

## Stageco Belgium NV

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**STAGECO**  
 STAGING GROUP



Stageco, based in Tildonk (B), is an internationally organized staging company, which originated in 1984 from the renowned Rock Werchter Festival in Belgium.

In spite of its long and rich tradition, Stageco remains a pioneer 'pur sang' and a trendsetter in a market at which creativity and technical know-how inextricably go together. That is the reason why our customers prefer the original to a copy.

Stageco took important steps during recent years to provide the expertise it has built in the international touring market (with customers like the Rolling Stones, U2, Bon Jovi, Bruce Springsteen and numerous other artists) to the corporate world. Consequently Stageco has already produced an astonishing list of successful projects in this new market segment.

Be it product launches, presentations, sponsored events, ... in close co-operation with the customer Stageco always succeeds in translating its entertainment experience towards the corporate world. Stageco creates an environment in which people can witness an event in a unique atmosphere.

For more information you can visit our website [www.stageco.com](http://www.stageco.com) or email to [info@stageco.com](mailto:info@stageco.com).

## References 2005 and 2006:

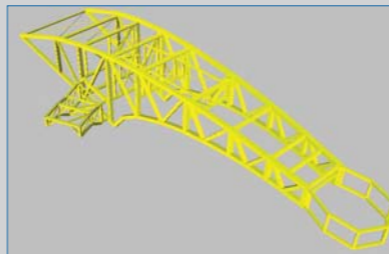
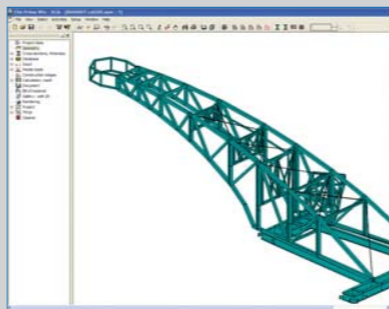
- U2 'Vertigo' 2005
- Rolling Stones 2005 – 2006 'Bigger Bang'
- Olympic Wintergames, Torino 2006
- Robbie Williams 'Close Encounters' 2006
- Bon Jovi 'Have a nice day' 2006
- Football Worldchampionships, Germany
- ...

## Quote of the jury:

"An excellent example of a Design-to-Operate project, where not only the original design of the structure, but also the erection and dismantling phases needed to be simulated using CAE software."



## Robbie Williams Close Encounters 2006



## ■ Project data

Height: ± 22 m  
 Overhang: ± 13 m  
 Loadcapacity overhang: ± 9 tons  
 Global capacity complete stage: ± 65 tons and ± 24 tons use load on work platforms  
 Mass: ± 300 tons (14 trailers) / set (2 complete sets are built)  
 Name of project: Robbie Williams 'Close Encounters' 2006  
 Production manager: Wob Roberts  
 Architect: Mark Fisher (Stufish)  
 Technical coordinator: Jeremy Lloyd  
 Project manager: Dirk Dedecker (Stageco)  
 Engineering steel structure: Tom Frederickx (Stageco)  
 Designing steel structure: Koen Peeters (Stageco)  
 Set production: Brilliant Stages (GB)  
 LED video system: XL video (B)  
 Location: mobile structure; trucked, shipped and flown around the world.  
 Building sequence: 2 days building up, production day, show day, 12 hours take down and loading, 1 or 2 travel days, ...

## ■ Description

The clients' brief was to design, fabricate and operate a portable structure to host one of the most popular artists of the moment: Robbie Williams. The planning for this 'World Tour' started early 2005. The choice of Stageco as the main contractor for the structural elements was based on previous working experiences the Robbie Williams production had with Stageco. The first sketches were made in December 2005 and the delivery date for both identical structures was beginning of May 2006. Very early in the design process, a calculation model was created to assess the influence of the overhang, use loads and wind loads on the overall stability and to determine which profiles would have to be used.

Specific constraints to the structure were that it should be possible to build it within 24 working hours and to dismantle it and load it on its 14 trucks in 12 hours. This very tight schedule was needed to assure a good flow of all the different concerts. Basically, while one of the stages is in use, its twin brother will be either on the road or being built or dismantled. To allow a swift installation of decoration, lights and videoscreens the two structures are absolutely identical and always built identically.

Structural calculations, together with the first cad drawings, allowed the project team to present a budget. Shortly after - we are speaking mid January 2006 - followed by the client's final approval. During the upcoming period the final design had to be done. As usual, numerous extras and modifications had to be taken into account.

## ■ Use of ESA-Prima Win

The structure was modelled with ESA-Prima Win 3.60.420. The scorio itself was drawn in AUTOCAD 2007 and imported in ESA-Prima Win as a dxf-file.

The difficulties by calculating the scorio were the huge eccentricities. Firstly because the bottom part of the scorio needed to be open to hide production items (cables, motors, ...). Secondly because the scorio had to be designed in several smaller parts to make building and transportation easier. Of course the structure had to be light but rigid, while it was going to be on the road for quite some time and would be built a lot of times. As in all our projects, transportation cost was a major issue.

The standard Stageco Elements weren't modelled in detail while, with this number of elements, the file size would increase significantly. That's why these standard frameworks (towers and trusses) were modelled as one line with the characteristics of these typical elements. To check these elements the inner forces were used and checked in a specific spreadsheet.

To show the difference between the simplified ESA-Prima Win model and the CAD-drawings, screenshots of both programs are given.

Used modules:

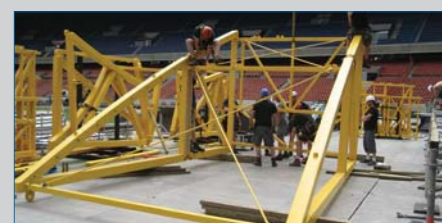
- English language
- 3D-FRAME
- Non-linearity (tension only)
- Steel Code Check EC3

The complete package of calculations and drawings was sent to the German TÜV for final approval.

Beginning of May 2006 a complete testbuild was done at a secret building site to assure all fabricated parts fitted well together. Only then all structures were shipped out. The tour started June 2006 and travelled to 19 different cities in Europe where Robbie performed 40 shows for a total audience of 2.000.000 people.

Mid September all the equipment, that had been designed to fit 40ft sea containers, was shipped to Australia, where the tour came to an end with another 9 shows in 5 cities.

## Robbie Williams Close Encounters 2006



## Robbie Williams Close Encounters 2006

The clients' brief was to design, fabricate and operate a portable structure to host one of the most popular artists of the moment: Robbie Williams. It had to be ready for his World Tour. The choice of Stageco as the main contractor for the structural elements was based on previous working experiences that the Robbie Williams production had with Stageco. The first sketches were made in December 2005 and the delivery date for both identical structures was beginning of May 2006. The tour started June 2006 and travelled to 19 different cities in Europe where Robbie performed 40 shows for a total audience of 2.000.000 people, followed by an Australian part of the tour.

Specific constraints to the structure were that it should be possible to build it within 24 working hours and to dismantle it and load it on its 14 trucks in 12 hrs.