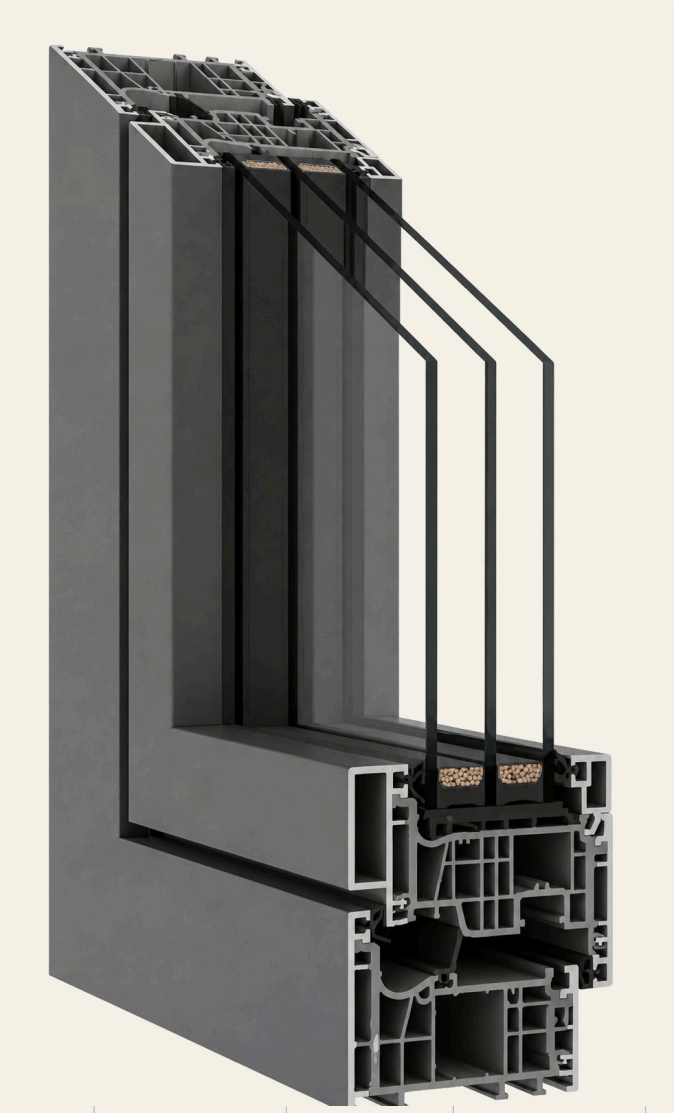
NEW PRODUCT

MULTI FAMILY BALANCE
BUDGET & PERFORMANCE

Alu Hybrid

Aluminum Cladding Shell On Both Interior And Exterior. PVC Core.



40-50+	0.13-0.17	2 / 3 / 4	2	40%-70%	2	UP TO 49 dB
Expected Service Life (Years)	Uw Whole Window U-Value	Glazing Layers (Double / Triple / Quad)	Low-E Coatings (#2 & #5)	Visible Light Transmitted (VT)	Perimeter Seals (Typical)	Acoustic (Max)

Prickly Mountain
EUROPEAN WINDOWS & DOORS

Quick Facts

PRICE, WARRANTY & DELIVERY
Product Lifespan: 40–50 years+
Warranty Length: 10 Years Frames / 5 Years Components Covered
Approx. Price per Sq Ft ($ / ft²): Dependent On Unit Type And Configuration
Key Pros / Cons: Pro - Full Aluminum Look and Finish & Great Thermals / Con - Slightly Less Max Size Possibilities
Lead Times - Total From Signed Shop Drawings to Product Site [Weeks] :
- **NYC Area:** 14
- **New England:** 14
- **Southeastern US, Florida:** 15
- **Great Lakes/Chicagoland:** 15
- **Texas:** 16
- **Rockies (Colorado, Idaho, Montana, Utah, Wyoming):** 16
- **West Coast/California:** 16-18

DIMENSIONS & PERFORMANCE

Frame Depth: 3 1/8" – 3 5/8"
Frame Width: ~2 3/4″ – 3 1/4″ (varies by configuration)
Max Height: ~9′
Max Width: ~5′
Max Area: ~30–40 ft² (operable) / larger for fixed
Min Height: ~16″–20″
Min Width: ~14″–18″
Glass / IGU / Panel Depth Range: ~15/16″ – 2 5/16″
Max Glass Weight per Panel: ~265–330 lbs

