# Door & Window Ideas

## Facing a unique challenge?

See what's possible ▶





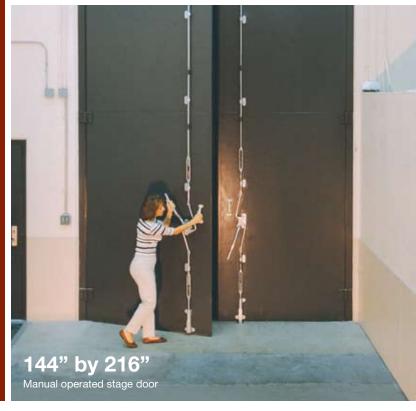




## Krieger Oversized Doors

Facing an extra large challenge? We've got the experience to help you get through. Whether your project requires a plain large door or a large door that's also acoustical, bullet resistant, blast resistant, radio-frequency proof or thermal shielded. Custom doors by Krieger can be engineered and manufactured to 16' by 16' and larger if needed. From stage doors and grand entrances, to testing cells and laboratory doors, when your project requires an oversized assembly, Krieger doors are the perfect fit.





All dimensions are for the entire size (both doors combined) not each leaf.



### Krieger's products and services exceed the limit.

For over 70 years now, architects, contractors, distributors, consultants and specialist have turned to Krieger for the very best in quality custom products, flexible engineering

and exceptional customer service. In 2005, when the University of Redlands, located in the city of Redlands, California, was completing renovation of its beautiful 140-acre campus, the expansion of an existing on-site electrical plant was high on the priority list. The expansion comprised of a \$5.5 million building and a brand new 1,500-kilowatt Caterpillar generator powered by natural gas installed to share the campus electric load.

With the building and generator located on campus, it was immediately clear that powerful, large-sized acoustical doors would be required

to prevent noise leakage while providing necessary access to the plant machinery. Sierra Wholesale, specializing in a commercial line of finishes and hardware, selected Krieger to manufacture the oversized acoustical doors specified for the project. In all, seven acoustical doors were needed including one 1 3/4" thick, 36" by 86" door and frame rated STC 51; one,

3" thick, 188" by 158" door and frame rated STC 55; one 100" by 86" door and frame rated STC 50; and four single doors and frames rated STC 45.

Once the shop drawings were approved, Krieger quickly went to work to produce the doors and frames as specified. When it was later discovered that measurements provided in the original drawings were inaccurate, although not at fault, Krieger took the initiative to remanufacture the doors and frames at no cost to the contractor. "Dedication, hard work and the will to go beyond what is expected is what our customers turn to us

for," comments Bob McCluney, Krieger's President. "It's the reason we have the kind of loyal customer relationships that we have."





### Krieger's ingenuity embeds doors into concave wall.

Ranked among the top 10 Public Western Universities, Cal State Fullerton, founded in 1957 and located 30 miles outside of Los Angeles, has produced close to 150,000

graduates in its 40-year history. With programs and enrollment growing annually, the university has taken on the task of expanding its facilities, including the addition of a new and innovative performing arts center.

Designed by Hardy Holzman Pfeiffer Associates, a leading planning, architectural and interior design firm, the \$43 million 103,000 square foot, two-story facility features an 800-seat concert hall, 250-seat thrust stage theater, 100-seat studio theater, three dance studios, a scene shop, design lab, warm-up, dressing and

storage rooms, costume and make-up labs, and a musical theater rehearsal studio.

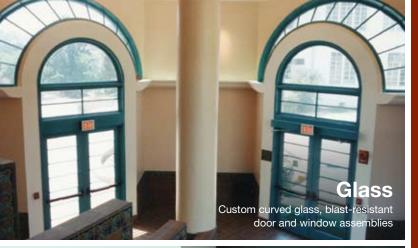
For Krieger, the real challenge of the project came in

the form of six hollow metal doors that had to blend into the concave façade of the walls in the back of the concert hall stage. The doors required a custom-made bracket and

hinge arrangement and bracing so that each leaf would meet correctly in the center—because they did not swing within the same plane as the wall. Krieger's experienced field service employees worked with expert engineers and the construction crew to understand the complexity and tolerances allowed in the design. Because each acoustical door leaf weighs approximately 1,100 pounds, the door frames needed to support 2,200 pounds and work with the connected wall support. To assure the correct motion of the swinging doors, Krieger first utilized a CAD

system to model the proposed hinging. The ingenuity behind the design is a result of Krieger's longevity and expertise in custom door manufacturing. ■







## Krieger Unique Doors

Stop limiting your designs. Krieger special purpose doors and windows can be custom manufactured for any creative architectural design or idea you can think of. From doors that have to fit into convex, concave and L-shaped walls, to doors that have to fit into wall pockets, and even doors that serve as removable room dividers, Krieger's engineering team has been called on to create some of the world's most unique solutions. So go ahead. Feel free to let your imagination loose and let us worry about solving the details.





#### Krieger delivers critical precision for nitrate vaults.

Tucked deep into a mountain side near Culpeper, Viriginia, former Federal Reserve facility in Mount Pony was resurrected in 2006 as Library of Congress' new National Audio Visual

Conservation Center (NAVCC), the world's largest and most comprehensive collection of film, television, radio and recorded sound.

