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# Adjustable Steelwork Connectors

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## ADJUSTABLE STEELWORK CONNECTORS

### THE NEED

Since the outset of steel construction, there has been an increasing demand for connections that are faster and easier to assemble. Traditional weld and drill methods are a labor and time intensive part of steel erection and innovative solutions are vital.



FIGURE 1 ADJUSTABLE STEELWORK CONNECTORS

### THE TECHNOLOGY

For more than 75 years, Lindapter has earned a respected reputation as the inventor and pioneer of steelwork connection systems, providing an independently approved and exclusive product range of steel connections.

Lindapter® offers two steelwork connection systems that allow I beams to be bolted together without the need to drill or weld the steel members. Without drilling, the integrity of the steelwork remains intact. Without welding, the connection is quick, simple and adjustable where required.



FIGURE 2 GIRDER CLAMP



The first of the steelwork connection systems is the Girder Clamp: a rigid assembly for securing secondary steelwork to structural members, suitable for connections subjected to tensile, combined, frictional, compression and shear loads. Each Girder Clamp comprises of two Lindapter steelwork clamps per bolt, nuts, washers, and a pre-drilled location plate. A Girder Clamp assembly can accommodate any size or type of steelwork by adjusting the location plate dimensions. Furthermore, it can cope with the differences in height between primary and secondary steelwork and/or angular displacement between the two members.



FIGURE 3 FLUSH CLAMP

The second of Lindapter's steelwork connections is the Flush Clamp: a bolted connection that joins the flanges of intersecting I beams. The Flush clamp consists of four each of six basic components: Body, Special Bolt, Special Washer, Flat Washer, Hex Nut and Half Nut. The assembly forms a clamp that is suitable for connecting beams of varying flange widths (3" to 7") and thickness (3/16" to 3/4"). The Flush Clamp is designed ideally for the connection of secondary steelwork to primary steelwork without the need for on-site power in structural engineering applications, or for the connection of overhead conveyor systems or lifting equipment in the material handling industry.

### THE BENEFITS

- The Girder Clamp and Flush Clamp provide a load bearing capability with a 5:1 factor of safety.
- The clamps allow quick and simple on-site adjustments.
- The assemblies can be designed to suit any size, and type of steelwork and to cope with height and angular displacement between members.
- No on-site drilling or welding
- The clamps do not weaken or damage existing steelwork
- The connections allow fast, cost-effective installation.
- Technical Support included free connection design from qualified and experienced Lindapter Engineers.



## STATUS

Lindapter steelwork connection systems are specified on countless projects across the globe from the Antarctic to the Caribbean, in diverse applications. Some case studies include:

- Tower Bridge, UK – Attaching monorail to the underside of the bridge
- Minnesota Twins Ball Park, USA – Attached canopy soffit to primary steel structure.
- Millau Viaduct, France – Clamping electrical services to inclined sections within the bridge deck.
- CERN, Switzerland – Connected the equipment supporting steel framework.
- St Pancras Station, UK – Connecting new roof support steelwork to the existing structure.

## BARRIERS

The clamps are not designed for the connection of primary steelwork and there are no data regarding their capabilities in accommodating seismic loads.

## POINTS OF CONTACT

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## REFERENCES

1. I-Beam Clamps Save Time, Engineering News Records, T-93
2. [www.lindapterusa.com](http://www.lindapterusa.com)

## REVIEWERS

Peer reviewed as an emerging construction technology

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## PUBLISHER

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