



Photo credit: The Shard Management

BMU Hydraulic Cylinder Retrofit in West Europe's Tallest Building: A Landmark Achievement in Facade Access Solutions

Facts & Figures

Commencement	September 2024
Completion	February 2025
Building Height	310 m
BMU Type	7000 series
Floor Count	87
Building Type	Mixed Use



The Shard, a prominent architectural icon in Western Europe, recently presented a formidable challenge: the essential life-cycle replacement of critical hydraulic cylinders on its primary Level 87 Building Maintenance Unit (BMU). This complex endeavor, undertaken by our service team in the UK and CoxGomyl factory, focused on replacing four end-of-life load-bearing cylinders: the two main luffing cylinders, the second-stage jib luffing cylinder, and the third-stage luffing cylinder. A comprehensive, turnkey solution was successfully delivered by our CoxGomyl engineers, encompassing the specification, supply, and project management of entirely new replacement cylinders. These cylinders were significantly upgraded to stainless steel 316, ensuring enhanced durability and future-proofing the BMU's operational life. This retrofitted upgrade extends the BMU's overall lifespan, effectively deferring more substantial replacement costs in the future.

Scaffolding and Equipment

Beyond the cylinder replacement, the project involved the meticulous design and erection of an extensive temporary access scaffold in collaboration with a scaffolding partner. For the main lifting operations, two 3-tonne Tractel Tirak winches were the primary equipment, complemented by a Tractel Tirfor winch for safely positioning the Tirak winches.

Challenges and Overcoming Them

Operating between Levels 75 and 91, fully exposed to the elements, the project team skilfully navigated frequent high winds and heavy rain. Proactive weather monitoring and flexible scheduling were crucial in overcoming these environmental challenges. Furthermore, all materials, including the substantial scaffolding and cylinders, required transportation through restricted service routes, uniquely small service lifts and via the Tirak winches through lift shafts, all during tightly controlled out-of-hours shifts, minimising disruption to the live building's operations. The precision required for lifting the four new two-tonne cylinders externally and lowering the old units through small apertures within confined spaces around the BMU at L87 also presented a significant logistical feat.

Project Timeline and Significance

Commencing in September 2024 and completed by February 2025, this project stands as a testament to our UK team's exceptional capability in managing high-risk and complex refurbishment, retrofit, and replacement initiatives on an iconic structure. The flawless execution, on budget and on schedule, solidifies this as a plan that demonstrates unparalleled expertise in facade access solutions.

In recognition of its outstanding achievements, this project has been selected as a finalist for the "Excellence in Sustainability - Project" award at the London Construction Awards 2025.