



## From Monorail to BMU: A Smarter Facade Access Solution for a Mumbai Landmark

### Replacing Traditional Monorail Systems with Advanced BMU Technology

Rishabraj Estate Developers Pvt Ltd set out to develop a premium commercial tower in Mumbai that would combine architectural appeal with long-term operational efficiency. For the 130 m structure, the original recommendation involved a monorail system with a self-powered cradle. However, after detailed technical discussions with our Facade Access Solutions India team, the project direction shifted toward a more advanced Building Maintenance Unit (BMU) solution.

Facade Access Solutions delivered a Tractel Scorpio BMU installed on an anchored rail track, creating a streamlined system designed for facade cleaning, maintenance access, and glass replacement operations. By replacing multiple monorail circuits with a single integrated BMU, the project achieved improved efficiency while maintaining a cleaner architectural appearance.

### Improving Facade Maintenance Efficiency with Scorpio BMU Technology

The installed Tractel Scorpio BMU featured a three-stage telescopic jib with a 23.5m working outreach and a 12.5m parking position. The BMU also incorporated a CC3 pantograph cradle that enabled access to recessed facade sections. An integrated Glass Replacement Unit further strengthened the system's maintenance capabilities by supporting safe and efficient facade glass replacement. The system was engineered in compliance with EN 1808:2015 requirements to support safe suspended access operations, load handling performance, and long-term operational reliability for high-rise facade maintenance.

In addition to improving facade access, the BMU reduced operational complexity and lowered long-term maintenance requirements compared to traditional monorail arrangements. The elimination of visible monorail tracks and brackets also enhanced the building's exterior appearance, reinforcing its identity as a premium commercial development.

### Solving Complex BMU Installation Challenges Without a Tower Crane

One of the project's most demanding phases involved the installation of the Tractel Scorpio BMU without the use of a tower crane. Because the site lacked conventional heavy lifting infrastructure, transporting and assembling large BMU components at height required a carefully coordinated installation strategy.

To overcome these constraints, the installation team developed a detailed execution plan that prioritized safety, sequencing, and site adaptability. Alternative hoisting methods were introduced to safely lift and position critical BMU components while minimizing disruption to ongoing site activities. Each stage of the installation process was closely managed to ensure precise assembly and alignment of the anchored rail track system.

The technical expertise and on-site coordination of the distributor, Confianza Ventures Pvt. Ltd., played a critical role in maintaining project efficiency throughout the installation phase. Despite the logistical challenges, the BMU system was installed safely, efficiently, and without delays. The successful completion of the project demonstrated how Facade Access Solutions and Tractel continue to deliver high-performance facade access systems for demanding high-rise environments.

### Facts & Figures

|                                  |                            |
|----------------------------------|----------------------------|
| Commencement                     | May 2023                   |
| Completion                       | Dec 2024                   |
| Building Height                  | 130 m                      |
| No. of BMUs                      | 1                          |
| BMU Type                         | BMU on anchored rail track |
| Building Type                    | Commercial Tower           |
| Applicable Codes and Regulations | EN1808:2015                |

