

# PRODUCTS IN ACTION

## Décor Set for Gothenburg Opera House



*"Les Misérables" at the Gothenburg Opera House*

Free Span	19.0 m
Height:	9.8 m
Depth:	5.0 m
Surface area	150 m <sup>2</sup>
Assemble/disassemble time:	< 30 min
Total weight:	950 kg

DIAB has been involved in the production of a sandwich vault construction that is a part of the décor set for the musical "Les Misérables" played at the Gothenburg Opera House. The vault construction that spans the whole width of the stage consists of two ellipse-shaped beams carrying 13 frame elements. The frame elements are covered with a cloth to give the construction the appearance of a brick vault. One of the design criteria was that the complete décor set had to be disassembled after each performance. In order to be able to handle a décor component of such large dimensions as those of the vault, low weight is of uttermost importance. Thus, FE-analysis of both beam and frame elements were used to optimise the construction. Both beam and frame elements are made utilising sandwich technology with Divinycell core materials to obtain the lowest possible weight.

### Core material:

Beams - Face:

Beams - Manufacturing method:

Frame Elements- Skins:

Frame Elements - Manufacturing method:

Design:

Manufacturer:

Structural Design:

### Divinycell® H-grade, delivered in kits

Uniaxial Carbon, Biaxial Glass /Epoxy

Hand lay-up

GRP Pecolit

Vacuum assisted bonding, components delivered ready to assemble

Ingmar Carlsson, Gothenburg Opera House

West Coast Composite

DIAB Technical Services

