

Case study:

Record number of Alimak construction hoists accelerates completion



Mashattan residential project, Istanbul, Turkey



**Other prestigious projects
where Alimak construction
hoists have been used**

- *Dokaae (Al-Kala Project),
Mecca, Saudi Arabia*
- *Eiffel Tower, Paris, France*
- *Statue of Liberty,
New York, USA*
- *Taipei 101, Taipei, Taiwan*
- *Petronas Towers,
Kuala Lumpur, Malaysia*
- *CN Tower, Toronto, Canada*
- *Emirates Towers,
United Arab Emirates*
- *Burj Al Arab, Dubai*
- *Viaduc de Millau, France*
- *Channel Tunnel,
England-France*
- *Troll production platform,
North Sea*
- *Turning Torso,
Malmö, Sweden*
- *Oresund Bridge,
Sweden-Denmark*

Mashattan residential project, Istanbul, Turkey

Alimak hoists accelerate completion schedule by three months

The 140 m high Mashattan residential project features 10 Alimak passenger/material hoists, the most Alimak construction hoists ever used on a single project in Istanbul.

The construction of residential towers is trending upward in many major cities around the world, and Istanbul is no exception. Working in a city that is located in an earthquake zone, and which is not generally recognized for its high-rise buildings, Turkish contractor Tasyapi is leading the trend with Istanbul's tallest housing project. The 140 m high Mashattan residential project, located in Maslak, some eight km from the city's center, features 10 Alimak passenger/material hoists, making it the largest number of Alimak hoists in use on a single project in Istanbul. In the pipeline are at least five 150-meter-plus projects that are scheduled to get underway shortly, including the 200 m high Mecidiyekoy tower, which was also awarded to Tasyapi.

Ten Alimak CH 20/30 DOL materials/passenger hoists are playing a key role in assisting Tasyapi to complete its 36-month contract for the 10-tower, Mashattan project – currently thought to be Istanbul's tallest residential project – by at least three months sooner than originally scheduled.

In praising the Alimak hoists' effectiveness and performance on the prestigious project, Project Manager, Cevdet Evgar, acknowledges that the mild winter has also contributed to the anticipated early completion.

Work began on the 36-month project in September 2005, with Tasyapi taking delivery of the 10 purpose-ordered Alimak hoists from local dealer Atilla Dural.

Featuring a 2,000 kg capacity and a car size of 3 m (L) x 1.4 m (W), the Alimak CH 20/30 DOL operates at a travel speed of 38 m/min and has ample room for materials and up to 20 passengers.

Construction

Initially, the contractor prepared a maximum 20 m deep anchored retaining wall around three sides of the hilltop location. With the fourth boundary descending to a small creek, the elevation drops a distance of some 40 m across the site.

Most of the site is on hard, load-bearing bedrock, allowing seven of the 10 towers to sit on 150 cm deep concrete foundation slabs. For the remaining three towers however, the contractor opted to bore 200 concrete piles into the bedrock, where each pile is 80 cm diameter x 12 m deep. Generally, the site's bedrock was covered by overburden that was up to 18 m deep. Tasyapi estimates that it will have excavated approximately 1.5 million m³ of overburden by the time it completes the project.



The Alimak construction hoists are used intensely during the day shift for moving materials, particularly gypsum boards.

Case study:

Providing around-the-clock service, the ten Alimak construction hoists are used to transport both men and materials, freeing up the project's cranes for other lifting duties and increasing overall efficiency and productivity.

The Mashattan project covers an area of 160,000 m², with each of the 10 towers housing a ground floor footprint of 1,300 m². This reduces to 900 m² at the 25th floor to provide a 400 m² terrace, and again to 500 m² at the 30th floor. Each 140 m high tower includes 33 floors plus a ground floor/mezzanine, and between three to seven basements. Due to the hillside location of the three towers sitting on the bored piles, one features seven basement levels, with two of the towers having six levels. The project also includes one-, two-, or three-story car parking areas around each tower. The remainder of the project will be landscaped and includes swimming pools, small ornamental ponds, and 12,000 m² of community buildings, including a market, shops, cinema, and fitness center.

Alimak construction hoists

“At the start of construction we used the Alimak construction hoists purely for moving people. But we recognized the hoists’ potential, and they are now used intensely during the day shift for moving materials, particularly gypsum boards,” said Project Manager, Cevdet Evgar.

“This frees up the cranes for other lifting duties, adding to our efficiency when moving both passengers and materials up and down all ten towers” he continued. Generally climbing some five floors behind the concrete operation, the hoists are providing round-the-clock operation for the contractor, including the night shift concrete pours between 9 p.m. and 3 a.m.

“I am really impressed with the efficiency of the Alimak hoists and the excellent back-up service we get from the local dealer, including the on-site Atilla Dural Service Engineer,” said Cevdet Evgar. Architect for the Mashattan project is Istanbul-based MM Projects, with Tasyapi acting as developer and main contractor.



With premium residential space costing in excess of US\$3,000/m² on the project, purchasers were initially offered the opportunity to buy multiples of 85 m², resulting in different sizes and layouts of apartments on each floor.

DETAILS

Location:	Mashattan residential project, Istanbul, Turkey
Application:	Residential building
Hoist type:	Alimak CH 20/30 DOL
No. of hoists:	10
Capacity:	2,000 kg/car
Hoist car size:	1.4 x 3.0 x 2.13 m (W x L x H)
Speed:	38 m/min
Lifting height:	140 m

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