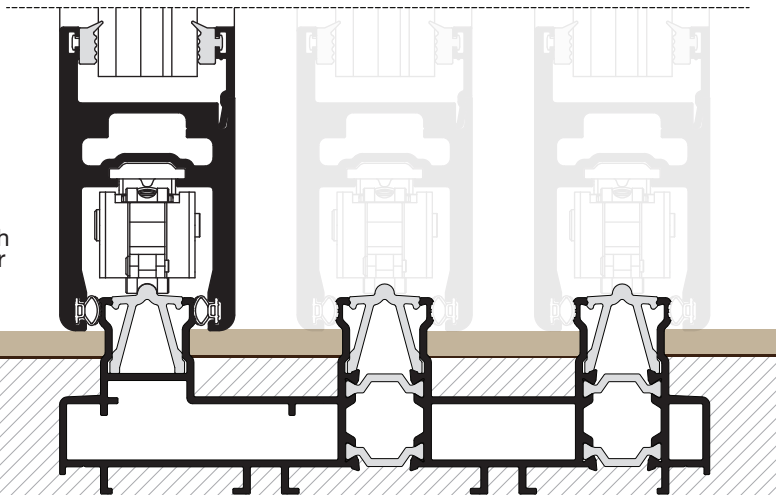
Finish Floor  
↓



## LOW PROFILE SILL Hidden Track System Cross Section

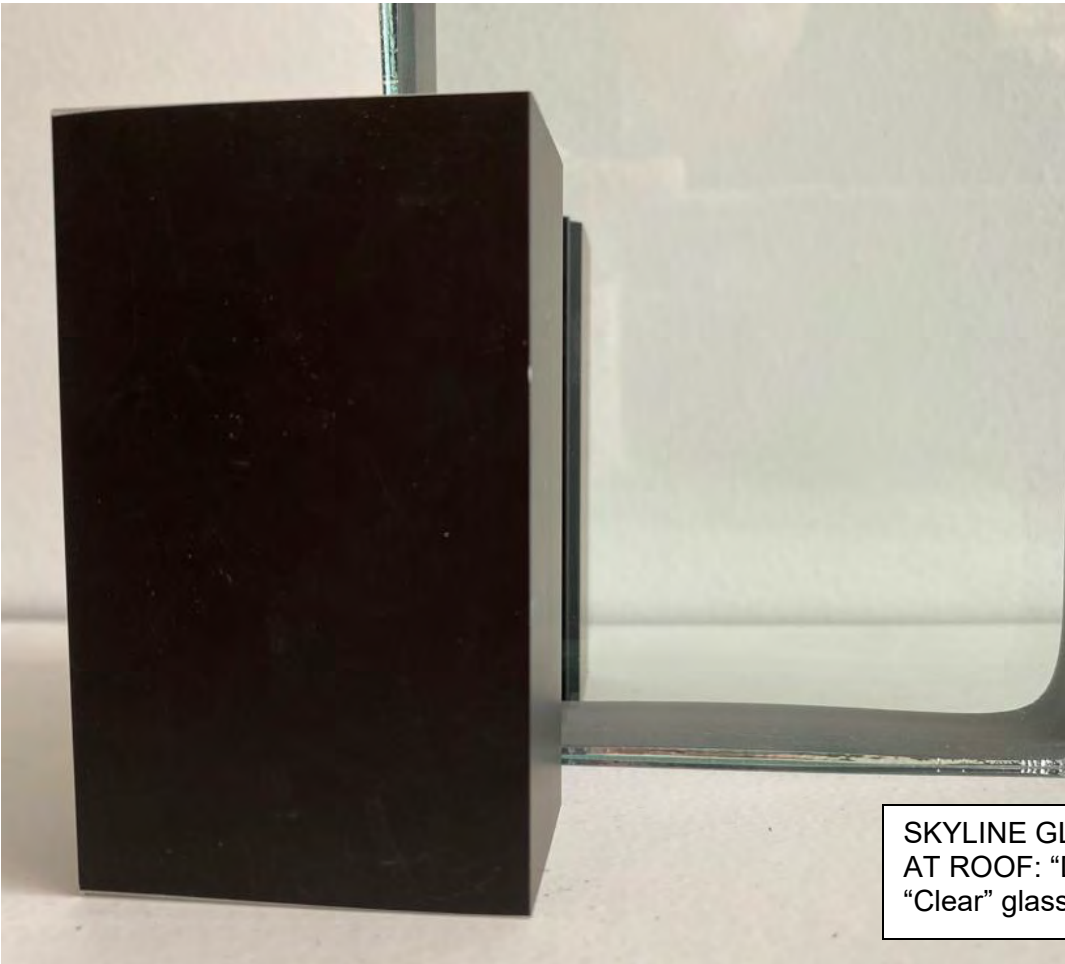


Finish Floor  
↓

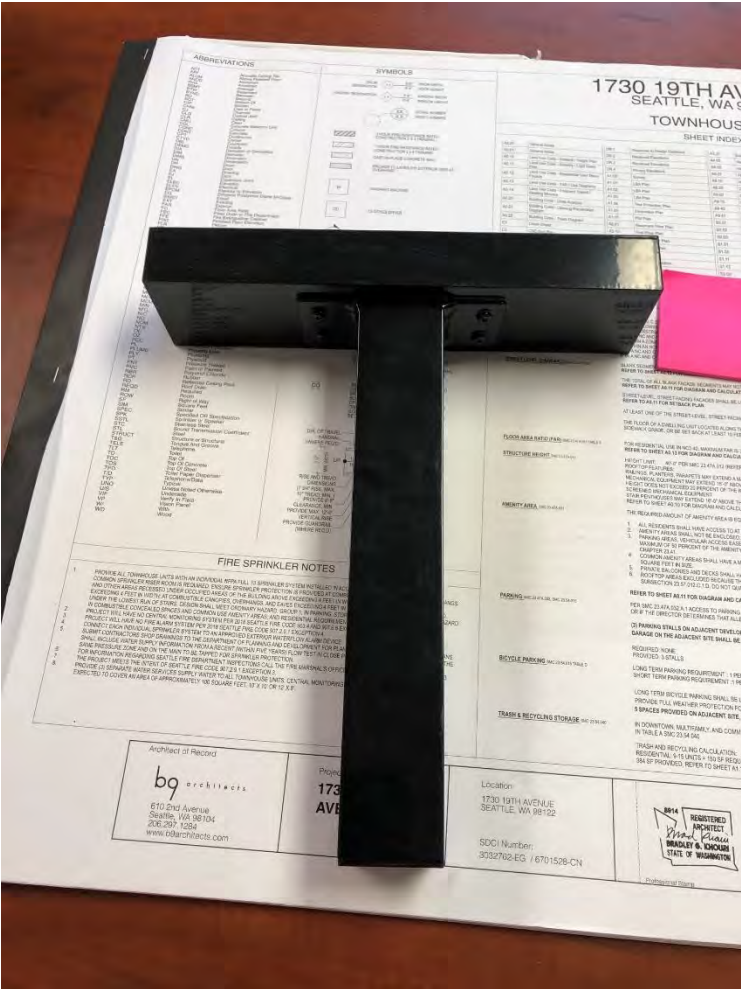




SKYLINE GLASS AND METAL GUARDRAIL  
AT ROOF: Installation examples



SKYLINE GLASS AND METAL GUARDRAIL  
AT ROOF: “Dark Bronze” metal sample and  
“Clear” glass sample



SKYLINE GLASS AND METAL GUARDRAIL  
AT ROOF: Top rail and post sample



**Louvers**

**Extruded Louvers**

Adjustable  
Brick Vents  
Combination

**Drainable**

Miami-Dade Qualified & Florida  
Approved  
Narrow Profile  
Penthouses  
Sightproof  
Stationary  
Storm Class  
**Fabricated Louvers**  
Acoustic  
Adjustable  
Stationary

**Grilles**

**Louver Screens**

**Sun Controls**

**Special Applications**

**Accessories**

**Selection Guide**

Products » Louvers » Drainable

## Drainable

Airolite's Extruded Aluminum Drainable louvers are high performance louvers designed to minimize water penetration through wall openings with drainable blades or drainable head and blades. Extruded Aluminum Drainable blades are available with visible or concealed vertical mullions in 4 and 6-inch frame depths.



