



BEAM CLAMPS INSTRUCTION MANUAL



MODEL BC-2, -4, -6, & -8

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PRODUCT INTRODUCTION



Thank you for purchasing a BC-2, -4, -6, or -8 model beam clamp (“beam clamp,” “BC,” or “clamp”). These beam clamps are durable, high-quality products rigorously engineered for both dependability and simplicity. Although use and maintenance procedures are relatively intuitive, any person who might use or maintain this product must be familiar with the instructions provided in this manual. Dimensions and other product specifications appear in the following table:

Model	Beam Flange Width in Inches (~cm)	Uniform Max. Rated Load in Pounds (~kg)	Net Weight in Pounds (~kg)
BC-2	2½ in. to 8½ in. ~(6.4 to 22)cm	2,000 (~909kg)	18 (~8kg)
BC-4	2½ in. to 9¼ in. ~(6.4 to 23)cm	4,000 (~1,818kg)	20 (~9kg)
BC-6	4½ in. to 8½ in. ~(11 to 22)cm	6,000 (~2,727kg)	28 (~13kg)
BC-8	4½ in. to 8½ in. ~(11 to 22)cm	8,000 (~3,636kg)	40 (~18kg)

Vestil Manufacturing Corp. created this manual to acquaint persons authorized to use and/or maintain this beam clamp with safe use and maintenance procedures. **Employers are responsible for instructing employees to use the product properly. Each person(s), who might use or perform maintenance on the beam clamp, must read and understand every instruction BEFORE using or performing maintenance activities. Users should have access to the manual at all times and should routinely review the directions.**

Although Vestil diligently strives to identify foreseeable hazardous situations, this manual cannot address every conceivable danger. The end-user is ultimately responsible for exercising sound judgment at all times.

SAFETY PRINCIPLES This manual addresses provides specifications and describes recommended use and maintenance practices. Each beam clamp conforms to the generalized specifications disclosed in this manual and fulfills our demanding standards for quality, safety and durability.

Vestil Manufacturing Corp. recognizes the critical importance of workplace safety. Each person who **might** participate in the use or maintenance of the product must read this manual **and fully understand the directions BEFORE using or performing maintenance on the beam clamp. If you do not understand an instruction, ask your supervisor or employer for assistance. Failure to adhere to the directions in this manual might result in serious personal injury or even death.**

Vestil is **not liable** for any injury or property damage that occurs as a consequence of failing to apply either: 1) the instructions that appear in this manual; or 2) the information provided on labels affixed to the product. Furthermore, failure to exercise good judgment and common sense might result in property damage, serious personal injury or death. Such injury or damage is solely the fault of the person(s) who fail to exercise good judgment; it is **not another responsibility delegated to manufacturers.**

This manual uses SIGNAL WORDS to classify personal injury risks and situations that might lead to property damage, as well as to draw attention to safety message(s). The reader must understand that each signal word indicates the seriousness of the described hazard.

- ⚠ DANGER** Identifies a hazardous situation which, if not avoided, **WILL** result in DEATH or SERIOUS INJURY. Use of this signal word is limited to the most extreme situations.
- ⚠ WARNING** Identifies a hazardous situation which, if not avoided, **COULD** result in DEATH or SERIOUS INJURY.
- ⚠ CAUTION** Indicates a hazardous situation which, if not avoided, **COULD** result in MINOR or MODERATE injury.
- NOTICE** Identifies practices likely to result in product/property damage, such as operation that might damage the beam clamp.

SAFETY GUIDELINES

Failure to read and understand the instructions included in this manual before using or servicing the beam clamp constitutes misuse of the product. Study the entire manual before you install the product. Read the manual to refresh your understanding of the safe use and maintenance procedures explained on p. 5-10. DO NOT attempt to resolve any problem(s) with the device unless you are both authorized to do so and certain that it will be safe to use afterwards.

