GEALAN

INNOVATION MIT SYSTEM

GEALAN-LINEAR®

A contemporary uPVC window platform. Built for great performance.

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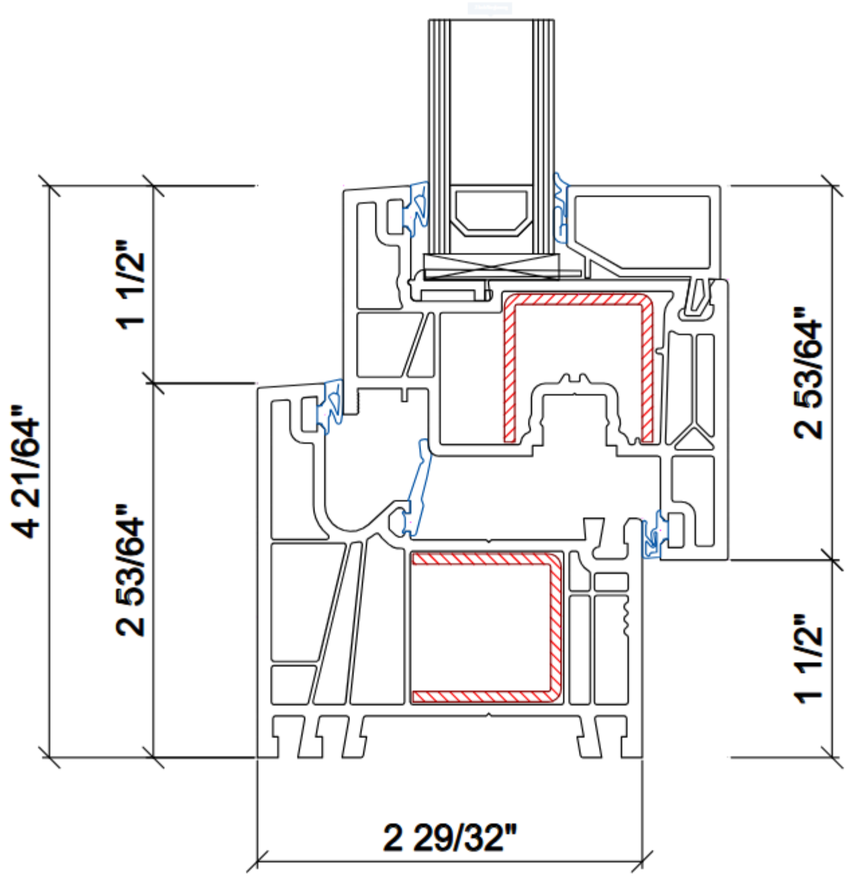
A contemporary uPVC platform

GEALAN-LINEAR® is GEALAN's newest square-edge tilt & turn platform — a clean, modern face with aluminum-like sightlines, delivered in a high-performance uPVC profile.

FRAME DEPTH	3 in	GASKETS	3 seals
NUMBER OF CHAMBERS	6	GLAZING	Up to 2 in
REINFORCEMENT	Galv. steel	OPENINGS	Fixed, Tilt & Turn



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The modern aluminum look in thermally superior uPVC

GEALAN-LINEAR®'s flat, square outer faces and crisp mitered corners match the visual language architects specify in aluminum windows and storefront — with the thermal performance and cost profile of a premium uPVC system.

