

No. 230
Elbphilharmonie Hamburg
Hamburg, Germany
Concept 2001, concept phase 2003
Project 2004-2014, realization 2006-2016

PROJECT KEY DATA

Project Number	230
Project Name	Elbphilharmonie Hamburg
Location	Platz der Deutschen Einheit 1-5, Hamburg, Germany
Project Phases	Concept Design 04/2003 Schematic Design 10/2004 - 04/2005 Design Development 10/2005 - 01/2008 Construction Documents 06/2006 - 07/2014 Construction Services 04/2007 – 10/2016
Milestones	Ground Breaking / Foundation Stone 02/04/2007 Topping-off 28/05/2010 Construction Start 03/2007 Start Realigned Project 09/04/2013
Client	Freie und Hansestadt Hamburg, Germany
Client Representative	Elbphilharmonie Hamburg Bau GmbH & Co. KG represented by ReGe Hamburg Projekt-Realisierungsgesellschaft mbH, Hamburg, Germany

No. 230
Elbphilharmonie Hamburg
Hamburg, Germany
Concept 2001, concept phase 2003
Project 2004-2014, realization 2006-2016

PROJECT TEAM

Herzog & de Meuron Project Team

Partners: Jacques Herzog, Pierre de Meuron, Ascan Mergenthaler (Partner in Charge), David Koch (Partner in Charge Project Management)

Project Team: Jan-Christoph Lindert (Associate, Project Director), Nicholas Lyons (Associate, Project Architect), Stefan Goeddertz (Associate, Project Architect), Christian Riemenschneider (Associate, Project Manager), Henning Severmann (Project Manager), Stephan Wedrich (Associate, Project Director until 2012), Carsten Happel (Associate, Project Manager)

Birgit Föllmer (Project Manager Main Concert Hall), Kai Zang (Project Manager Detailing New Building and Small Hall), Peter Scherz (Project Manager Granary, Kaistudio), Jan Per Grosch (Project Manager Envelope)

Christiane Anding, Thomas Arnhardt, Petra Arnold, Christian Baumgarten, Tobias Becker, Johannes Beinhauer, Uta Beissert, Lina Mareike Belling, Andreas Benischke, Inga Benkendorf, Christine Binswanger (Partner), Johannes Bregel, Francesco Brenta, Jehann Brunk, Julia Katrin Buse, Ignacio Cabezas, Jean-Claude Cadalbert, Maria Christou, Sergio Cobos Álvarez, Massimo Corradi (Digital Technologies), Guillaume Delemazure, Annika Delorette, Fabian Dieterle, Annette Donat, Philipp Doukakis, Patrick Ehrhardt, Carmen Eichenberger, Stephanie Eickelmann, Magdalena Agata Falska, Daniel Fernández, Stephan Flore, Hans Focketyn, Bernhard Forthaus, Andreas Fries, Asko Fromm, Florian Gast, Catherine Gay Menzel, Marco Gelsomini, Ulrich Grenz, Jana Grundmann, Hendrik Gruss, Luis Guzmán Grossberger, Christian Hahn, Yvonne Hahn, Naghmeh Hajibeik, David Hammer, Michael Hansmeyer, Nikolai Happ, Bernd Heidlindemann, Anne-Kathrin Hellermann, Magdalena Hellmann, Lars Höffgen, Philip Hoglebe, Ulrike Horn, Robert Hösl (Partner), Michael Iking, Ina Jansen, Nils Jarre, Damun Jawanrudi, Jürgen Johner (Associate), Leweni Kalentzi, Julia Kniess, Andreas Kimmel, Anja Klein, Frank Klimek, Alexander Kolbinger, Benjamin Koren, Tomas Kraus, Jonas Kreis, Nicole Lambrich, Jana Lasorik, Matthias Lehmann, Monika Lietz, Julian Löffler, Philipp Loeper, Thomas Lorenz, Christina Loweg, Florian Loweg, Xiaojing Lu, Femke Lübcke, Tim Lüdtker, Lilian Lyons, Jan Maasjosthusmann, Janos Magyar, Klaus Marten, Petrina Meier, Götz Menzel,

