

FASET Bulletin GEN04 (Revision 1)

Safe Use of Beam Gliders / Beam Anchors

Summary

This Technical Bulletin provides guidance to Clients, Principal Contractors, Contractors and FASET Members on the safe use of beam gliders / beam anchors used as an anchor when accessing a steel structure.

Note: In 2017 there were two separate incidents that occurred in the construction industry where beam gliders / beam anchors became detached from the steel, resulting in the persons falling, causing serious injuries. Whilst the root causes of the incidents are not covered in this guide, a contributing factor was that the beam gliders / beam anchors came off the steelwork due to a small gap in the steel structure.

What are Beam Gliders / Beam Anchors?

A beam glider / beam anchor clamps on to hot rolled steel beams to provide an anchor point capable of constant adjustment during progressive works. They are used in many trades to offer an adjustable anchor point for fall restraint, work suspension or fall arrest. They are typically classed as Personal Fall Protection Equipment and should comply to BS EN 795: 2012 *Personal fall protection equipment - Anchor devices*.

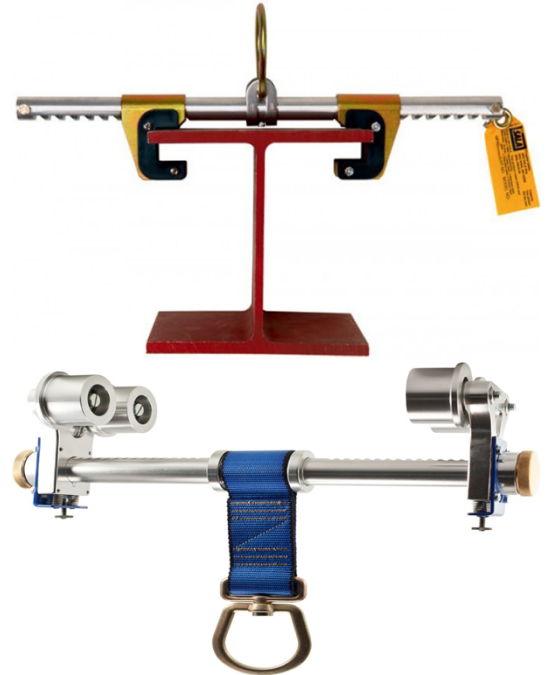


Figure 1. Typical examples of beam gliders / beam anchors.

Beam gliders / beam anchors can be used in a number of configurations, the most common being:

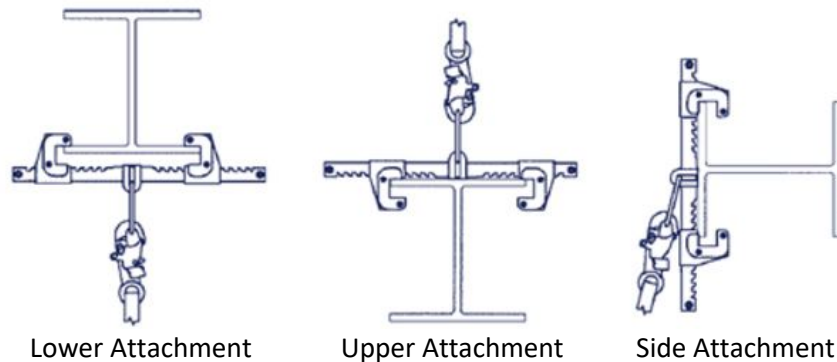


Figure 2. Common configurations of beam gliders / beam anchors.

For more information about FASET, contact:

FASET
PO BOX 138, WHITCHURCH
SHROPSHIRE. SY13 9AD

T +44 (0)1948 780652
E enquiries@faset.org.uk
W www.faset.org.uk

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What do beam gliders consist of?

