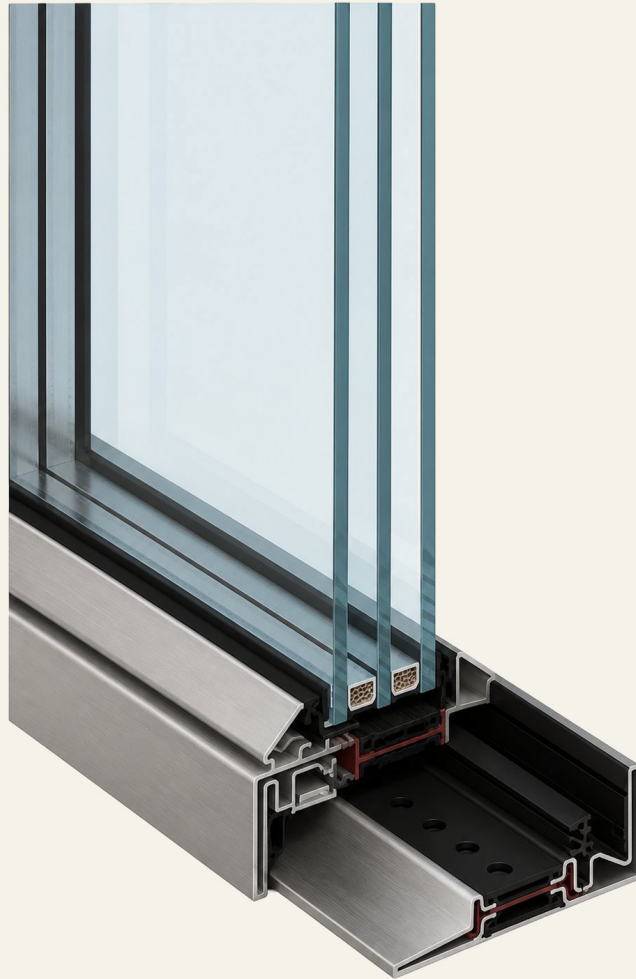


## Architectural Steel

Steel, Expressed With Uncompromising  
Strength And Architectural Clarity.



**80+**

Expected  
Service Life  
(Years)



**0.19-0.30**

Uw  
Whole Window  
U-Value



**2 / 3**

Glazing Layers  
(Double / Triple)



**2**

Low-E Coatings  
(#2 & #5)



**40%-70%**

Visible Light  
Transmitted (VT)



**3**

Perimeter Seals  
(Typical)



UP TO  
**45**

Acoustic  
(Max)

# Quick Facts

## PRICE, WARRANTY & DELIVERY

**Product Lifespan:** 80 years+

**Warranty Length:** 5 Years / Components Covered

**Approx. Price per Sq Ft (\$ / ft²):** Dependent On Unit Type And Configuration

**Key Pros / Cons:** Pro – True steel presence – ultra-slim sightlines, unmatched rigidity / Con – Lower thermal performance.

**Lead Times (Typical) - Total From Signed Shop Drawings to Product Site (Weeks):**

- NYC Area: 18
- New England: 18
- Southeastern US, Florida: 19
- Great Lakes/Chicagoland: 19
- Texas: 20
- Rockies (Colorado, Idaho, Montana, Utah, Wyoming): 20
- West Coast/California: 20-22

