

Festhalle Multi-Purpose Arena

Lindapter Girder Clamps provided a solution to suspend a Mero rigging system.

Project Background

Location: Frankfurt, Germany
Product: Type AF Girder Clamp
Market: Arts / Entertainment / Staging
Client: Messe Frankfurt
Contractor: Ernsthaus Rigging Services



The Festhalle is an architecturally and historically important building which at the time of its completion in 1909 had the largest dome in Europe.

The dome reaches a height of 40 metres and looks down on 5,646m² of space which is used to hold events and concerts. Internally the original arched steel roof trusses and dome structure can be seen, and are used to suspend modern rigging equipment.

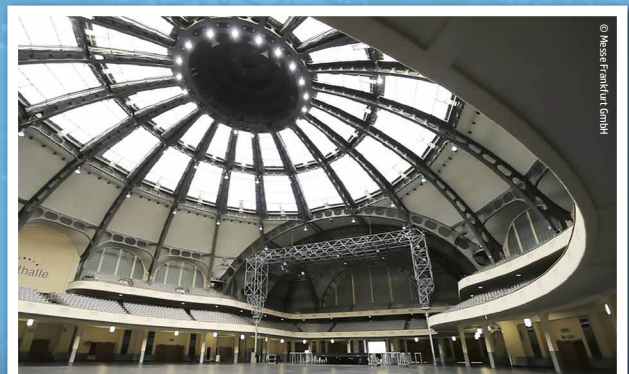
Client Requirement

The shackle suspending the rigging from the steel roof structure needed to be replaced due to additional high frictional loads caused by the weight of a new rigging system and equipment.

Welding or damage to the existing steel structure was not permitted due to the historical importance of the building, and so a new method of connecting to the steel was required. The solution would also need to be capable of carrying the necessary loads and prevent frictional slip.



Bespoke bracketry system being installed



Original steel roof and dome structure

Festhalle Multi-Purpose Arena

Design Solution

Lindapter in conjunction with the rigging contractor designed a bespoke bracketry system. This included two large adjustable plates that attached to either end of a steel arm to spread the load.

The plates would then be connected to the existing steel using Type AF high slip resistance girder clamps to provide the necessary combined loads of tensile and slip, particularly at the outer edges of the roof where loads were the greatest.



Installation

Each bracket arrangement was carefully lifted into position and then fixed at the point of contact between the adjustable plates and the steel roof trusses. A combination of size M16 Type AF girder clamps, washers, packing pieces and spreader bars were used for each connection. For the brackets on the outer edges of the roof up to ten girder clamps per plate were installed to provide the necessary high slip resistance.

After each bracket was secure the contractor was able to suspend the Mero rigging system from the steel arm which was then used to install lighting and other equipment.

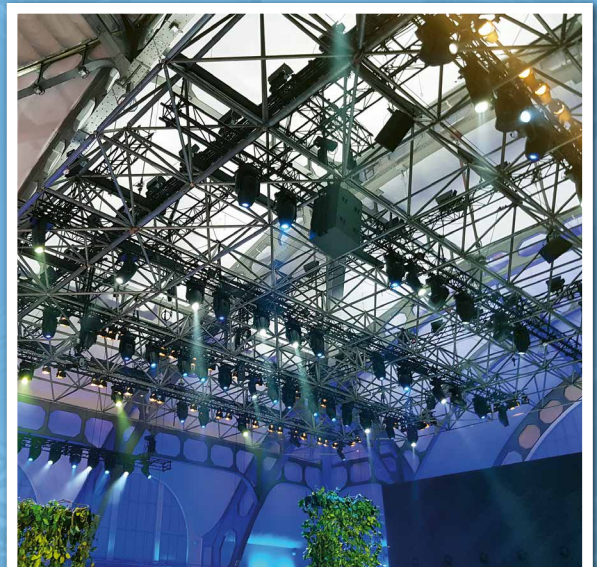
[Click here to watch the installation video >>>](#)



Result

Lindapter Type AF Girder Clamps provided a drilling and weld free connection that prevented any damage to the existing steel trusses.

They have independent technical accreditations, which include the CE Mark (ETA-13/0300), TÜV and Lloyd's Register approvals which verify the high load and slip capacities, leading to a safe and successful installation.



Mero rigging system suspended from the roof

Key Benefits

- ✓ High slip resistance for tensile and frictional loads
- ✓ No drilling or welding required
- ✓ Hot Dipped Galvanised finish offers a cost effective and low maintenance solution



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