⚠ DANGER

Electrocution might result if any part of the beam clamp, hoist, or the object supported by the clamp contacts electrified wires. Reduce the likelihood of electrocution by applying **common sense**:

- DO NOT *contact* electrified wires with any part of the clamp, hoist, crane or the object grasped by the clamp;
- DO NOT use or store the beam clamp in an area where contact with electrified wires is likely or possible;
- Before connecting the clamp to a hoist, inspect the usage area for unusual conditions and implement precautions that account for those conditions.

⚠ WARNING

If this product is used improperly or carelessly, the operator and/or bystander(s) might sustain serious personal injuries or could be killed. To reduce the likelihood of injury:

- Consult the safety messages included in the manual(s) for your crane, trolley, hoist, and any other device used in conjunction with the clamp.
- **DO NOT open the clamp while lifting and/or moving material.** BEFORE opening the clamp, be certain that the beam is fully supported by the ground or other surface, and is fully immobilized (can't fall over, roll, slide, or move in an uncontrolled manner). If a second person is needed to immobilize the load, find someone to help you. To open the clamp, turn the handle counterclockwise (see FIG. 1 on p. 6). **DO NOT open the clamp while using it to lift and/or move material.**
- **ALWAYS** inspect the beam clamp before each use according to the inspection procedures described in the most recent edition of ASME B30.20. B30.20 also recommends "frequent" and "periodic" inspections.
- Properly maintain the beam clamp according to the maintenance procedures on p. 11-12 of the manual. Vestil developed these procedures to supplement the maintenance practices of ASME B30.20.
- **ALWAYS** attach the beam clamp to a safety hook (e.g. a hoist that has a safety hook attached to the end of the chain or rope), or to a connection that includes safety mechanisms to prevent unintended detachment from the hoist. **DO NOT** use the device on a hoist hook that might accidentally or unintentionally release the clamp. **DO NOT** connect the clamp to a safety hook that does not function properly or that is damaged.
- **DO NOT** grip a beam that has any debris or surface contamination on it that might affect the quality of the connection between the clamp and the load. Remove the debris, such as oil, grease, water and dirt **BEFORE** clamping the beam.
- Clear all debris, including fluids, from the path of travel if the job requires moving the load to a new location **BEFORE** picking up the load. If moisture is present in the path of travel, absorb it before using the clamp.
- **Make sure that no person is in the travel path.**
- **DO NOT** remove or obscure any label. Verify the placement and legibility of all labels as shown in FIG. 2 on p. 12. If a label is damaged or unreadable, immediately contact Vestil for a replacement. **DO NOT** use the clamp **UNLESS** all labels are securely attached and readable.
- **DO NOT** attempt an unbalanced lift. Before performing the lift, attach enough clamps to properly balance the load. (See "Use Instructions," p. 7-10).
- **DO NOT** sit on or apply any weight/pressure to a beam held by the clamp.
- **DO NOT** attempt to lift material that weighs more than the rated load of the clamp. **ALWAYS** make sure that the load weighs no more than the rated load.
- **DO NOT** lift a load higher than necessary. (See "Use Instructions" on p. 7-10).
- **DO NOT** raise the load over your feet or any other part of your body.
- **DO NOT** use the clamp to lift material over people or to lift any apparatus that supports people, such as a work platform. The clamp is designed ONLY to lift beams.
- **DO NOT** get in front of or behind a suspended load while moving it. Always orient yourself so that the beam is visible to you. You are less likely to be injured if the load remains within sight at all times. Stand to one side of the beam and hold onto the hoist's safety hook with one hand to stabilize the load as you move it to the desired location.
- **DO NOT** leave a suspended load unattended. An unattended, suspended load creates a risk of injury to yourself and others. Always move the beam to its desired location, set it down and properly immobilize it, and then disengage the clamp from the beam. Disconnect the clamp from the hoist **BEFORE** leaving the work area.