No. 230

Elbphilharmonie Hamburg

Hamburg, Germany

Concept 2001, concept phase 2003

Project 2004-2014, realization 2006-2016

Alexander Meyer, Simone Meyer, Henning Michelsen, Alexander Montero Herberth, Felix Morczinek, Jana Münsterteicher, Christiane Netz, Andreas Niessen, Monika Niggemeyer, Mònica Ors Romagosa, Argel Padilla Figueroa, Benedikt Pedde, Sebastian Pellatz, Malte Petersen, Jorge Manuel Picas de Carvalho, Philipp Poppe, Alrun Porkert, Yanbin Qian, Robin Quaas, Julian Raffetseder, Holger Rasch (Digital Technologies), Leila Reese, Chantal Reichenbach, Leonard Reichert, Thorge Reinke, Ina Riemann, Nina Rittmeier, Dimitra Riza, Miguel Rodríguez Martínez, Guido Roth, Christoph Röttinger, Patrick Sandner, Philipp Schaerer (Digital Technologies), Chasper Schmidlin, Alexandra Schmitz, Martin Schneider, Leo Schneidewind, Malte Schoemaker, Katharina Schommer, Helene Schüler, Katrin Schwarz, Gerrit Christopher Sell, Heeri Song, Nadine Stecklina, Markus Stern, Sebastian Stich, Sophie Stöbe, Stephanie Stratmann, Kai Strehlke (Digital Technologies), Ulf Sturm, Stefano Tagliacarne, Anke Thestorf, Henning Többen, Kerstin Treiber, Florian Tschacher, Chih-Bin Tseng, Jan Ulbricht, Inga van Husen, Florian Voigt, Jonathan Volk, Maximilian Vomhof, Constance von Rège, Christof Weber, Ruth Maria Weber, Catharina Weis, Philipp Wetzler, Douwe Wieërs, Julius Wienholt, Julia Wildfeuer, Boris Wolf, Patrick Yong, Xiang Zhou, Bettina Zimmermann, Marco Zürn

No. 230

Elbphilharmonie Hamburg

Hamburg, Germany

Concept 2001, concept phase 2003

Project 2004-2014, realization 2006-2016

PLANNING

General Designer and General Planning

Joint Venture Arbeitsgemeinschaft Planung Elbphilharmonie:

- Herzog & de Meuron GmbH, Hamburg, Germany
- H+P Planungsgesellschaft mbH & Co. KG, Aachen, Germany
- Hochtief Solutions AG, Essen, Germany

ARGE Generalplaner Elbphilharmonie, Hamburg, Germany (2005-2013)

- Herzog & de Meuron AG, Basel, Switzerland
- Höhler + Partner Architekten und Ingenieure, Aachen, Germany

Electrical Engineering

Hochtief Solutions AG, Essen, Germany

ARGE Generalplaner Elbphilharmonie, Hamburg, Germany (2005-2013)

- Winter Ingenieure, Hamburg, Germany

HVAC Engineering, Mechanical, Plumbing

Hochtief Solutions AG, Essen, Germany

Knott & Partner Ingenieure VDI, Berlin, Germany

Müller + Partner, Braunschweig, Germany

C.A.T.S. Computer and Technology Service GmbH, Darmstadt, Germany

ARGE Generalplaner Elbphilharmonie, Hamburg, Germany (2005-2013)

- Winter Ingenieure, Hamburg, Germany

No. 230
Elbphilharmonie Hamburg
Hamburg, Germany
Concept 2001, concept phase 2003
Project 2004-2014, realization 2006-2016

Structural Engineering Concept & Design

Schnetzer Puskas International AG, Heinrich Schnetzer, Basel, Switzerland

Structural Engineering Planning

Schnetzer Puskas International AG, Basel, Switzerland
Subcontractor: Rohwer Ingenieure GmbH, Handewitt, Germany

Structural Engineering Construction Documentation

Hochtief Solutions AG, Essen, Germany
Subcontractor: Spannverbund GmbH, Waldems-Esch, Germany (Contractor proposals Building Roof, Execution Building Roof, Main Hall steel roof structure, internal roof steelwork including acoustic reflector)