THERMAL, STRUCTURAL, ACOUSTIC
U-Factor Range (BTU/hr·ft²·°F): 0.13 – 0.17 BTU/ft²·hr·°F
Frame Thermal Break Depth: Full uPVC Core
Air / Water / Structural Ratings: –
Acoustic Performance: ~32–46 dB (Standard Configurations) / ~47–49 dB Achievable
NFRC Certified: No (If Required, Certification Is Possible)
Passive House / PHIUS Certified or Compliant: Certified No/ Compliant Yes, Depending On Project Location

GLASS, PANEL & SEALING
Glass Panes Available: Double / Triple / Quad
Glass / IGU Maximum Depth: ~1 3/4″ (44 mm)
Panel Options Available: Fixed / Tilt & Turn
Panel Placement Options: Inward Opening
Number of Gaskets: 2 (Typical)
SDL Bars Available: Yes
Hurricane Rated: No (If Required, Certification Is Possible)

HARDWARE & OPERATION
Hinge Types: Concealed Standard / Exposed If Needed
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 / Dual-Finish
Coastal / Marine-Grade Option: Yes
Insect Screens: Fixed
Threshold Available: N/A

Performance

SYSTEM PERFORMANCE

Air Infiltration: Class 4 ≈ ~0.03–0.08 cfm/ft²
Water Tightness: Class E1950 ≈ ~40.7 psf
Wind Load Resistance: Class C5 ≈ ~60 psf design pressure

Air / Water / Structural Ratings As Per EN 1026 / 1027 / 12211
U.S. performance values require certified testing where applicable.

THERMAL PERFORMANCE

- Uw: 0.13–0.20 typical range
- Ug: Ug = 0.09 BTU/ft²·hr·°F
- Ψ (Psi Values): ~0.037–0.039 (Swisspacer - Advanced)

SOLAR & LIGHT

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

AIR & ACOUSTIC

- Air Infiltration: ≤ 0.05 cfm/ft²
- Rw: ~32–46 dB (Standard Configurations) / ~47–49 dB Achievable

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: ≈ ~15/16″ – 2 5/16″
- Low-E coatings on surfaces #2 and #5 for optimized thermal performance
- Center-of-glass performance: Ug = 0.09 BTU/ft²·hr·°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

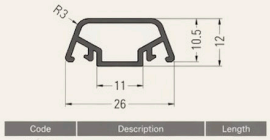
Spacer Systems
- Standard: Swisspacer Advanced (warm-edge)
- Options: Swisspacer Ultimate, aluminum

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

SDL Bars

Aluminum

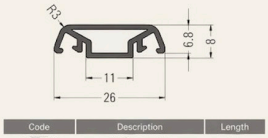
Profile set – mullion and transom profiles



Code	Description	Length
A 3026	Mullion profile	6 m

Technical information:

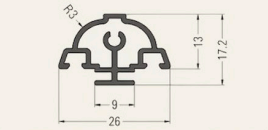
R_{ext} = 250 mm
R_{int} = minimum handle radius



Code	Description	Length
A 3026/8	Mullion profile	6 m

Technical information:

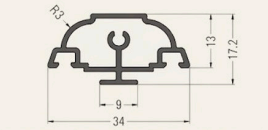
R_{ext} = 250 mm
R_{int} = minimum handle radius



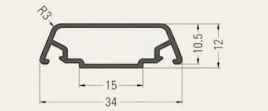
Code	Description	Length
A 3026/7	Mullion profile	6 m

Technical information:

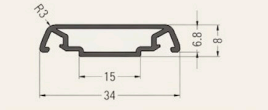
R_{ext} = 325 mm
R_{int} = minimum handle radius



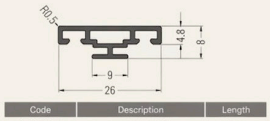
Code	Description	Length
A 3034/7	Mullion profile	6 m



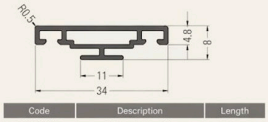
Code	Description	Length
A 3034	Mullion profile	6 m



