



ABRAJ AL-BAITTOWERS, MAKKAH, SAUDI ARABIA, 595 m

CASE STUDY

30 Alimak construction hoists support one of the world's largest building projects

Access anytime, anywhere

ALIMAK



PROVEN PERFORMANCE AT THE WORLD'S GREATEST HEIGHTS

Examples of tall structures where Alimak construction equipment or permanent elevators have been installed:

- Konstantynow Radio Mast, Poland, 645 m
- Abraj Al-Bait Towers, Mecca, Saudi Arabia, 595 m
- CN Tower, Toronto, Canada, 550 m
- Taipei 101, Taipei, Taiwan, 508 m
- International Commerce Centre, Hong Kong, China, 484 m
- Troll A oil production platform, North Sea, 472 m
- VLF transmitter Lualualei, Hawaii, 455 m
- Petronas Towers, Kuala Lumpur, Malaysia, 452 m
- Jin Mao Tower, Shanghai, China, 421 m
- Two International Finance Centre, Hong Kong, China, 415 m
- Power plant chimney, Utah, USA, 397 m
- CITIC Plaza, Guangzhou, China 391 m
- Shun Hing Square, Shenzhen, China, 384 m
- Gullfaks C, North Sea, 380 m
- Central Placa, Hong Kong, China, 374 m
- Bank of China Tower, Hong Kong, China, 367 m
- Emirates Tower I, Dubai, UAE, 355 m
- Tuntex Sky Tower, Kaohsiung, Taiwan, 348 m
- Electricity transmission towers, China, 346.5 m
- Viaduc de Millau, France, 343 m
- Burj Al Arab, Dubai, UAE, 321 m

ABRAJ AL-BAIT TOWERS, MAKKAH, SAUDI ARABIA

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Thirty high-speed Alimak™ construction hoists played a key role in the construction of the Abraj Al-Bait Towers, one of the largest building projects ever undertaken. Rising to 595 m, the towers were built adjacent to the Grand Mosque in Makkah, Kingdom of Saudi Arabia.

In 2004, Alimak supplied 28 construction hoists for the construction of the Abraj Al-Bait Towers, a landmark development adjacent to the Grand Mosque in Makkah. Five years later, two additional high-speed Alimak hoists were installed inside the tallest tower of the complex.

With one of the world's tallest buildings forming part of the development, contractor Saudi Binladin Group faced a significant logistical challenge. Upon completion, the complex became home to the Makkah Clock Royal Tower, one of the world's tallest buildings and a prominent feature of the city's skyline. The development also ranks among the world's largest building complexes, with a total floor area of approximately 1.5 million square metres.

The contractor's requirement was to transport up to 10,000 workers to and from the towers within 30 minutes, particularly during the five daily prayer periods.

To meet these demands, fourteen dual-car Alimak construction hoists were deployed, including six Alimak Scando 20/32 dual hoists and eight Alimak Scando Super FC 28/37 dual hoists. These units operated continuously throughout the most intensive construction phases of the project.

Alimak's later contribution included two high-speed Alimak Scando 650 FC-S hoists installed inside the tallest tower. Each hoist served a lifting height of 345 m and provided a payload capacity of 2,900 kg. The units featured 3.9 m long hoist cars and were supplied through Alimak's distributor in Saudi Arabia, Al-Maymanah for Trading.

High speed and high reach were not the only factors behind the selection of Alimak equipment. Reliability, durability and the ability to operate under demanding site conditions were equally important considerations.



ABRAJ AL-BAITTOWERS, MAKKAH, SAUDI ARABIA

Building next to Islam's holiest site

The tallest tower within the Abraj Al-Bait complex rises to 595 m, making it one of the most recognizable buildings in the Middle East and among the tallest buildings in the world.



The Abraj Al-Bait Towers were constructed adjacent to the Grand Mosque, which surrounds the Kaaba, Islam's holiest site.

The development is located directly adjacent to the Grand Mosque, which surrounds the Kaaba, Islam's holiest site. Designed to accommodate the large number of visitors travelling to Makkah each year, the complex includes extensive hotel, residential, commercial and prayer facilities and can accommodate tens of thousands of occupants and visitors.

One of the project's most distinctive features is the giant clock installed near the top of the main tower. Measuring approximately 80 m high and 80 m wide on each face, the clock became one of the world's largest and highest-mounted clock faces.

During construction, the Alimak hoists operated up to 20 hours per day, seven days a week, helping maintain productivity on one of the world's most demanding high-rise construction projects.

PRODUCT DETAILS

Location:	Makkah, Saudi Arabia
Application:	Mixed-use tower complex
Building height:	595 m
Hoist types:	6 x Alimak Scando 20/32 II 8 x Alimak Scando Super FC 28/37 II 2 x Alimak Scando 650 FC-S 29/39
No. of hoist cars:	30
Capacity:	2,000 kg, 2,800 kg and 2,900 kg / car
Lifting height:	86 m to 350 m
Hoist car size:	1.5 x 3.2 x 2.3 m (W x L x H)
Speed:	Up to 100 m/min

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