Structural Engineering Certification

WK Consult, Dr.-Ing. Rainer Grzeschkowitz, Hamburg, Germany

Structural Engineering Brick Facade 2005-2013

Jäger Ingenieure, Radebeul, Germany

Signage – Consulting and Planning

Herzog & de Meuron GmbH with Integral Ruedi Baur, Zürich, Switzerland

Sprinkler

Itega GmbH Ingenieurbüro für technische Gebäudeausrüstung, Hann. Münden, Germany
Hochtief Solutions AG, Essen, Germany

3-D Modelling

Herzog & de Meuron GmbH, Hamburg, Germany
Hochtief Vicon, Essen, Germany

No. 230
Elbphilharmonie Hamburg
Hamburg, Germany
Concept 2001, concept phase 2003
Project 2004-2014, realization 2006-2016

CONSULTING

Acoustics

Nagata Acoustics Inc., Los Angeles / USA, Tokyo / Japan

Building Physics

MF Dr. Flohrer Beratende Ingenieure GmbH, Berlin, Germany

Taubert und Ruhe GmbH, Halstenbek, Germany

Jäger Ingenieure, Radebeul, Germany

TU Dresden, Dresden, Germany

GWT, Dresden, Germany

Vertical Transportation

Jappsen Ingenieure GmbH, Berlin, Germany

Fire Protection, Site Supervision

Hahn Consult Ingenieurgesellschaft, Hamburg, Germany

Fire Safety Planning

HHPNord/Ost Beratende Ingenieure GmbH, Braunschweig, Germany

Hahn Consult Ingenieurgesellschaft, Hamburg, Germany

Crowd Flow

Happold Ingenieurbüro GmbH, Berlin, Germany

Facade Maintenance Strategy

Univ.-Prof. Dr.-Ing. Manfred Helmus Ingenieurpartnerschaft, Wuppertal, Germany

Noise Control

Taubert und Ruhe GmbH, Pinneberg, Germany

No. 230
Elbphilharmonie Hamburg
Hamburg, Germany
Concept 2001, concept phase 2003
Project 2004-2014, realization 2006-2016

Restoration Brick Facade

Jäger Ingenieure GmbH, Radebeul, Germany
TU Dresden, Dresden, Germany

SAA Consulting - Audio/Video

Peutz Consult GmbH, Düsseldorf, Germany
ADA, Ahnert Design Acoustic, Berlin, Germany

Thermal Simulation (Main Concert Hall)

Ingenieurbüro Hausladen GmbH, Kirchheim, Germany
in cooperation with Prof. Bjarne W. Olesen, Technical University of Denmark, Lyngby, Denmark

Wind Engineering Consultants

Wacker Ingenieure, Birkenfeld, Germany

Facade Engineering 2005-2013

R+R Fuchs, Munich, Germany

Climate Consulting 2005-2013

Transsolar, Stuttgart, Germany

Interior Design Hotel / Gastronomy 2005-2013

General Contractor Adamanta, Düsseldorf, Germany

MRLV, Hamburg, Germany

Aukett und Heese, Berlin, Germany

Bost Design, Berlin, Germany

Formwaende GmbH & Co. KG, Lüneburg, Germany

Scenography Consulting

BAA Projektmanagement GmbH, Oberhausen, Germany

Ducks Sceno, Lyon, France

GCA Ingenieure, Unterhaching / Berlin, Germany

No. 230
Elbphilharmonie Hamburg
Hamburg, Germany
Concept 2001, concept phase 2003
Project 2004-2014, realization 2006-2016

Traffic Planning 2005-2013

Ing.-Ges.mbH Heimann, Hannover, Germany

Transport Planning 2005-2013

ReGe Hamburg - ARGUS Stadt- und Verkehrsplanung, Hamburg, Germany

Vertical Circulation Consulting

Jappsen Ingenieure, Berlin, Germany

Well Drilling Consulting 2005-2013

IGB Ingenieurgesellschaft, Hamburg, Germany

Lighting (collaboration) 2005-2012

Ulrike Brandi Licht GmbH, Hamburg, Germany

No. 230
Elbphilharmonie Hamburg
Hamburg, Germany
Concept 2001, concept phase 2003
Project 2004-2014, realization 2006-2016