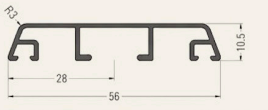
Code	Description	Length
A 3034/8	Mullion profile	6 m



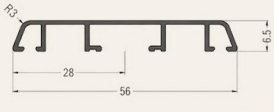
Code	Description	Length
A 3026/25	Transom profile	6 m



Code	Description	Length
A 3034/25	Transom profile	6 m



Code	Description	Length
A 3056	Mullion profile	6 m
AT 3056	Mullion profile THERMO	6 m



Code	Description	Length
A 3056/8	Mullion profile	6 m
AT 3056/8	Mullion profile THERMO	6 m

Technical Drawings

Click Link For Alu Hybrid Technical Drawings

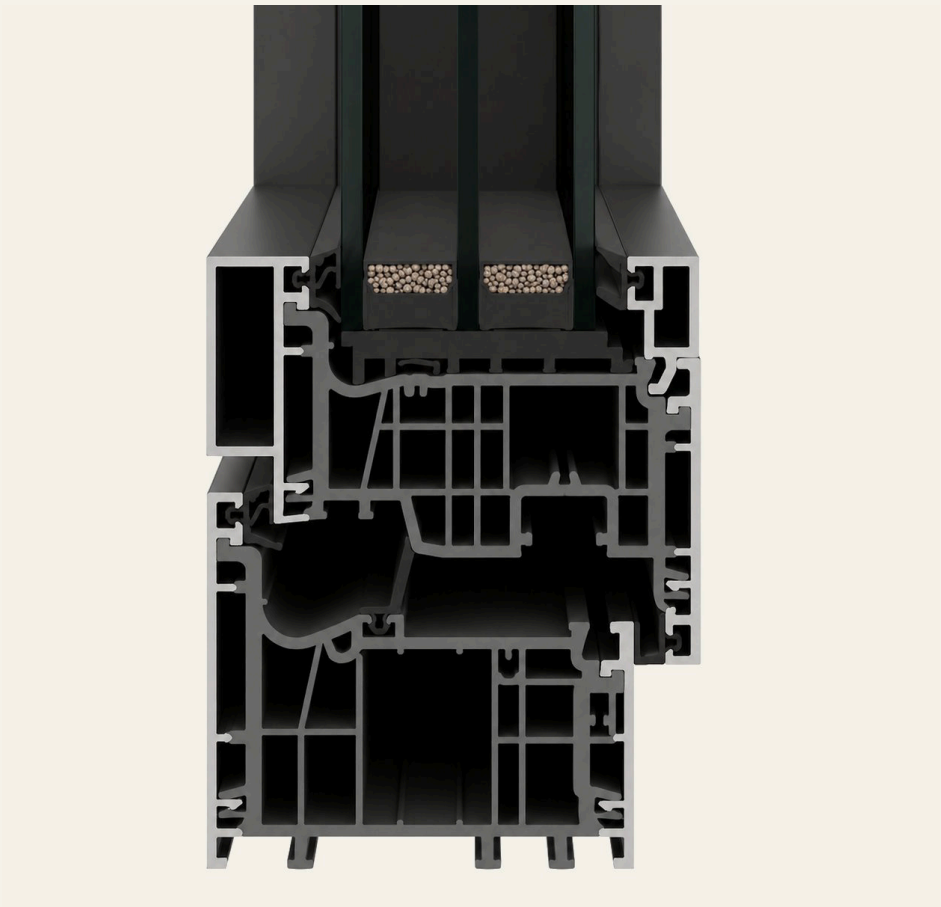
Frame Details

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



Installation Overview

Contact Prickly Mountain Directly For The Full Alu Hybrid, Alu I, Alu II, & Alu III 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
- Installed using engineered bracket systems or direct anchoring (project-dependent)
- Method must align with structure, substrate, and load conditions
- Fastening strategy defined at shop drawings stage

