

FAQs about Lindapter Girder Clamps

Below you'll find answers to the questions we get asked the most about Lindapter Girder Clamps. If your question is not answered here please contact Lindapter's Technical Support team.

Can location plates be made to any dimensions?

No. Details of the minimum sizes are shown in this catalog.

Are Lindapter assemblies reusable?

It is not advisable. The load bearing capabilities cannot be guaranteed because they may have been over tightened and therefore overstressed.

Do tail length and packing combination calculations have to be exact?

The tables within the catalog or on the website should be used for guidance on tail lengths and packing combinations; there is a tolerance which varies depending on the bolt diameter.

Is it possible to use Lindapter products with proprietary concrete anchors?

Yes, but it may be necessary to reduce Lindapter's recommended bolt tightening torque to comply with the anchor bolt manufacturers figures; if so, this is likely to effect the connection capacity.

Will clamps damage my steel surface coating?

The material from which Lindapter clamps are manufactured should not damage the structure although removal marks might be visible on some surface coatings.

Can Lindapter connections be used in a combined tension and friction / slip resistance load?

Yes, although calculations are needed to determine the best size and Lindapter product to use.

Why do location and end plates have to be made to a certain minimum thickness?

As well as positioning all the components, the location plate supports the tail of the clamp.

On girder clamp assemblies the plate does not have to be as thick as it does for end plates; the reason for this is that the tail of the clamp on the bottom beam is trying to bend the plate but this is counteracted by the clamp's tail on the top beam.

With end plates there is no counteracting clamp, hence the plate needs to be thicker to support the tail. Plate thicknesses may be able to be reduced by using higher grade/strength material.

Are Lindapter assemblies affected by vibration?

Although tested and approved for situations where they will be subject to vibration conditions we would recommend that, in circumstances where this could be extreme, a proprietary locking device / anti-vibration washer can be used.

Can Lindapter Type F9 be used to connect beams together?

It is possible if the beams are running parallel to each other but they must be of the same type and width although a Lindapter Girder Clamp is a much better option; the Type F9 must never be used to connect beams together which are crossing at 90° to each other or have tapered flanges.

Can Lindapter assemblies be used as permanent connections or are they only for temporary use?

They can be used in temporary and permanent applications. The company has details of applications that have been in situ for 40 years or more.



FAQs about Lindapter Girder Clamps (continued)

Below you'll find more answers to the questions we get asked the most about Lindapter Girder Clamps. If your question is not answered here please contact Lindapter's Technical Support team.

How long will Lindapter assemblies last in an exterior environment?

The best coating would be Hot Dip Galvanizing. Longevity would depend on the background corrosion rate evident in the location it is intended they be used; guidance should be sought from the galvanizers association of the relevant country.

Why is there such a high Factor of Safety, typically 5:1, on Lindapter connections?

This recommended Factor of Safety is to ensure that the components are subject to loads well within their capacity range in normal working condition but in event of an unintentional overload of the component / assembly there is sufficient strength within the clamps to avoid damage and / or failure of the connection.

A lower Factor of Safety must not be used without first seeking advice.

Do I need to use a torque wrench when assembling a Lindapter connection?

Yes, we always recommend the use of a calibrated torque wrench. It is important to tighten up the fasteners to our published torque figures to ensure it replicates test conditions so that the Safe Working Loads can be achieved.

Is it possible to use Lindapter products either sub-sea or within the splash zone?

Yes, although consideration has to be given to the proposed material or coating used; splash zones can be more aggressive than total submersion.

Is it possible to use stainless steel fasteners with Lindapter products?

It is not recommended as it is likely to create a mechanism for the onset of bi-metallic corrosion. They can however be used with the Lindapter Type LS which is manufactured in stainless steel.

Why is the frictional Factor of Safety on Lindapter Type AF only 2:1 and not 5:1 as it is on the tensile Safe Working Loads?