Labeled Photographs

****Note: Vestil does NOT provide replacement parts for this product. The following diagram is solely intended to clarify terms that appear in the Use (p. 5-8) and Maintenance Instructions (p. 9-10).****

FIG. 1A: Side View

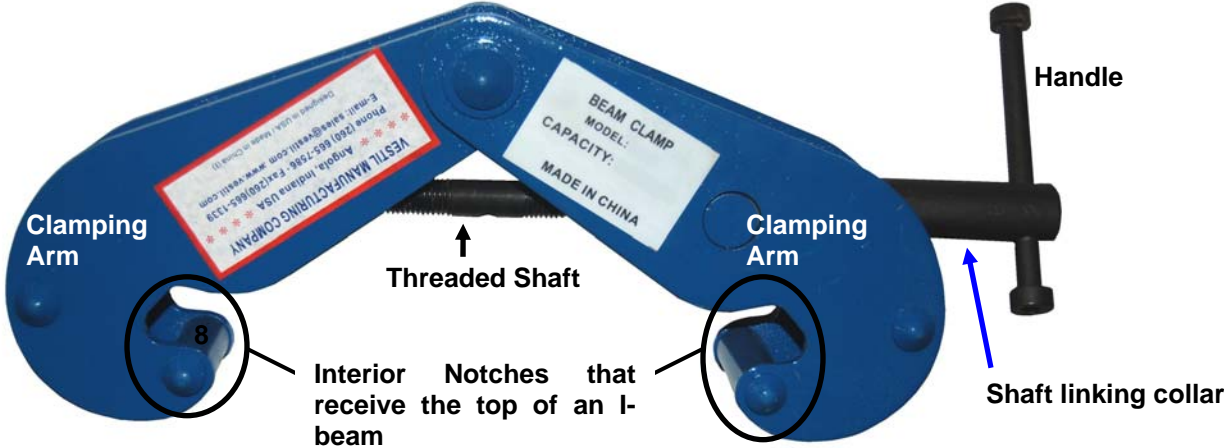
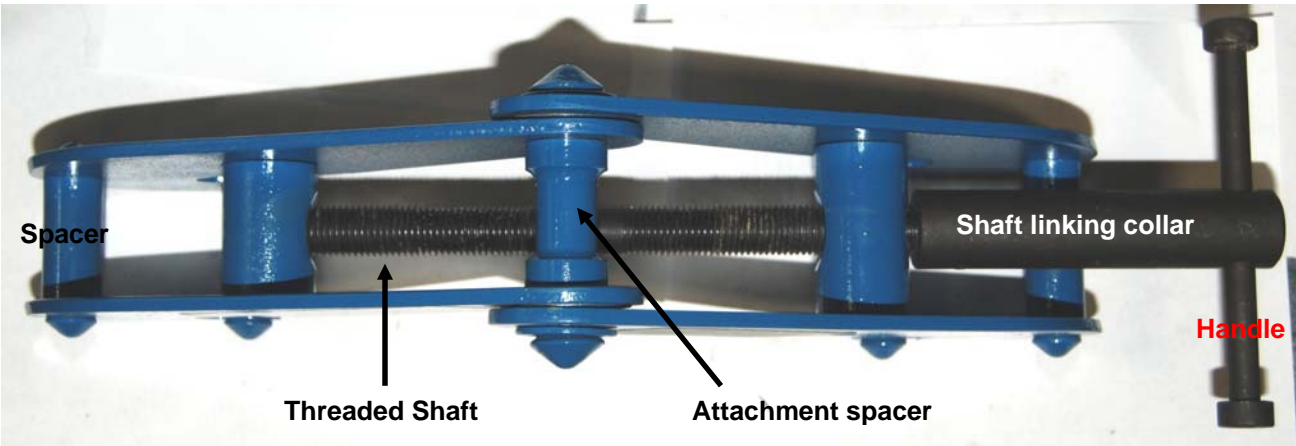
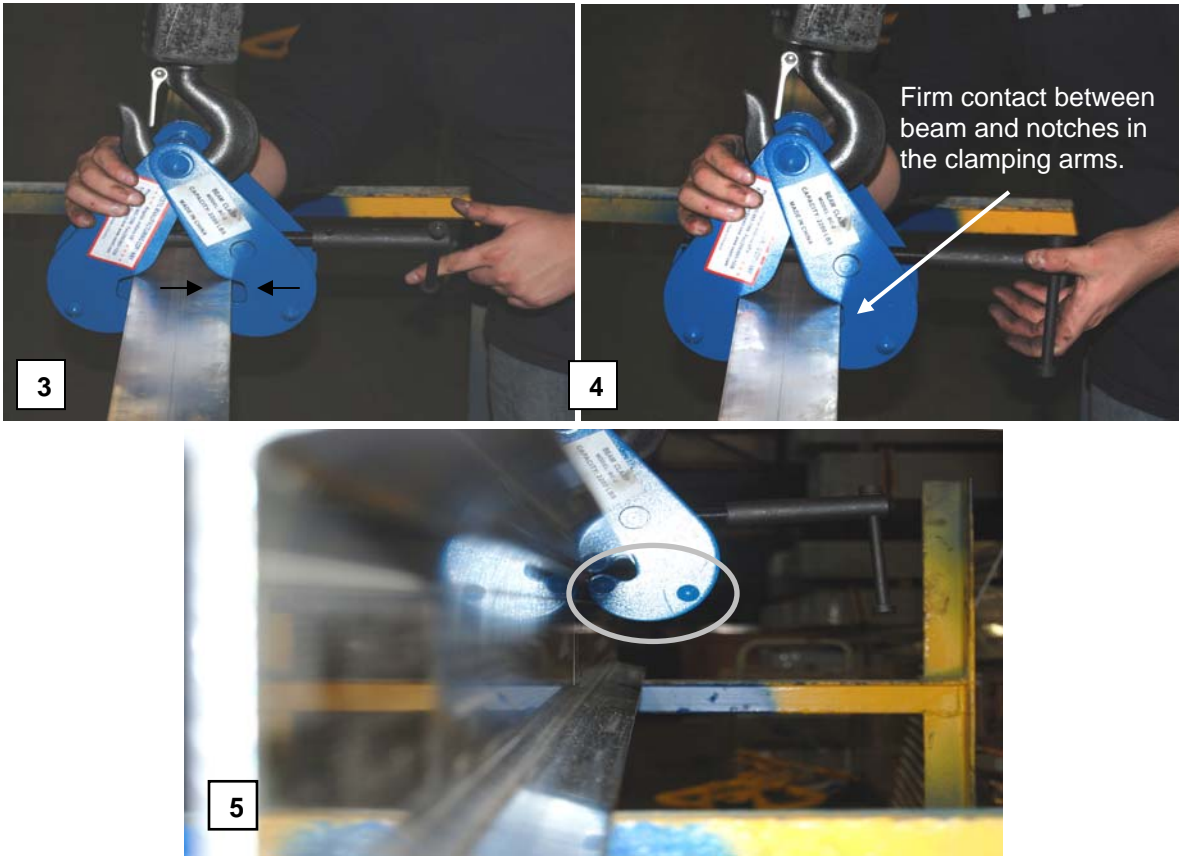