A typical beam glider / beam anchor has the following parts

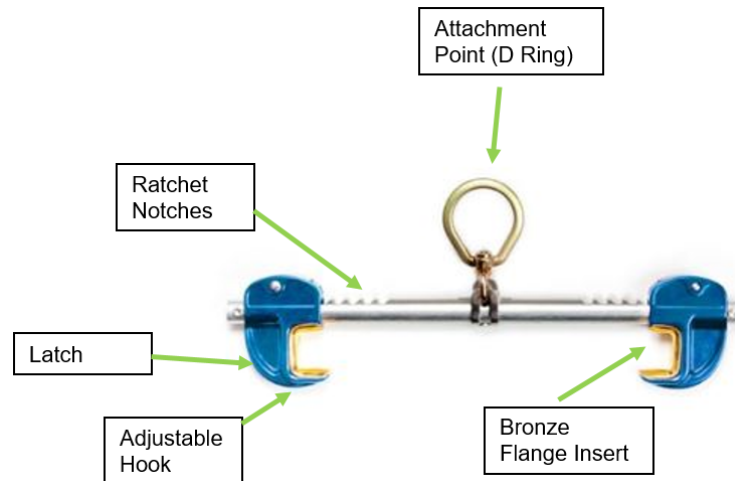


Figure 3. Common components of beam gliders / beam anchors.

Control Measures

Users of beam gliders / beam anchors must be competent in their use and be provided with the manufacturer's instruction manual for any type of beam anchor used. The beam glider / beam anchor must have a valid thorough examination certificate and be visually inspected by the competent user prior to use.

When preparing a safe system of work where beam gliders / beam anchors are to be used, the following hazards and precautions should be considered:

Known Hazards	Hazard Mitigated by
Lack of familiarization or incorrect use	<ul style="list-style-type: none"> User training and brief from a competent person / training provider / scheme Understanding the equipment's user manual / guidance
Gaps and open-ended steel beams	<ul style="list-style-type: none"> Conduct a "steel beam survey" to determine if there are any gaps that exist in the steelwork, in particular at connected joints Arrange for the "dead stops" to be installed by the Steel Erector during the steel erection phase
Tapering beams	<ul style="list-style-type: none"> Do not use beam gliders / beam anchors
Overloading the device	<ul style="list-style-type: none"> Ensure that the device is capable of intended load of the person / materials
Varying sizes of steel	<ul style="list-style-type: none"> Ensure that the beam glider / beam anchor fits the steelwork's web and can be adjusted to suit the varying steel sizes
Corroded / painted steelwork	<ul style="list-style-type: none"> Do not use beam anchors on corroded steel structures Where the steelwork has been coated with a material such as intumescent paint, tests should be taken to determine its paint gauge to ensure that the beam glider / beam anchor does not embed into the material and subsequently becomes detached

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Gaps and Open-Ended Beams

Gaps in the steelwork may exist at joint connections, changes in direction of the steel structure, and changes in size of steel members used in the structure.. Open ended steel is common in some steelwork designs. The Principal Designer, Principal Contractor and Steelwork Designer have a duty, as defined in the Construction Design Management Regulations 2015, to identify potential hazards and mitigate them in the construction phase.

When gaps in the steel or open-ends of the steel have been identified in the original design, the Principal Designer and Steelwork Designer should mitigate these hazards in the design review process. This might be achieved by eliminating them from the design or for sacrificial flanges or stops being built in to the design, thus stopping the beam glider / beam anchor passing through the gap / end.

Where gaps or open ends still exist, the Principal Contractor and Steelwork Contractor should ensure that temporary stops are installed before the steelwork is accessed. This should be done before the steelwork is hoisted into position. Scaffold type Girder Clamps and short scaffold tubes could be installed at each gap / open end.

User and Supervisor Assessment Guide

Where beam gliders / beam anchors have been specified in the safe system of work, the Site Supervisor and Worker using the device should:

- Be familiar with the type of beam glider / beam anchor provided.
- Undertake a review of the steel structure to be accessed (from safe vantage points) to identify any gaps or open ends. Binoculars and torches may be required to achieve this.
- Not assume that construction drawings are correct, as onsite modifications may have been made or controls may not have been installed correctly.
- Ensure that any action taken to make a gap or open end safe are undertaken with the express permission of the Principal Contractor and that this work is undertaken before general access is permitted under a controlled safe method of work, which may include additional restraint systems.



Figure 4. Example of open end in steelwork.



Figure 5. Example of temporary stop used at open end of steelwork.

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