COX GOMYL
PART OF ALIMAK GROUP

Case Study
Qingdao Haitian Centre, China

Architectural Harmony: Custom BMU Solutions for Qingdao Haitian Center

Facts & Figures

Commencement	2018
Completion	2022
Building Height	204m 240m 369m
BMU Type	5000 series
No. of BMUs	7
Outreach	27.25 m
Building Type	Mixed-use

In Qingdao, China, the Haitian Center transforms the skyline with its three dramatic towers and flowing, wave-like facade. Designed by Archilier Architecture and developed by CGIC, the centerpiece is a supertall tower reaching 369 meters, accompanied by two towers standing at 240 and 204 meters. While visually spectacular, the complex architecture demanded innovative long-term maintenance solutions.

CoxGomyl answered the challenge with a custom-designed facade access system, employing advanced Building Maintenance Units (BMUs) to navigate the non-linear facades and tight rooftop spaces. This custom system ensures efficient, safe access across the entire building envelope while respecting the architectural vision.

Overcoming Architectural Challenges

Inspired by the fluidity of ocean waves, the Haitian Center's facades curve, slope, and recede in complex ways. These features created significant challenges for maintenance access, especially with inclined and negatively sloped surfaces and irregular recesses that standard equipment couldn't handle.

Complicating matters further, the roof areas—particularly atop the supertall tower—offered minimal space. This demanded BMU designs with extended outreach capabilities and compact storage profiles, tailored to fit within tight spatial constraints.

Custom-Engineered BMU Systems

Across the three towers, CoxGomyl installed seven highly specialized BMUs from the high-performance 5000 Series. Each smaller tower received two units: one fixed and one on twin tracks. These BMUs feature three-stage telescopic jibs extending up to 20.75 meters, with certain units also equipped with telescopic masts for vertical reach.

The tallest tower posed the greatest challenge, requiring three BMUs with five-stage telescopic jibs reaching up to 27.25 meters. Two of these also included telescopic masts, while the third incorporated a knuckle jib for enhanced flexibility in accessing recessed and sloping areas.

Each BMU utilized a soft rope restraint system, ensuring stability and safe movement across the building's undulating surfaces.

Seamless Installation Amidst Construction

Installation occurred alongside active construction, demanding careful coordination. CoxGomyl's on-site team, led by Project Manager Arthur Wang, developed and followed a dynamic schedule aligned with evolving site activities. Comprehensive safety training and close coordination with other trades ensured the BMUs were installed smoothly and on time.

Ensuring Lasting Performance

Since its completion in 2020, the facade access systems have enabled reliable, unobtrusive maintenance across all three towers. The result is a sustainable solution that preserves the Haitian Center's bold design for years to come—an outstanding demonstration of CoxGomyl's expertise in engineering complex, high-performance facade access solutions.

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