



BIN JACKER SUPPLY

Halo Lift System



Thank you for purchasing the Bin Jacker Supply Halo Lift System. Through continuous reinvention and **user feedback from erection contractors like you**, this is a better system than what is currently available for structure moving. The BJS Halo Lift System can be assembled in short amount of time and can safely move any structure within its capabilities. The photos used in this instruction manual are from job sites and from a test set up. If you have questions, please contact us at 605-987-2626 or binjackersupply.com

Bin Jacker Supply Warranty

Bin Jacker Supply of Canton, South Dakota warrants for a period of one (1) year from the date of original purchase, its equipment to be free from defects in material and workmanship. BJS will not be responsible for repair or modification not authorized by a BJS representative.

Equipment if defective in material/workmanship shall be returned to Bin Jacker Supply where company representatives can conduct any necessary inspection or test. The return of equipment shall be done ahead of time with a notification in writing or email to BJS. Mail notification to P.O. Box 96 Canton, South Dakota 57013.

Bin Jacker Supply reserves the right to make changes to its equipment, add improvements, or discontinue the manufacture of its equipment without notice or obligation to the purchaser of its equipment.

If damage occurs: All damaged equipment must be repaired to manufacturer's standards before the Equipment can be utilized further. In some cases a replacement of the equipment is necessary.

BJS's obligation under this warranty is solely limited to repair or replacement at the company's discretion. Labor to troubleshoot, remove, or reinstall equipment is not covered under this warranty.

This warranty is not applicable under the following circumstances:

1. When any person or company other than BJS assumes any obligation in connection with sales of such equipment.
2. When any equipment has been modified, repaired, or altered outside the company's factory in any manner.
3. When the equipment has been subject to negligence resulting in damage.
4. When the equipment has been installed, erected, placed or used in any manner contrary to BJS printed instructions or directions.
5. When the equipment has been destroyed by an act of god.
6. When the notification procedure described above (paragraph 2) is not complied with.

Under no circumstances is Bin Jacker Supply liable of any loss, damage, cost, repair, or consequential damage, of any kind, in connection with the sale, use, or repair of any equipment purchased from it.

Warning Symbols

The symbol shown below is used to call your attention to instructions concerning your personal safety. Watch for this symbol it points out important safety precautions. It means ATTENTION! Become Alert! Your Personal Safety Is Involved!

Read the message that follows and be alert to the possibility of personal injury or death.

DANGER: Indicates an imminently hazardous situation that if not avoided, will result in death or serious injury.

WARNING: Indicates a potentially hazardous situation that if not avoided, could result in death or serious injury.

CAUTION: Indicates a potentially hazardous situation that if not avoided may result in minor or moderate injury.



Safety

When assembling this system use appropriate safety equipment and practices at all times.

- Hard hats are recommended to prevent head injuries.
- Protective eye glasses are recommended to deflect objects from hitting or enter eyes.
- Gloves and other heavy clothing are recommended to prevent cuts and abrasions to hands and other body parts.
- Steel toes work boots are recommended to protect feet from injury.
- Beware of all pinch points when assembling components.
- Reading, understanding, and following the instructions in this book are also required for safe assembly.
- A safe work area is required to assembly the BJS Halo Lift System. Be aware of all hazards prior to assembly.

Halo Lift System safety guidelines

- Use a partner to move heavy pieces of the Halo system.
- Halo Lift System has many pinch points and will require gloves at all times when handling them.
- Use of tag lines to guide lifted structures is strongly recommended.
- Personnel should be clear of crane and all lifted structures while in operation.
- Use tag lines to maneuver the Halo system while in operation.
- Do not walk in or under the structure being lifted.
- Keep travel area clear of all obstructions.
- Evacuate unnecessary personnel.

Failure to heed safety warnings may results in serious injury or death.