CONTRACTORS

General Contractor

Adamanta Grundstücks-Vermietungsgesellschaft mbH & Co. Objekt Elbphilharmonie KG, Düsseldorf, Germany
Represented by Hochtief Solutions AG, Essen, Germany

Facility Management

SPIE GmbH, Hamburg, Germany

Investor Consortium

Adamanta Grundstücks-Vermietungsgesellschaft mbH & Co. Objekt Elbphilharmonie KG, Düsseldorf, Germany,
represented by Commerz Real AG, Hamburg Branch, Germany

Interior Design Residential

Skyliving GmbH & Co KG, Oststeinbeck, Germany
General Contractor Hochtief Solutions AG, Essen, Germany

Interior Design Architect Residential

Antonio Citterio and Partners, Milan, Italy

No. 230
 Elbphilharmonie Hamburg
 Hamburg, Germany
 Concept 2001, concept phase 2003
 Project 2004-2014, realization 2006-2016

BUILDING DATA

Site Area	113'452	sqft	10'540	m ²
Gross Floor Area (GFA)	1'351'001	sqft	125'512	m ²
Number of Levels	29		29	
Footprint	61'839	sqft	5'745	m ²
Length	413	ft	126	m
Width	279	ft	85	m
Height	361	cbft	110	m
Gross Volume (GV)	16'805'289		475'872	m ³

DETAILED DATA

Building Dimensions:

Length:
 West 21.60 m / 71 ft
 North 108.60 m / 356 ft
 South 125.90 m / 413 ft
 East 85 m / 279 ft

Height:
 Kaispeicher 37.26 m / 120 ft above sea level
 Entire building 110 m / 360 ft above sea level
 (approx. 102 m / 334 ft above street level)

Plaza

Length Tube (Escalator tunnel): 85 m / 279 ft
 Length escalator (Entry to Viewpoint West): 85 m / 279 ft
 Gross floor area : approx. 5'745 m² / 61'839 sqft
 Public area: approx. 3100 m² / 33'368 sqft

Glass Facade

Surfaces: Total glass facade surface: approx. 20'500 m² / 220'660sqft
 External element glass facade surface: approx. 16'000 m² / 172'223 sqft
 Facade Plaza: approx. 2'400 m² / 25'833 sqft
 Facade wind protection screens: approx. 285 m² / 3'068 sqft
 Facade roof terrace: approx. 80 m² / 861 sqft
 Facade void residential: approx. 450 m² / 4'844 sqft

No. 230

Elbphilharmonie Hamburg

Hamburg, Germany

Concept 2001, concept phase 2003

Project 2004-2014, realization 2006-2016

Facade void hotel: approx. 1`250 m² / 13`455 sqft

Number of elements: approx. 1`100

Size of facade elements: Width 4.30 m - 5 m / 14 ft
(subdivided in half > 2.15 m)

Height 3.35 m - 5.025 m / 11 - 16 ft

Weight facade elements approx. 1.4 t - 1.8 t / 3`086 -
3`968 lbs

Glazing configuration: Double glazing consisting of 2
bonded laminated safety panes with grey coloured dots
and an additional dotted mirror coating

Roof

Total surface: approx. 6`200 m² / 66`736 sqft
consisting of 8 concavely curved surfaces

Total weight of structural steel: approx. 850 t / 1.874`000
lbs

Number of curved steel beams: approx. 1`000 beams
composed of singular steel bars which were individually
preformed.

Weight per beam: up to 8 t / 17`637 lbs

Visual cladding consisting of approx. 5`800 circular, white,
perforated aluminium plates ("Pailletten") mounted to a
separate substructure:

diameter paillette: 0.9 - 1.1 m / 3 - 4 ft

No. 230
Elbphilharmonie Hamburg
Hamburg, Germany
Concept 2001, concept phase 2003
Project 2004-2014, realization 2006-2016

USE / FUNCTION

Concert Halls

Main Concert Hall:

2`100 seats

Floor area (incl. stage): approx. 2`590 m² / 27`879 sqft

Volume: approx. 23`000 m³ / 812`245 cubic ft

Length: approx. 50 m / 164 ft

Width: approx. 40 m / 131 ft

Height: approx. 25 m / 82 ft

Number of spring elements: approx. 362

Stage:

