

Virgin Hanger Roof - Heathrow

Client: Virgin Atlantic Airways

Main Contractor: Interserve Engineering Services

Engineer: Meinhardt (UK)

Our Customer: Rowen Structures Ltd.

CIVIL 31



www.fagiolipsc.com

During the construction of Virgin Atlantic Airway's £32m hanger development, Fagioli PSC were presented with a number of demanding challenges. Due to a restricted construction period it was decided to construct the entire roof section at ground level before lifting the complete unit (weighing 560 tonnes) into position.

The extensive experience of Fagioli PSC in this field, most notably in a similar development for British Airways, was called upon to provide an innovative solution.

The lifting force was applied via anchorages attached to a cantilever beam at the top of the permanent columns. Fagioli PSC towerlift system was employed to provide stability to the permanent columns during lifting operations.

The roof was initially lifted 6 meters using our hydraulic strand jacking equipment and was held in position for several weeks while additional permanent steelwork was added. The main lift was then carried out using a computer control system. The lift was completed at the end of 2001 during a one day operation.

The lift utilised 8 No. L600 Strand Jacks which were connected in pairs to each corner of the structure with L50 tie back jacks attached to the cantilever beam of each column. L15 jacks were available for use as storm guys.

The use of the jacking system reduced the critical construction period by 8 weeks and didn't compromise the airport's radar. This allowed the work to be carried out during normal working hours rather than at night between the hours of 23.00 and 06.00 when there are no takeoffs or landings at Heathrow.



Top left: Virgin Hanger roof deck in mid lift,

Below left: pair of L600 jacks attached to each corner

Below right: The roof truss at full height.

