

UK : LOWERING OF A 1300 TON ROOF IN LONDON

PROJECT	EQUIPMENT	WEIGHT
CIVIL	STRAND JACKS L180 / L50	1300 TON

Fagioli were contracted for the lowering of the Earls Court Exhibition Centre roof structure (EC1), as part of the deconstruction scheme developed by Keltbray.

Due to the impact of the works in this residential area and also the proximity of London Underground and Network Rail lines Strand Jacks were the chosen method.

The 1,300 tonnes roof structure, constructed in the mid 1930's, consists of a central section of 7 no steel girder trusses spanning 76m and with an overall length including hip ends of 126m.

The 25m lowering was performed by fourteen Fagioli L180 lifting/lowering jacks, mounted on cantilever beams (temporary structure) which in turn were on top of the permanent columns; each strand jack was assisted by an individual PPU.



Four Fagioli L50 guy jacks in frames were mounted on each corner of the building to control any possible horizontal deviation of the roof during the operation.

Firstly, during the lifting Stage, the L180 jacks took the load and lifted the roof so that the trusses could be cut. After cutting the ends of the trusses the roof was lowered almost to ground level at a speed of 5m/h on average and held while contractor carried out further cutting activities.

Finally the roof was lowered until the full load was supported on stools located under the trusses.

The jacking system was closely synchronised so that the trusses stayed level throughout the lowering procedure.

Operations director from Capco's demolition contractor Keltbray commented "This is the first time that a steel structure of this size has been mechanically lowered some 25m to be disassembled at ground level in the UK."

