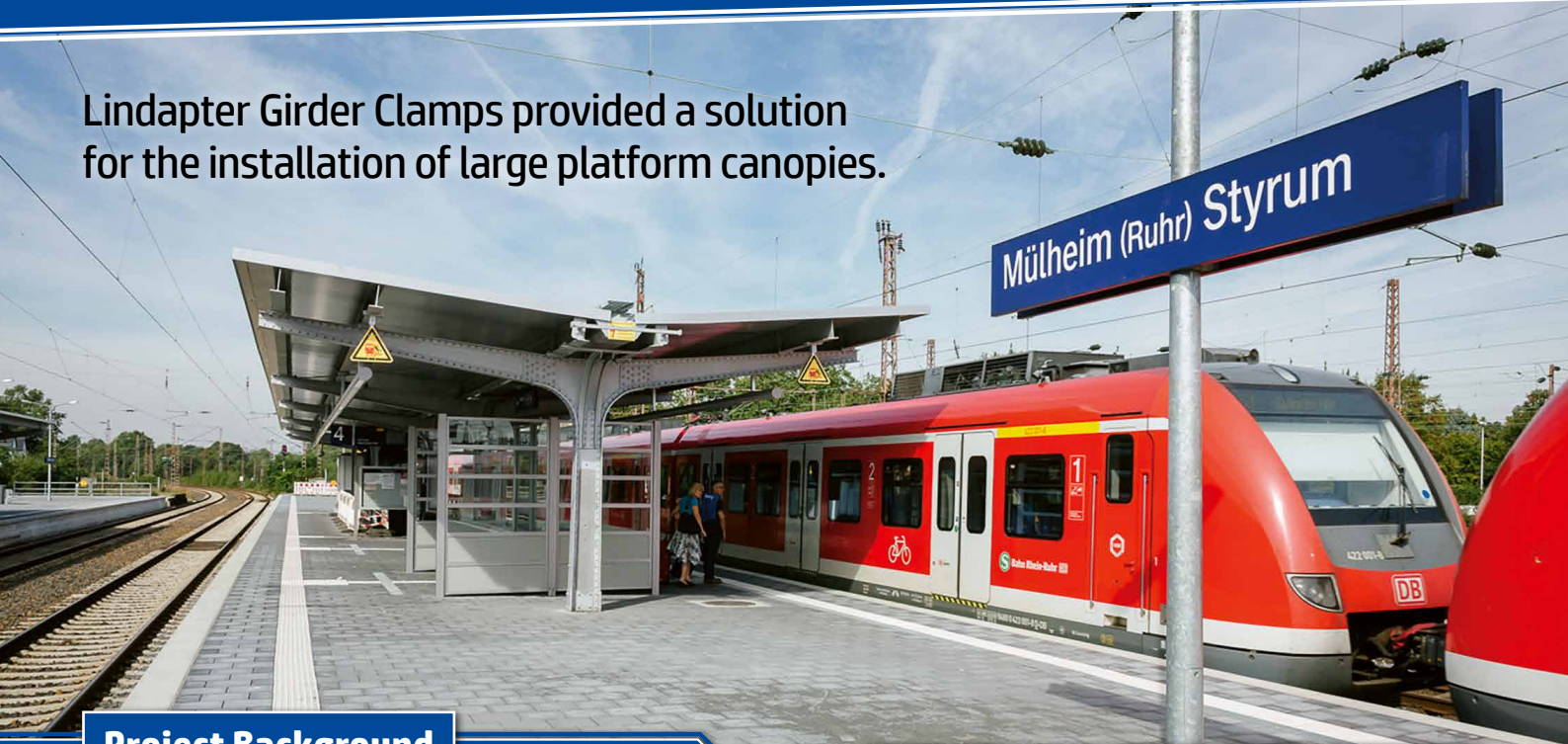


# Railway Station Platform Canopies

Lindapter Girder Clamps provided a solution for the installation of large platform canopies.



## Project Background

**Location:** Mülheim, Germany

**Market:** Rail

**Product:** Type A & B Girder Clamps

**Client:** Deutsche Bahn AG



**Deutsche Bahn AG** is the largest railway operator and infrastructure owner in Europe and carries around two billion passengers on the German rail network annually. As part of their continued railway infrastructure investment programme in the North Rhine-Westphalia state Deutsche Bahn are modernizing 150 stations by 2023.

## Client Requirement

Mülheim (Ruhr) Styrum railway station was identified by Deutsche Bahn as requiring work, in particular the two central platforms needed modernizing. The proposed work included, redeveloping the platforms and raising them to achieve a step-free transition onto to trains, plus the installation of new canopies to protect passengers from inclement weather.

One of the challenges the contractor faced was how to secure steel beams to the loadbearing columns to construct a frame for the canopies to be fixed to without drilling or welding in the field.



*Steel beams are connected to the columns*



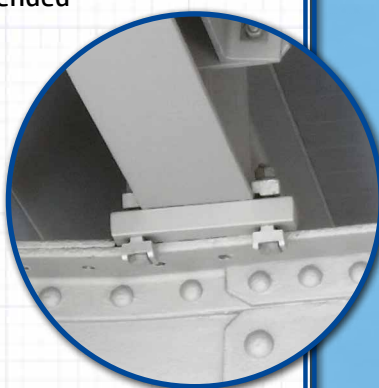
# Railway Station Platform Canopies

## Design Solution

After researching and evaluating several connection methods, the CE approved Type A & B Girder Clamps by Lindapter were specified due to their high load capacity and range of independent approvals.

Engineers designed a four-bolt connection with location plate, that didn't require drilling or welding in the field, to connect steel beams to the extended arms of the columns.

The design provided a suitable structure for fixing the canopy panels to, and for a high degree of corrosion protection a hot dip galvanized (HDG) finish was specified on the Girder Clamps.



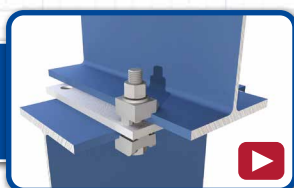
## Installation

After the loadbearing steel columns were installed along the length of the platforms, steel beams were lowered into position on top of the extended arms. The steel beams, which spanned from one column to the next, were connected using the location plate and four-bolt configuration consisting of Lindapter Type A & B clamps.

Installation was quick and easy as each bolt was simply inserted into the pre-drilled holes with the Type A holding the bolt captive while the nut on the Type B clamp was tightened with a torque wrench. To complete the installation the canopy panels were fixed to the steel beams.



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



## Result

Lindapter Type A & B Girder Clamps provided a drilling and weld free connection that was quick and easy to install in the field. The clamps are fully adjustable which gave the contractor the ability during installation to manoeuvre the beams into their final positions before fully tightening them.

Redevelopment of the platforms were successfully completed on time and now provide a modern, safe and comfortable environment for passengers. Deutsche Bahn have since specified the same connection design on many other platforms throughout the country.

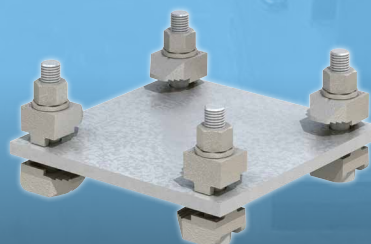


*Completed platform after redevelopment*

## Key Benefits



- ✓ Adjustable in the field for easy installation
- ✓ No drilling or welding required
- ✓ Hot Dip Galvanized finish offers a cost-effective and low maintenance solution



[Click here for more details](#)