FIG. 1B: Top View

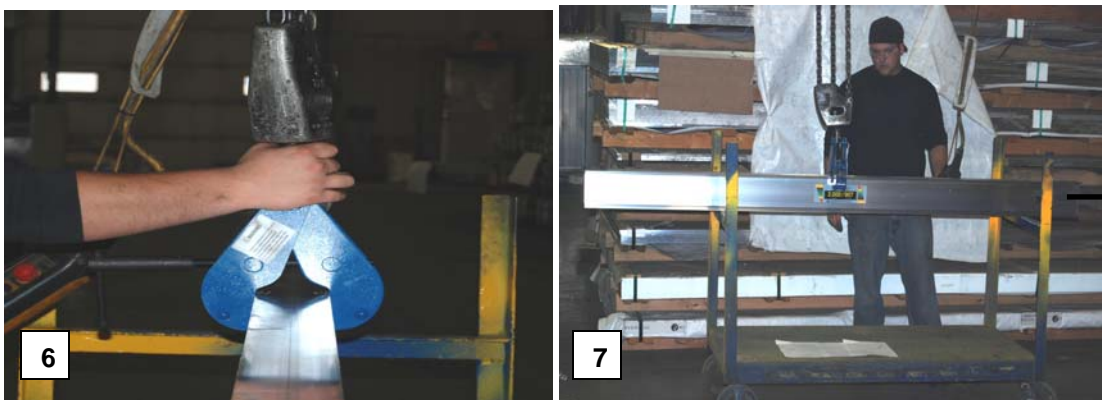


Step 4: Engage the beam with the tongs. Turn the handle clockwise until the clamp firmly grasps the beam. Each clamping arm is formed to include an interior notch. These notches receive the top of an I-beam. Tighten the clamp until the top of the beam contacts all four of the clamping arms within the notches as shown in photos 3 and 4. The angled teeth (circled in photo 5) allow the clamping arms to engage the underside of the top of an I-beam. Adjust the position of the tongs to allow all 4 teeth to make solid contact with the beam.



Step 5: Test the balance of the beam in the clamp. Grasp the hoist hook to stabilize the lift (see photo 6), and raise the beam just a few inches from the ground (or other supporting surface). The beam is improperly balanced if it slides or hangs lower on one side. If improperly balanced, return the beam to the ground/supporting surface and immobilize it. Reposition the clamp to improve balance by moving the clamp slightly towards the end that hung lower during the test; then raise the object again to see if the beam is balanced. **DO NOT** proceed to the next step until the load is properly balanced and stabilized. **DO NOT** use the clamp if you cannot achieve a balanced hold of the beam; use a different device to lift and move the beam.

- If a single clamp cannot balance the beam, use a combination of two or more clamps. For instance, you could connect a chain sling to the hoist hook, and attach a beam hook to each end of the sling via safety hooks. Afterwards, retest the balance of the beam according to the process described in Step 5. Raise the beam **ONLY** after achieving proper balance.



This end of the beam hangs lower than the other. Return the beam to the ground or supporting surface and reposition the tongs by moving them closer to this end.

Step 6: Lift the beam. To raise the beam, steady the clamp and load by grasping [one of] the hoist hook[s]. The photographs demonstrate the procedure as it applies to a lift using a single beam clamp. For combinations of two or more clamps, grasp the safety hook of the clamp attached to the back end of the beam (as shown in the diagram next to photograph 8).

Lift the load to approximately waist height. Continue to grasp the hook. Direct the load to a position above the desired location. **Refer to the “Warning” messages and follow the lifting rules below.**

WARNING

Review all “Safety Guidelines” on p.5 and always follow these “Lifting Rules” when using the clamp:

1. NEVER lift material over yourself or other persons. Inform persons in the area that you are going to use the clamp and make sure that no one is in the starting point, path of travel, or end point.
2. DO NOT press down on the beam. Grasp ONLY the hoist hook to stabilize the load while raising, lowering and/or moving to a new location.
3. **Always stand at arm’s length to the side of the load** and hold onto the safety hook as shown in photo 8. Make sure that your clothing, feet, and all other body parts stay out from underneath the load. This stance allows the operator to exercise some control of the load while maximizing safety.
4. The beam must remain level during movement. Walk slowly to keep the beam level. If the object has to be removed from a container or be lifted over an obstacle, continue to grasp the hoist hook. Use a different device if you will not be able to maintain the safe stance described in Rule 3.

