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Solar Control Window Films: Success Stories

Beijing Capital International Airport, Beijing, China

Installation Summary

Building Description:
Beijing Capital International Airport, Terminal 3

Location:
Beijing, China

Problem:
Stifling temperatures

Solution:
Solar Gard® Sterling 20

Benefits:
Lower inside temperatures
Increased level of comfort

Terminal 3, Beijing Capital International Airport Solar Gard® Sterling 20 alleviated uncomfortable temperatures

Solar Gard Alleviates Solar Heat Headache at Beijing Capital International Airport

With an estimated 50 million passengers traveling through it, Beijing Capital International Airport is the busiest airport in all of Asia. Terminal 3 was built in 2008 to accommodate the growing traffic volume, and was opened just in time to handle the influx of international travelers arriving for Beijing's Olympic Games.

Terminal 3's sprawling design represents the developing Chinese city. The glass and steel lend a futuristic feel while cultural heritage is hearkened through rich tones and tapered red pillars reminiscent of the revered Chinese dragon. One of the most unique aspects of the new terminal is its enormous glass ceiling which affords stunning views to visitors traveling through the concourse. But these views came with a high cost…a huge solar heat headache.

Terminal 3 suffered a compounded heat problem. The wide glass ceiling allowed the sun to stream directly in, intensely heating the area and Beijing's summer temperatures typically linger around 90°F. Air conditioning was inadequate because of the giant space. The combination of solar heat intake through the glass ceiling, Beijing's hot temperatures and subpar air-conditioning, rendered one of the world's most beautiful terminals, one of the most uncomfortable.

Airport officials did not want to sacrifice the aesthetics they had worked so hard to create, so window film made the short list of solutions. Bekaert Specialty Films suggested Solar Gard Sterling 20 for its optimum heat and glare reduction and its ability to soften the incoming natural light.

To access the massive arched ceiling, the team built a rope spider web-like scaffolding system to maneuver through the air. Because the work was performed at night during low traffic, it took one month to complete. Solar Gard Sterling 20 was installed on 30,000 square meters of Terminal 3. It blocks 99 % of the ultraviolet rays and rejects 76% of solar heat intake.

Airport officials have reported that the high temperatures have been significantly lowered. Today Terminal 3 lures many visitors with its shops, restaurants and beautiful gardens. After the installation of Solar Gard Sterling 20, all travelers who pass through Terminal 3 can comfortably enjoy these wonderful amenities offered at the Beijing airport.

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