### Case Studies

[Living Learning Community](#)

[Johns Hopkins](#)



K609HP



K6096HP



K6744



K6746



K6746HP



K6844



K6846



K6856



**What's New**

Current news and press releases.



**SpecWizard**


Guides you through selecting and configuring a product.



**Selection Guide**

Find the louver that meets your needs and specifications.

Airolite Louver Color: "Dark Bronze" to match Kawneer Storefront



**Declare.**

The Tofino offers high space efficiency for two bikes in sidewalk settings, campuses, city parks, or anywhere space is limited.

For ADA-compliant use in circulation paths as defined by ADA 2010 Section 307.3, please see our [Cane Detectable Tofino No Scratch®](#) bike rack.

INTERNATIONAL JOURNAL OF ENVIRONMENT & DEVELOPMENT

 [Tofino Surface Mount](#) ( 855 KB)

 [Tofino Embedded Mount](#) ( 1 MB)

Surface mounted to pavement.

Finish:



### Galvanized

If color is not a requirement, this hot dip galvanized finish is a good choice for durability, low cost and corrosion protection on mild steel racks. While a galvanized finish will appear rough when compared to zinc plated and powder coated finishes, galvanizing provides the highest degree of corrosion resistance of all three. Additionally, galvanizing can also be used as an under coating treatment to TGIC and PPA powder coats. All Sportworks galvanized bike racks are finished to ASTM A123.

f

## SDOT standards:

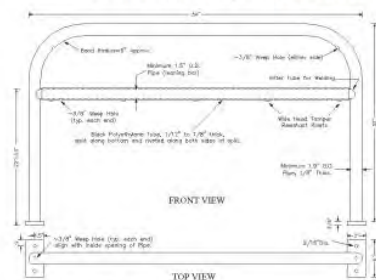
### OVERVIEW

The following are guidelines for both standard and custom bicycle racks. The goals of the specifications are to provide safe, secure, durable, low-maintenance bike racks and corrals that are easily identifiable as such.

### SPECIFICATIONS

The following are Seattle standard bike racks and pre-approved bike racks for the ROW.

- **Seattle standard bike rack:**
  - Inverted-U Bike Rack
- Approved pre-manufactured models
  - **Manufacturer:** Dero
    - \* **Dero Models:** Hoop Rack, Hoop Rack Heavy Duty, Swerve Rack, Downtown Rack, Round Rack, Arch Rack
  - **Manufacturer:** Sportworks
    - \* **Sportworks Models:** Tofino No Scratch, Oahu No Scratch Circular, Westport No Scratch
  - **Manufacturer:** Urban Racks
    - \* **Urban Racks Models:** Urban Staple, Urban Corral
  - **Manufacturer:** HuntCo
    - \* **Urban Racks Models:** The City of Portland Bike Rack, The Arc Bike Rack



Rail Type Bike Rack [Image: SDOT]

### STANDARD ON-STREET BICYCLE PARKING CORRAL

See Appendix C for City of Seattle standard corral plans and elevations.



Bike corral on University Way NE [Image: SDOT]

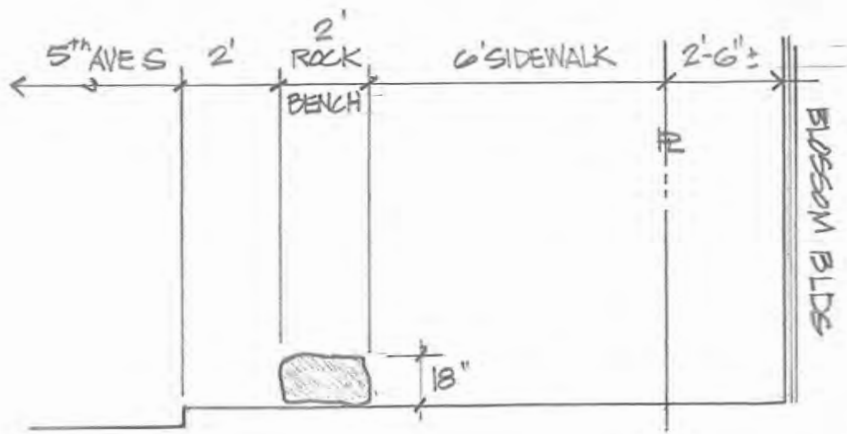
### CUSTOM BICYCLE RACK MINIMUM SPECIFICATIONS

SDOT will review and approve all non-standard bicycle racks in the ROW. The following are required minimum specifications for all bicycle racks in the ROW and recommended specifications for bicycle racks on public and private property:

- are intuitive to use correctly;

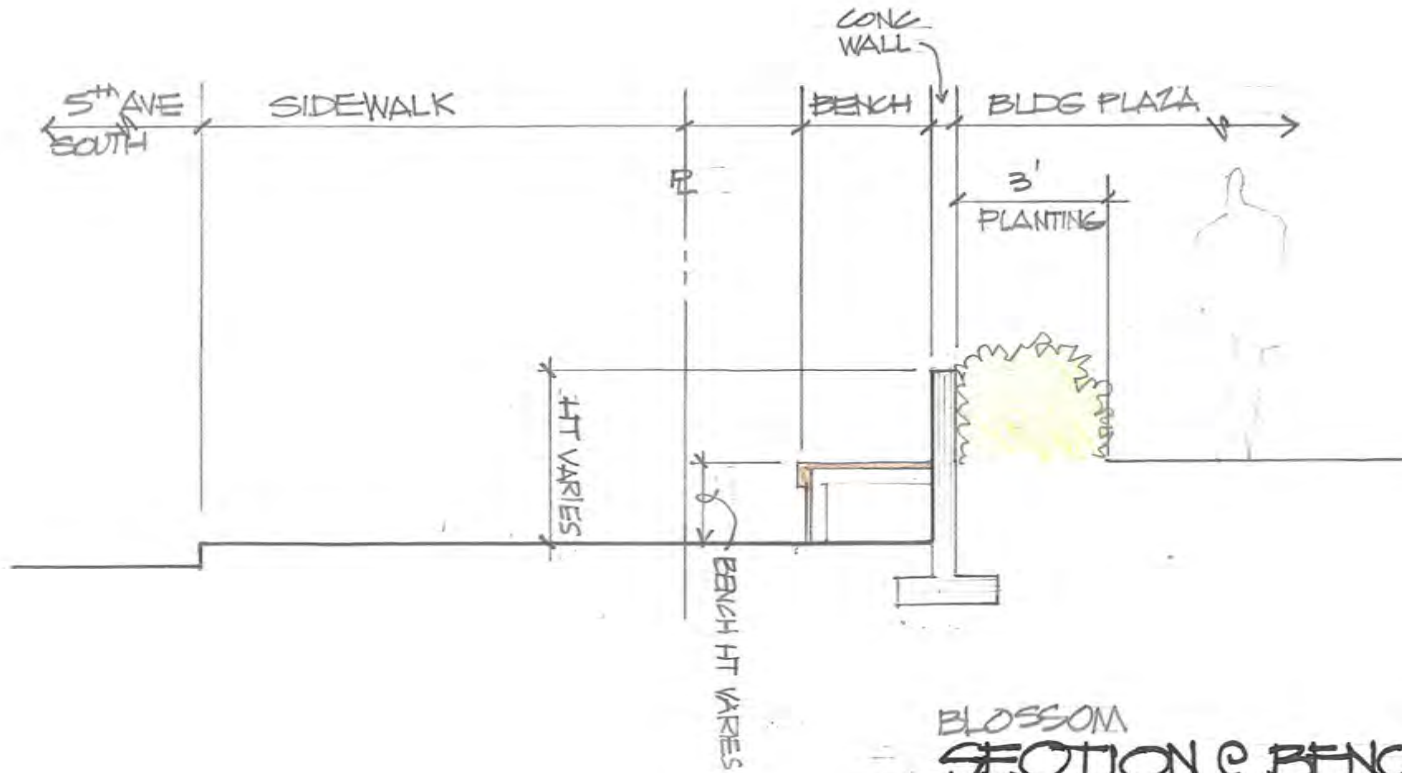


Non-standard racks on Blanchard St [Photo: MIG/SvR]



BLOSSOM  
SECTION @ BENCH  
1/4" = 1'-0"





BLOSSOM  
SECTION C BENCH  
1/4" = 1' - 0"



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