



The world's tallest building  
redefines the possibilities

## Facts & Figures

<b>Commencement</b>	2004
<b>Completion</b>	2010
<b>Building Height</b>	828m
<b>Floor Count</b>	162
<b>No. of Access Systems</b>	18
<b>Outreach Up to</b>	21.5m
<b>Building Type</b>	Mixed Use

As the world's tallest building, the Burj Khalifa sets the standard for what architecture and design should be. At 828 metres, the building houses the highest swimming pool, mosque and observation deck in the world. A desert flower native to the region, *Hymenocallis*, inspired the petal shaped footprint of the building. Skidmore, Owings & Merrill Architects incorporated traditional Islamic patterns throughout the towering contemporary structure.

CoxGomyl accepted the challenge to design an integrated BMU solution to keep the world's tallest building looking immaculate, developing no less than 13 bespoke machines to achieve full facade access.

The unique tri-petal footprint and lack of roof or terrace space prevented a conventional BMU solution from being adopted.

Instead, a unique combination of mobile, wall-mounted machines was designed specifically for this application. The solution consists of three wall-mounted machines located at each of levels 40, 73 and 109 (nine in total). These complex machines launch from within their internal parking space through a retracting panel, and travel along a set of tubular stainless steel rails.

The wall-mounted machines typically have an outreach of 9m and a SWL of 250kg in addition to a material hoist capacity of 600kg.

The mid-levels of the building between level 109 and tier 21 (624.1m) are accessed from longer telescopic boom machines located at tier 19, 20 and 21 with a specially designed knuckle jib with an outreach of 21.5m. The tower space above tier 21 is maintained by a series of six smaller machines located from tier 22 through to tier 27 with small outreaches that begin at 1.8m and 4m.

