

How to avoid accidents when using Lifting Clamps



Lifting clamps have a variety of applications, including transporting plates and hoisting lifting beams. For optimum performance and safety, here are some “dos and don’ts.”

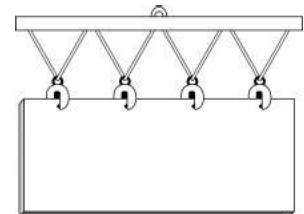
Connect it Right. What’s best for your load?

Photo courtesy of All Material Handling Inc.

1. Make sure that the clamp is not too small *or too large* for the job. Check the Working Load Limit (W.L.L) stenciled on the clamp. The minimum load is 10% of the clamp’s rated W.L.L.
2. Don’t attach clamp directly to a crane/load hook. Best practice is to use a chain sling with W.L.L. greater than or equal to the clamp.
3. Don’t use a connection that might release the clamp. Use a flexible connection between the crane hook and clamp shackle.

Which Way is Up? Are you lifting horizontally or vertically?

1. For vertical and horizontal lifting, determine the center of gravity and make sure the load is divided proportionally over the clamps. (See drawing.)
2. When lifting plates with a vertical clamp, never lift more than one at a time.
3. Never use a vertical clamp for horizontal lifting
4. When lifting horizontally, never exceed lifting angles
5. The capacity of all horizontal clamps is based on a sling angle of sixty degrees (60°). Sling angles less than sixty degrees increase the load exerted on the clamps. Sling angles greater than 60° reduce the gripping force. Don’t exceed 60°.
6. Never lift a plate from the bottom of the plate stack.



Determine the center of gravity and attach the clamps proportionally over the load.

Take it Easy! Before you lift, check one more time.

1. **Temperature:** Make sure that the ambient temperature and the temperature of the load material are within the working limit of each clamp.
2. **Gripping and load surfaces:** Are they clean and free of dirt, oil, grease or anything that might impede contact between the teeth and the load? Ensure cam segments and pivot are free of dirt.
3. **Clamp check:** Inspect the clamp before each lift. Make sure it hasn’t been ground, welded or modified in any way. Don’t use a clamp that has been previously overloaded. Check for smooth clamp operation and adequate tension of locking lever (if applicable).
4. **Beyond the clamp:** What is your sling assembly attached to? Is it defective? Any chance the lift will swing over workmen or any other personnel? Will the clamp touch any other surface during lifting?

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