

SC

Construction hoists
References worldwide

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by Tractel®



Scanclimber SC2032F reaches the Eiffel tower



In spring 2008 Scanclimber's partner Sky Accès in Paris was given the order for the delivery of a building hoist type SC2032F for the transport of both passengers and material which should be erected at one of France's most famous monuments: the Eiffel Tower.

The SC2032 is needed for transportation of staff and material for the refurbishment of the restaurant on the first level of the Eiffel Tower being at a height of 62 m. This hoist is used independently from the permanently installed hoist on the Eiffel Tower for transportation of the public.

The unique challenge for this project was to secure the 2 tonne capacity hoist at one anchoring point alone, 61 m above the ground, something never attempted before.

Working closely with Scanclimber engineers a solution was developed utilising 3 mast stacks secured together in the form of a triangle

and capable of providing sufficient stability. The design had to consider storm winds of 200 km/h as well as the loadings to be encountered during erection and dismantling. In order to meet all of these conditions a key element was a specially fabricated foundation frame which was developed, designed and produced. This frame, to which all three mast stacks are attached, is integrated into the 25 m² foundation weighing nearly 50 tonnes. This serves as a counterweight during the erection cycle and later provides load distribution for the completed hoist during the construction phase.

The Scanclimber SC2032F hoist with its load capacity of 2 tonnes and large cage dimension of 3.2 m x 1.5 m provides the sole method of vertical transportation throughout the 5 month refurbishment period of this famous landmark on the Parisian skyline.



Finland's tallest hotel rises with help of Scanclimber hoists

The Solo Sokos Hotel Torni Tampere construction work is completed in the former customs territory of the Tampere railway station. Construction work began in November 2012 and last for 2 years. The developer was Mutual Insurance Company Pension - Fennia and the hotel was built by the SRV Corporation. The hotel business is run by SOK Sokotel.

The hotel consists of two main parts, the new high tower section and of the restored, a hundred year old, locomotive house including an old water tower. The restored part serves as a ground floor service section with restaurants and a reception. The hotel tower has 25 floors above the ground and two basement floors. The 300 hotel rooms are located in the tower section.

The Solo Sokos Hotel Torni Tampere reached a height of 88 meters at the top. This exceeds the height of Finland's previous tallest residential building "Cirrus", by half a meter. Cirrus is located in Vuosaari, Helsinki.

During the construction phase, the transportation of persons and goods was handled by Scanclimber's construction hoists. For heavy lifting loads, the site was equipped with a tower crane.

When the floors above the ground level were starting to be built, the first double caged Scanclimber SC1432 hoist was erected on the wall of the tower. Both cages had a lifting capacity of 1400 kg and could run independently and stop at any floor. Each floor was equipped with the highest class of safety equipment with full height doors that open only when the hoist is at the correct floor position.

The hoist height was increased on a weekly basis as the construction work progressed. This secured traffic always to the top floor of the building.

When the building height reached the 20th floor, another single caged hoist, SC1432 was erected next to the double caged hoist. This ensured short waiting times even during peak traffic hours on the floors.





Scanclimber hoists arrive in Australia

The first Scanclimber SC2032 hoist in Australia was installed at Melbourne Docklands Waterfront Development project. During the first week of December 2007 Scan-Rent Australia Pty Ltd (the new distributor of Scanclimbers in Victoria and South-Australia) in partnership with local rigging company Rigtech Australia Pty Ltd erected the machine on behalf of Hansen Yuncken, the main contractor on this job site.

Melbourne Docklands is a unique waterfront development in the heart city of Melbourne, covering 200 hectares of land and water, located along the spectacular Victoria Harbour and three kilometers of Yarra River frontage. It offers a dynamic blend of residential, commercial, retail and leisure components. For this project the SC2032 hoist was transporting both personnel and materials up on a seven story car park complex.

As well as the Docklands project Scan-Rent Australia Pty Ltd rented two SC2032 units for North-Bank Place East & West Towers (11 & 16 stories respectively) in Melbourne. The main contractor on these job sites was L.U. Simon Builders. Additionally several new Scanclimber SC1432 passenger hoists are on the way to Australia to support a rapidly growing construction activity.