Square outer face

Narrow sightlines

Multiple color options

Three independent seals — tested to AW-class air and water tightness

01

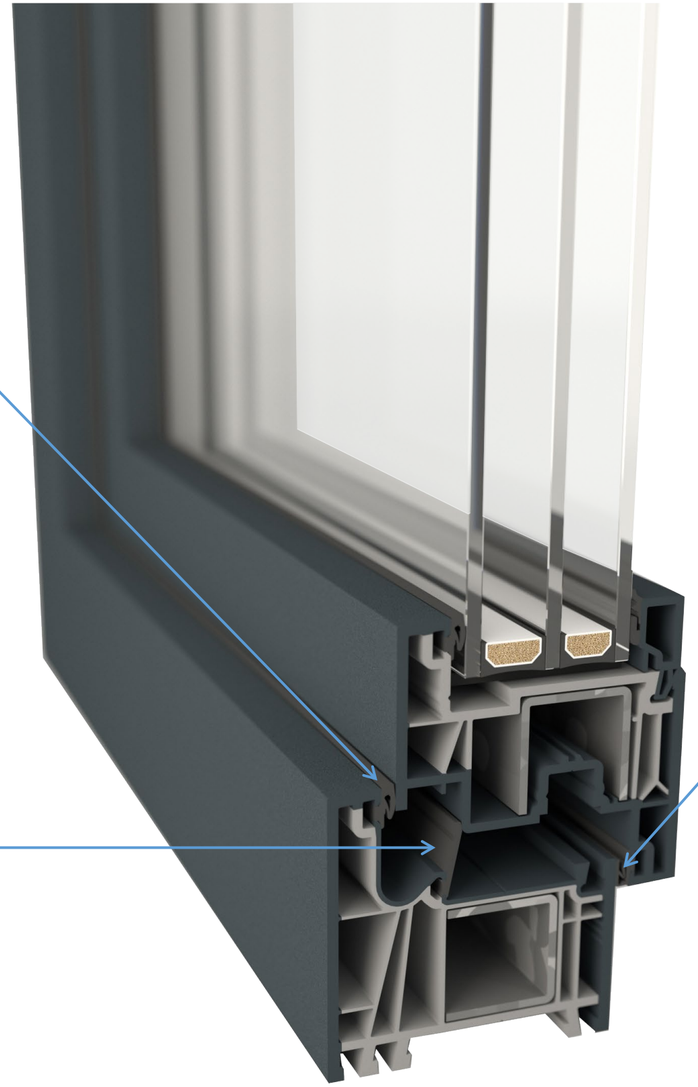
Exterior gasket

Outer weather seal at the sash-to-frame line — the first barrier against wind-driven rain and airborne moisture.

02

Center gasket

Middle seal creates a pressure-equalized drainage chamber, isolating the outer weather zone from the warm interior.



03

Interior gasket

Inner air-tightness seal — protects indoor comfort and condensation performance.

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Bigger openings, single elements — up to 137”

Galvanized steel inserts carry the structural load, allowing a single linear element to span widths and heights that would otherwise require mullions or splits, giving architects the glass area of aluminum within a uPVC system.

FIXED WINDOW WIDTH

up to **137** in

FIXED WINDOW HEIGHT

up to **137** in

MAX AREA — FIXED WINDOW

up to **75** ft^2

MAX AREA — TILT & TURN WINDOW

up to **26** ft^2

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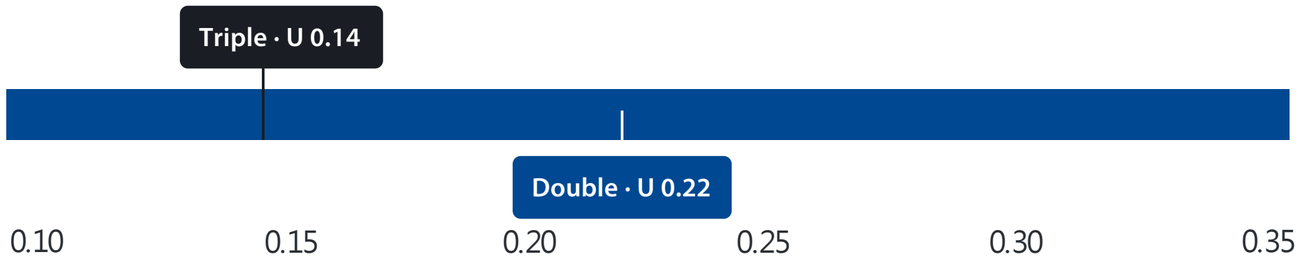
U-factor across the full NFRC scale

U-FACTOR · BTU/(h·ft²·°F)· LOWER IS BETTER



BEST DOUBLE-PANE

0.22 BTU / (h · ft² · °F)

3 mm LoĒ-366 / 18 mm Argon 90% / 3 mm LoĒ-i89 on Clear.

