Shower Doors Unlimited has carved out a reputation among the architectural and design community for producing unique shower enclosures utilizing creative engineering design and high-end components. From frameless glass enclosures to fully framed enclosures, their award winning designs can be seen in some of the finest homes in South Florida and the Caribbean. Most recently the firm was commissioned to develop luxury, frameless pocket shower doors for Marriott’s new signature, boutique hotel, The Marquis, which will be located in Miami’s new Met 2 Financial Center.

“The architect’s vision was to create a glass shower door that would disappear into a pocket but would never, ever jump the track – he wanted to combine extreme luxury and aesthetics with the ultimate in safety,” reports Jeffrey Geraci of Shower Doors Unlimited.

“Coming from Detroit, I had experience with auto assembly line automation. I thought that a linear bearing system might work for a pocket door slide as they have long life and are dependable. Initially we created a design that integrated the bearing track into the bottom of the door. However, the client and architects wanted a table top prototype so they could be 100 percent sure the design would meet all of their needs: form, function and safety.”

“After discussions with multiple suppliers, we finally made contact with an applications engineer from Rollon who recommended the Compact Rail linear bearing system, and we were able to create a table-top model with one of the samples. Initially we did not like the design because it did not have the aesthetic element required for such a high-end design, while from a functional standpoint the bearings gathered debris which affected the door’s performance and would require more maintenance.”

It was at this point that Jeffrey and his team at Shower Doors Unlimited literally turned the design on its head.

“Sitting there analyzing the design we picked up the table-top prototype and turned it upside down and had our ‘eureka’ moment. More discussions with the Rollon engineer revealed that the X-Rail would be a more suitable bearing for the 125lb door in the pocket door area, where space is extremely restricted. Rollon recommended roller bearing tracks that go inside the X-Rail to conserve space and they sent us new samples so that we could re-build the model.”
Jeffrey and his team confirmed with Rollon that the X-Rail would carry the required load and their updated table-top model was approved immediately by the architectural team. They were able to prove that the aesthetically clean design would never leave the track, would meet the high cycle requirements, and yet still provide a very smooth motion.

Rollon’s X Rail bearing systems are available in stainless and carbon steel and are available in three sizes (up to 10 feet in length) to meet most application requirements. The unique profile rail designs provide raceway and bearing protection while delivering high stiffness and less deflection. X Rail’s stainless steel delivers torsion-resistance at steel pricing and the sliders are inter changeable for greater flexibility.

“The revised model secured the job for us, and it was one of the largest projects that Shower Doors Unlimited has ever won. However, we still had to actually produce the shower door mechanism and that is when the real work began.”

Shower Doors Unlimited began building a full size model in the shop and worked with Rollon’s engineers who customized the X-Rail by creating a mounting pattern that would accommodate the U-channel design. Normally the holes are in four corners but the design required a center line, which Rollon was able to accommodate.

As with many cases in the real world, the design had another set-back; samples of the doors were installed but the header beams were not robust enough and they were experiencing warping and deflection which significantly affected the performance of the doors.

“Discussions the hotel builders and Rollon led to us putting metal bracing in the headers which immediately cured the problem with outstanding results. You can now move the 125lb shower doors with your pinky. The doors were so well received by the customer that they have doubled the order to 100 doors, not to mention that we can now market this design to other high-end customers.”

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