Hypo-Vereinsbank in Munich is restoring facades of the headquarters

The HVB-Tower is one of the most remarkable construction sites in Munich at the moment. What makes it remarkable is not just the height of the administrative building of the Hypo-Vereinsbank, which stands tall at 114 m, but also its architectural design. According to the plans made, the high-rise building should be completed by the end of 2015 and the lower North building by 2018. Scanclimber transport platforms and hoists are in operation to transport goods and people at the work site for the next few years

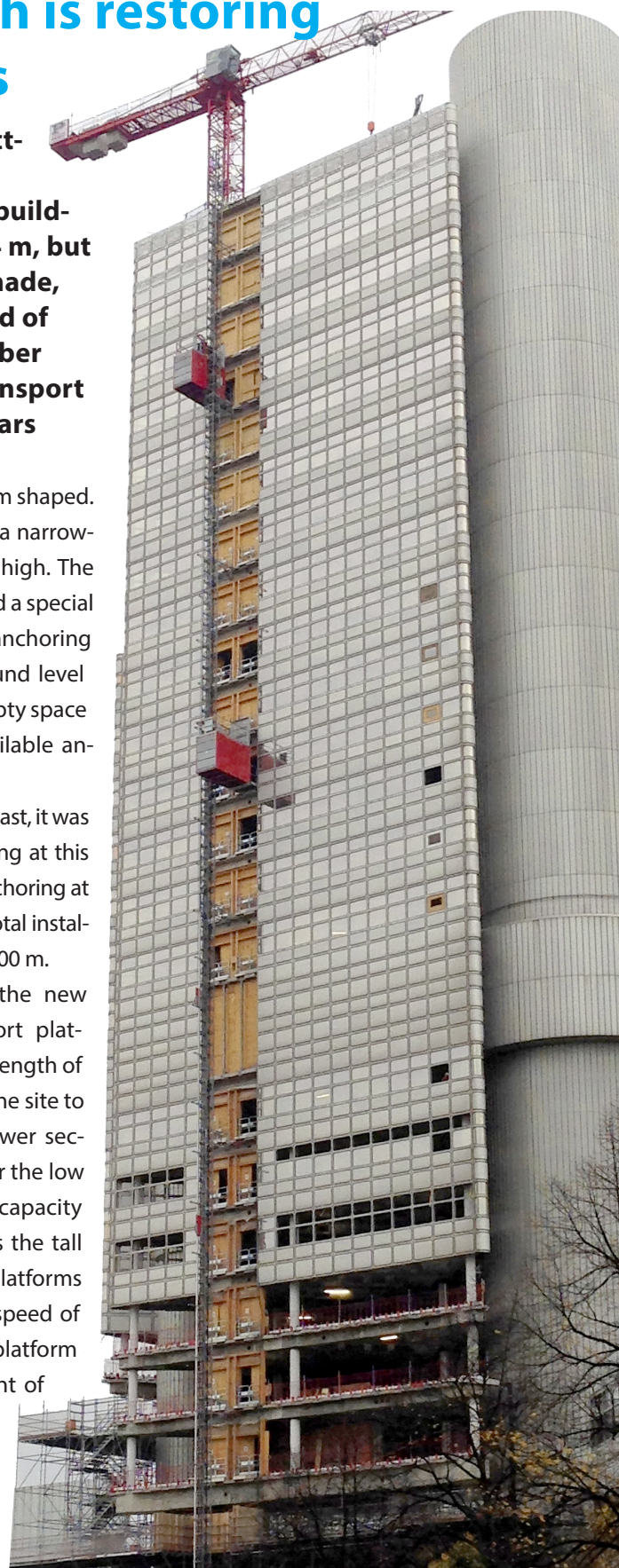
For the high-rise part, a twin cage Scanclimber hoist SC2032 was erected with a loading capacity of 2000 kg per cage. The hoists are equipped with automatic hydraulic loading ramps. The ramps are lowered automatically when the hoist reaches the landing level, securing safe and smooth access to and from the hoist. The hoist is used to transport goods and men for the renovation of the tower and the refurbishment of the skyscraper's facade and roofs through 2015.



HVB Tower is mushroom shaped. The tall building stands on a narrower foot which is 21 meters high. The shape of the building placed a special requirement for the mast anchoring of the hoist. From the ground level there were 23 meters of empty space above, before the first available anchoring could be placed.

Due to stability of the mast, it was possible to reach freestanding at this height, and have the first anchoring at a height of 23 meters. The total installation height of the hoist is 100 m.

Additionally, one of the new Scanclimber SC20 transport platform units, with a platform length of ca. 3.40 m was installed at the site to service the HVB-Tower's lower section. Transport platforms for the low buildings have a loading capacity of 2 tons, which is same as the tall hoist, but these transport platforms are fast, having a running speed of 24 m/min. The transport platform was installed up to a height of 10 m only. Since the platform has control boxes on all floors, it can be called from any floor, thus reducing unnecessary waiting.