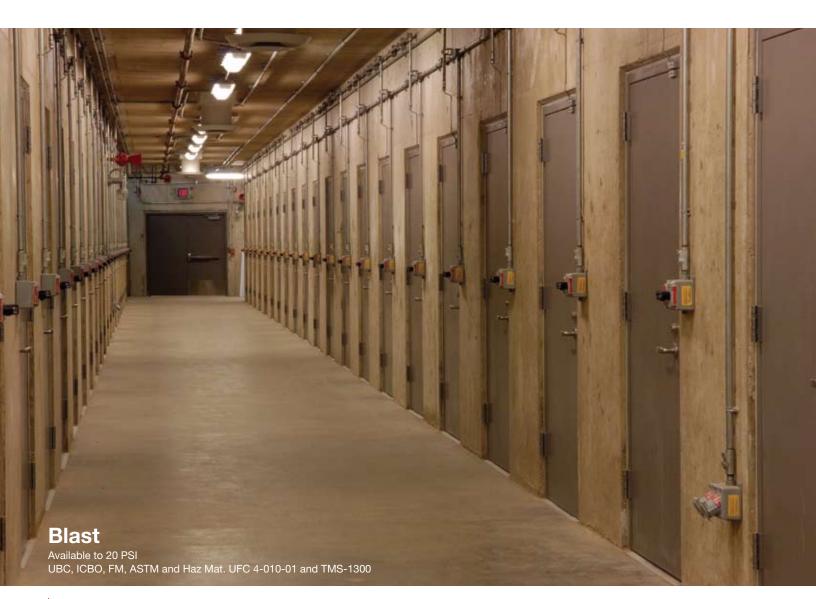
To create this state-of-the-art facility, Smith Group, an architectural firm founded by Sheldon Smith in 1853, was selected to lead the renovation in two phases. Phase I involved the repurposing of the original structure, while Phase II concerned itself with the addition of approximately 258,500 square feet, including a newly constructed Nitrate Vault Building.

Because cellulose nitrate film is flammable and highly explosive it must be kept at a constant temperature of 50 degrees Fahrenheit and 6.0 grains of moisture. For proper preservation and safety, the construction of the

vaults themselves was one of the most crucial aspects of the facility.

contracted by DPR Construction, J.S. Archer—an expert in commercial and industrial door hardware, hired Krieger Specialty Products for the very precise work required on the doors to the Nitrate Vaults. Highly acclaimed as one of the nation's leading blast-door manufacturers, Krieger was tasked with custom manufacturing 124 interior blast-resistant doors with a 1.0 PSI rating. Each door was fashioned out of cold-rolled steel and finished off with a vision light, a three-hour fire rating and prime paint. Because the blast doors and frames were being fit into existing openings, the project had a low

tolerance for measurement differentials and required the kind of manufacturing precision that Krieger has built its reputation on. ■









## Krieger Technical Doors

Leading the industry in highly specialized expertise, Krieger's engineering team creates custom door and window assemblies that look beautiful and satisfy various technical needs. Tested and certified to latest standards, Krieger doors are available for acoustical, blast and pressure, bullet resistant, radio frequency shielding, thermal shielding and various hybrid combination needs. Whatever your technical requirement may be, Krieger has the knowledge and experience to ensure you achieve the exact performance your special purpose doors must meet.





## Krieger Veneers

Any Krieger door or window, of any size and technical performance, can be veneered to achieve the visual impact you want and need. Choose from virtually every type of wood. Apply antique original facades to brand new doors. Or go for the bold look of stainless steel, bronze, brass, copper, stone or any artistic combination you can think of—even etched glass. Our top-of-the-line veneers and finishes are meticulously prepared by master craftsmen, and all veneers utilize a three-ply approach backed by our performance warranty.













### Krieger's veneer expertise preserves 1930s grandeur.

High atop Mount Hollywood in Los Angeles, sits Griffith Observatory—a dearly loved landmark of the community. Originally constructed in 1935 and given to the city as a gift by

Colonel Griffith Jenkins Griffith, the observatory's mission is to bring the cosmos within the public's reach. And per the Colonel's request, admission and telescope use remain free to the public even today.

Host to over two million visitors a year, the Observatory had been long overdue for the much needed revitalization that began in October of 2002. The Planetarium Theater was completely gutted. All historic features, including an existing 100-foot wide plaster dome, floors, walls, lighting fixtures, metal work and seating were removed and restored to their original appearance. An extensive

underground excavation added an additional 11,000 square feet that now house a gift shop, cafeteria, offices, exhibit rooms and production areas under the front lawn. And the main entrance

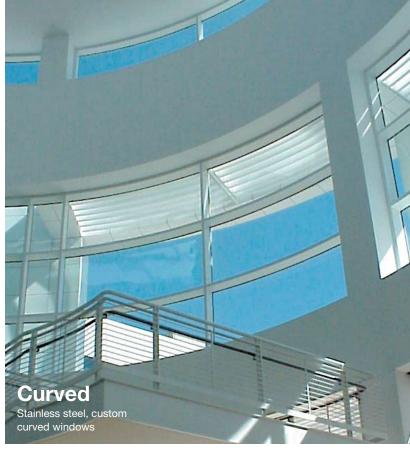
area, known for its massive Foucault Pendulum, custom marble, travertine and mosaic work, had been beautifully restored to the original grandeur of the 1930s.

