


ARCIS

Durable and versatile, ultra-thin, prestressed precast panels—at a fraction of the weight

Exterior facades
Architectural rainscreens
Ventilated façades and sunscreens
Décor, accent walls & interior elements
Louvers and fins
Retail storefronts
Marine decking
Stair treads
Mechanical screens





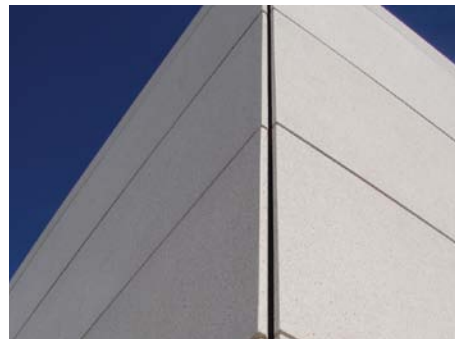
The Louisa, Portland, Ore.



The Casey, Portland, Ore.

Photography: Josh Partee

The versatility and resilience of precast with remarkable thinness



Boasting panel depths from 0.75 inches (19mm) to 2 inches (51mm), innovative patented ARCIS ultra-thin precast prestressed technology provides a versatile, lightweight panel that offers the strength and aesthetic versatility of concrete. With final installed weights of 9.4 psf (46 kg/m²) to 25 psf (122 kg/m²), ARCIS will forever change the way you think about architectural precast.



The secret: stainless steel prestressing

ARCIS panels use non-corrosive, high-strength aerospace grade stainless steel prestressing—pretensioned cable strand—placed longitudinally and transversely in the panel face to impart strength, crack control and durability while allowing concrete cover to be minimized. The stainless steel tendons are placed slightly off the midplane of the panel to resist curling, warping and cracking. Panels can be produced in a variety of sizes from as small as 20 square feet (1.8m²) up to 8' x 13' (2.4m x 4m) and 8' x 15' (2.4m x 4.6m) in some markets. Panel dimensions depend on orientation and installation.

Countless benefits

Lightweight

Thinner, lower-weight panels mean a lower-cost superstructure, smaller and less expensive cranes or lifts for installation, reduced shipping expenses and more usable space.

Flexible

The modular configuration of ARCIS panels allows for amazing flexibility. Remove a panel to add a door. Cut in a window opening. Add penetrations and cut holes in the field with conventional tools. Or replace a panel if needed. Few enclosure systems can offer this flexibility and capability.

Resilient

Stainless steel prestressing eliminates the possibility of corrosion. High-performance concrete provides strengths in excess of 5,000 psi (35 MPa). Durable ARCIS panels will withstand everyday punishment and the test of time plus offer the fire resistance benefits of non-combustible concrete.

Aesthetic versatility

ARCIS panels are custom manufactured with exacting details following ASTM and PCI MNL 117 specifications. Popular precast finishes such as sandblasting, acid etching and polishing are possible. Reveals, insets and colors can be provided through the use of form liners and pigmented concrete. So dream big.

Applications limited only by your creativity

Rainscreen design meets precast durability

Ideal for use as a cavity wall system, sealed exterior façade or accent panel, ARCIS architectural rainscreens reduce cladding weight by nearly 90% compared to conventional precast while allowing you to create a true rainscreen configuration. ARCIS rainscreens achieve the architectural look and durability of traditional precast without the extra weight or loss of design performance.

Panel connections are made using embedded stainless steel anchors that are attached directly to the prestressing strand during manufacturing set-up. The connection to the building structure is accomplished with screw fasteners. No welding is required, which dramatically speeds up and simplifies fieldwork. Panel size is governed by the attachment system, the panel thickness and the installer's method of handling the panels. The panels span vertically between J clips.



For most high-rise applications, wind loading controls the design. 1" (25mm) thick panels can span between clips approximately 60" (1.5m) with a 35 PSF (1.6 kPa) wind load. 1 1/4" (32mm) panels can span 80" (2m) with a 30 psf (1.4 kPa) wind load. The panels can cantilever above and below the clips. Thicker panels can span farther, as can panels with ribs or stiffeners. Panel width is controlled only by installation; maximum panel size is about 8' x 13' (2.4m x 4m).

The exceptionally light weight of ARCIS rainscreen panels also makes them ideal for recladding applications.