## DIMENSIONS & PERFORMANCE

**Frame Depth:** 2 15/16"

**Frame Width:** ~1 7/8" – 2 7/16" (sightlines depending on node)

**Max Height:** ~9'

**Max Width:** ~6' 6" (double leaf)

**Max Area:** ~30–45 ft² (operable) / larger for fixed

**Min Height:** ~16"–20"

**Min Width:** ~14"–18"

**Glass / IGU / Panel Depth Range:** ~1" – 1 3/4" (double + triple capable)

**Max Glass Weight per Panel:** ~220–285 lbs (hardware-dependent)

## THERMAL, STRUCTURAL, ACOUSTIC

**U-Factor Range (BTU/hr-ft²-°F):** 0.19 – 0.30 (system dependent)

**Frame Thermal Break Depth:** Polyamide thermal break (continuous, steel-integrated)

### Air / Water / Structural Ratings:

**Air Infiltration:** Class 4 ≈ -0.03–0.08 cfm/ft²

**Water Tightness:** Class 9A ≈ -12–15 psf

**Wind Load Resistance:** Class C5 ≈ ~60 psf

**Acoustic Performance:** ~38–45 dB (Standard Configurations) / ~45 dB Max

**NFRC Certified:** No (If Required, Certification Is Possible)

**Passive House / PHIUS Certified or Compliant:** No (Not Typically Applicable For Steel Systems)

## GLASS, PANEL & SEALING

**Glass Panes Available:** Double / Triple

**Glass / IGU Maximum Depth:** ~1 3/4"

**Panel Options Available:** Fixed, Casement (inward & outward), Tilt & Turn, Top-Hung / Bottom-Hung

**Panel Placement Options:** Inward + Outward Opening

**Number of Gaskets:** 3 (central + internal + external)

**SDL Bars Available:** Yes

**Hurricane Rated:** No (If Required, Custom Engineering Required)

## HARDWARE & OPERATION

**Hinge Types:** Concealed Standard / Exposed Available

**Handle Pin Diameter:** 7 mm Window

**Regular Leaf / Hidden Leaf:** Both Options Available

**Motorization Achievable:** Yes

**Alarm System Integration Achievable:** Yes

**Smart Home Compatibility Achievable:** Yes

**ADA Compliance Options:** Yes

**Child Safety Options:** Yes

## FINISH, SCREENS & SPECIAL FEATURES

**Color Options:** RAL / Custom / Material-Based (Steel, Stainless, Brass, Corten)

**Coastal / Marine-Grade Option:** Yes (material dependent – stainless recommended)

**Insect Screens:** Fixed

**Threshold Available:** N/A

Handmade craftsmanship for over 30 years





## Contents

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| 01 Glass, Glazing, & Infill                         | p. 1 |
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# Glass, Glazing & Infill

## Glazing Completely Customizable To Your Spec



### Standard Configurations

- Triple-pane insulating glass unit – 4 / 18 / 4 / 18 / 4
- Glass / IGU / Panel Depth Range:  $\approx 15/16'' - 2 \frac{5}{16}''$
- Low-E coatings on surfaces #2 and #5 for optimized thermal performance
- Center-of-glass performance:  $U_g = 0.09 \text{ BTU/ft}^2\cdot\text{hr}\cdot^\circ\text{F}$

### Build & Capacity

- Glazing thickness range:
- Designed for high-performance triple-glazed, and quad glazed assemblies
- Panel infill options: insulated core (polystyrene) with structural plywood backing

### Spacer Systems

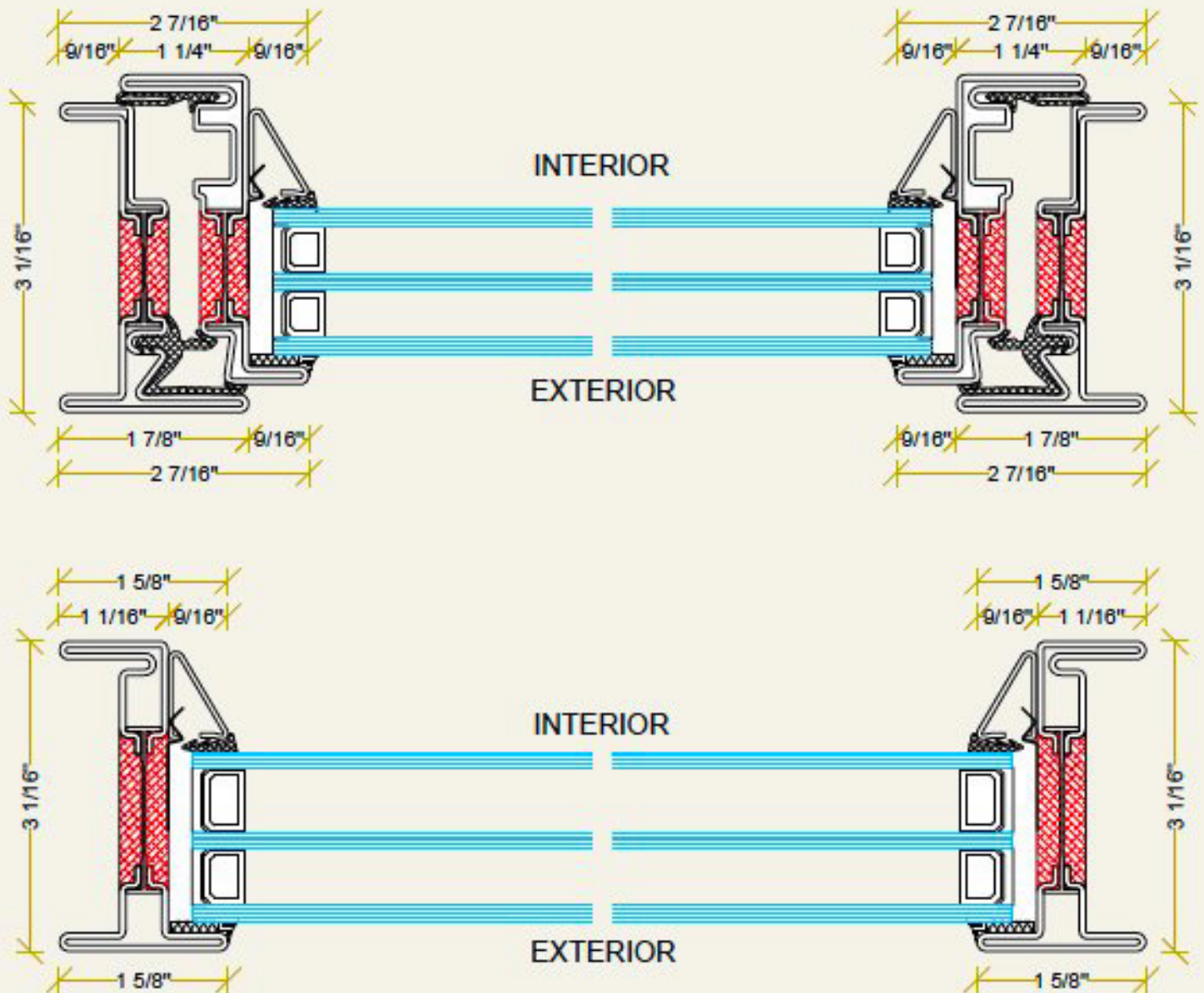
- Standard: Swisspacer Advanced (warm-edge)
- Options: Swisspacer Ultimate, aluminum

