

Title: **Shanghai World Finance Center, China**

Authors:

Subject: Building Case Study

Keyword: Façade Access

Publication Date: 2013

Original Publication: Corporate Publication

Paper Type:

1. Book chapter/Part chapter
2. **Journal paper**
3. Conference proceeding
4. Unpublished conference paper
5. Magazine article
6. Unpublished

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Shanghai World Finance Center China

7000 Series - Job Sheet

01/13 Edition

At the time of completion in 2008, the Shanghai World Finance Center was the tallest skyscraper in China, with the tallest observation deck in the world at 474 metres. Architects Kohn Pendersen Fox & Associates designed the 492-metre structure with a distinctive aperture at the top, and rounded edges along the glass façade.

CoxGomyl designed an integrated access solution, which allows a cleaning cycle of twice monthly for the observation deck, monthly for the hotel, and bi-monthly for the offices.

The access solution involved the supply of 20 separate BMU systems that were capable of providing access to 100% of the envelope, whilst having the ability to retract into the building and out of sight for parking.

Systems were installed within the building at levels 42, 54, 66, 78 and 89, on outside terraces at level 96, and on the centre spine at roof level. A variety of jib designs were used on these systems including fixed length jibs and multistage knuckle jibs, which were capable of launching the cradle through narrow openings and reaching around corners to position the cradle in hard-to-reach locations on the building's façade.



The outside machines at level 96 and roof level were of a compact design, which enabled them to lower beneath the parapet level for parking. In the case of the roof level machines, this was achieved using a telescopic pedestal arrangement.

The glass-clad observation bridge is located at level 97, and is accessed using a custom gantry to facilitate regular and convenient access to this important viewing area.

An important element of the design brief was to ensure that the machines could also be used to facilitate the glass replacement process. The majority of machines were fitted with glass handling hoists, with two of the machines at roof level fitted with higher capacity hoists of 2000kg.

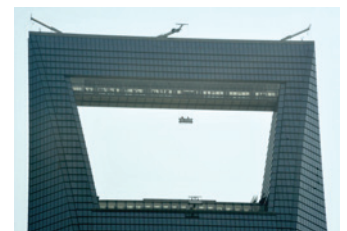
Facts & Figures

Commencement	1997
Completion	2008
Building height	492m
Floor count	102
No. of BMUs	20
Outreach	Up to 21.5m
Building type	Office, Hotel and Retail



Technical Data - Shanghai World Finance Center, China

No. of BMU	19 sets	1 set Gantry
Service area	G/F to the top	The glass clad Observation Bridge
Jib type	Fixed length, Multistage telescoping and Multistage knuckle	/
Outreach	21.5m	/
Jib retracted length	3.8m	/
Jib luff angle	30 deg	/
Cross bar slew angle	90 deg	/
BMU slew angle	360 deg	/
Drum hoist type	Multi layer/ Segment Drum Hoist	/
Actual hoist height	500m	/
Cradle SWL	300kg	360kg
Cradle length	3.6m	9m
Cradle restraint system	Mullion Guide	/
Track system	Twin track	Twin track
Track gauge	5.3m	7.1m
Communication	Intercom	/
Emergency retrieval	Emergency stop button installed in every cradle	/
Features	2,000kg hoist capacity	/



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EW Cox Holdings Pty Ltd

182 Normanby Road, Southbank, Vic 3006, Australia
 Phone +61 3 9673 4444 Fax +61 3 9673 4400
 Email headoffice@coxgomy.com Web www.coxgomy.com

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