



Commercial Window Case Study

VEKA Inc. is the North American division of VEKA AG one of the world's largest extruder of vinyl lineals for the residential and commercial window and door industry. In addition we extrude fence, deck and handrail extrusions for fabricators and builders in the outdoor living products sector. VEKA employs more than 3,000 skilled personnel serving customers globally from 25 plants worldwide, with over 40 years of leadership in helping fabricators deploy technologically advanced materials for residential and commercial building applications.

VEKA EUROVIEW 70 DS SYSTEM:

The system that was chosen for use in Soldiers & Sailors Memorial Hall was the VEKA Euroview 70DS. The system has a 70mm (2-3/4") frame depth. It's thermal properties are achieved by a 5-chamber air-pocket system in all frame and sashes. Frame and sash profiles are all steel reinforced, to provide the structural strength, and decrease the thermal expansion factors, inherent in PVC system

Slightly rounded edges give the classical design to the Euroview System.

High Thermal Insulation Values up to $U_w=1,0$ W/m²K (U-Value 0.176 BTU/H*ft²*F, R-Value 5.7) are achievable (depending on glazing) and reduce heating costs noticeably.

High-quality gaskets are standard in an attractive grey and comprise a system of dual compression seals that keeps the cold, draft and moisture outside.

Galvanized Steel Reinforcing used according to VEKA fabrication requirements, supports the structural integrity and operational reliability.

Five Chamber Profile with a basic overall depth of 70 mm (2-3/4"): is an ideal use of dead air's natural insulating characteristics.

Save Energy and Reduce Costs
Because of multi-chamber technology, VEKA profiles have an enormously low heat transmission value. This reduces your energy use as well as heating and cooling costs.

Feel Comfortable
The excellent insulation performance of VEKA profiles and reliable weather seals guarantee a difference in overall room temperature providing comfort throughout the conditioned space.

Optimal Noise Insulation
Noise exposure affects comfort and can impact your health. Even the basic window produced with VEKA Profiles protects against sound transmission. Windows with VEKA profiles can be fabricated to the highest possible level of sound transmission control.



Option:
Recessed sash



Soldiers & Sailors Memorial Hall and Museum

Soldiers & Sailors Memorial Hall and Museum is a Pittsburgh History and Landmarks Foundation site. It also is listed in the National Register of Historic Places. Built in 1910, it is the largest memorial in the United States dedicated solely to honoring all branches of military veterans and service personnel. After 101 years of operation, the single pane wood windows had reached the end of their life cycle. Building managers, concerned about rising energy costs in Pittsburgh's four-season climate, investigated options for replacement. Vinyl Tilt/Turn windows were chosen for their convenience, functionality and excellent energy efficiency.



Case Study





New vinyl fixed round tops protect stained glass windows from the elements while Argon filled IGs help prevent further color deterioration of the stained glass



Golden Oak woodgrain laminate tilt-turns were chosen to match the original hungs. Shown (left to right) in closed position, turn position for easy cleaning and tilt position for ventilation

PROJECT DETAILS

Project Name:	Soldiers & Sailors Memorial and Museum
Location:	Pittsburgh, PA
Owner:	Allegheny County
Fabricator:	Ventana USA
Builder/Contractor:	Bruce Construction
Construction Type:	Replacement
Code Conditions:	National Historic Landmark
Square Footage:	26,750 sq ft

TECHNICAL SPECIFICATIONS

Window System:	VEKA Euroview 70DS
Products:	Steel Reinforced Vinyl Tilt/Turn Windows, Fixed and Circle Top Windows and Swing Doors
Color:	White, Golden Oak Laminate White Exterior with Nussbaum Laminate Interior
Glazing:	Cardinal 1" IG, 272 LowE Argon
Hardware:	Roto NT & KfV Panic Hardware
Number of Units:	71 Windows, 4 Doors



Original wood casement windows replaced by muller vinyl tilt-turn windows

Unique Requirements/Solutions

- The concrete and metal window facade frames block access from the exterior for cleaning. The inswing "Turn" feature solves this problem and the "Tilt" function provides ventilation. The multi-function advantages of these windows easily met the requirements of the project.
- A fixed mullion was added to the sash to emulate the look of the original divided mull casements.
- The lamination capabilities of the vinyl system allowed the replacement units to match original interior wood trim look. Nussbaum (deep brown) was chosen for the halls, Golden Oak was used in the lobby.
- Five large circle top stained glass windows were leaking badly. To protect these historic pieces, fixed vinyl windows with Argon filled IGs were built to fit the outside openings.

Since 1987, Ventana USA has pioneered vinyl profile bending. Our 25+ years of experience and the exceptional skills of our employees and customer service team has kept us a front runner in the window market. We are a leading manufacturer of vinyl Euroview tilt/turn products and shapes, vinyl bay/bow windows, garden windows, arch top single-hung and casements.

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Bruce Corna, Jr. and Bruce Smith focused their passion for building and founded Bruce Construction. The firm's building practices are integral to the overall design and function of their many projects. Working under one umbrella, Bruce Construction also provides solutions through divisions that focus on stormwater management practices, landscape design, and environmental consultation.

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Original wood double hung window replaced by a vinyl tilt-turn over tilt-turn



Muller Tilt-Turn to simulate the "hung" look