

Madame Butterfly

Facts and figures on the stage technology

Construction time	The fabrication, assembly and final technical adjustment took about ten months. Planning extended over a period of two to three years.
Construction personnel	33 technology firms from Austria, Germany and Switzerland are involved in building the stage. Also 14 members of the festival's technical staff, including crane operators, are taking part in the construction.
Wooden piles	The stage is erected on about 119 piles made of spruce wood or steel and driven up to six metres deep into the bed of the lake.
Paper sculpture	The paper sculpture measures 23.2 metres at its highest point and 33 metres at its widest point. It has a total surface area of 1,340 square metres. Of the 117 constituent parts, the biggest is approx. 17 square metres, the smallest about six square metres in size. The paper sculpture weighs about 300 tonnes in total. The supporting structure of steel and wood accounts for about 288 tonnes of that. Some twelve tonnes are polystyrene foam and facade plaster.
Paper boat	The paper boat is made of a steel skeleton that is covered with plywood cladding and coated with fibre-glass reinforced plastic. It measures about 6 metres at its highest point and is approximately eleven metres long. It is moved by means of a winch.



Companies involved in construction of the stage

Correct as of 30 March 2022 (subject to alteration)

Construction firms (principal contractors)	
Biedenkapp Stahlbau GmbH <i>paper sculpture</i>	Dornbirn (A)
Blitzschutztechnik Krottenhammer <i>monitoring of the lightning protection system</i>	Lauterach (A)
Bootswerft Hartmann GmbH & Co KG <i>paper boat</i>	Hard (A)
Bregenzer Festspiele GmbH	Bregenz (A)
BSS Industry GmbH <i>flag</i>	Nebelberg (A)
Edelbunt Matthias Trostberger <i>paper sculpture</i>	Telfs (A)
Geiger Technik GmbH <i>paper boat</i>	Nenzing (A)
Keller Grundbau GmbH <i>paper sculpture</i>	Wien (A)
Kiechel & Hagleitner GmbH <i>monitoring of electrical equipment</i>	Bregenz (A)
Ludwig Steurer Maschinen- und Seilbahnbau GmbH & Co KG <i>Yamadori platform</i>	Doren (A)



Subcontractors	
Amkon Maschinenbau GmbH <i>flag (control technology)</i>	Hofkirchen-Garham (D)
FE - Mechatronik <i>Yamadori platform</i>	Egg (A)
Haberkorn GmbH <i>Yamadori batteries</i>	Wolfurt (A)
i+R Gruppe Holzbau GmbH <i>paper sculpture</i>	Lauterach (A)
n-power, Mobile Energy <i>Yamadori batteries</i>	Feldkirch (A)
Planeta Hebetchnik GmbH <i>flag (winch)</i>	Ebreichsdorf (A)
Ritter Maschinen GmbH <i>paper boat (winch)</i>	Zell am Harmersbach (D)
Salzmann Hafenbau GmbH <i>paper sculpture</i>	Fußach (A)
Unican GmbH <i>paper boat (control technology)</i>	Neuss (D)
Artistic realisation and scenery building	
La Mimesi Frank Schulze	Berlin (D)
Statics and planning	
Andres Geotechnik AG	St. Gallen (CH)
Dipl.-Ing. Heinz Millner ZT GmbH	Dornbirn (A)



Exent AG	Hüttwilen (CH)
Gaisberger ZT GmbH	Dornbirn (A)
Mader + Flatz Baustatik ZT GmbH	Bregenz (A)
Markowski Straka ZT GmbH	Feldkirch (A)
merz kley partner GmbH	Dornbirn (A)
Planning and bidding process	
Bregenz Festspiele GmbH	Bregenz (A)
Rudhardt Gasser Pfefferkorn - Ziviltechniker	Bregenz (A)
Site coordination	
Rudhardt Gasser Pfefferkorn – Ziviltechniker	Bregenz (A)
3D visualisation	
Simon Wimmer Screenpix	Altach (A)
Special effects	
Hummig Effects e.K.	Peißenberg (D)
Construction partner	
Liebherr-Werk Biberach GmbH	Biberach / Riß (D)
Industrial divers	
Laguna-Lindau Tauchsport e.U. GbR	Scheidegg (D)
Bodenseetaucher GmbH	Wolpertswende (D)



Cranes	
Liebherr GmbH	Rankweil (A)
Liebherr-Werk Biberach GmbH	Biberach / Riß (D)

The 2022 Bregenz Festival runs from 20 July to 21 August. For tickets and information please visit our website www.bregenzerfestspiele.com or call 0043 5574 4076.