If you use a motorized trolley:

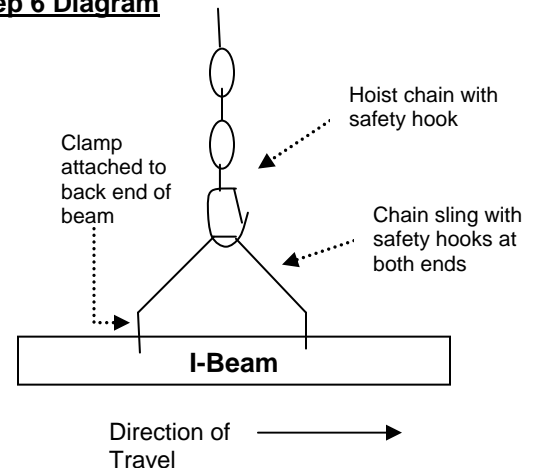
- DO NOT push or pull the clamp or the beam. Allow the trolley to provide all movement. Your hold on the hook is a means ONLY for stabilizing the load.

If you use a manual trolley,

- Grasp the hoist hook with one hand. DO NOT pull the beam in the direction of travel. Use the hand that grasps the hoist hook to move the trolley in the intended direction.



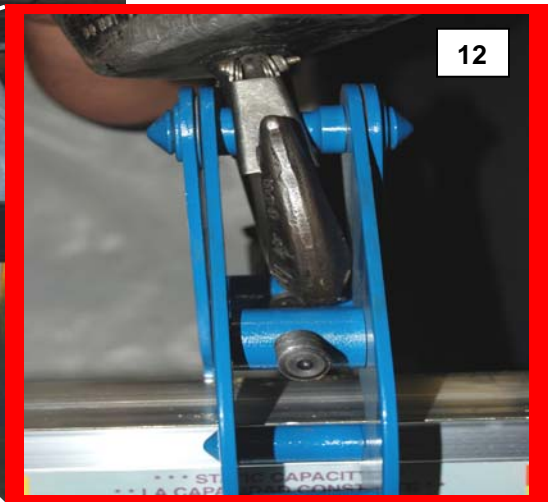
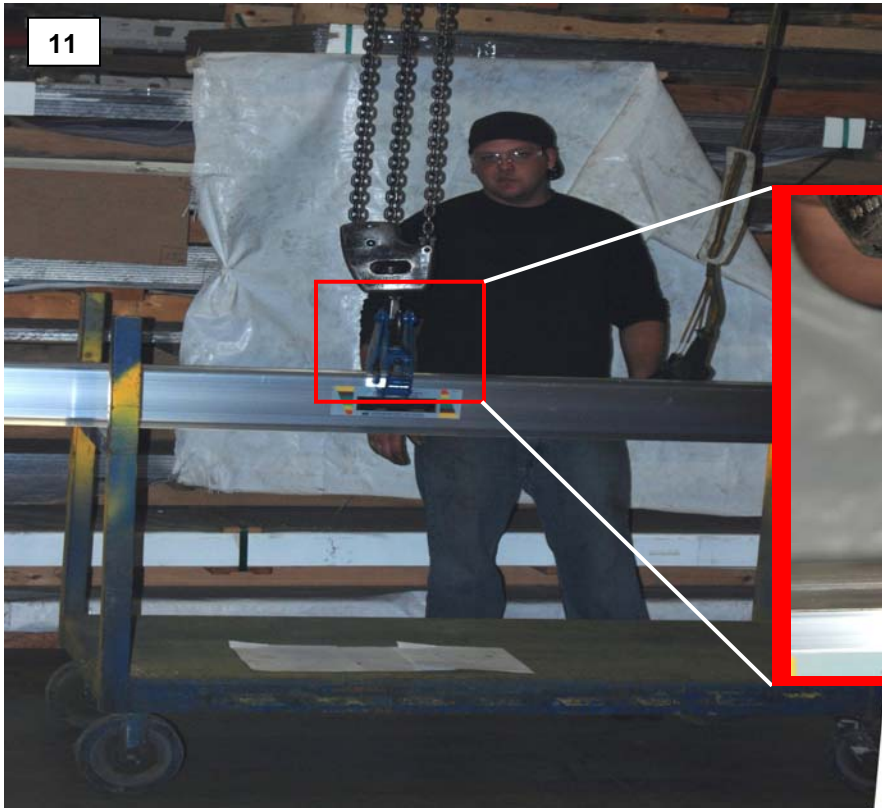
Step 6 Diagram