SC1432 twin preferred choice for Nokia House in Finland

The first SC1432 personnel and material hoist in Finland as twin cage unit was used for the renovation of Nokia House, the head office of Nokia Corporation, located by the Gulf of Finland in Espoo.

Each office was fully remodelled at high speed with two floors being worked on simultaneously. As a result two independent hoist cages were required. The hoist cabins were painted the same colour as the building at the customer's request so that they blended in with the facade during construction.



SC2032F at the heart of Denmark's Parliament house renovation

Christiansborg castle in Copenhagen, which houses the Danish parliament, was rebuilt 1907-1918 after its second fire in 1884. The 100 year old building underwent substantial renovation of its roof. The renovation of the copper and concrete of the 100 m high tower, which took about 3 years.

The scaffolding and access contract on the job was held by Dansk Stillads Service A/S. 15 km of steel scaffolding pipe envelope the building which can be seen from all over Copenhagen City.

Access to the building site was via a 90 m high Scanclimber SC2032F hoist, with 24 landings. This hoist was delivered and erected by VMC Pitzner A/S, who also provided technical supervision on the scaffolding.

Underneath the ground around the tower is a museum, which houses ruins of earlier castles in the same place. Because of this, the hoist was placed on a system of steel beams which directed the weight of the hoist on to the pillars which carried the roof of the museum.



Special cooling tower hoist to 170 m

Scanclimber SC2032F material and passenger hoist in use at Neurath power plant, Germany

A German contractor was awarded the contract to erect the two cooling towers for the new blocks F and G at the Neurath power plant in Germany and therefore needed a suitable hoist for the transport of both material and passengers from the ground up to the respective landing location throughout the slip form construction phase.



The first cooling tower had a lower diameter of 108 m with an upper diameter of 69 m. The outer surface had a concave profile whose gradient changes dramatically. Since the sliding formwork used for the concrete pour changed height continuously, a key requirement was that the hoist would adapt to the constantly changing inclination.

Scanclimber Oy's office from Limburg eventually solved the problem together with their client by developing an adaptation of the Scanclimber SC2032F (a hoist with 2.000 kg load capacity, a cage length of 3.20 m and a cage width of 1.5 m) to meeting these very special requirements.

In order to adjust to the concave profile of the structure, distance sleeves - precision manufactured to match the required shape of the structure - were installed between the 1.5 m long mast sections and the anchor pitch of the hoist was reduced to a distance of only 12 m instead of normal 21 m as a result of the considerable inclination encountered. For the upper anchor a shorter pitch was utilised in order to meet the requirement for a large freestanding mast above the last anchor. This demand of a long free slide way of the formwork without unnecessary disruption of an anchor was achieved with a freestanding mast height of 15 m, even on a 16° inclination.



Additionally the power supply cable had to be specially installed. A cable trolley was placed underneath the hoist cage so that the ground station was slightly elevated to accommodate this. Due to the changing inclination throughout the entire lift cable guides disruptions may have occurred. To overcome this anticipated problem the cable guides were manufactured with special rollers so that the cable tension was minimised.

Additional optional equipment installed on Wiemer & Trachte's Scanclimber SC2032F were a frequency converter which considerably reduced the starting current and thereby provided soft start and stop for a comfortable ride in the hoist cage. Furthermore, an automatic grease pump for the rack lubrication was provided.



SC2032 hoist 250 m high above Moscow

Scanclimber SC2032 double cage hoist on the construction of a 250 high tower on the Moscow City Complex in Russia

The building business activity in Russia's capital has been remorselessly increasing over recent years. The highest building projects being erected at the moment are in the Moscow City area.

There, on a surface of ca. 3 million of square metres various sky scrapers, concert halls, hotels etc. are emerging. The Moscow City business quarter presently comprises 15 sky scrapers.

One of the biggest sky scrapers, a 250 m high office building was erected by the Turkish company ENKA.

One of the most important machines on site was the building hoist which had to provide passenger transport for the entire 250 m high building. Due to the considerable number of persons which must be transported due to various trade groups in such a building, particularly during peak hours like start of work and break times, and so a standard hoist could not be used.

In cooperation with the German Scanclimber branch a SC2032 passenger and material transport hoist was proposed according to the requirements of the customer. First it was agreed that on such a high 70 storey building the most economic way to avoid hoist congestion due to the demands of various users was to equip it with a lift attendant. Accordingly, lift cages were installed in order to be able to flexibly react to the requirements of the job site and the lift



attendants would be able to stop at landings requested as the work cycle progressed.