### Glass Options

- Safety glazing – tempered (standard) or laminated
- Acoustic / sound control glass
- Decorative options – privacy (satinated), patterned, reflective, anti-reflective, stained
- Bird Friendly Glass
- Impact Resistant / Bulletproof Glass
- Fire Rated Glass
- Hurricane Rate Glass

# Technical Drawings

[Click Link For Architectural Steel Technical Drawings](#)



# Frame Details

## Proportion

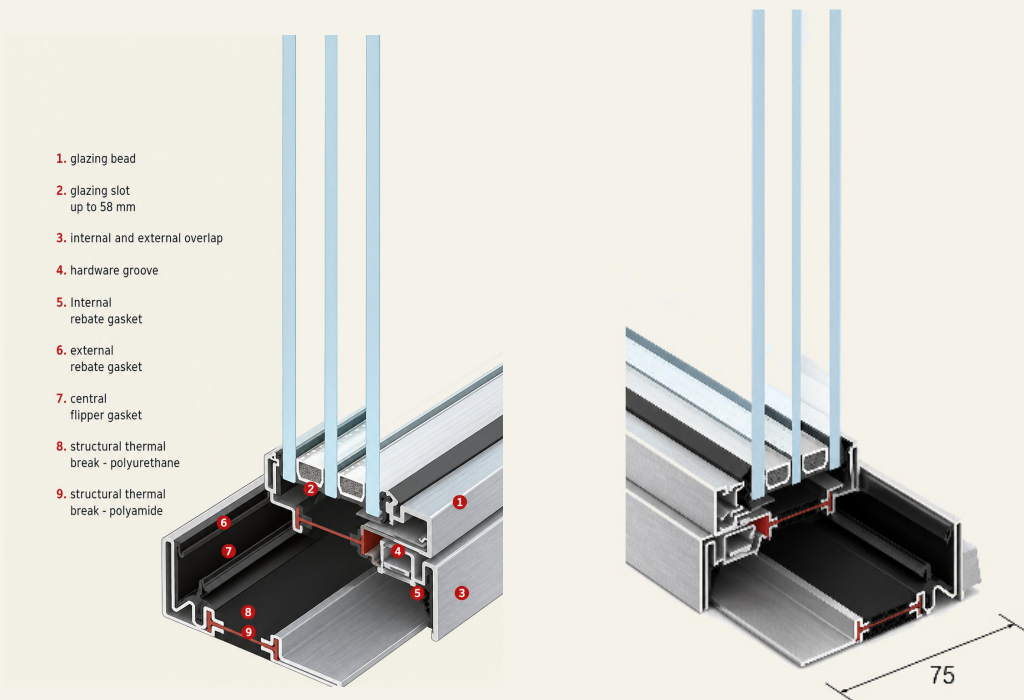
- Fixed units remain clean and minimal
- Operable units introduce slight depth for hardware and performance
- Slim aluminum profiles maintain consistent sightlines across configurations

## Material Build

- Thermally broken aluminum system – strength with thermal control
- Polyamide thermal breaks – separation of interior and exterior climates
- Engineered multi-chamber profiles – structure, insulation, and drainage integrated

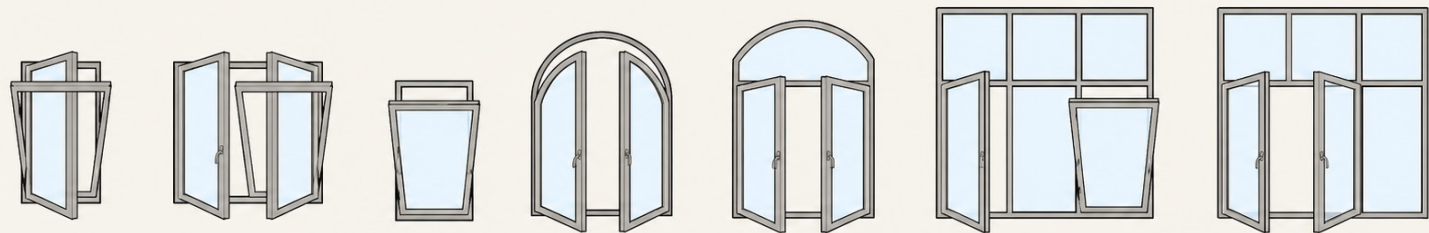
Compatible with tilt & turn, door, lift & slide, pivot, and folding systems

Glazing range: 1 3/8" – 1 7/8"