Step 8: Lower the beam. Make sure that the beam is not swinging or rotating, and then slowly lower the hoist until the beam contacts the ground or other supporting surface; lower the load sufficiently to create slack in the

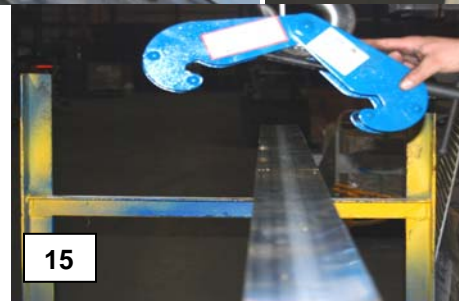
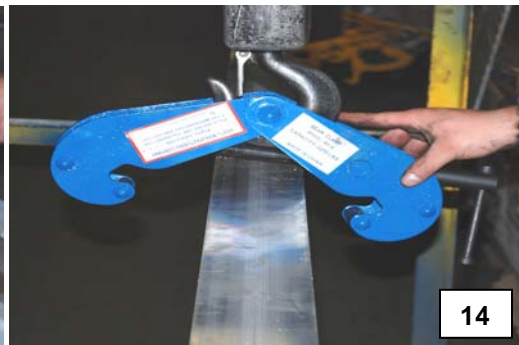
hoist chain (or rope) so that the interior of the hoist hook and the attachment spacer are no longer in contact (see Photos 11 and 12). DO NOT disconnect the clamp from the beam until you appropriately immobilize the beam to prevent it from rolling, falling over, or moving in an uncontrolled manner.

In the following photographs, the beam weighs little and lacks dangerous projections that could cause injury. It can easily be controlled by the operator. If you cannot control BOTH the clamp and beam without difficulty, find someone to help you. However, despite these suggestions you should always use the procedures developed by your employer for safely handling beams.



Step 9: Disengage the clamp. Turn the handle counterclockwise to open the clamp and release the beam. Raise the hoist high enough that the clamp no longer contacts the beam, and then disconnect the clamp from the hoist.

NOTICE You should fully open the clamp to prevent accidental or partial engagement of the beam.



Maintenance and Inspections:

A designated person must verify that the clamp complies with all regulations, codes, and standards that apply to "Under-the-Hook Lifting Devices" in the location where the clamp is *used*. The person(s) designated to conduct inspections must do so before the clamp is used for the first time, and EACH time it is installed for use.

Inspections:

NOTICE The end-user is responsible for performing inspections as recommended in ASME B30.20. The standard categorizes examinations based on regularity of performance. Highlights of the recommended inspection procedures appear below. However, the full procedures (in the published standard) should be followed.

WARNING DO NOT use a clamp that is structurally damaged. Structural damage includes, but is not limited to, bending, warping, cracking or other deformation of one or more of the spacers, clamping arms, or of the threaded shaft (see FIG. 1A on p.4). Restore the clamp to normal operating condition **BEFORE** using it again.

Inspections Before & During EVERY lift: visual examination must be performed by the operator prior to AND during each lift. In particular, the *operator* should inspect for:

1. Debris on the load surfaces; AND
2. Condition and operation of the controls.

Frequent Inspections: the specific meaning of "frequent" varies from daily to monthly depending on the service classification (normal, heavy, severe, and special/infrequent) of the clamp. Definitions of the service classifications appear in ASME B30.20. The *operator* or other *designated person(s)* should visually inspect the clamp for:

1. Deformation, cracking, or excessive wear of any part of the clamp;
2. Operating mechanisms for conditions that interfere with proper function; AND/OR
3. Loose or missing fasteners, stops or nameplates.