BEST TRIPLE-PANE

0.14 BTU / (h · ft² · °F)

3 mm LoĒ³-366 / 17.5 mm Argon 90% / 5 mm LoĒ-180 / 17.5 mm Argon 90% / 5 mm LoĒ-i89 on Clear.

NFRC METRIC	LINEAR
U-Factor (whole window)	**0.14 – 0.32 BTU / (h · ft² · °F)**
SHGC (whole window)	**0.16 – 0.51**
Visible transmittance	**0.36 – 0.62**
Condensation Resistance	**45 – 74**
Air leakage (NFRC 400)	**<0.01 cfm/ft²**

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PHIUS-recommended performance through Climate Zones 5A/5B

Tested with a triple-pane low-e build, GEALAN-LINEAR® lands well inside the PHIUS recommended band from climate zones 0 through 5A/5B.

FIXED U-FACTOR

up to **0.14** BTU/(h·ft²·°F)

TILT & TURN U-FACTOR

up to **0.15** BTU/(h·ft²·°F)

FIXED SHGC

up to **0.24**

TILT & TURN SHGC

up to **0.21**

PHIUS CLIMATE-ZONE COVERAGE

0–2	3	4C/5C	4A/4B	5A/5B	6	7 / 8
✓	✓	✓	✓	✓	—	—

PHIUS-recommended performance band for Climate Zones 0 through 5A/5B at the standard NFRC model size.

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Tested across the full performance class range

AW–PG70

Tilt-Turn Window

48″ × 84″

DESIGN PRESSURE	**± 70.18 psf**
WATER RESISTANCE	**15.04 psf**
AIR INFILTRATION	**0.10 cfm/ft²**

AW–PG55

Fixed Window

59½″ × 98½″

DESIGN PRESSURE	**± 55 psf**
WATER RESISTANCE	**15.04 psf**
AIR INFILTRATION	**< 0.10 cfm/ft²**

CW–PG105

Tilt-Turn Window

48″ × 72″

DESIGN PRESSURE	**± 105 psf**
WATER RESISTANCE	**15.04 psf**
AIR INFILTRATION	**< 0.05 cfm/ft²**

AW and CW are the top NAFS durability classes; PG (psf) is the design pressure rating—higher PG means higher wind-load capacity.

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Performance above premium vinyl windows

AIR LEAKAGE

3× tighter envelope

< 0.10 cfm/ft²

3× tighter

Typical vinyl windows: 0.20–0.30 cfm/ft² (NFRC default)

DESIGN PRESSURE

Above the aluminum range

± 105 psf

3.5× builder-grade

Builder-grade vinyl windows: ±15–30 psf
Premium vinyl windows: ±30–40 psf
Thermally-broken aluminum windows: ± 50 – 90 psf

WATER PENETRATION

Tested to the NAFS ceiling

15.04 psf

Max NAFS test pressure

Builder-grade vinyl windows: 2.86 – 6 psf
2.5–5× higher water-test pressure

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Acoustic performance that keeps the noise outside

Tested per ASTM E90 across different IG build-ups, the GEALAN-LINEAR® Tilt & Turn scales acoustically with the glass package — from standard double-pane to premium laminated triple-pane.

SOUND TRANSMISSION CLASS

up to **47** STC

Reduces typical traffic and conversation noise to a low murmur.

OUTDOOR–INDOOR TRANSMISSION

up to **37** OITC

Targets the low-frequency content of trucks, trains and aircraft.