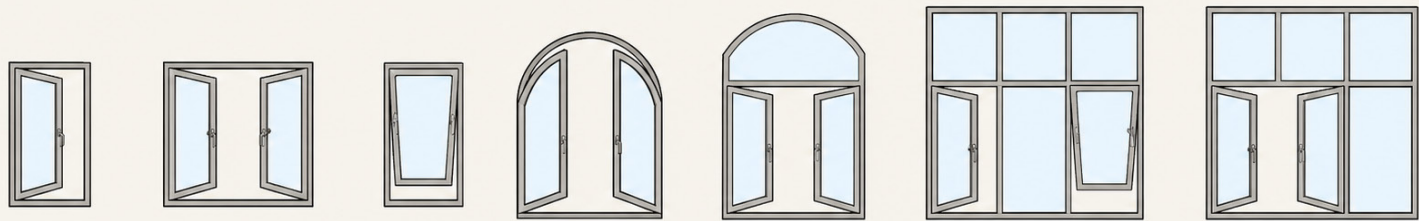


# Configurations

## GEOMETRY AVAILABLE



internal opening



external opening

# Finish & Color

**Galvanized Steel** Ultra-slim, high-strength steel profiles maximize light and design freedom. Hot-dip galvanizing protects the core from corrosion. Baked polyester powder coating locks in a durable, consistent finish.

Painted



**Corten Steel** 6–8× more corrosion resistant than standard steel. Higher tensile strength – supports larger, heavier units with slimmer sections. Self-forming patina seals the surface and evolves over time.

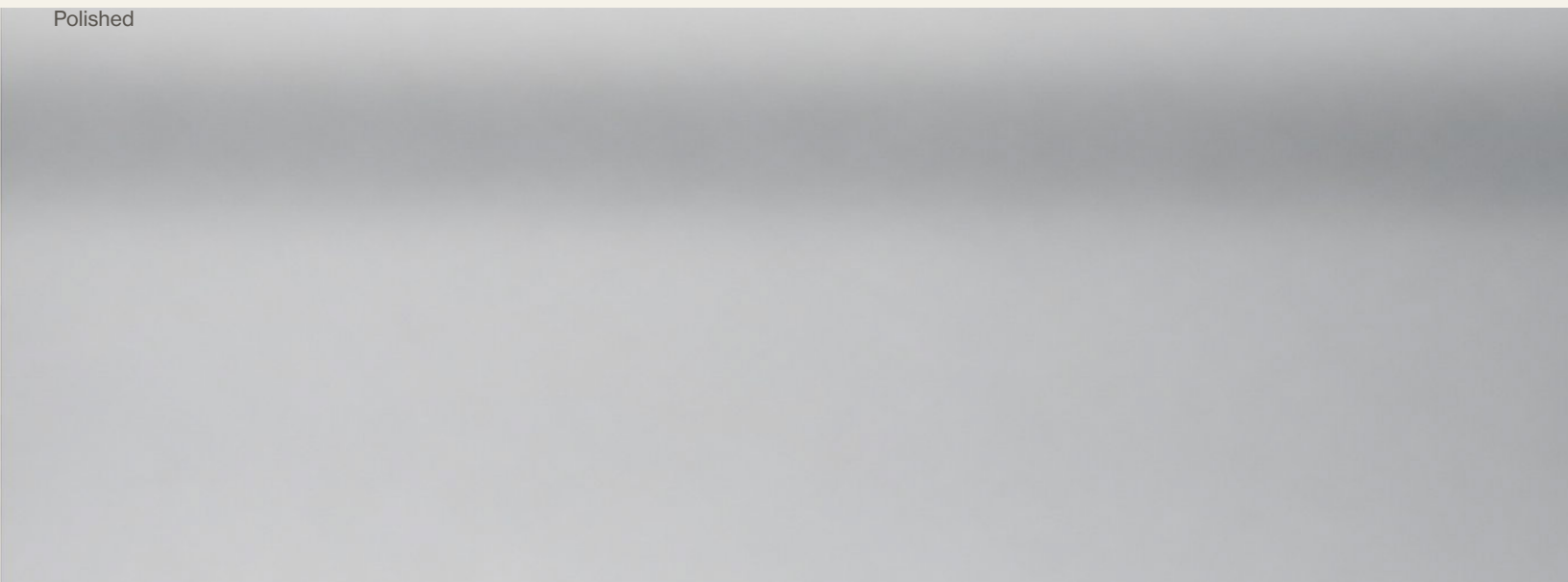
Oxidized

**Stainless Steel** Pre-treated, cold-rolled stainless — clean, consistent, low maintenance.  
No rust. High corrosion resistance. Up to 90% recyclable.  
Slim profiles — less frame, more light.  
Lower conductivity than aluminum — better thermals.  
304 (satin) or 316L (marine-grade, scotch-brite or gloss).