Periodic Inspections: complete visual inspections performed AND recorded by a *qualified* person. The inspection should specifically look for:

1. Loose bolts or fasteners;
2. Excessive wear of friction pads, linkages, and other mechanical parts; AND/OR
3. Excessive wear at the points where the clamp connects to the hoist hook, and load support clevises or pins.

Maintenance: the end-user must implement a maintenance program to ensure the proper function and safety of the clamp. A qualified person may establish a program that is used in preference to the maintenance procedures described below. However, if you apply the procedure that follows, complete **EVERY** step each time maintenance is performed.

NOTICE Vestil DOES NOT provide replacement parts for the beam clamp. Any condition which requires replacement parts can **ONLY** be corrected by purchasing a new clamp.

WARNING ONLY qualified persons may perform maintenance on the clamp. A qualified person is someone "who, by possession of a recognized degree in an applicable field or certificate of professional training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter [beam clamp] and work [use of the beam clamp]." See ASME B30.20-0.2-2003.

Step 1: All sources of power must be disconnected, locked out and tagged, "Out of Service."

Step 2: Disconnect the clamp from the hoist hook and tag it, "Out of Service."

Step 3: Perform all adjustments indicated as necessary during any inspection (every lift, frequent, or periodic).

Step 4: If other conditions exist which require new/replacement parts to repair, contact Vestil to order a **new clamp**. Deformity, corrosion, rusting, or excessive wear of fasteners, clamping arm(s), and/or the attachment spacer or any other spacer warrants immediate replacement of the clamp.

⚠ WARNING The reader should understand the significant difference between “Adjustments” and “Repairs,” and “Modifications”.

- An adjustment or repair refers to a simple correction that restores the clamp to normal operating condition, such as tightening loose fasteners, or removing debris from the surface of the clamp. **DO NOT** use the clamp if adjustments and/or repairs are incomplete! Return the clamp to service **ONLY** after finishing all necessary repairs and adjustments.
- A modification is a change that alters the clamp from normal operating condition, like bending the structural members. **NEVER** modify the clamp without the **express, written approval of Vestil**. **Modifications may render the clamp unsafe to use.**

Step 5: Perform a periodic inspection, as recommended in ASME B30.20.

Step 6: Make a dated record of the repairs, adjustments and/or replacements made.

Markings:

Only use the clamp if both labels are readable and undamaged.

FIG. 2: Product label placement



Hanging tag attached to spacer:
Label #675 on one side

⚠ WARNING	⚠ ADVERTENCIA
DO NOT exceed rated capacity DO NOT use if damaged, malfunctioning, or missing parts DO NOT lift people OR lift loads over people DO NOT raise load higher than necessary DO NOT leave a suspended load unattended DO NOT use lifter unless you read and understand the owner's manual DO NOT alter OR modify lifter DO NOT remove OR obscure any label STAY CLEAR of suspended loads	NO exceda la capacidad tasada NO USE is las partes estan dañadas, no funcionan correctamente o faltan partes. NO eleve al personal o eleve cargas sobre el personal NO eleve la carga mas alto de lo necesario NO deje desatendida una carga que este suspendida NO use el elevador a no ser que haya leído y entendido las instrucciones del manual del propietario NO altere o modifique el elevador NO quite u oscurezca ninguna etiqueta MANTENGASE alejado de las cargas suspendidas
	675 rev 0709

Label #023 on opposite side

Model No. _____	Serial No. _____
No. Modelo _____	No. Serie _____
Capacity _____ lbs.	Lifter Weight _____ lbs.
Capacidad _____ kgs.	Peso del Elevador _____ kgs.
BHT-1 Design Category: B	BHT-1 Service Category: 1
BHT-1 Categoría de Diseño B	BHT-1 Categoría de Servicio: 1
Read Owners Manual for product safety warnings	
Lea Manual de Proprietarios para advertencias de seguridad de producto	
Vestil Manufacturing • Phone (260)665-7586 • sales@vestil.com • vestil.com	
	023 rev 0709