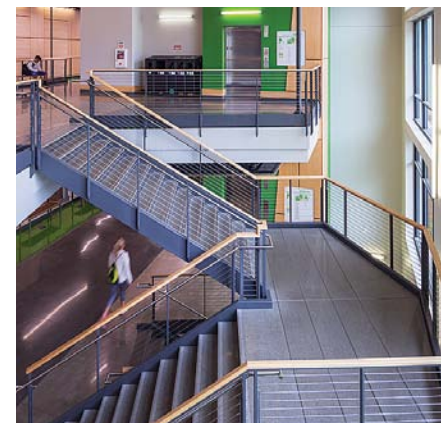
Use the aesthetic versatility of ARCIS panels for decorative interior applications and striking storefront entrances. Their durability protects your design vision as well as any other material currently on the market.



Marine decking

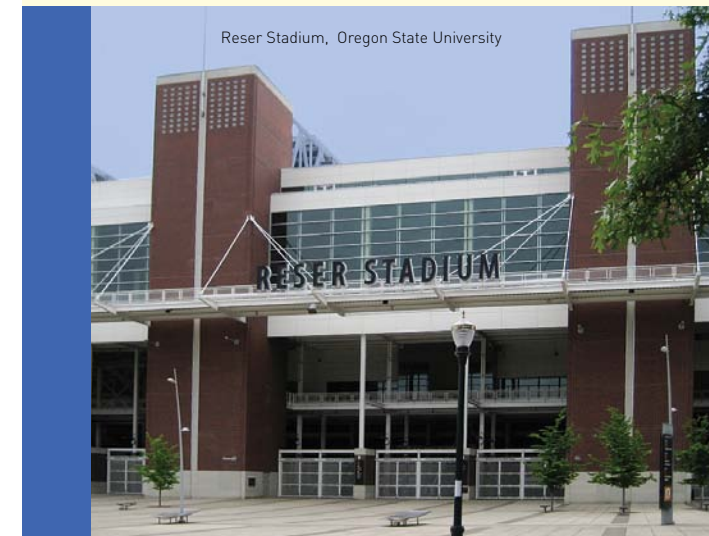
As an alternative to wood, composite or conventional concrete decking, ARCIS panels can provide long-term durability and attractive looks while their light weight reduces structural requirements.

Our mix designs create a material that withstands the harshest environments: salts, freeze-thaw cycles and heavy traffic. Architectural finishes deliver great looks and provide a slip-resistant surface. ARCIS panels can be designed to meet the most stringent environmental demands. ARCIS panels can incorporate recycled material content for added LEED and life cycle benefits.



Stair treads

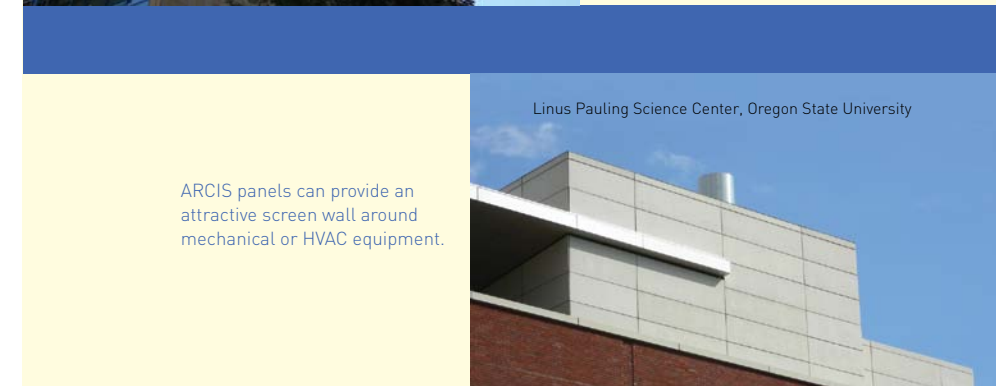
ARCIS stair treads are sleek, functional and highly durable to withstand years of foot traffic. They deliver a minimalist appearance with maximum durability. They can be adapted to fit in most common stair and tread platform systems.



ARCIS panels can incorporate a variety of colors and architectural finishes including thin brick, sandblasting, acid etching, reveals, insets and more.

