

## Elbphilharmonie

### Hamburg, Germany

The Elbphilharmonie is emerging directly on the Elbe at the peak of the harbour above the historical Kaispeicher A in which tea and cocoa sacks were stored right up until the 90s. The new building with its curved glass façades sweeps up above the gutted red clinker Kaispeicher and takes on the appearance of a huge glass ship. An 82 meter long escalator leads up to the public plaza on the roof of the old Kaispeicher at a height of 37 meters, where visitors are rewarded with a fascinating view of the harbour and city. The heart of the building is the large concert hall with 2,150 seats, which is set to become one of the best in the world. In addition, the building will also house a smaller concert hall with around 550 seats, a 5 star hotel with around 250 rooms, 45

apartments as well as restaurants and bars. The Elbphilharmonie is the cultural highlight of the new Hafencity area and is likely to become the centre of the city of music, Hamburg.

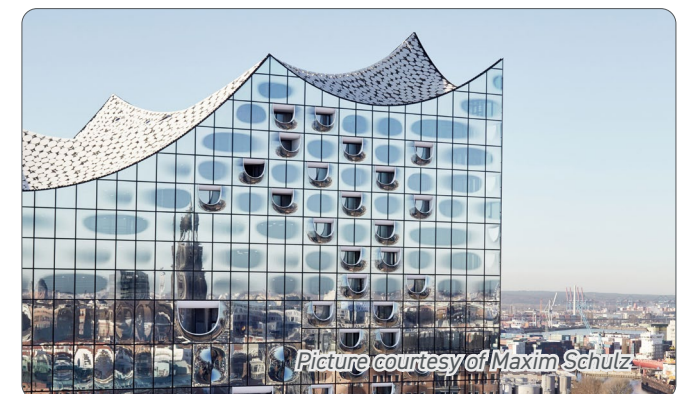
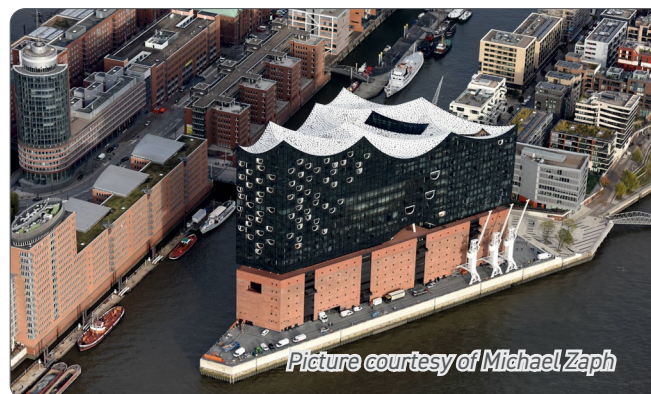
Swiss architects Herzog & de Meuron defined extreme technical requirements for the single skin unitized glass façade. Both standard curtain wall units developed for the Elbphilharmonie comprise two modules each, 4.30 m wide, and 3.35 m high as well as 5.00 m wide and 3.35 m high.

The vertical façade members of the spherically curved units in the Philharmonic area have been partly covered with a mirror polished high gloss sheeting made of stainless steel. The approximately 370 mirror polished, manually operated vertical tilt windows were also tailor-made for the Elbphilharmonie and serve the individual fresh air

supply.

The horseshoe shaped cut out glass balconies in the residential areas resemble a tuning fork. The approx. 100 tuning forks made of glass fibre reinforced polymer (GRP) are outwardly curved and in addition have to support the loggia glazing. The pre-elements out of GRP comply with Fire Protection Classification B1 and were manufactured and coated brilliant white by the Chemnitz company Fiber-Tech Products GmbH. Gartner fitted these pre-elements with inner stainless steel reinforcements to support the structure as well as the three centimetre thick, double curved laminated triple glazing. The large loggia tuning forks were installed between the 12th and 17th floors of the Elbphilharmonie at a height of 55 to 75 meters.

Environment:	marine
Material:	304 and 316L mirror-polished stainless steel with a thickness of 1.0 to 3.0 mm
Architects:	Herzog & de Meuron
Photographs:	Iwan Baan, Maxim Schulz, and Michael Zaph
More information:	elbphilharmonie.de







*Picture courtesy of Iwan Baan*