Brackets
- Proper bracket type, spacing, and load capacity is critical
- Brackets 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

pro clima®

SIGA 1966

Henry® A CARLISLE COMPANY

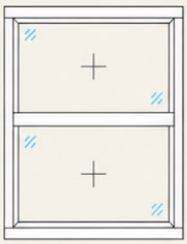
Sika® BUILDING TRUST

DOW®

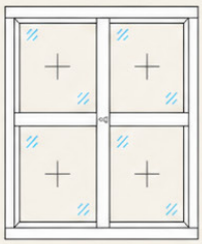
Configurations

FIXED FIELD

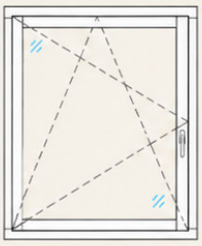
DOUBLE
FIXED FIELD



DOUBLE
FIXED FIELD

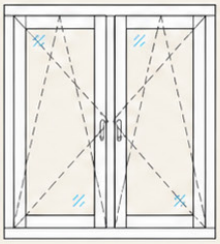


QUADRUPLE
FIXED FIELD

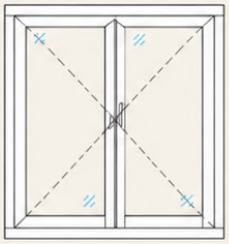


TILT & TURN

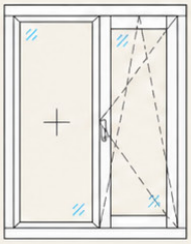
TILT
(INSWING)



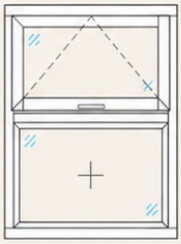
DOUBLE
TILT & TURN



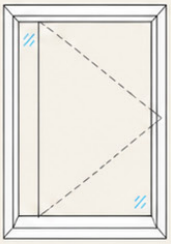
TILT & TURN + TURN
(OPERABLE MULLION)



TILT & TURN +
FIXED FIELD



TILT + FIXED FIELD
(INSWING)



TURN
(OUTSWING)

AWNING
(OUTSWING)

Finish & Color

Finish & Color Range
• RAL color palettes – extensive architectural range (matt, texture, satin, gloss)
• Dual-finish capability – independent interior and exterior color selection
• Matte, glossy, structure, or metal finish

Powder Coating Standards
• QUALICOAT certified – high resistance to UV, temperature fluctuation, and mechanical wear
• QUALICOAT SEASIDE – enhanced corrosion protection for coastal or aggressive environments
• AAMA 2604 – long-term exterior durability and color stability

Anodized Finishes
• QUALANOD standard – refined metallic tones with natural depth
• High resistance to abrasion, UV exposure, and environmental wear
• Controlled color tolerances – consistent output across C0, C33, C34 ranges

RAL COLOURS

QUALICOAT
Inspired by architecture, trusted by professionals.
| SEASIDE |

QUALITY LABEL
INTERNATIONAL
Qualanod
FOR ANODISING
ARCHITECTURE

Full RAL Color Library Available)

AM-FS (Metallic)

More Options Available

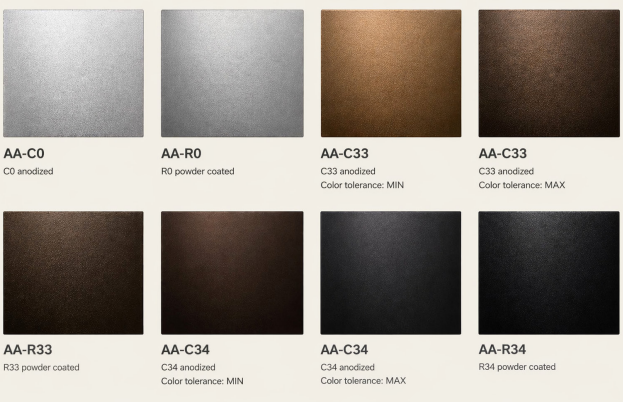
AR-MAT (Standard Finish & RAL Colors)

More Options Available

AR-FS (Structured)

More Options Available

AA-C, AA-R (Anondized)



AD-MAT

Handles

Spindle Diameter: 7mm
Spindle Length: Typically ≈ 1 3/8" to 1 3/4"

Handle Height
Standard: centered on sash
Adjustable: within middle third of sash (size and hardware dependent)
Custom placement: Available upon request – subject to system limitations

