

**USER MANUAL**  
**BEAM LIFTING CLAMP**



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## USER MANUAL BEAM LIFTING CLAMP:

Safety First! Guarantee your personal safety by carefully reading the following safety instructions First.

Before using the clamp you must inspect the area, where the profile needs to be clamped, on damages and possible defects. Check the frame on damages, rips or deformation. This could point out overload. Check the threaded spindle, the spindle must go in and out easily. If this is not the case the clamp must be taken out of order. Verify whether the working load limit ( WLL ) and the jaw-opening of the clamp is sufficient for the load created in the lifting situation.

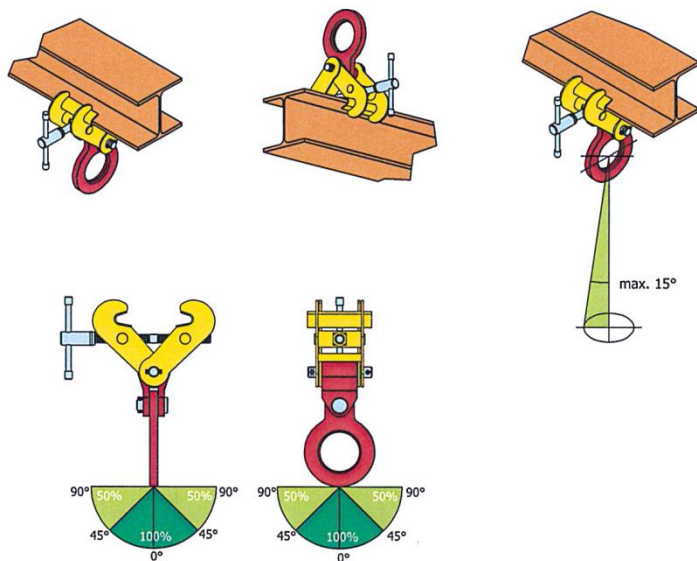
Attach the lifting clamp to the hoisting mechanism :

- directly to a crane hook by means of a safety shackle;
- by means of a coupling link or D-type shackle;
- by means of a sling or chain, if necessary, in conjunction with a coupling link or D-type shackle.

There are different kind of lifting clamps ( beam lifting clamp, safety beam lifting clamp and bulb screw clamp ).

### Beam lifting clamp:

A beam lifting clamp is suitable for lifting and handling steel beams and steel strips ( see picture below).



Permissible positions for using the clamps are lifting and handling from a vertical position and lifting work, where the lifting clamp is used as a lifting point. The lifting clamps feature a screw thread mechanism consisting of a threaded spindle and tow spindle nuts. As soon as the spindle has been actuated, this mechanism ensures that a constant clamping force is applied by the jaws. In this way the clamp will not work itself loose from the object. The linked clamping parts ensure that the

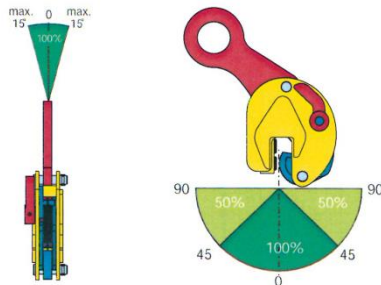
clamping force continues, which means that the load continues to be held firmly. As there is no cam and pivot arrangement, the object to be lifted does not become damaged.

### Use:

Check that the threaded spindle is free of dirt and if necessary clean it with a wire brush. Remove excess dirt form the beam or strip where the lifting clamp is to be applied. Open the clamp by using the threaded spindle. Position the jaw as far as they will go over the beam or strip, ensuring that the clamp is positioned so as to balance the load when it is being lifted. Close the clamp by reversing the threaded spindle as far as it will go ( finer tight). Start the lifting and check whether the clamp is shifting. Make sure that the load is in a stable position, before taking the clamp off the plate.



