

Facade Access Replacement Guide

Leading providers of facade access solutions

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Together, Manntech and CoxGomyl are the world's leading providers of superior facade access solutions.

Present around the world with over 120 years of combined experience, CoxGomyl and Manntech are industry pioneers and innovators, providing optimal building maintenance systems available for every building structure regardless of its simplicity or complexity. The combination of the brands provide the most reliable and efficient building access solutions which are built on proven technologies, providing exceptional performance whilst meeting the highest standards of safety and quality.



CoxGomyl is a leading global provider of premium facade access solutions. Present around the world with over 60 years of experience, CoxGomyl has the widest range of configurable building maintenance units built on innovative, proven technologies which provide exceptional performance.

Visit CoxGomyl at www.coxgomyl.com

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Manntech is recognised globally for advanced German high quality engineered building maintenance units pioneering many of the facade access systems seen in the industry today. With over 60 years of experience, Manntech have the longest history of innovation in designing end to end building access solutions for the world's most complex architectural structures.

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ALIMAK SERVICE

Alimak Service is a global leader in vertical access service solutions. Alimak Service provide a full range of service, parts and training solutions, delivered by a global service support network across 100 countries. Our mission is to ensure the highest level of product uptime and safety, over the total life cycle of your equipment.

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Replacing a Facade Access System

Serving buildings for decades at a time, facade access systems such as building maintenance units, provide a long-term access solution for a range of architectural forms, from the simplest to the most complex. Manntech and CoxGomyl's facade access systems are chosen all over the world for their reliability and efficiency. Outside the normal wear and tear, irregular maintenance and environmental impact can have an adverse effect to each systems efficiency and reliability. Over the years a replacement may be required when the current system is beyond economical repair, or it has reached the end of its service life.

Working with building owners and building managers, CoxGomyl and Manntech provide innovative replacement facade access solutions to keep established buildings around the world pristine. When a facade access system has reached the end of its life, the most logical solution is to seek a replacement with the capability to meet the modern needs of the building. CoxGomyl and Manntech utilise the latest technological advances to deliver discreet, modern replacement systems, ensuring that the most recent codes and standards are met, particularly with respect to meeting today's safety standards. Modernisation features may include updated HMI diagnostic panels, smarter and more efficient PLCs, and greater Ingress Protection (IP) rated electrical enclosure and components. Features such as remote monitoring also allow for more efficient troubleshooting and minimal downtime when compared to older equipment.

Summary of replacement benefits:

- Enhance the long-term investment for the property based on a 30+ year lifecycle for a new facade access system
- More readily available components and spare parts when compared to aged or discontinued equipment
- Upgraded safety features to comply with today's codes and standards
- Improved efficiency through utilisation of innovative components
- Easily serviceable to minimize downtime
- Higher IP rated components to prevent premature environmental impacts
- Operational efficiencies for a more user-friendly product



The Replacement Process

Once awarded a project, CoxGomyl and Manntech will designate a dedicated Project Manager and Technical Representative to work closely with all stakeholders to provide a seamless, end-to-end solution from the design and manufacturing process to dismantling the old building maintenance unit and delivering the replacement.

Each client is appointed a technical representative and project manager to provide guidance throughout the project to ensure that an optimal replacement solution is found and delivered within a reasonable timeframe.

The entire process can be simplified into 3 steps:

1. Detailed coordination amongst key stakeholders

The removal of the previous building maintenance unit is factored into every replacement project. CoxGomyl and Manntech project managers will assess the clients' priorities relating to the delivery of a new facade access system, ensuring that all requirements are met.

- **Building structural limitations:** Project managers will work closely with the building structural engineer to ensure that the new facade access system is within the building's load requirements to limit structural or roofing work.
- **User input:** Project managers will also review the operations of the existing facade access system with the current users to ensure operational efficiency is increased.
- **Property management expectations:** A review of the full project costs, scheduling, building protection, delivery restrictions, and tenant/resident expectations and a plan on how to minimize building disruption will be provided to ensure the best possible solution is offered.

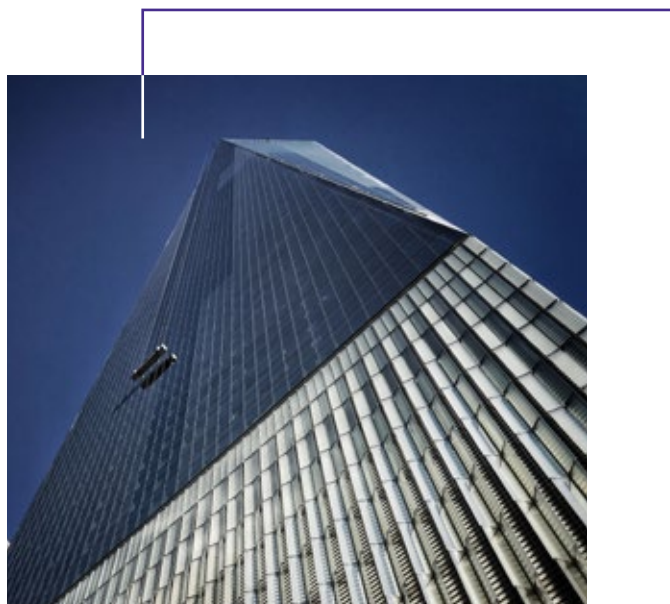
2. Removal of the existing facade access system