The published safe working load and 2:1 factor of safety is a recognized method of determining slip and is defined according to the Eurocode as the load corresponding to 0.004" (0.1mm) of movement. As the safe working load is based on movement of 0.004" it is acceptable to use a reduced factor of safety of 2:1.

What should be considered when connecting a pre-drilled section to an existing beam?

Make sure the section is thick enough to counter the reaction from the tail of the clamp.

Can I use Lindapter clamps in slotted hole connections?

Yes, but it is important that the slot is 'bridged' to ensure that the tail of the clamp does not fit into it. This can be done by using either a product with a full width tail such as a Type LR or a Lindapter Type A or B with one of the standard range of packings (CW, P1 or P2S).

What is the recommended Lindapter safe working temperature range?

As a general rule -22°F to +662°F; however this can increase or decrease in certain situations. For example, the Type AAF clamp is tested to -76°F.

FAQs about Lindapter Hollo-Bolts

Below you'll find answers to the questions we get asked the most about Lindapter Hollo-Bolts. If your question is not answered here please contact Lindapter's Technical Support team.

Can the Hollo-Bolt be used in concrete?

No. It is designed as an expansion bolt for HSS or other steel sections where access is available from one side only.

Is it possible to reuse the Hollo-Bolt?

No, although a new Hollo-Bolt can be inserted in the existing hole.

Can I use slotted holes in Hollo-Bolt connections?

Yes, as long as the slot is in the outer ply only and is perpendicular to any shear load.

Is it necessary to seal the Hollo-Bolt to prevent ingress of water?

This is not always necessary especially on the size 5/8" and 3/4" Hollo-Bolt HCFs where the rubber washer expands to fill the void. Sealing washers are available however it is important the interface between the RHS face and plate or bracket is not ignored.

Can the maximum clamping thicknesses published in the catalogue be exceeded?

No. The figures are accurate depictions and should not be exceeded under any circumstances.

Which Hollo-Bolt load table should I use?

For simple connections with un-factored loads please use the capacity figures shown on page 41 (5:1 Factor of Safety). The Hollo-Bolt LRFD and ASD Design Strengths figures on page 40 (taken from ESR-3330) are to be used only when designing a bolted connection to **AISC 360, AISC 341 and AISI S-100** as referenced in Section 2205 of the IBC.

Can the Hollo-Bolt be used in all shapes and sizes of HSS?

Yes. It can be used in square, rectangular, circular, and other profiles where access is restricted to the outer face. In all cases however the suitability of the component is subject to the available void space, the total thickness of the material to be clamped and in the case of circular sections, the radius of the outer face.

Why is there a minimum outer ply requirement when using 5/8" and 3/4" Hollo-Bolts?

To ensure the rubber washer does not compromise the shear capacity of the Hollo-Bolt by being within the shear plane.

How do I remove a Hollo-Bolt?

Sizes 5/16", 3/8" and 1/2" using a pneumatic tool to remove the Hollo-Bolt:

- 1) Set the pneumatic hand tool to reverse mode (anti-clockwise rotation).
- 2) Place a suitable size wrench (depending on collar size) on the collar flats to hold in place.
- 3) Use the pneumatic hand tool to loosen the bolt.
- 4) Continue in reverse mode until the cone on the inside of the HSS at the other end of the bolt is released to drop inside the HSS.
- 5) The bolt can now be removed as can the sleeve by prying the collar with a pinch or crow bar.

Sizes 5/8" and 3/4" (Hollo-Bolt HCF) using a pneumatic tool to remove the Hollo-Bolt:

- Steps 1) to 3) same as above.
- 4) Continue in reverse mode until the cone, expanded sleeve, and rubber washer on the inside of the HSS, at the other end of the bolt are released to drop inside the HSS.
 - 5) The bolt and loose collar can now be removed.

Note: Hand tools can be used to untighten the bolt. These methods can also be used to remove the Hollo-Bolt Countersunk Head. The Hollo-Bolt Flush Fit however cannot be removed once it is installed.

