

## Commercial uPVC Vinyl – Crystal MAGNUS 4500

As demand for ultra-high energy efficiency in the built environment grows, Crystal offers the perfect energy solution for new and renovated properties. **Crystal MAGNUS Commercial uPVC Vinyl** windows and doors combine the structural performance of top aluminum fenestration products with the extraordinary thermal performance of vinyl. These architecturally rated, European-inspired products are ideal for select high-rise, multi-family, commercial, institutional, and upscale residential properties. The **MAGNUS 4500 Series** features tight compression sealing frame and sash technology for superior energy efficiency, with glazing pockets that accommodate dual- and triple-pane insulating glass units. **MAGNUS 4500** windows can yield thermal U-values as low as 0.20.

*Winner of US Glass Magazine's Readers' Choice Award 2019*

### Crystal MAGNUS 4500 uPVC Advantages

- Structural performance and durability of aluminum: steel-reinforced for large openings, fusion-welded framing
- Thermal performance and low maintenance of vinyl
- Many styles: tilt-and-turn, casement, hopper, and fixed windows; tilt-slide, single- and dual-swing French doors
- Great energy efficiency: U-values as low as 0.20 with glass and fill options
- Great structural performance: NAFS CW-PG70 ratings
- Excellent sound attenuation: up to STC 41dB
- Aids in LEED and Passive House building certification



### One Flushing at 41<sup>st</sup> Avenue, Queens, NY

One Flushing is a multi-generational affordable and senior housing development with 231 rental apartments, located in the heart of bustling Flushing, Queens near commuter rail lines. The 10-story building with 400 feet of frontage covers much of an entire city block and features ground floor retail space. Crystal supplied over 1,500 **MAGNUS 4500 Series** In-Swing Casement and Fixed Windows with factory-installed PTAC louvers configured in master frames.

For sound attenuation and safety, Crystal sourced special insulated glass units from leading supplier **Vitro Architectural Glass**, with Solarban 60 low-E coating, Argon gas filling and laminated interior panes. To achieve façade design and fenestration placement desired by the architects, Crystal custom designed and fabricated an innovative installation T-angle for the oversized windows. To accommodate senior residents and ADA compliance, Crystal placed handles for the operating windows at 44-46" above the floor and for families, Crystal provided 4" sash stop limiters in accordance with New York City multi-family building codes.

### Project Partners

#### Owners:

Monadnock Development in partnership with Hellenic American Neighborhood Action Committee (HANAC), Asian Americans for Equality (AAFE)

#### Architects:

Bernheimer Architecture, Brooklyn, NY; SLCE Architects, New York, NY

#### General Contractor:

Monadnock Construction, Brooklyn, NY

#### Fenestration Installer:

Vista Skywall Systems, Queens, NY



**MAGNUS uPVC**

### Products and Services

- Crystal **MAGNUS Series 4500** In-Swing Casement and Fixed uPVC Vinyl Windows: 1,532 quantity
- Reliable Products AEL-42 Type 7116 PTAC Louver: 418 quantity
- Crystal installation accessories: custom designed and fabricated T-angle anchor, custom aluminum sill covers, strap anchors
- Crystal product selection and engineering guidance

Crystal **MAGNUS** Commercial uPVC Vinyl products combine the strength of aluminum windows and superior energy efficiency of vinyl to provide great views for many new construction and rehabilitation projects across the country. Fabricated at several Crystal facilities, **MAGNUS** windows and doors can play a lead role in buildings seeking to qualify for LEED or Passive House certifications. *See these and other projects on our website, [www.crystalwindows.com](http://www.crystalwindows.com).*

**Headquarters:**  
 31-10 Whitestone Expressway  
 Flushing, NY 11354  
 Call 800-472-9988  
[marketing@crystalwindows.com](mailto:marketing@crystalwindows.com)