Satin



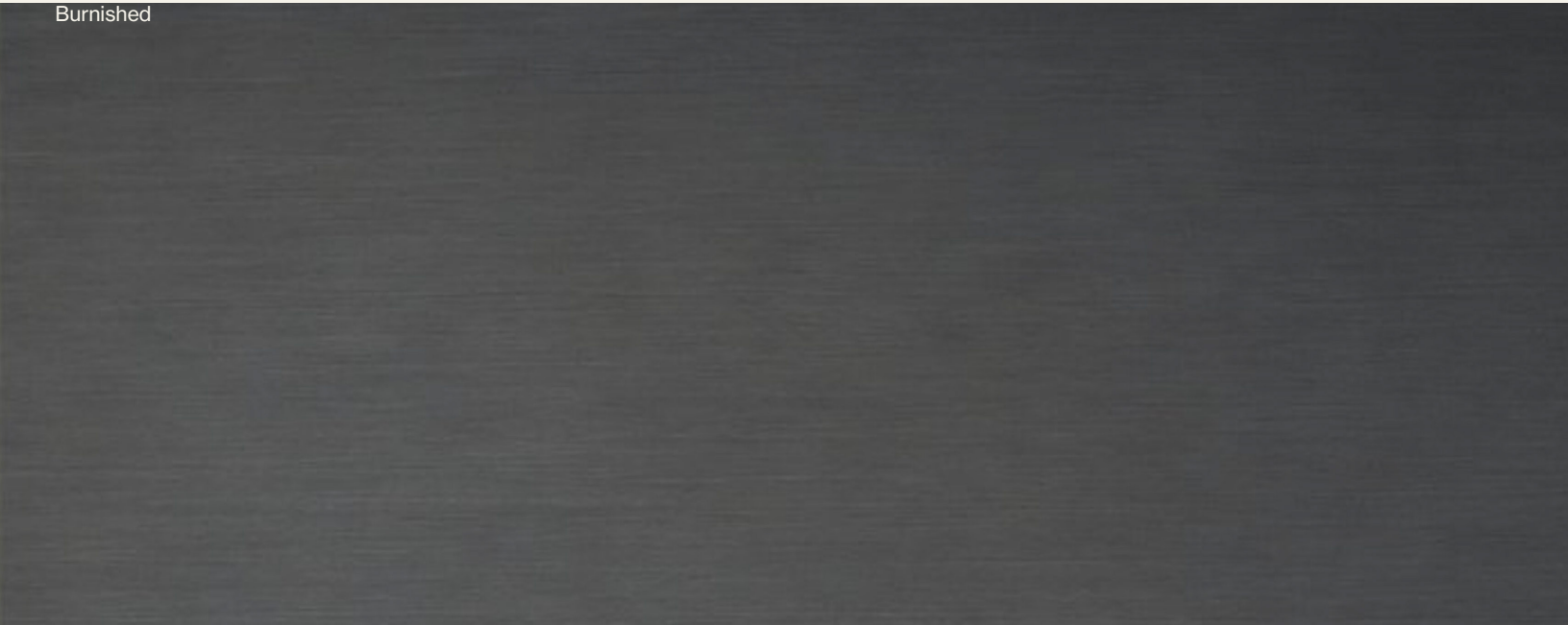
Polished



Scotch-Brite



Burnished





**Galvanised steel DX51D Z200 / ZM120**  
Hot galvanized Iron alloy of carbon with Sendzimir system, skinpast finish. Requires liquid or powder coating

**Corten steel Fe 510 X**  
Carbon iron alloy with high corrosion resistance (Cor) and tensile yield strength (ten), with oxidized finish





**Scotch brite  
stainless steel**

316L (marine)

iron-chrome  
alloy nickel  
and  
molybdenum,  
cold rolled with  
scotch brite  
finish

**Blackened  
stainless steel**

316L (marine)

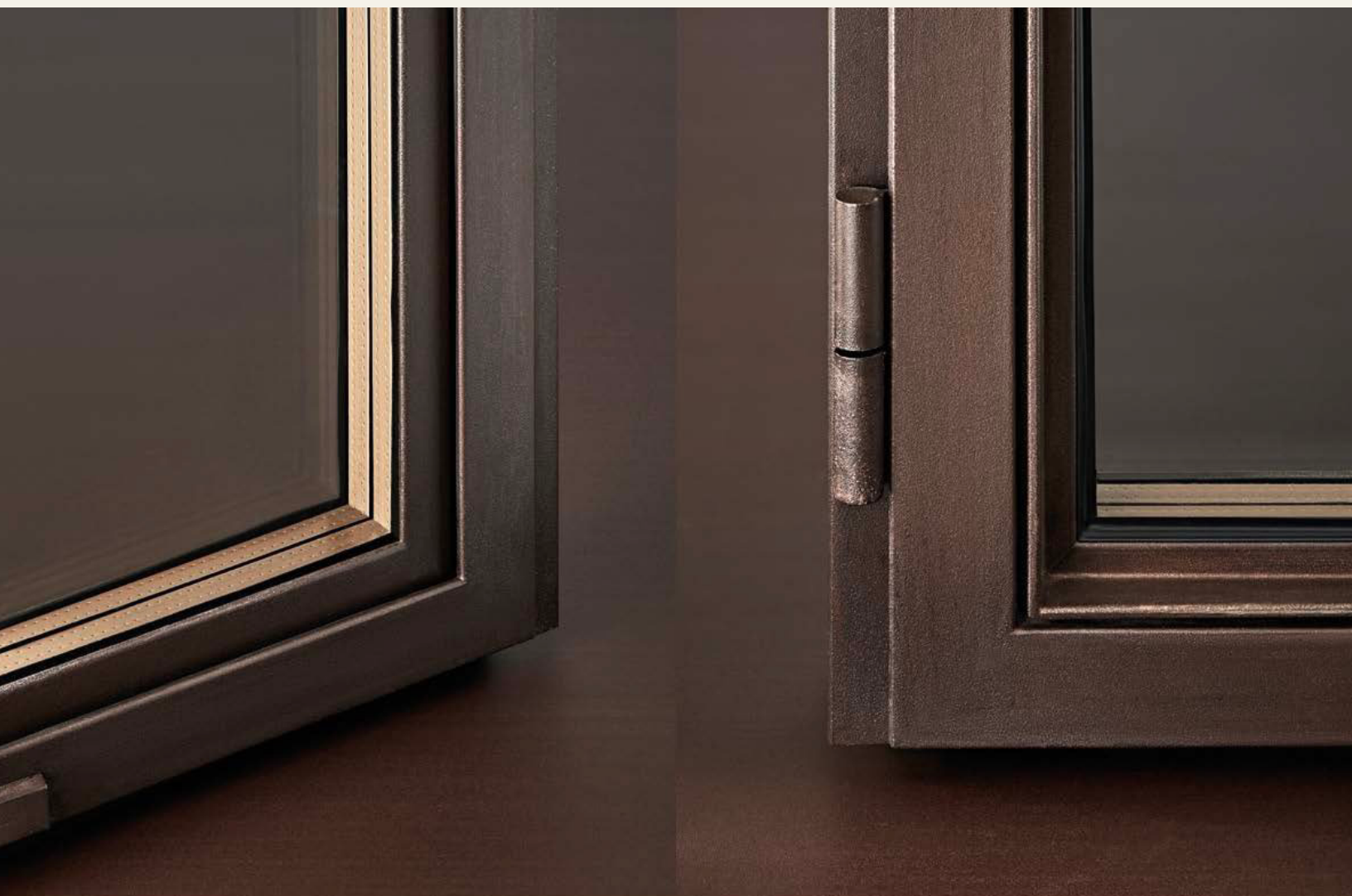
iron-chrome  
alloy nickel  
and  
molybdenum,  
cold rolled with  
hand  
burnished finish



