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Alaska Airlines' new hangar incorporates the latest Megadoor Technology

Alaska Airlines
Owner

Alaskaair.com

Kiewit Building Group
Construction Manager

Kiewit.com

McCool, Carlson, Green
Architects

Mcgalaska.com

Schneider Structural Engineers

Structural Engineer

sastructural.com

Statistics:

281' X 45' 5- Part
Megadoor System

60,000 ft² (18,288 m)
hangar bay

Northern most
commercial hangar to be
LEED certified

ASSA ABLOY Entrance Systems (AAES) is proud to have supplied Alaska Airlines a 281' x 45' five part Megadoor system for their new two bay, narrow body, hangar in Anchorage. Alaska Airlines is the fifth largest airline in the United States and is ranked by J. D. Power and Associates as having the highest customer satisfaction of the conventional airlines for eleven consecutive years.

The \$50 million state-of-the-art building more than doubles the size of their original '50s-era hangar. The old hangar was unable to accommodate the Next Generation aircraft. The new facility, spanning 100,000 ft² (3,048 m), will be able to house two 737-Max 9 aircraft in an efficient climate controlled environment.

In order to perform line maintenance cost effectively, the facility and systems must be reliable and energy efficient to control the indoor climate. During the early planning stages, Jason Gamache, Director of Sustainability and Principal Architect at McCool, Carlson, Green (MCG) understood that the hangar door system would be a critical choice for Alaska Airlines.

Hangar doors play an important role in energy efficiency, and their reliability in winter weather ensures planes depart for their gates on schedule.

On previous projects, Jason and his team at MCG had specified vertical lifting Megadoors and were familiar with their performance in Alaska. However, all Alaska Airlines' existing hangars in their network used traditional bottom rolling doors. Knowing that the hangar doors were a critical design element, but a new technology for Alaska Airlines, Jason arranged for a tour of multiple Megadoor installations at the Ted Stevens Anchorage International Airport (ANC). During these visits the team was able to review the Megadoors in action and talk to the facilities maintenance managers to understand how the doors performed over the years. The oldest Megadoor at the airport was installed on the FedEx hangar in 1993.

After the tour, David Boyce, Anchorage Regional Line Maintenance Manager, Alaska Airlines, saw the value of the energy efficiency and cold weather reliability offered by the vertical lifting Megadoor. Additionally, he appreciated the fact that Megadoors did not require the large rail systems in the floor. These rail systems are a nuisance because they require routine cleaning, heating and drainage.



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However, before David would recommend Megadoors for the new hangar, he wanted a system that did not require the manual opening and closing of the mullion floor pit covers that he saw on the existing doors at ANC. He also wanted a flush, clean, door threshold.

Therefore, AAES proposed its retractable mullion pin option with its new, spring-loaded pit cover. Since 2001, AAES has been supplying the Megadoor retractable mullion pin option which uses a linear actuator to extend and retract a pin at the base of each mullion which transfers horizontal wind loads into the concrete floor.

In 2016 AAES invented and patented the spring-loaded mullion pit cover. When the mullion base pin is extended, the force of the pin depresses the pit cover.

As the base pin retracts, the cover moves back into place eliminating the need to manually open or close the pit covers. Importantly, the weight of a person stepping on the cover is not enough to depress the cover.

Critical Issues:

- **Cold Weather Performance** – The door must operate reliably in harsh winter conditions ensuring aircraft movements are on schedule.
- **Energy efficiency** – During the winter months, provide a comfortable working environment for the technicians by controlling the hangar's climate in a cost-effective manner.

Benefits:

- **Cold Weather Performance** – Megadoor understands that if a door does not open when required, it can delay aircraft departure times with huge financial consequences. Since 1987 over one hundred Megadoors have been installed in Alaska earning them the reputation as the best cold weather door on the market for large openings. Megadoor systems operate vertically, so they do not need floor tracks, (required by bottom rolling doors), which commonly fill with ice during winter months which hinders their operation. Ice does not accumulate on the Megadoor exterior surface as it does on conventional doors, because as the door fabric flexes in the wind or folds during operation, the ice simply flakes off. The Megadoor will not freeze to the ground like other door systems which can damage them if forced open while locked in ice.
- **Energy Efficiency** – With over one hundred Arctic installations, the Megadoor has proven to be the most energy efficient hangar door in the world. With its demonstrably superior seals, the Megadoor reduces air leakage more than any other door which is crucial since 80% of energy loss on a closed hangar door is attributed to air infiltration around poor seals. In addition, the vertically operating Megadoor systems are faster than other hangar systems, enabling Alaska Airlines to quickly open and close a Megadoor for aircraft movements. This minimizes the loss of conditioned air and keeps the technicians comfortable and accountants happy.

For more information about this product, please contact: (800) 927-6342 or sales.us.megadoor@assabloy.com