Next, our dedicated project team will recommend the most suitable removal method given the unique needs of the building. There are several options for the removal of old facade access system:

- Units can be dismantled using scaffold and dismantling tools and transported to the ground through the building.
- Units can be cut up using a torch or plasma cutters, where permitted, with the supervision of a fire attendant and carried through the building.
- A mobile crane can be used to lift and lower the system to street level either in one piece or in components.
- A roof derrick can be used to lower and remove the existing system to street level.
- A heavy lift helicopter or sky crane.

3. Delivery of the replacement facade access system

CoxGomyl and Manntech replacement facade access systems are carefully integrated into the existing structure of a building. From the outset of a project, engineers plan carefully and consider how the delivery process can be conducted smoothly to minimise the risk of error. Replacement machines can be supplied with bespoke components to suit the size and weight limitations of each building's available vertical transportation possibilities.



A number of methods can be employed to successfully deliver a replacement facade access system:

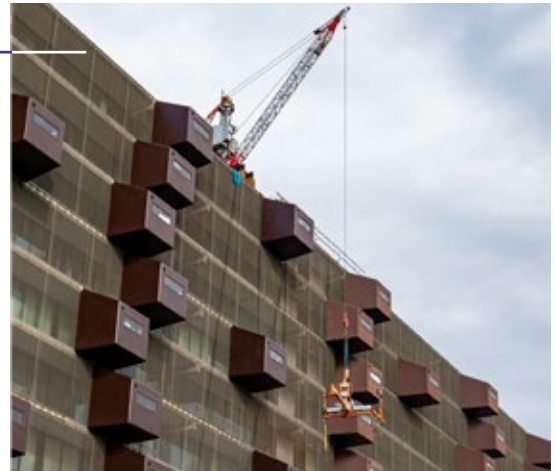
- CoxGomyl and Manntech project managers will assess the clients priorities relating to cost, speed, downtime, and minimized disruption of the site and propose the most suitable removal strategy for each individual building.
- Smaller BMUs can be delivered through the building in a modular fashion. This eliminates the need for street closures, uses more simple equipment and and minimizes the risk of damage to the facade.
- Large BMUs can be delivered via derrick crane for full control of the hoisting process and less assembly time.
- A street crane can be used to deliver a facade access system quickly. Turn-key pricing makes this a cost-controlled method of delivery.
- Helicopters provide a rapid delivery solution for replacement facade access systems.

Facade Access System Installation Methods

CoxGomyl and Manntech can utilise a variety of methods for the installation of facade access systems, depending on the individual project's needs.

Light Weight Roof Derrick Crane

An aluminium, lightweight roof derrick crane is an efficient and economical solution for providing access to install a building maintenance unit. With a maximum lifting capacity of up to six tones, derrick cranes require an installation time of approximately one week for the crane, after which a building maintenance unit can be installed in four to five days.

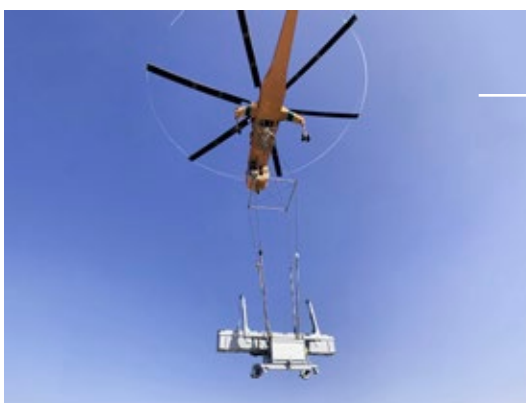
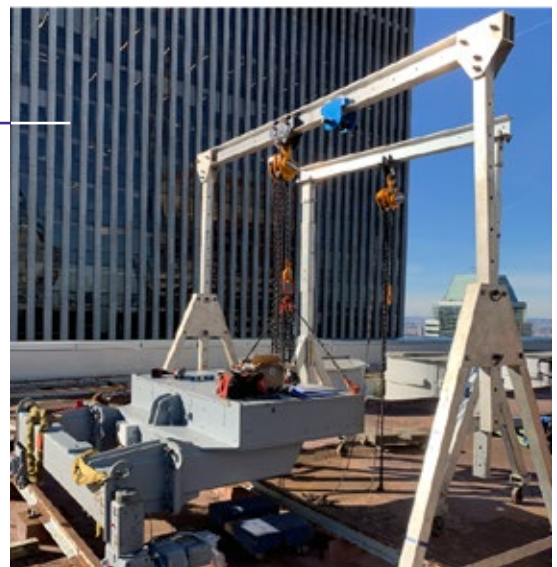


Mobile Crane

Ideal for low rise buildings, mobile cranes can be utilised for the installation of low complexity building maintenance units. Installation of mobile cranes is efficient, requiring only one day, however careful planning required to ensure that street closures, permits and reviews of nearby subway lines underground are considered.