**burnished stainless steel external view**



**Burnished stainless steel internal view**



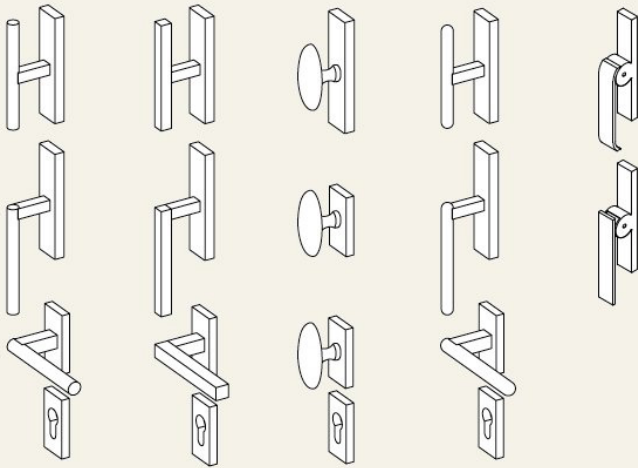
**Corten steel internal view**

**Corten steel external view**



# Handles

Handles align with the system – same material, same finish, no visual break. Two families: Vitruvio and Raffaello.



truncated   square   oval   round   raffaello

## Select Third-Party Brands

 **FSB**

**FORMANI®**

ROCKY MOUNTAIN  
H A R D W A R E

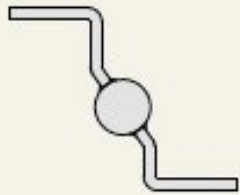
-ento

**A** | FROM THE ANVIL

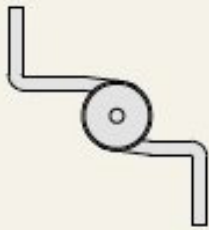


# Hinges & Fittings

Small. Strong. Built for heavy doors.  
Matched finish – disappears into the frame.  
Adjustable. Proven under load.