The hoist plant was designed as

a double cage plant in order to transport the high passenger volume in the best possible way.

On this installation two cages

run on one mast, one on the left and one on the right hand side. This saved both investment and assembly costs with each lift cage able to carry 24 passengers at the same time.

In order to avoid additional investment costs in the landings, both lift cages were set in such a way that one lift stops at the even storey numbers and the other at the odd storey numbers only. By this only half of the landings were necessary.

To guarantee an appropriate speed of the hoist plant, the Scanclimber frequency controlled drives were used which run the cages with a lifting speed of 54 m/min. This choice was made due to two considerations: one hand a high lifting speed on such a high building is needed, on the other hand operating with lifting attendants it is necessary to have a fast and smooth reaction capability to meet the various demands of all the storeys.

At the end of October 2005 Scanclimber, branch Germany was given the order for the delivery of the plant, provided that delivery of the complete hoist plant with approximately 100 m of mast and accessory would take place in the second week of January 2006.

This tight delivery schedule was achieved and with a special bonus to Moscow in January: one of the cages was painted red, the other one in yellow which are the colours of the football club Fenerbahce Istanbul who has a lots of fans in Turkey.

Additionally the anchoring of such a high hoist required some detailed solutions. First the hoist was designed to be delivered in order to have as few anchoring in the façade



as possible. For this purpose the hoist was equipped with special anchoring which enabled a vertical anchoring distance of 21 m installation of the mounting plates onto the building was agreed upon with the steel construction in order to place the anchoring in an area where sub-

sequent mounting of the façade elements would be affected as little as possible. A location was found in which only a narrow area of about 20 m height and about 2.50 m width was left open. The rest of the façade could then be completely finished in one.

Hoist Range We Offer Today

Falcon H48

| | SC1432-48 | SC2032-48 |
|---|-----------------------------|--------------------------|
| Payload | 1400 kg or 17 persons | 2000 kg or 24 persons |
| Speed | 36 m/min | 36 m/min |
| Max. anchoring distance | 12 m | 9 m |
| Cage internal size L x W x H | 3200 mm x 1390 mm x 2055 mm | |
| Mast section: height weight, single / twin | 1.5 m 80 kg / 91 kg | |

Wega 65H

| | SC2032-65H | SC2037-65H | SC2532-65H | SC2537-65H | SC3232-65H | SC3237-65H |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Payload | 2000 kg or 24 persons | 2000 kg or 25 persons | 2500 kg or 24 persons | 2500 kg or 27 persons | 3200 kg or 24 persons | 3200 kg or 27 persons |
| Cage internal length (mm) | 3200 | 3700 | 3200 | 3700 | 3200 | 3700 |
| Cage internal width x height (mm) | 1510 x 2040 | 1510 x 2040 | 1510 x 2040 | 1510 x 2040 | 1510 x 2040 | 1510 x 2040 |
| Speed options: 36 or 54 or 90 m/min | YES | YES | YES | YES | YES | YES |
| Max. anchoring distance | 21 m*) | | | | | |
| Mast section: height weight, single / twin | 1.5 m 138 kg / 154 kg | | | | | |

*) depending on ground station type, cage amount (single or twin), cage length and lifting capacity

Wega Wideline 65H-WL

| | Modular H65H-WL Hoist Specs |
|------------------------------------|---|
| Payload | 2500 kg (29 persons) - 3000 kg (35 persons) |
| Cage internal length (mm) | 3700 - 5000 |
| Cage internal width x height (mm) | 2010 x 2800 |
| Speed options: | 36 or 54 or 70 m/min |
| Max. anchoring distance | 15 m*) |
| Max. lifting height, free-standing | 5-8 m*) |
| Mast section: height | 1.5 m |

*) depending on ground station type, cage amount (single or twin), cage length and lifting capacity

Scanclimber is the world's technology leader in mast climbing equipment for both temporary and permanent installations. The company has its corporate head office in Pirkkala, Finland, and manufacturing in Gniezno, Poland.

The company employs more than 200 people in Europe and Asia.

Scanclimber creates value for its customers with high quality, reliable and flexible vertical access solutions.

SCANCLIMBER®
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Scanclimber Oy, Turkkirata 26, FI-33960 Pirkkala | www.scanclimber.com

Tel. +358 10 680 7000, Fax +358 10 680 7033

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