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Article:	Green pin® Horizontal plate clamp type EH(S)	Revision:	A
Subject:	Instructions for use - Green Pin® Horizontal plate clamp, type EH(S) (P-6635 and P-6636)		
Note:	Main dimensions, general info and warnings can be found in our latest catalogue.		



P-6635

P-6636

Green Pin® Horizontal plate clamp type EH(S)

- Material : Carbon and alloy steel
- Safety Factor : MBL equals 5 x WLL

1) Description of the Horizontal plate clamp

The clamp is designed to hoist (rigid) metal plates into horizontal position and to transport them in such a way.

EH and EHS clamps differ in their jaw opening dimensions of 0-60 mm and 0-100 mm respectively.

The clamp consists of the following three main parts (see Figure 1):

- 1) Segment;
- 2) Body;
- 3) Segment bolt with dowel pins;

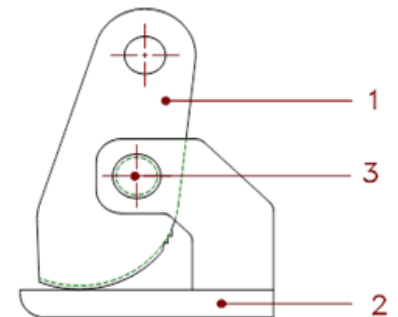


Figure 1

The plate is clamped between the segment and the base by the lever mechanism when tension is applied to the segment (see Figure 2).

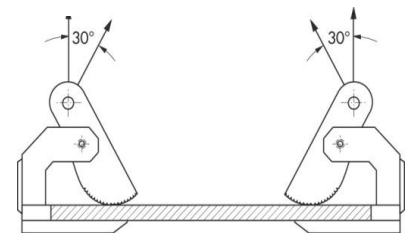


Figure 2

2) Instructions for use

Ensure, that the Working Load Limit (WLL) of each clamp is not exceeded and the load direction does not exceed 30° (see Figure 2), The side ways load direction may not exceed 10° (see Figure 3).

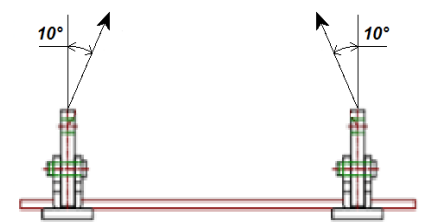
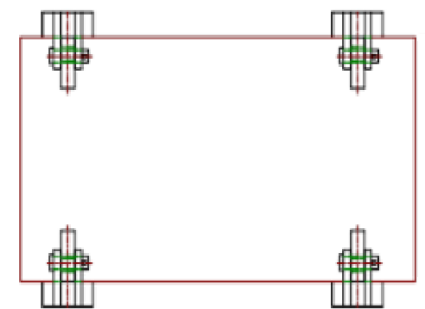


Figure 3

Fitting the clamp

- Never attach the clamp directly to large hooks. Always use suiting lifting components, e.g. shackles for wire rope, connection links for chain and master links.
- Select a equal or higher WLL for the required tackle (wire ropes, chains, load hook, etc.) than for the clamp. See Table 4.
- Use accessories which meet the applicable safety requirements.

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Positioning the clamp

Before use, the clamps must be inspected. See paragraph Inspection for the criteria.

Always use a suitable clamp for each hoisting job. Consult the supplier if in doubt;

- 1) Pull the segment back to open the jaw fully;
Move the clamp until the plate projects as far as possible into the jaw opening of the clamp. Make sure the lifting clamp base is fully connected with the plate to be lifted. Make sure the edge of the plate is not placed onto the weld of the plate lifting clamp;
- 2) Repeat this procedure with the other clamp(s);
- 3) Hoist the clamps a little until the teeth of the segment grip the plate.
- 4) Inspect again the positioning of clamps and slings;
- 5) The plate can then be transported horizontally (see figure 2). Observe the points overleaf.

Warnings and use limitations

Information indicated on clamp:

- EH301036: Type/serial number;
- WLL: kg: Maximum vertical load which may be exerted upon the clamp.
0-60mm: Minimum and maximum plate thickness which can be clamped.
- Do not place hands and/or fingers between the segment and the load when the load is clamped in order to raise it.
- The grip length must be kept as small as the risk of the load buckling allows, and the load must sag only slightly between the grip points.
- When the load direction angle (see Figure 2) exceeds 30°, the clamps and slings must be derated according Table 4:

Load angle	Clamp WLL	WLL lifting components
0-30°	100%	1.2 x Load
30-45°	150%	1.4 x Load
45-60°	200%	2.0 x Load

- Always use the required number of clamps for the required balance, ensuring that the side load angle does not exceed 10° (see Figure 3).
- The surface of the load must be free of:
 - Coatings;
 - Dirt;
 - Grease.
- The service temperature (both the ambient temperature and the temperature of the load) must be between 0°C and +100°C.
- The maximum surface hardness of the load is 50 HRC.
- Unauthorized modifications and/or alterations to the clamp are prohibited.
- Subjecting the clamp to loads exceeding the specified Working Load Limit (WLL) is prohibited. Only use clamps for their proper purpose. Never use the clamps to pull plates from beneath stacks, for example, or use as vertical clamps.
- Take any bystanders into account, and ensure that the load remains within the operator's view.
- Keep in mind that the load may move when it is lifted off the ground if the crane is not above centre of gravity of the load.
- Do not swing the load by e.g. transporting it too quickly.
- Never transport more than one plate at a time.
- Do not stand under the load as it is hoisted or transported.
- Clamp rigid metal plates only. Do not clamp any soft materials, such as wood or lead.

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- Wear personal safety equipment such as safety shoes and helmet.
- Modifications on the clamp such as grinding or welding, etc. is prohibited, as this affects the heat treatment of the clamp. If necessary, spare parts can be requested at Van Beest B.V.
- The serviceability of the clamps is ensured only when clamps are used with the original parts fitted.
- Take clamps which have been overloaded out of service. Refer to the WLL, indicated in the catalogue.

Removing the clamp

The clamp can be removed by relieving the hoisting force on the clamp, as follows:

- 1) Release the tension on the ropes a little;
- 2) Pull the segment back to widen the jaw opening;
- 3) Pull the whole clamp away from the plate.

Note: Slight marking of the plate is inevitable.

Inspection

The points below must be observed during inspection:

- The clamp (specifically, the condition of the teeth and welds) must be first be checked carefully each time it is used. The criteria are as follows:
 - Visibly damaged teeth;
 - Weld cracking;
 - Tolerance between the segment bolt and the hole must not exceed 0,5 mm;
- Remove grease and oil from the segment and the base at frequent intervals.

Maintenance

Remove the product from service, before replace any part.

When necessary the clamp can be disassembled as follows:

- 1) Remove one of the dowel pins;
- 2) Withdraw the segment bolt to free the segment;
- 3) Remove the segment.

Note: Check operation of the clamp following assembly.

Worn parts may be disposed of as scrap iron, properly marked, for recycling.

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If you have further questions, please do not hesitate to contact us.

Kind regards,

Van Beest Product Management

