

Case study:

Alimak hoists at work on the buildings that takes the definition of “Green Skyscrapers” to a new level



Bosco Verticale, Porta Nuova, Milan, Italy



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Two Alimak passenger and materials hoists were used by Colombo Costruzioni S.p.A. during the construction of the Bosco Verticale skyscrapers in Milan, Italy. An innovative building project of two towers hosting more than 900 trees that won the prestigious International High-rise Award.

The Alimak Scando 450 construction hoists were an integral part of the construction of the two skyscrapers. The first Alimak hoist had an 80 m lifting height and 17 landings and the second 112 m and 25 landings. Both hoists had the Alimak ALC-II control system and A3 remote monitoring systems.

Colombo Costruzioni S.p.A. was able to meet the challenge of moving workers efficiently, constantly and safely during the all construction phase thanks to the excellent collaboration of our partner in Lombardia, A.C.G. 5 S.r.l., chosen as the full services suppliers for the hoists from project management and installation right through to maintenance, training, dismantling and providing a 24 hour call out service.

Challenges

One challenge concerned the different positions and dimensions of the terraces on the outside of the towers. There was a need to create an ideal landing solution on all floors for easy and fast use. Thanks to the flexible, modular design of the Alimak Scando 450 hoists and together with a scaffolding supplier, the optimal solution was achieved.

The second challenge focused on increasing the performance of the hoists; reducing waiting times at the landings and optimizing the loads/unloads according to the hoist ascent or descent. The intelligent Alimak ALC-II control landing system increased the efficiency of the use and reduced waiting times substantially.



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There were three main challenges during the project: a fast and easy landing solution for all floors, increasing the performance of the hoists, decreasing downtime but increasing uptime. All were solved thanks to the flexible, modular design, the intelligent control system and the remote monitoring system of the Alimak construction hoists.

The final challenge was to keep the hoist downtime to a minimum and increase the uptime. The Alimak Hek A³ remote monitoring system, which sends activity reports back to the jobsite engineers, ensured that this was achieved.

Colombo Costruzioni S.p.A., with 180 direct employees, an annual turnover of more than 200 million euro and over a century of history has become a national and international benchmark in the construction sector, but has always kept its roots in Lecco, Italy, which is where the company originates from. The extraordinary wealth of experience accumulated since 1905 represents the solid base of a company that has always cared for safeguarding important reference values and family traditions.

Alimak construction hoists have been used for over 50 years in a wide range of applications, from industrial and mining projects, chimneys and bridges, through to new building construction and refurbishment on some of the world's tallest structures.

COIMA SGR, authorized by the Bank of Italy in 2007, is a leading independent company in the management of real estate investment funds on behalf of Italian and international institutional investors. Today COIMA SGR manages 19 real estate investment funds, with investments worth over 5.5 billion Euro. COIMA, was founded in 1974 by the Catella family together with Domo Media, and is specialized in development and management of real estate assets on behalf of institutional investors. COIMA collaborates with leading Italian and international investors, such as sovereign wealth funds, pension funds, banks, insurance companies, developers, real estate funds and private equity groups. In more than 40 years of activity, COIMA has developed and managed properties totaling over 5 million square meters including Porta Nuova, one of the most prestigious urban regeneration project in Europe.

PROJECT DETAILS

Project:	Bosco Verticale
Location:	Porta Nuova, Milan, Italy
Asset management:	COIMA SGR
Property management:	COIMA SRL
Interior design:	COIMA Image in collaboration with Dolce Vita Homes



One of the Alimak hoists at work on the Busco Verticale.

CONSTRUCTION HOIST DETAILS

Application:	Skyscrapers, residential
Hoist types:	2 x ALIMAK SCANDO 450 DOL 14/32
Capacity:	1,400 kg
Hoist car sizes (W x L x H):	1.4 m x 3.2 m x 2.13 m
Speed:	54 m/min
No. of landings:	17 and 25
Lifting height:	80 m and 112 m