two-wing



three-wing



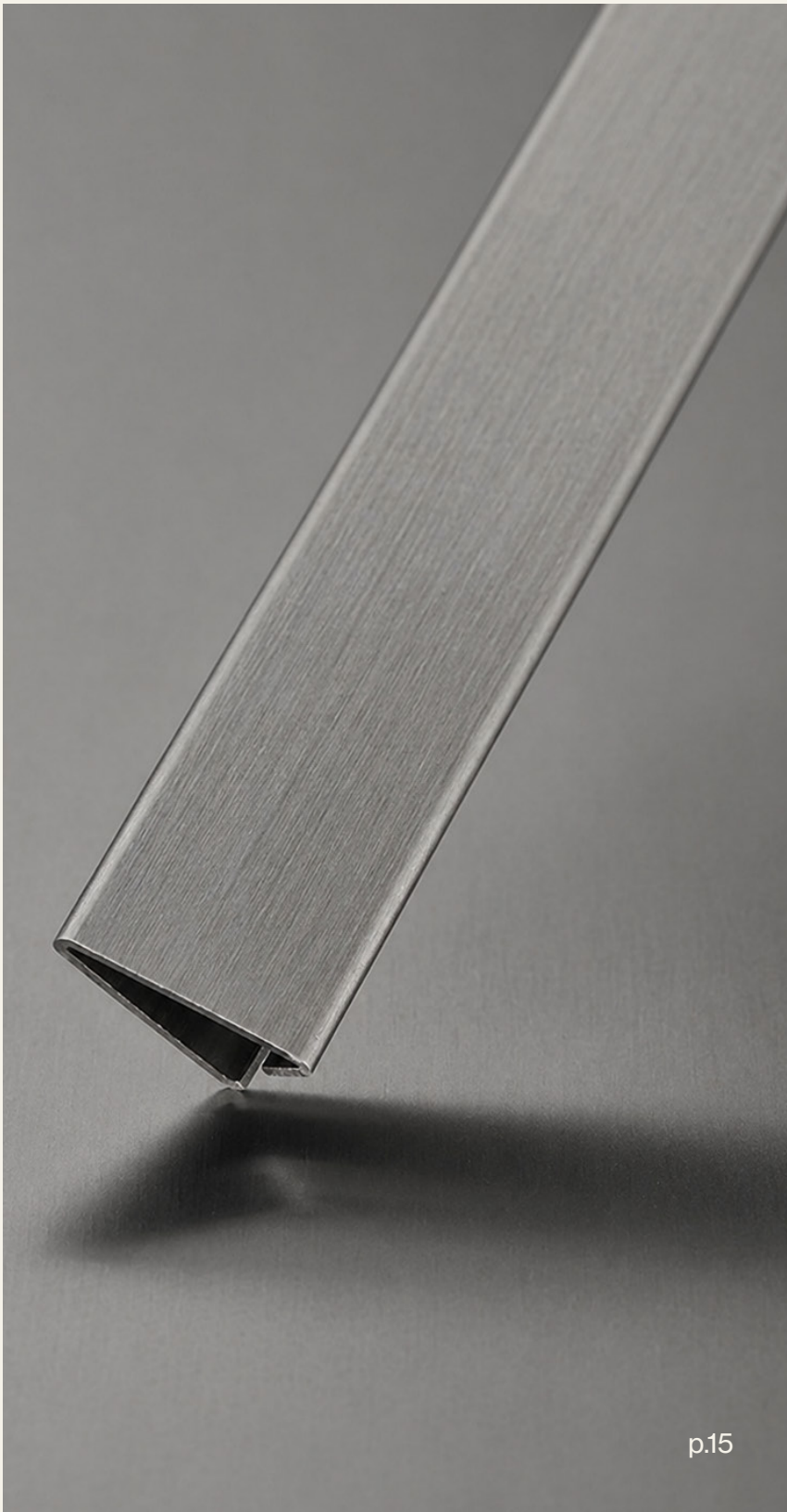
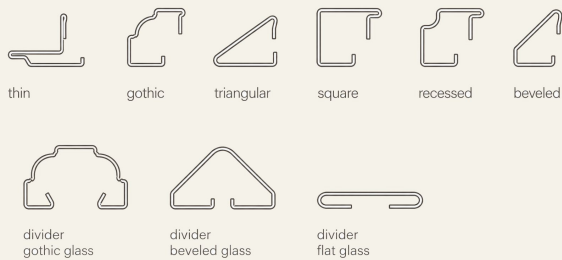
welded



# Glazing Beads

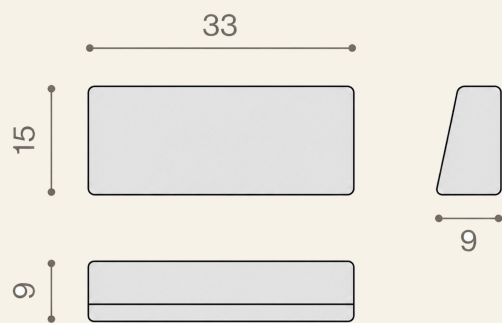
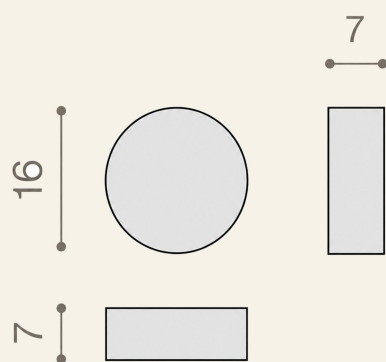
Glazing beads secure the glass and complete the frame.

Clean, minimal forms – square, triangle, L – each shaping the final read of the window.



# Water Management & Drainage

Offered in two forms: trapezoidal and round.



# Accessories

Accessories are developed as a continuation of the system – integral, not applied.

Glass stops, handles, and hinges share the same finishes – allowing them to visually dissolve into the frame.



# Performance

## SYSTEM PERFORMANCE

**Air Infiltration:** Class 4  $\approx$  ~0.03–0.08 cfm/ft<sup>2</sup>

**Water Tightness:** Class 9A  $\approx$  ~12–15 psf

**Wind Load Resistance:** Class C5  $\approx$  ~60 psf

*U.S. performance values require certified testing where applicable.*

## THERMAL PERFORMANCE

- $U_w$ : 0.17–0.25 typical range
- $U_g$ : 0.09 BTU/ft<sup>2</sup>·hr·°F (triple-pane reference – glass dependent)
- $U_f$ : 0.44 BTU/ft<sup>2</sup>·hr·°F
- $\Psi$  (Psi Values): ~0.037–0.039 (Swisspacer - Advanced)

## SOLAR & LIGHT

- SHGC: 37%
- VT: ~47% - 70%

## AIR & ACOUSTIC

- Air Infiltration:  $\leq$  0.05 cfm/ft<sup>2</sup>
- $R_w$ : ~38–45 dB (Standard Configurations) / ~45 dB Max

# Installation Overview

Contact Prickly Mountain Directly For The Full Steel & Brass/Bronze Install Guides.