Four long years in the making, this historic renovation took many carefully planned steps and extra special attention was paid to details and capabilities of the companies that were selected for the job. Krieger was among the specialty companies brought in to contribute to the renovation. Proud to be on board for this historic endeavor, Krieger provided four acoustical doors, rated STC 50, in various areas of the building, the most interesting of which was placed on the main dome of the Samuel Oschin Planetarium Theater. To preserve the building's historical style,

iron cladding from the original door was carefully removed, meticulously restored and then veneered over a newly custom manufactured Krieger door.







## Krieger Windows

Just because you need high-performance windows doesn't mean you have to surrender style. Whether you need blast, bullet, acoustical or a hybrid of all three, Krieger windows can be custom-designed to be the centerpiece of any architectural setting. From odd shapes and sizes, to unique curves and frames, Krieger special-purpose windows offer you endless options—regardless of the heavy-duty tasks they are performing.



#### Krieger windows embellish former early 1900s ballroom.

From its humble beginnings in a private home in 1917, the world renowned San Francisco Conservatory of Music has grown to serve over 1,300 students and more than 1,500

public performances annually. In 2006 the SFCM, having outgrown their previous location of 50 years, relocated to newly expanded and refurbished facilities in a building originally built as a ballroom in 1914. As the building's historical terracotta façade, 50 by 70-foot plaster ceiling, pilasters, cornices and ceiling ribbons had all been miraculously preserved, the architect, Simon Martin-Vegue Winkelstein Moris chose to retain the historical features and combine them with elements of modern design.

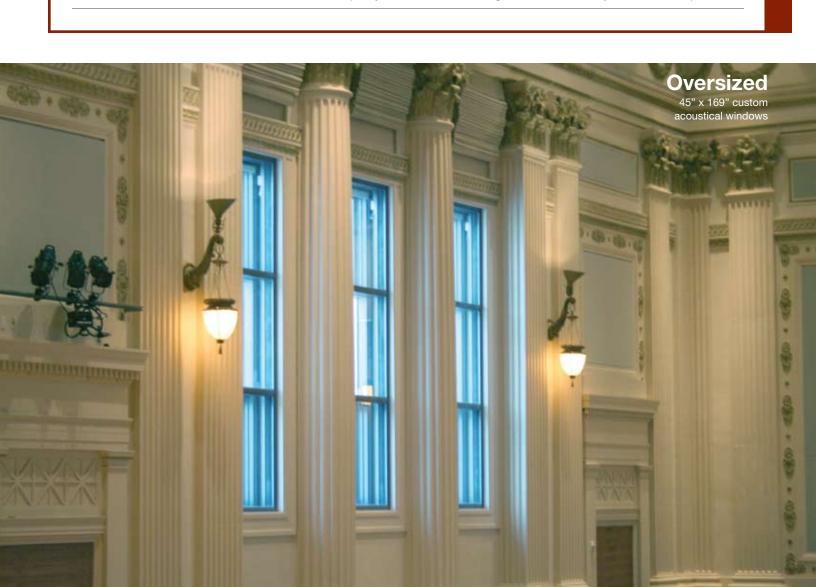
The end result is a new \$80 million, 72,987 square feet facility that nearly doubles the Conservatory's original size and now includes three state-of-the-art performance halls, one of which is large enough to hold a full orchestra and chorus. The acoustic quality of

the building was of highest priority. Kirkegaard & Associates, famous for their acoustical contributions at Carnegie Hall and Chicago's Orchestra Hall, were brought in to oversee every

aspect of acoustical design. Kirkegaard's expertise was combined with the talents of the architects, theatrical consultants and project managers to guarantee a building with superior sound.

Being the first to introduce many of the major innovations that lead the special-purpose door and window industry today, Krieger was the obvious choice to guarantee acoustical windows with superior performance. Krieger custom-designed a total of 59 windows, rated STC 52. Most were 43" by 21" in size, but the project also included several custom sizes, such as 13" by 46," 15" by 46," 116"

by 105" and 169" by 45." Krieger's noise-control windows were utilized at various locations throughout the building where acoustics and grand architectural style were most important. ■



#### **About Krieger**

For over 65 years, Krieger has been the world's leading manufacturer of custom doors and windows for acoustical, blast, bullet, stainless steel, security, thermal and radio frequency needs. Offering cutting edge innovation and exceptional performance, Krieger doors and windows are chosen for premier buildings and installations by architects, consultants and contractors who challenge the boundaries of possibilities.

Want to see what's possible? Let Krieger's experience, capability and engineering talent show you how beautiful and functional doors and windows can be. Give us a call today. We're happy to discuss your project and ideas anytime you need.

Call 1-800-374-9147

or visit www.KriegerProducts.com



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