

Aagade Pedestrian Bridge, Copenhagen

Services :

- Competition design
- Tender design
- Follow up design

Construction period: 2005 - 2006

Client: Municipality of
Copenhagen, Denmark

Architect: Dissing+Weitling

Construction cost: EUR 2 mill.



The bridge is part of a new pedestrian and cyclist route in Copenhagen, crossing the heavily trafficked street of Aagade. The alignment of the route is implemented to the bridge with its curved, horizontal appearance.

The single span girder is a slim, closed steel box girder suitable to resist the moment of torsion caused by the horizontal curvature and the one-sided hanger force. The single arch inclined 45° is connected to the girder by pinned hangers and supported on the abutments.

The analysis of the vertical frequencies in the structure revealed the necessity for TMD dampers. The dampers are incorporated in the closed girder opposite the hangers.

The TMD of approximately 400 kg each are finally tuned based on a load test after the erection of the complete structure.

The bridge is 5.3 m wide with elegantly illuminated handrails. Due to the curved girder and one side support by hangers, uplift forces are confined by tie down anchors completely covered at the abutments, which are flush with the embankments.