**#1 Rule: If it's not square, level, and plumb – nothing else matters.  
Set it right, or it will not perform.**

**1/2" = Recommended gap between rough opening & outer edge of window or door frame**

## Mounting Methods

- Typically installed via direct frame anchoring through factory pre-drilled pilot holes, or using engineered bracket systems (project-dependent)
- Method must align with structure, substrate, and load conditions
- Fastening strategy typically defined at shop drawings stage

## Screws

- Proper screw type, spacing, and load capacity is critical
- screws must transfer weight safely into structure – not finish materials
- Incorrect placement = deflection, misalignment, and long-term failure



## Mulling & Stacking

- Multi-unit assemblies require precise alignment and sequencing
- Structural support must account for combined system weight and movement
- Tolerances tighten as units scale – small errors compound quickly

## Critical Requirements

- Structure must be true and fully supported
- Sill conditions must be continuous, level, and properly prepared
- Units must be installed without forcing or correcting field errors

## Site Coordination

- Confirm rough openings, elevations, and tolerances before delivery
- Ensure handling equipment is available (units are heavy)
- Protect units during construction – dust, debris, and moisture matter

## Most Important

Installation quality directly impacts performance, operation, and longevity.  
All installation must follow approved shop drawings and best building practices.

## High-Performance Building Products Recommended With Our Systems



# Accessibility, Child Safety & ADA Considerations

Designed for accessibility, safety, and intuitive daily use.

## **Operability**

- One-hand use
- No grasping, pinching, or twisting
- Low-force hardware (system-dependent)

## **Reach**

- Within accessible ranges
- Forward  $\leq 48"$  AFF
- Side  $\leq 54"$  AFF

## **Thresholds**

- Low-profile / flush options
- ADA height + bevel compliant

## **Clear Opening**

- 32" minimum achievable
- Dependent on configuration

## **Hardware**

- Lever-based, accessible systems
- No knobs
- Electronic access available

## **Automation**

- Motorized options
- Smart integration
- Manual override standard



## **Child Safety**

- Lockable handles and restrictors available
- Controlled opening limits for ventilation
- Optional keyed or concealed safety hardware
- Designed to reduce fall risk in operable units

# Technical

All Dimensions, Sizing Ranges, And Performance Values Are Provided For Reference And Are Confirmed During The Shop Drawing And Engineering Process For Each Project

Performance Values Shown Are Based On Standard Assemblies. Project-Specific Performance Is Determined Through System Configuration And Engineering

Proper installation requires project-specific detailing developed by the Architect or waterproofing consultant and coordinated with the overall building envelope design

## Finish Disclaimer

Colors and finishes shown are for reference only. Final appearance may vary due to metal variation, lighting conditions, and production processes. Physical samples should be reviewed and approved prior to order. Powder-coated finishes may vary slightly by batch. Stainless steel will exhibit natural grain and tone variation. Corten steel will oxidize and evolve over time with environmental exposure

Specialty sizes for both fixed and operable windows may be available at an additional cost. Please consult with Prickly Mountain for project-specific options

Water management performance is achieved through a combination of profile geometry, sealing systems, and concealed drainage paths. Final performance is dependent on proper installation, flashing integration, and site conditions

Accessibility compliance is configuration-dependent and must be verified at the shop drawing and specification stage. Final compliance is subject to project conditions, installation, and applicable local codes

## Accessibility Considerations

Select hardware, low-threshold, and motorized configurations may support accessible design goals. Final compliance must be verified by the design team based on project conditions, selected configuration, and applicable code

Information in this document can be modified without notice

# Warranty Overview

## Coverage You Can Count On

- 15 Years – Insulated Glass Units (seal failure / internal fogging)
- 20 Years – Frames & Structural Components
- 10 Years – Laminated Glass Integrity
- 5 Years – Hardware & Operating Components
- 10 Years – Factory Finishes (adhesion / manufacturing defects)

## What's Covered

- Manufacturing defects in materials and workmanship under normal use
- Conditions that materially impair intended function or structural performance
- Factory-supplied and factory-applied components

## What's Not Covered

- Installation, labor, freight, or site-related conditions
- Normal wear, maintenance, weathering, or adjustment
- Glass breakage, condensation, or inherent optical characteristics
- Damage arising from construction, environment, misuse, or surrounding building conditions

## How It Works

- Covered issues are addressed in accordance with our Limited Warranty
- Replacement components only – labor, freight, and field costs excluded
- Coverage begins from delivery or shipment-based warranty commencement, not installation date

*Prickly Mountain*  
EUROPEAN WINDOWS & DOORS

[www.pricklymountain.com](http://www.pricklymountain.com)