Project data New Entrance Building Van Gogh Museum

Design	2012–2014
Construction	2014–2015
Opening	5 September 2015
Surface area original structure	Rietveld Building plus Exhibition Wing: circa 14.200 sqm
Surface area New Entrance Building	975 sqm incl. entrance platform
Total surface area new building	Circa 15.175 sqm
Architect Van Gogh Museum	Gerrit Rietveld/Joan van Dillen/Johan van Tricht, 1973 (Paulus Potterstraat building)
Renovation Rietveld Building	Martien van Goor (Greiner Van Goor Architecten) Amsterdam, 1999
Architect Exhibition Wing	Kisho Kurokawa, Tokyo 1999
Design concept New Entrance Building	Kisho Kurokawa Architect & Associates, Tokyo 2012
Co-architect New Entrance Building	Hans van Heeswijk Architects, Amsterdam 2015
Client	Van Gogh Museum Foundation
Contractor	Central Government Real Estate Agency, The Hague
Location	Museumplein 6, Amsterdam, Netherlands
Co-architect	Hans van Heeswijk architecten, Amsterdam
Project team	Jasper Druijven, Richard Gouverneur, Stephanie Haumann, Hans van Heeswijk, Rob Hulst, Ronno Stegeman en Boaz van der Wal
Structural consultant	Arcadis Nederland, Rotterdam
M&E Consultant	Deerns Raadgevende Ingenieurs, Rijswijk
Building physics consultant	DGMR, The Hague
Logistics consultant	Theateradvies, Amsterdam
Lighting consultant	Hans Wolff & Partners/Lighting Designers, Amsterdam
Contractor glass constructions*	Octatube, Delft
Main contractor**	Bouwbedrijf Van der Spek, Pijnacker
Electrical installations contracter	Breedveld en Schröder, Almere
Mechanical installations contracter	Kuijpers Installaties, Utrecht
Elevators	Mitsubishi Elevator Europe, Veenendaal
Total project costs	20 million euros
Finance	The total cost of €20 million has been met from the museum's own funds, together with contributions from the BankGiro Loterij, the foundation Stichting Vincent van Gogh, Van Lanschot Bankiers, Sompo Japan Nipponkoa Insurance, the *Tokyo Shimbun*, the Netherlands Ministry of Education, Culture and

Science, the City of Amsterdam, the Amsterdam-Zuid city district, Yanmar Europe,
the Triton Collection Foundation,
the John and Marine van Vlissingen Foundation, Heineken, TAKII Seed, the Drs C. van Zadelhoff Fonds,
Ernst A. Nijkerk, Dümmen Orange and other companies, charitable funds, foundations and private donors.

*** Glass constructions Octatube:**

- Largest glass structure in the Netherlands in which glass fins (beams and mullions) and double glass units are elements of the building´s main structure.
- A major step forward in the technical innovation of transparent structures and for glass as a structural material.
- There has never been a longer structural glass fin in the Netherlands: 12 meters.
- The steel structure of large circular hollow sections (Ø406,4x12,5mm) has been shaped in a complex 3D geometry. The steel roof sections are defined by a digitally developed computer shape. The outer perimeter of the glass volume has a varying radius.
- For the overall stability of the roof, the glass fins have been connected to the steel structure. They are working together as one structure.
- There are two perimeter roof beams: one at the front with a total length of 65 meters and one at the back with a total length of 55 meters. The roof beams have been purchased in oversized length in order to avoid visible welding lines. The perimeter beams are supported by 10 columns.
- Due to the complex geometry and the many connections for glass fins, a full scale test assembly has been made of the entire roof structure (60mx15mx10m).
- The steel production tolerances are much smaller than the allowable standards, because the glass tolerances are dictating the maximum allowable steel tolerances. This has been realised with the help of the test assembly and digital surveys during fabrication.

Glass Facade

- The bent glass faced is composed of cold bent double laminated insulated glass units. This means the rectangular glass panels have been shaped on-site during installation.
- The total area is approximately 650sqm.
- The facade has 20 glass fins which are all unique. The longest facade fin is 9,4 meters and has a width of 450 millimetres.
- The 11,3 meter long glass canopy has a cantilever of 1,5 meters and has a fixed connection of almost 0,5 meters.
- The smallest bending radius is 11,8 meters.

Glass Roof

- The main geometry of the roof is a shell under an angle of 16,5 degrees.
- The double glass units in the outer 1,3 meter perimeter of the roof are cold twisted (this means the rectangular glass panels have been shaped on-site during installation) to make a smooth transition between the curved roof surface and the cold bent facade. This glass perimeter enables a fully transparent connection between the cold bent glass facade and the glass roof surface.
- The total area is approximately 600sqm.
- There are 30 glass roof fins, all unique in length and with an optimized height to accentuate the shape of the curved roof. The longest glass fin in the roof (also the longest structural glass fin in the Netherlands) has a length of 12 meters and a height of 700 millimetres.

Glass Staircase

- The glass staircase is supported by a triple laminated glass arch which transfers the highest loads from the stairs and also stabilizes the staircase. Because of this glass arch, the amount of steel is kept to a minimum.
- The connection between the glass arches and the stringers is site-bonded for a perfect load transmission.
- LED-lighting has been integrated inside the glass stair steps.

** **Main contractor, Bouwbedrijf Van der Spek:**

John van der Spek, director and owner of Bouwbedrijf van der Spek BV, says: "As the contractor, we built the new entrance to the Van Gogh Museum in Amsterdam. We were also responsible for the electrical engineering, mechanical engineering, and transport equipment work. The work started in April 2014 and was completed in August 2015. As the building contractor, we formed the 'cement' between all the various parties. The limited opportunities for transporting goods into and out of the centre of Amsterdam and coordinating all the different work tasks were very much a logistical challenge. The project included some technical challenges too, such as the creation of an escalator shaft and a lift shaft six metres below ground level. This was only possible by freezing the groundwater and then sawing the concrete and digging out the frozen ground. This allowed new transport equipment to be placed in the shafts: two escalators, a lift made entirely of glass, and a goods lift. New fire partitions have been created, using glass fronts, while a completely new electrical evacuation and fire alarm system has been installed. A new heating and cooling system for the entrance building has been fitted in the floor."

Note for the editors/not for publication:

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