Floor area: approx. 270 m² / 2`906 sqft

Width: max. 21.3 m / 70 ft

Depth: max. 15.5 m / 51 ft

Canopy:

Height above stage: 15 m / 49 ft

Diameter: 15 m / 49 ft

Chamber Music Hall:

approx. 550 seats (chamber music)

Floor area: approx. 440 m² / 4`736 sqft

Length: approx. 30 m / 98 ft

Width: approx. 14.6 m / 48 ft

Height: approx. 10 m / 33 ft

Stage Floor Area: 172 m² / 1`851 sqft

Number of spring elements: 56

Kaistudio:

approx. 150 seats

Floor area: approx. 174 m² / 1`886 sqft

Musical Education

"Das Klingende Museum" - Music Education for children

No. 230
Elbphilharmonie Hamburg
Hamburg, Germany
Concept 2001, concept phase 2003
Project 2004-2014, realization 2006-2016

Public Space

Ticketing, Merchandising and Shop

Plaza:

Public space / partly outside, 37.26 m above sea level (8th floor)

Parking

520 Units

Hotel (Interiors designed by others)

4+-star Hotel:

Gross floor area: approx. 16`640 m² / 179`111 sqft

approx. 246 rooms

Wellness area

Restaurant

Conference rooms

Apartments (Interiors designed by others)

Gross floor area: approx. 12`801 m² / 129`166 sqft

45 units (each 120-380 m² / 1`292-4`090 sqft)

Restaurants (Interiors designed by others)

Restaurant and Bar "Störtebeker" on the 5th floor

Deli Cafe "Störtebeker" on the 8th floor

"Störtebeker" Shop and Beer Tasting Room on the 6th floor

No. 230

Elbphilharmonie Hamburg

Hamburg, Germany

Concept 2001, concept phase 2003

Project 2004-2014, realization 2006-2016

FIT OUT / FURNITURE

Room Acoustical Skin Main Concert Hall ("Weisse Haut")

Material: High-density gypsum fibreboard panels

Number of panels: approx. 10.000

Number of milled cells: approx. 1 million

Size per panel, varying: usually approx. 0.5 m² (5 sqft)

Weight per panel, varying: 30 - 125 kg / m² (66 - 275 lbs / sqft)

Wooden Panelling Chamber Music Hall

Material: European solid oak; individually milled scantlings mounted on Gifatec-Panels

Number of panels: 120

Size of panel: Width: 0.63 m / 2 ft; Height: 6.25 m / 20.5 ft

Weight per unit area: at least 50 kg/m²

MATERIALS / MANUFACTURERS

Facade

Contractor glass facade construction: Josef Gartner GmbH, Gundelfingen, Germany

Glass manufactures: Interpane AG, Plattling, Germany

Glass bending: Sunglass, Padua, Italy

Float glass (stocksizes): Guardian Flachglas GmbH, Thalheim, Germany

Glass printing: BGT AG, Bretten, Germany

Fiberglass manufacturer: Fiber-Tech, Chemnitz, Germany

Main Concert Hall

Steel construction: Spannverbund Gesellschaft für Verbundträger mbH, Berlin, Germany
and Haslinger Stahlbau GmbH, Feldkirchen, Austria

High-density gypsum fibreboard panels / "Weisse Haut" - production and assembly planning: Peuckert GmbH,
Mehring, Germany

Manufacturer gypsum fibreboard: Knauf Integral, Satteldorf, Germany

Organ builder: Klais Orgelbau, Bonn, Germany

Chair production: Poltrona Frau, Tolentino, Italy

Stage system and equipment: Waagner-Biro AG, Wien, Austria

No. 230

Elbphilharmonie Hamburg

Hamburg, Germany

Concept 2001, concept phase 2003

Project 2004-2014, realization 2006-2016

Chamber Music Hall

Wooden panelling (solid oak): Eichhorn GmbH, Wächtersbach, Germany

Stage system and equipment: Waagner Biro AG, Wien, Austria

Steel construction: Spannverbund Gesellschaft für Verbundträger mbH, Berlin, Germany

Steel construction Catwalks: Peuckert GmbH, Mehring, Germany