



## **Crystal Window & Door expands engineering assistance services**

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Manager Sabrina Leung (center) and some of her team members.

Queens, NY Crystal Window & Door Systems has expanded its offerings of project engineering assistance services for architects and fenestration trade customers. The Crystal R&D/Engineering Department has qualified to use the National Fenestration Rating Council (NFRC) Component Modeling Approach (CMA) Program and its online directory. This tool will give Crystal the ability during the project's design and specification phase to estimate and optimize selections of window types, configurations, glazing options, and frame and spacer components to maximize overall window energy performance and energy efficiency ratings.

While Crystal currently uses thermal performance modeling for glazing options, the CMA Program adds in spacers, window frames, and other components to the assessment.

"Our capabilities with the NFRC's CMA Program will greatly enhance our ability to help design and construction professionals make the best decisions for their fenestration products," said Sabrina Leung, architectural sales and R&D/engineering manager.

"With so many glazing, spacer, coating, and configuration choices available, Crystal's engineering team will be able to use the CMA Program software tools to ensure the customer's desired fenestration selections and configurations achieve energy code or advanced specification targets. We can recommend various alternatives guiding design, construction, and fenestration professionals on how best to achieve desired energy performance within their project budgets." Crystal has several new products in the final stages of testing which will be added to the CMA directory when approved.

The CMA Program is the latest addition to Crystal's engineering and R&D services, which include fast-track custom window modification and accessory design, in-house product testing, sample mock-ups, and installation support. For example, Crystal supplies many landmark and historic projects that often require special accessories and product customization to meet design criteria and to replicate the original style of the building. Crystal's R&D/Engineering Department, along with the company's commercial sales team and its five production plants across the country, works closely with project architects, GCs, owners, and fenestration installation firms to provide tailored designs,

installation support, and to expedite concepts into production. Using 3-D printing technology, Crystal can model detailed components, window profiles, and accessories prior to final production, and prepare samples of various designs for customers' review and approval.

Through consultation with its affiliate network of independent structural façade engineering professionals, Crystal's R&D/Engineering Department also offers solutions and recommendations for particularly challenging projects, saving time and cost on installations. Crystal engineers routinely visit challenging job sites to consult on installations, field testing, and service.

In addition, Crystal facilitates new product development and customization with its in-house test chamber and engineering analysis. "We greatly reduce design cycle time by performing structural analysis, thermal simulations, and air and water testing of new products all in-house," said Leung. "Once satisfied, we release the new product, product modification, or accessory for third-party independent lab testing, production, and ultimately sale."

Crystal's R&D/Engineering team members have decades of experience in the window and door industry, both with domestic and European standards, designs, and energy codes. Additionally, their knowledge of production equipment, manufacturing processes, materials, and emerging technologies has helped Crystal to rapidly expand its product offerings, fast track new product development, and work with customers to provide the best solutions for their fenestration needs.

"It's important that fenestration, design, and construction professionals know we are here to support their projects every step of the way," said Leung. "From initial concept through product selection, delivery, and final installation, our engineers provide their expertise and assistance to ensure the most successful and most effective fenestration projects possible."

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