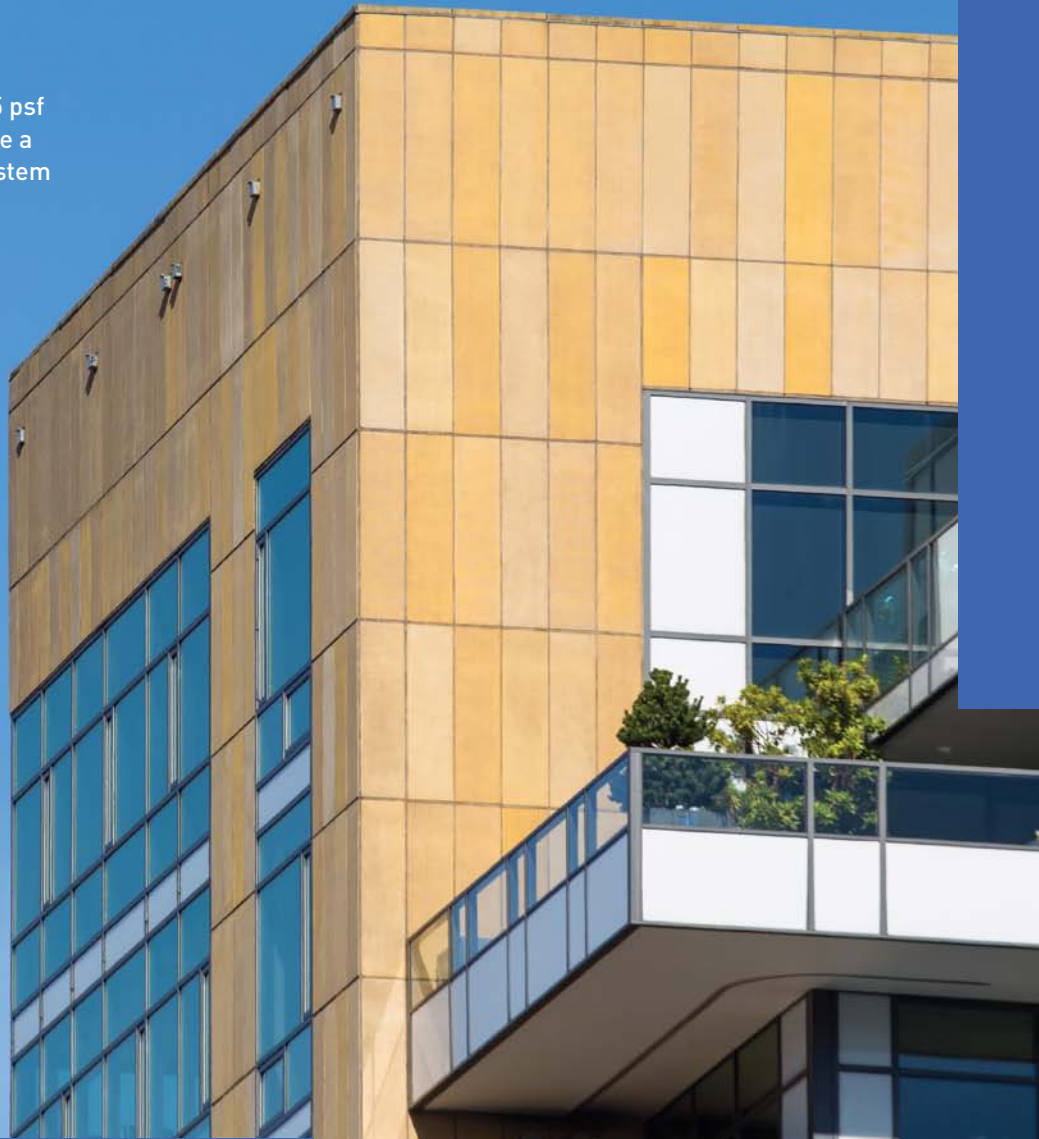


Amazingly thin ARCIS panels can be shipped much less expensively than many comparable cladding products.