Halo Lift System Information

1. Grain bins require one Halo section per bin wall sheet in a ring. For example a 36ft diameter bin has 12 sheets in a ring and will require 12 Halo sections. For most grain bins $1/3$ of the diameter will equal the number of Halo sections needed. (24ft bin x $1/3$ = 8 sections)
2. Each Halo section supports 3000 pounds. The 12 section setup for our 36ft hopper can support 36,000 pounds.
3. Maximum Capacity of the BJS Halo System is 36,000 lbs. Do not exceed under any circumstances.
4. The height of the grain bin to the eave will determine the length of the vertical webbed slings connecting the halo section and the wall brackets.
5. The wall brackets are installed in the second ring from the ground.
6. The Halo typically sits 1-5 feet above the eave, clear of air vents.
7. Plan the location of crane, bin, halo, and ending location prior to setting up the system.
8. When using a replacement bolt instead of a Hitch pin ensure the Halo section sheer points are resting on the shank of the bolt, not the thread.

Halo Lift System Setup Instructions

1. Begin by assessing the structure you are moving and determining the correct number of Halo sections required.
2. Determine the number and length of lifting webbed slings to be used, as well as shackles.
3. Begin by laying out the halo sections in a circular pattern as shown below and connect them with the included hitch pins(or 1" grade 5 bolts). This is easiest with two people but one person can manage with wood blocks or cribbing to hold the sections up.



4. After all of the halo sections are connected place the star in the center of the circle and begin connecting the horizontal lifting webbed slings via screw pin shackle as shown below.



5. The screw pin shackles should be installed in the central star as shown below



6. After you have installed the horizontal lifting webbed slings from the halo section joints to the halo star you can hook up the vertical lifting webbed slings.



7. After all the webbed slings are hooked, the halo is ready to be picked up by the crane and swung to the position above the structure to be moved. Horizontal webbed slings should be at **45 degrees or better**.



8. Install the Halo sidewall brackets prior to moving to the halo into position. The halo sidewall Bracket is installed in the second ring from the bottom of the tank at the vertical bolt seam. The rods on the bracket sit in the valley of the corrugation. Install the halo sidewall brackets so that all of the holes are aligned with the structure. Install all the bolts that line up with the bolt running in the structure and the nut on the inside of the structure. Use flange bolts on the outside of the structure with the bolts toward the center of the bin. Use flange nuts or washers and hex nuts on the inside of the bin.



9. Lift the halo system up and over the structure meant to be moved after all the sidewall brackets are installed. Some of the nylon webbed slings may catch on accessories on the structure. Use a 2x4 or something similar to free the webbed slings.



10. Attach the hanging vertical lifting webbed slings to the sidewall brackets with supplied $\frac{3}{4}$ in shackles. Test lift the structure to check for proper halo system height above eave (approximately 1-5') as well as angle of webbed slings being at least 45 degrees. Check to make sure the webbed slings have no twists or other obstructions in them. Lower the structure to make any corrections. Do not proceed unless all rules have been met

11. Double check all webbed slings and $\frac{3}{4}$ in screw pin shackles for lifting. Proceed if everything checks out. Use tag lines and spotter personnel for safety and control.



12. Lift the system and structure to the desired location and slowly lower until some connections can be made.



13. Secure the structure to the base at all connections using specified hardware.
(PIC)
14. Lower the Halo system to removes $\frac{3}{4}$ in shackles and lifting webbed slings from halo sidewall brackets.

(PIC)

15. Raise the Halo system and swing away from the now secured structure. Lower the Halo system to the ground and disconnect from the crane. Disassemble the Halo system first by removing nylon webbed slings and then by removing hitch pins.
(PIC- possible screen capture may work here)
16. Disconnect the Halo sidewall brackets from the structure and store them with the rest of the Halo System (PIC)
17. Wrap up all webbed slings and store in a dry location. Halo sections, Halo Star and Lug, Halo Shackles and Halo Hitch pins can be stored as well. (trailer PIC)
18. Store system in a dry location to prevent sedentary damage.



Halo Lug



Halo Star



Webbed sling



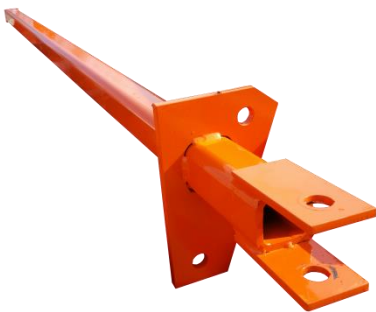
$\frac{3}{4}$ " screw pin shackle



Halo Star with Lug



Sidewall bracket



Halo Section



Hitch Pin

1" x 5 1/2" grade 5 bolt

Notes:

Page numbers

36-38k max cap