STANDARD GLAZING EXAMPLES	STC	OITC
15/16″ IG — 1/8″ + 11/16″ air + 1/8″	**29**	**24**
1-3/8″ IG — 1/8″ + 1/2″ air + 1/8″ + 1/2″ air + 1/8″	**30**	**23**
1-3/8″ IG — 1/4″ + 3/8″ air + 1/8″ + 3/8″ air + 1/4″	**33**	**25**
1-3/8″ IG — 1/4″ laminated + 5/16″ air + 1/4″ + 5/16″ air + 1/4″ laminated	**34**	**28**
1-3/8″ IG — 1/4″ + 3/8″ air + 1/8″ + 3/8″ air + 1/4″ laminated	**37**	**27**
15/16″ IG — 1/4″ + 3/8″ air + 5/16″ laminated	**38**	**31**

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For mid-rise, multi-family, and institutional.

NAFS AW–PG70 and CW–PG105 ratings open GEALAN-LINEAR® to the full commercial spec sheet — multi-family residential, hospitality, education, and mid-rise buildings

AW-class and CW-class performance — tested, not just rated

Air leakage down to 0.03 cfm/ft^2 for tight envelope targets

137″ single-element fixed frames for generous daylighting

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Five colors. Three finish options.

Specify the profile three ways: **pure white**, **one-side lamination** (color outside, white inside), or **two-side lamination** — which unlocks a **grey base profile** so the cross-section matches the finish at every cut and joint.

White

Sandstone

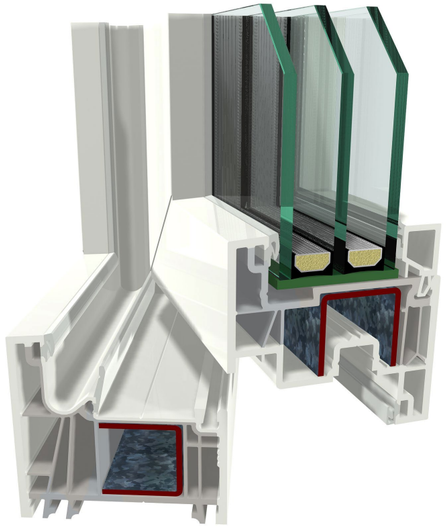
Anthracite Grey

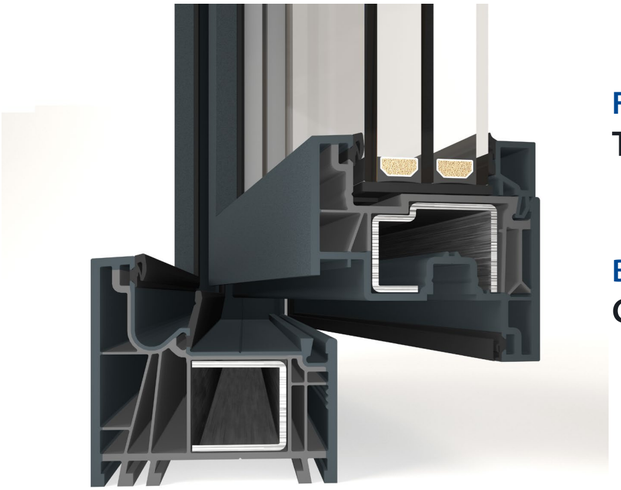
Dark Bronze

Black Smooth

FINISH
White
One-side laminated

BASE PROFILE
White





FINISH
Two-side laminated

BASE PROFILE
Grey

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Aluminum looks. Passive House performance.

01

Looks like aluminum

Square edges, a flush sash, and narrow sightlines create the contemporary look North American architects are specifying today.

02

Sized like aluminum

Steel-reinforced frames are available up to 137″ in width and 137″ in height—suitable for windows, storefronts, and full-height residential elevations.

03

Performs like Passive House

Three-gasket sealing with U-factors as low as 0.14 — PHIUS-recommended for cold climates (Climate Zones 5A/5B).