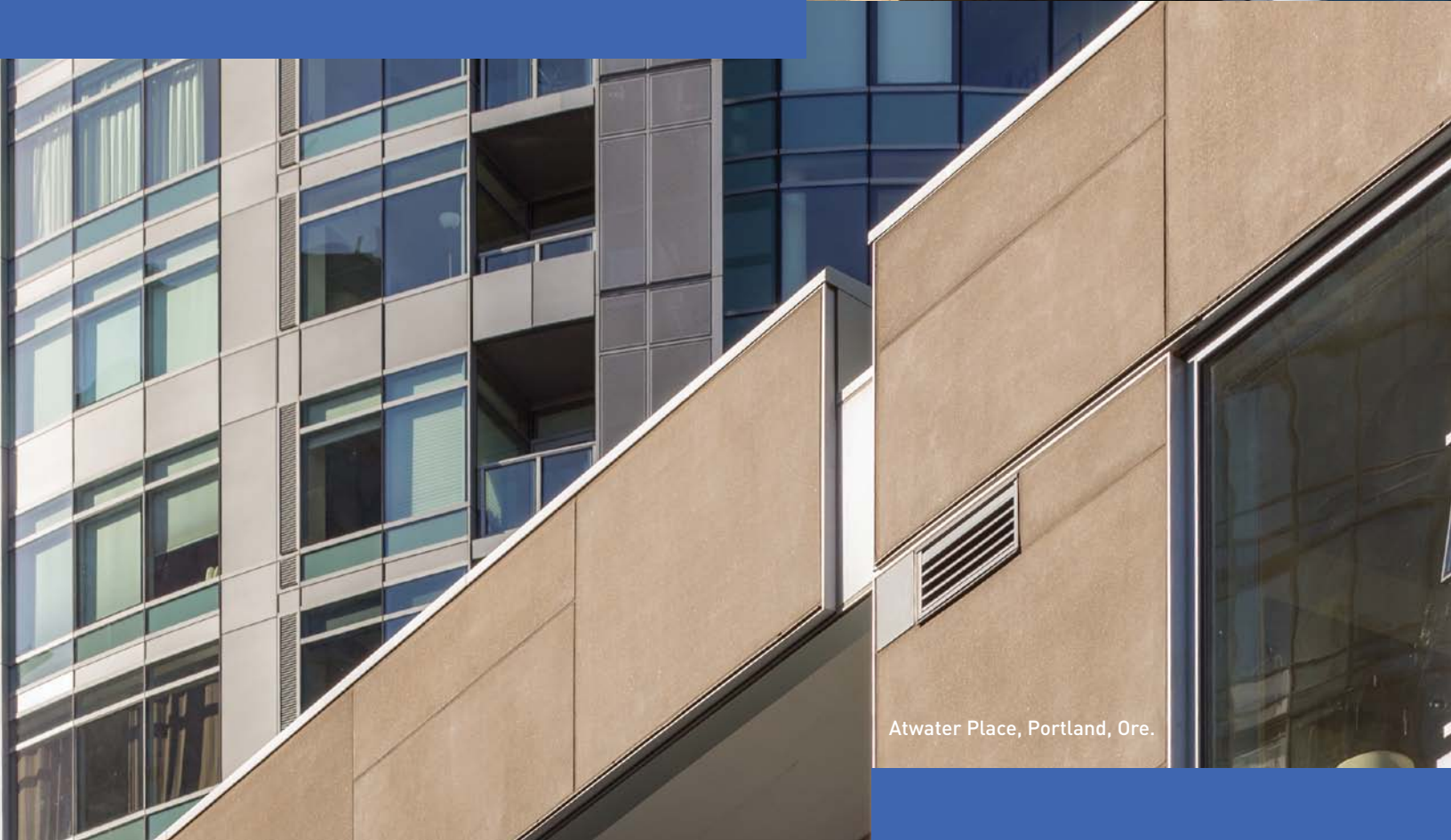


ARCIS panels can provide an attractive screen wall around mechanical or HVAC equipment.

With final installed weights from 9.4 psf to 25 psf [46 kg/m² to 122 kg/m²], ARCIS panels provide a lightweight cladding for a true rainscreen system with the durability and aesthetic benefits of precast concrete.



The Casey, Portland, Ore.



Atwater Place, Portland, Ore.



Innovation from the leading minds in precast



ARCIS® technology is now available throughout the United States and Canada through select producer members of AltusGroup, the only international collaboration of precast manufacturers dedicated to innovative precast solutions for improving the built environment.

ARCIS complements AltusGroup's highly successful and award-winning CarbonCast® Precast Enclosure Systems and Double Tees, which comprise more than 40 million square feet (3.7 million square meters) of precast surface area and over 1,200 projects sold to date.

ARCIS products are available from these AltusGroup precasters:

Armtec

Richmond, B.C.
armtec.com

EnCon

Denver, Colo.
enconunited.com

Enterprise Precast

Omaha, Neb.
enterpriseprecast.com

Gage Brothers

Sioux Falls, S.D.
gagebrothers.com

High Concrete Group

Denver, Pa.
highconcrete.com

Knife River

Portland, Ore.
kniferiverprestress.com

Founding AltusGroup Precaster Members

Oldcastle Precast Building Systems
Metromont Corporation
High Concrete Group LLC

ARCIS product technology is licensed exclusively to AltusGroup and its members and is protected under the following U.S. and Canadian Patents: USPTO 6,711,866 B2 titled "Thin Pre-Stressed Concrete Panel and Apparatus for Making the Same," issued March 30, 2004, and the similar Canadian Patent 2,357,834, issued 11/20/2007.

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