

CASE STUDY

SOLAR CONTROL

CUSTOM VENETIAN BLINDS ADD SPECIAL TOUCH AT WILSHIRE GRAND CENTER



Product: Specialized Venetian Blinds, Wilshire Grand Center Los Angeles, CA
Architect: AC Martin, Los Angeles, CA
Dealer: Contract Décor, Inc. Thousand Palms, CA, Photographer: Ewelina Frye

- The Wilshire Grand Center in downtown Los Angeles has been an attention-getting project from the very beginning. As construction got underway, 21,200 cubic yards of concrete was poured at the site, setting a Guinness World Record for concrete in one continuous pour. By the time construction was completed it was 1,100 feet (335.3 m), the United States' tallest building west of the Mississippi River.

Naturally the Wilshire Grand Center's architectural firm, AC Martin, had something extra special in mind for solar control on the first floor, and in the Hotel Intercontinental Los Angeles Downtown's "Sky Lobby" between the 72nd and 70th floors.

AC Martin's design incorporated large scale venetian blinds, similar to systems used in the past on several buildings including Sony Berlin and Bayer's headquarters in Leverkusen. For the Wilshire Grand project, however, AC Martin wanted louvers with more substance and greater presence than is typical. Since the louver systems are such a key building feature, their appearance and function were

particularly important to the design team. That meant using extruded aluminum louvers, instead of the usual formed sheet aluminum louvers.

Moving to extruded louvers significantly increased the system weight, so a completely new drive mechanism had to be designed to meet the project requirements. In addition, integrating the systems with the building structure required different drive mechanisms for different parts of the building to address specific conditions and constraints.

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AC Martin drew the product they wanted into their project rendering and during the bid phase of the project, Draper developed initial designs based on those drawings and produced 3D prints of louver profiles and connection details. Once Draper was awarded the project, our solar control solutions engineering team further developed the design and a prototype was designed, manufactured, assembled, and tested at Draper's Spiceland, Indiana, factory. This prototype allowed Draper to better understand key elements of the system and refine various details, such as louver connections and the attachment of the stainless steel lift tapes to the bottom louver.

The prototype also provided a better understanding of the scale and appearance of the system. After working with the prototype, AC Martin and the construction manager, Turner, requested several changes, including a reduction in the number of lift tapes and tilt cables. Additionally, the prototype allowed Draper and the installing dealer to dial in on how the systems could be shipped and installed on site.

For those systems installed inside a pocket, Draper produced a custom two-motor head rail with one motor to raise and lower the louvers and a second one to provide the tilt function. Draper worked closely with a motor manufacturer to develop a special tubular motor with enough torque and a slow enough speed to provide a controlled rotation of the louvers. For locations where the systems are not installed in pockets, Draper installed a different drive mechanism with a remote raise/lower motor inside a horizontal beam, while an actuator provides the tilt function.

The majority of the systems on the project have 12" louvers, although in a number of sky lobby areas 6" louvers provide a different aesthetic.

For more information on Draper's solar control solutions, click here. (draperinc.com/customsolutions)

Visit wilshiregrandcenter.com to learn about the Wilshire Grand Center, part of a mixed-use hotel, retail, observation decks, shopping malls, and office complex.

To read about AC Martin, click here. (acmartin.com)

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