

## Model H

### HORIZONTAL

### SPRING-LOADED CAM

### APPLICATION

The Model H is a horizontal lifting clamp intended to be used in pairs (Fig. 39) or sets of pairs for transporting plate. A single operator can use these clamps due to their dual spring, which hold the cam of the first clamp in place while the second is being positioned.



Figure 39

### OPERATION

#### Step 1

Before using any Campbell® clamp, refer to the Application section at the beginning of this manual to be sure the lift to be made is appropriate for the size and style of clamp. Know the type of material to be moved before making a lift. Do not lift plate, or plates, if they will buckle under load. Some exotic steels are too hard to allow the teeth of the cam to sink in. This may be true of structural members and fabricated sections.



**WARNING!** Do not lift a plate or member with a hardness greater than 400 Brinell (43 Rockwell C)

#### Step 2

Select a clamp with the appropriate capacity and grip range. The model designation, capacity and grip range are shown on the face of the clamp (Fig. 40).



**WARNING!** Never lift a weight greater than the Working Load Limit shown on the clamp.

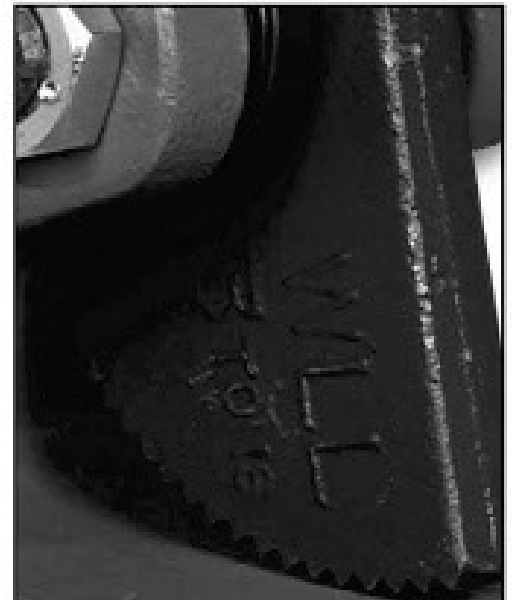


Figure 40

Note: The 3T WLL for the "H" clamp is 3T per clamp.

### Step 3

Inspect the clamp before each lift (Fig. 41).

- A. Inspect the cam and pad for wear and defects. Gripping surfaces must be free of foreign matter.
- B. Inspect the shackle and visible linkage for elongation, distortion, wear or damage.
- C. Inspect the clamp body for wear, damage or distortion.
- D. Do not use any clamp that needs repair.

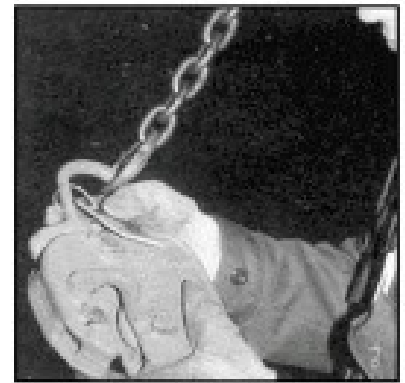


Figure 41

If in doubt, refer to the Maintenance and Inspection section of this manual for detailed instructions.

### Step 4

Determine if more than one sling is required to balance the load. When the size or shape of a plate or fabricated section is too large for a pair of clamps to properly balance the load, the use of a multiple sling or spreader bar is required (Fig. 49).

- A. All clamps utilized in a multiple sling or spreader bar assembly must be rated at the same capacity.
- B. The lifting angle (Fig. 42) between the sling legs on opposite sides of the load should be less or equal to 60 degrees ( $\beta \leq 60^\circ$ ). The lifting angle between the sling legs on same side of the load should be less or equal to 20 degrees ( $\theta \leq 20^\circ$ ).
- C. The Working Load Limit of any multiple sling assembly (Fig. 42) or spreader bar assembly (Fig. 43) must not be more than the combined Working Load Limit of two clamps, regardless of the number of clamps in the assembly.

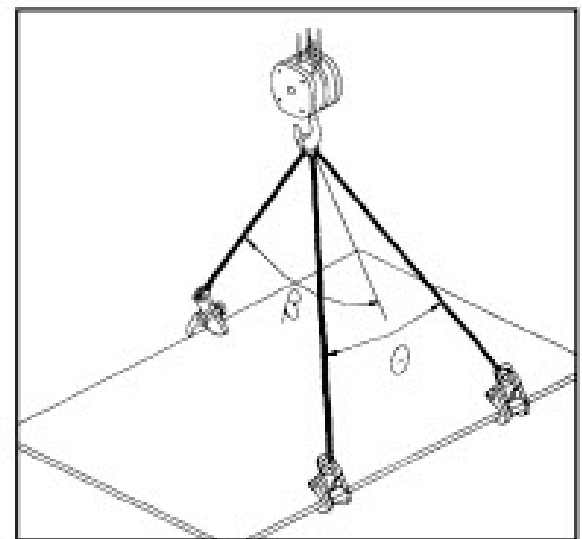


Figure 42

## Step 5

Position the clamp(s) to balance the load. Position the clamp(s) so the lifting force of the crane is directly in line with each clamp's lifting shackle, and the load is evenly distributed (Fig. 43).

**⚠ WARNING!** Never attach a clamp directly to the crane hook. Use a sling between the crane hook and clamp to minimize interference in the clamp operation.

**⚠ WARNING!** Do not side load. Never exceed an angle of 10° from vertical.

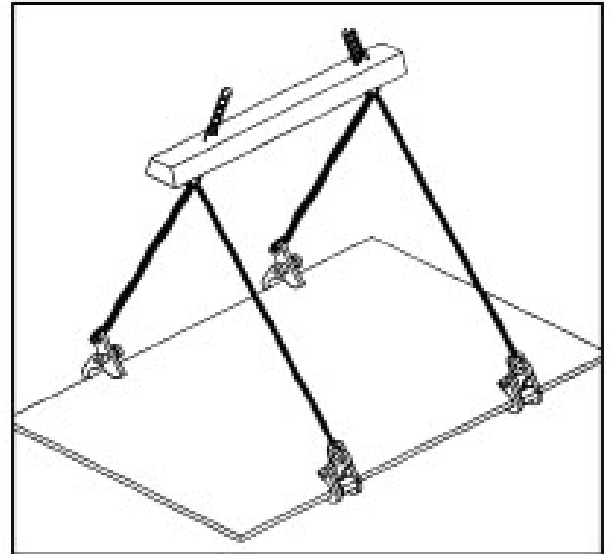


Figure 43

## Step 6

Engaging the clamp:

### HORIZONTAL

- A. Press down on the back side of the cam until the cam retracts.
- B. Install the clamp over the plate to the full depth of the throat opening.
- C. Release the back side of the cam so the cam engages the plate.

## Step 7

Lift slowly and smoothly. The operator should stand clear of the load and never lift over people or machinery.

**⚠ WARNING!** Do not begin to lift until all personnel are clear of the lift area. Never stand under or near a member being lifted.

**⚠ WARNING!** Do not jerk or bump load while lifting.

## Step 8

After the plate is fully supported and at rest, the H clamp can be removed by retracting the cam. To do so, press down on the cam while at the same time slide the clamp away from the plate.

## Step 9

Campbell® recommends inspection of each lifting clamp before and after each lift. Refer to the Maintenance and Inspection section of this manual for detailed instructions.

 **WARNING!** Do not use a clamp that needs repair.