Standard Handles (Standard Pricing)
- *Can Be Painted To Match Unit Color*

FKS

Premium Handles (Premium Cost, Limited Availability)

FSB

FROM THE ANVIL

ROCKY MOUNTAIN HARDWARE

ENTO

Hinges & Fittings

Hardware
- Multi-Point Lock Perimeter System With Three-Way Adjustment
- Supports Large Sash Weights With Smooth Operation
- Tilt-Turn With Ventilation Standard
- Concealed Hinge Option Available

Optional
Security · Sensors · Restrictors · Motorization

Water Management & Drainage

European aluminum systems are not designed to resist water entirely — they are engineered to control, manage, and evacuate it with precision.

System Approach

- Pressure-equalized design
- Multi-chamber profiles with internal drainage paths
- Dual-stage sealing: weather seal + air seal
- Controlled water capture within glazing and frame

Moisture that passes the outer seal is captured, channeled, and expelled — never allowed to build within the system.

Drainage Configuration

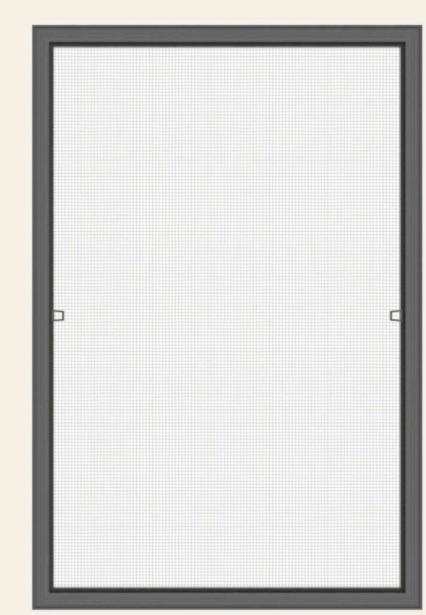
- Concealed drainage — clean exterior, hidden discharge
- Visible drainage — direct, high-capacity evacuation
- Sill-integrated drainage — controlled flow at the base

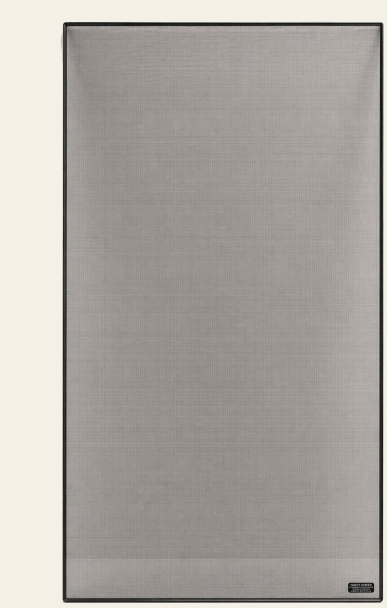
Each option delivers consistent performance without compromising the elevation.

Accesories

Insect Screens

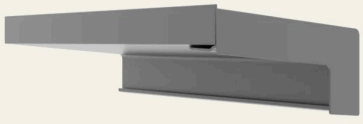
FLEXSCREEN





Sill Extensions

aluron
ALUMINIUM 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 ≤ 48" AFF
- Side ≤ 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

LUTRON

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

Considerations

THINGS TO THINK ABOUT WHEN DESIGNING

PERFORMANCE DRIVEN
Balance size, glass, hardware, and performance to achieve your target ratings.

OPERABLE VS. FIXED
Hybrid strategies may be required for large openings and code compliance.

SIGHTLINES VS. PERFORMANCE
Minimizing sightlines impacts U-value and structural capacity.

HARDWARE LOCATION
Affects usability, reach, clearances, and daily function.

GLASS SELECTION
SHGC, coating, and laminate makeup matter more than most expect.

THINGS TO THINK ABOUT WHEN INSTALLING / BUILDING

STRUCTURE SUPPORTS WEIGHT
Aluminum windows are heavy — ensure structure is designed accordingly.

OPENINGS MUST BE EXACT
No field "adjusting" like domestic units — precision is critical.

SILL CONDITION IS CRITICAL
Proper water management and flashing start at the sill.

EQUIPMENT & ACCESS
Plan for forklift or telehandler and proper material handling.