Elevator or Hoist Cars

Installations utilising building elevators or hoist cars require the facade access system to be broken into components due to varying capacity and size limitations. Detailed logistics planning is required for this method to ensure that pinch points and floor capacities are taken into consideration. Consequently, this method requires a longer installation time of one to three weeks and an extended commissioning period due to the separation of pieces.



Helicopter

Utilising a helicopter to install a facade access system requires significant logistics planning, including of the staging area, flight path and required street closures. Likewise, the building on which delivery is being made needs to be secure and clean, with all personnel removed from the top three floors. As a result, this method is typically reserved for uncongested areas for BMUs weighing up to 16,000lbs and where the use of cranes isn't an option.

Facade Access System Replacement for Guangfa Securities

CoxGomyl delivers a new and improved replacement BMU for Guangfa Securities Headquarters.

CoxGomyl recently provided a replacement building maintenance unit for Guangfa Securities Headquarters, one of the most outstanding skyscrapers in Guangzhou, China. The distinctive design of the building required an innovative building maintenance system to provide access across its entire 308-metre facade. The original building maintenance unit, installed by a competitor of CoxGomyl, had failed to perform to the required standard since its completion in 2018, presenting a range of safety issues as a result, while the design also interfered with the carefully considered aesthetic of the structure. CoxGomyl was invited to deliver a replacement facade access system to overcome these challenges and provide safe access to the building's facade for decades to come.

A building maintenance unit was developed that could be easily integrated into the existing structure of the building while it remained operational. A full-service solution was provided, installing a roofing crane to hoist the BMU into position and removing the previous BMU. Featuring a three-stage telescopic jib the BMU has an outreach of 30.7 metres. Utilising a two-stage telescopic mast, the BMU has the required flexibility and manoeuvrability to navigate the facade of the skyscraper without compromising its aesthetic integrity.

Installations

As the chosen service provider for CoxGomyl and Manntech, all building maintenance unit installations are carried out by Alimak Service.

Before



After



Facade Access System Replacement for Three Allen Center

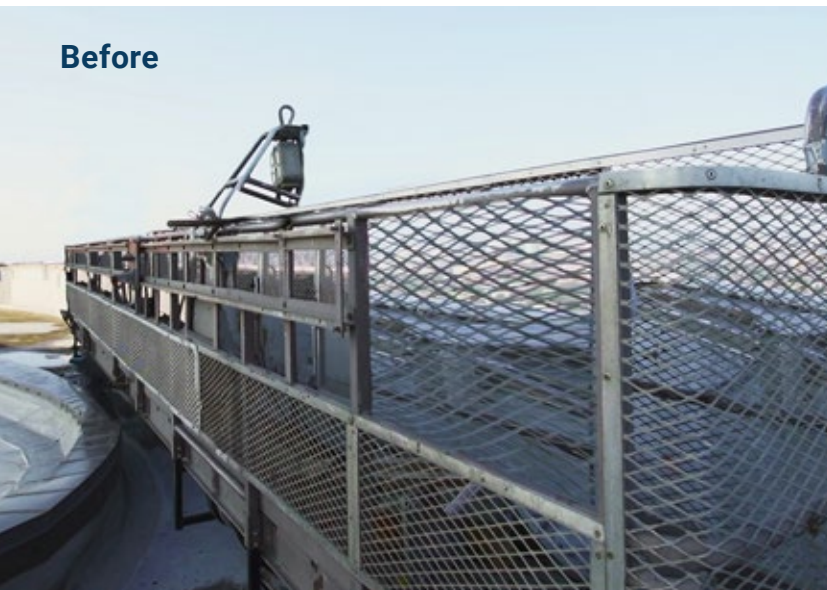
Manntech overcomes technical challenges to deliver a custom building maintenance unit for Three Allen Center via helicopter.

As part of the redevelopment of Three Allen Center in Houston, Texas, a new building maintenance unit was required to replace an aging system which had been out of use for a long time. Renowned for developing innovative custom facade access solutions, Manntech was the first choice for the task. The stakeholders required the replacement BMU to feature the same functional abilities of the previous model to preserve the appearance of this iconic building for decades to come.

The team at Manntech devised an innovative solution and successfully designed, manufactured and delivered the building maintenance unit to its new home on the roof of Three Allen Center. There were a number of technical challenges to overcome in order to lift the building maintenance unit onto the roof of the 208-metre tower without significantly impacting its full-time residents.

Following careful consideration, the engineers at Manntech concluded that the safest and most efficient way to overcome the logistical challenges associated with lifting the new BMU to the roof of the building and minimize disruption to the building tenants, was to deliver it by helicopter. Thus, the twin arm BMU was strategically designed and weighted to be lifted from street level to its final location on the roof via helicopter. Manntech has once again overcome a variety of technical challenges to deliver reliable, high-quality facade access to every elevation of this landmark tower.

Before



After





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