**Safety beam lifting clamp:**

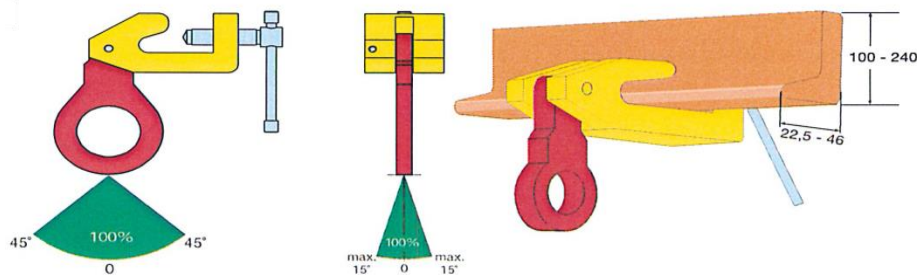


The safety beam lifting clamp has especially been developed for the lifting of steel beams. Permitted positions for using the clamp are the lifting and transporting of beams in horizontal and vertical position. A special lifting shackle is used to place the centre of gravity of the beam to be lifted directly beneath the lifting shackle. This maintains the balance of the beam, once it is lifted. The lifting clamp features a safety mechanism consisting of a locking device, a tension spring and a lever. Once the lever is operated, the safety mechanism provides constant pretensioning of the cam on the steel plate, this ensuring that the clamp does not slip when the lifting force is applied. When a load is being lifted, the clamping force on the cam is increased by the weight of the load. It also ensures that the clamp will not work itself loose from the plate when the lifting force is off the clamp.

**Use:**

Use the lever to open the clamp. Place the jaws as far as they will go over the beam, making sure that the clamp is positioned so as to balance the load when it is being lifted. Make sure that the lifting shackle is facing towards the centre of the beam or structure. Close the clamp by fully turning the lever back. Lift gently to allow the lifting force to be applied; check whether the clamp is slipping. If the load is slipping, read the above mentioned instructions again. Make sure that the load is in a stable position, before taking the clamp off the plate.

**Bulb screw clamp:**



The bulb screw clamps ( see picture above) have been specifically designed for the provision on a bulb profile of a temporary lifting point. The bulb screw clamp is used individually to create a temporary lifting point on a bulb profile. The lifting shackle may be subjected to a lateral load of up to 45° left or 45° right in relation to the perpendicular and sideways 15°.

**Use:**

Open the clamp by means of the thread spindle. Position the clamp completely onto the bulb profile, in such a way that the bulb falls into the recess of the clamp and the flat side of the bulb profile faces the spindle side. Close the clamp by fully ( i.e. finger tight ) closing the thread spindle. Mount the hoisting element onto the lifting shackle and start lifting gently. Make sure that the clamp does not shift. If the clamp shifts or if the load becomes unbalanced, repeat the above. When the load has reached its destination, lower the crane hook until the clamp is fully unloaded. This can be verified by the slackness of the hoisting chain and a fee movement of the lifting shackle of the clamp. Take the hoisting element from the lifting shackle while holding on to the frame. The bulb screw clamp is removed from the construction by loosening the thread spindle.



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Safety instructions:

- 1 The clamp must be inspected and tested every year by an expert body.
- 2 Never work with an untested clamp.
- 3 Keep at a distance when lifting and never stand under the load.
- 4 Do not use the clamp if damaged.
- 5 Never lift more than one beam or load at a time.
- 6 Never lift beams that are heavier than the working load limit ( WLL ) , as indicated on the clamp and the test certificate.
- 7 Do not lift beams or strips smaller or bigger than the jaw opening, as indicated on the clamp and the test certificate.
- 8 Do not attach the bulbclamp to any other parts but bulb profiles.
- 9 When simultaneously operating a number of lifting clamps facing each other, use lifting slings or chains which are of sufficient length to ensure that the permissible lifting angles are respected.
- 10 When simultaneously operating a number of lifting clamps side by side, use a lifting beam ( equalizer ) and lifting slings of chains of sufficient length to ensure that the lifting shackles on the clamps are never subjected to a lateral load of more than 15°.
- 11 Do not place the clamp on tapered or conical sections of the beam to be lifted.
- 12 Make sure that the clamp(s) is/are positioned so as to balance the load when it is being lifted.
- 13 Remove all grease, oil, dirt and corrosion at the point where the clamp is to be attached.
- 14 The clamp is only suitable for use in normal atmospheric conditions.
- 15 If bulb screw clamps are being used, make sure that the size of the bulb profile matches the range of the bulb screw clamp.
- 16 The operating temperature of both lifting clamps range from +100°C ( +212°F) and minus 40° C (-40°F).
- 17 Ensure that the lifting shackle can never be subjected to 15° lateral load.
- 18 A free fall or uncontrolled swaying at the crane hook resulting in objects being struck may cause damage to the clamp. If this occurs, check whether the clamp is in good working order before using it.
- 19 Lifting clamps are not suitable to be used as permanent joints.
- 20 Do not modify the clamp ( by welding, grinding, etc. ), as this can adversely affect its operation and safety, thereby nullifying any forms of guarantee and product liability.
- 21 Check whether the clamp has any visible damage and operate the spindle to check whether the clamp opens and closes smoothly.
- 22 Ensure that all attachments have been tested and are of the correct tonnage. Make sure that coupling links and shackles are large enough to allow the clamp to move freely in the hook.
- 23 Check whether the teeth of the cam are free from dirt and if necessary thoroughly clean with a wire brush.