

Muscat Airport Control Tower

Client: OAMC
Contractor: Carillion Awali
Location: Muscat, Oman
Products: Tru-Lift

Case Study



Carillion Awali has utilised the RMD Kwikform self-climbing wall formwork system, Tru-lift, on the 100-metre tall Air Traffic Control Tower at the new Muscat International Airport in Oman. Construction on the new 12-million capacity airport is expected to be completed by 2014, with three subsequent expansions planned to boost capacity to a total of 48-million passengers per annum.

The Muscat International Airport development is expected to be the largest project ever undertaken in Oman. The existing airport, designed in 1973, has reached its maximum capacity, and the new airport has been designed to accommodate for the nation's passenger growth numbers.

Commenting on the project, Steve Phillips from RMD Kwikform said: "This was an interesting project that was unusual in that there were additional challenges. We had to get approval from civil aviation and airport authorities that would allow us to cross height zones. This required a greater level of input and focused the need for a fast, safe solution to the construction of the tower. This is why we opted for the Tru-lift system, which requires a minimal number of components, ensuring quick and easy assembly while maximising construction cycle times. This allowed the contractor to meet its deadline,

despite the organisational hurdles that they faced."

The design of the tower consisted of two elevator shafts running parallel to the top of the 100m Air Traffic Control (ATC) tower, on which the control station will be built. Eight Tru-lift cylinders were used, and with the systems capability to be raised 3.6m in one jack stroke during the lifting cycle, no additional crane was required to lift the forms.

Project Manager from Carillion Awali, Blair Anderson said: "This was the first time we have worked on the construction of a tower this size, making the selection of the wall formwork system essential. When RMD Kwikform introduced us to the Tru-lift system, we quickly recognised that it was the best solution for the job. It was safe, quick and easy to erect and efficient, helping us to overcome timescale challenges imposed crossing height zones. We are already familiar with the level of onsite assistance and technical support RMD Kwikform provide, so once we had seen the Tru-lift system, the decision to select them as the supplier was easy." The Tru-lift solution also utilises a reusable tapered form tie system, eliminating the use of sacrificial hardware and ultimately driving down construction costs. Lifting cycle times are further reduced due to unique internal corners allowing fast and easy striking, with accessible connection points from the Tru-lift system to the re-usable anchor screws cast into the previous pour improving set up speed for subsequent pours. Both these features were important at the Muscat International Airport project, allowing construction to be completed to budget, and to schedule.



Steve Phillips from RMD Kwikform continued: "We have a good relationship with Carillion Awali having worked with them on numerous projects in the past, including the Majlis Oman. We understand the priority they place on safety, and we knew this was an even greater concern given that the Air Traffic Control tower would be the tallest structure ever built in Oman. That's why when they approached us to supply a formwork solution for the ATC, we recommended Tru-lift.

The complete system can be raised during the lifting cycle, maximising its effectiveness and making it incredibly efficient, but it also has three levels of fully enclosed platforms creating a completely safe and protected working environment. This meant the project was completed with no accidents or near misses reported, with the Tru-lift system receiving high accolades from the Ministry officials."

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