SEQUENCE MATTERS
Installation timing impacts performance, risk, and cost.

RED FLAG
- Waiting too long to finalize sizes or details
- Designing oversized assemblies without confirming feasibility
- Assuming site or installer can "figure it out" later

PRO TIP
- ✓ Look finish, style, and samples early — avoid re-approvals and extend timelines
- ✓ Lock down early and leave no room for changes ASAP
- ✓ Use tried + tested combinations to control cost and performance
- ✓ Align GC, installer, and supplier before production

HELPFUL TO PONDER
- Triple vs. double pane — performance, cost vs. weight
- Spacer upgrades: Desiccant vs. Standard
- Finish selections — standard vs. specialty
- Staging and handling — red cost, not optional

$ UPGRADE! IS IT WORTH IT?
- ✓ Warm-edge spacer upgrade — up front for even better edge and higher-performance glass — pays long-term by far (esp residential)
- ✓ Concealed hardware — yes (operability + aesthetics payoff)
- ✓ Full frame insulation — depends (size, code + budget)
- ✓ Exotic finishes / custom — only if it matters visibly

ALU SYSTEM
- Engineered with premium aluminum profiles
- Thermal broken
- Pressure equalized
- Multi-chamber profiles
- High-performance gaskets
- Designed for durability, performance, and clean architectural lines

PREMIUM ALUMINUM WINDOW SYSTEMS | BUILT FOR PERFORMANCE

Pros vs Cons

ALUMINUM
(THERMALLY BROKEN)

PROS

- Slim profiles — clean, modern sightlines
- Strong — supports large openings with minimal bulk
- Durable — corrosion-resistant, stable over time
- Wide range of finishes — highly adaptable
- Scales well — consistent across full-home systems

CONS

- Requires thermal breaks for high performance
- More conductive than timber-based systems
- Can feel cooler / less tactile than natural materials

uPVC / FIBERGLASS

PROS

- Most cost-effective option
- Low maintenance
- Good baseline thermal performance
- Fast production and installation

CONS

- Bulkier profiles — reduced sightlines vs aluminum
- Limited color, finish, and depth options
- Lower structural capacity for large openings
- Lower perceived architectural value

TIMBER CLAD
(Wood Interior / Aluminum Exterior)

PROS

- Warm interior — natural material quality
- Strong thermal performance
- Exterior aluminum for durability
- Balanced system — performance + architecture

CONS

- Higher cost vs aluminum
- Longer lead times (custom finishes)
- More coordination required (detailing + install)
- Less scalable across large, complex openings

STEEL

PROS

- Maximum strength — ultra-slim sightlines
- Supports very large glass with minimal frame
- Long lifespan (often 60–100+ years)
- Strong architectural presence

CONS

- Significantly higher cost
- Heavier — more complex installation
- Requires maintenance (coatings / corrosion control)
- Thermal performance highly dependent on system design

BRASS / BRONZE

PROS

- Premium, legacy materials
- Natural patina — evolves over time
- Exceptional durability
- Distinct architectural expression

CONS

- Very high cost
- Long lead times
- Heavy — structural considerations required
- Primarily aesthetic-driven vs performance-driven

ALUMINUM PERFORMANCE + VERSATILITY

The baseline for performance, scale, and adaptability.

uPVC / FIBERGLASS VALUE + EFFICIENCY

Practical performance and efficiency at a lower cost.

TIMBER CLAD WARMTH + PERFORMANCE

Warmth and natural material layered onto aluminum performance.

STEEL PRECISION + STRENGTH

The ultimate in strength, slim sightlines, and architectural expression.

BRASS / BRONZE LEGACY + STATEMENT

Timeless materiality that ages beautifully and makes a statement.

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 aluminum substrate, finish type, lighting conditions, and production processes. Physical samples should be reviewed and approved prior to order. Painted (powder-coated) finishes may exhibit slight variation between batches. Anodized finishes may vary in tone and reflectivity due to alloy and process conditions. Structured/tactile finishes may show variation in texture and sheen. Liquid metal finishes are hand-applied and will exhibit natural variation in tone, and depth

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

Prickly Mountain Strongly Recommends Contractors Experienced In European Fenestration Installation

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

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