

Vacuum Glass Lifter Operation JHA

Worked instructional example

Work and worksite

A glazing crew will move a specified glass panel from a secured rack to a receiving support with a vacuum lifting device and an approved hoisting arrangement at ground level. This fictional learning example records planned controls; it supplies no actual inspections or work authorization.

- Panel weight, surface, geometry and orientation must suit the actual lifter configuration and instructions.
- The receiving support and controlled travel area are ready before attachment.
- This excludes elevated glazing, damaged glass and treating a hand suction cup as a rated hoisting device.

Questions before work

- What confirms panel and lifter compatibility in the intended orientation?
- Which vacuum checks and alarm responses does this unit require?
- How will the panel be supported before vacuum is released?

Task Hazard Control

1 Identify the panel and movement

Hazard: Unknown weight or unsuitable glass can exceed device limits or lose attachment.

Control: Glazing lead confirms panel identification, weight, condition and surface compatibility with the lifter's configuration and planned movement. Hold unresolved capacity or suitability.

Verification: Compare the actual panel with lifting documents and the unit instructions.

Reasoning: A nominal capacity alone may not apply to every orientation or surface.

2 Prepare receiving support and the route

Hazard: A suspended panel can strike people or arrive at an unstable support.

Control: Set the receiving support and separate the travel, swing and potential fall zones. Agree signals and safe guide positions.

Verification: Lead checks the route and receiving support before attachment.

Reasoning: The receiving arrangement must exist before the panel moves.

3 Inspect and attach the lifter

Hazard: Damaged pads, contamination or failed vacuum controls can drop glass.

Control: Use the manufacturer's inspection, pad preparation, attachment and specified safe function-check procedure. Verify required indicators and alarms; remove a defective lifter from service.

Verification: Authorized operator records the unit-specific checks before the lift.

Reasoning: Pad contact does not prove a reliable vacuum attachment.

Complete the work and hand over

4 Move the panel under control

Hazard: A vacuum loss, swing or rotation can crush or cut workers.

Control: Use the planned hoist and lifter method, maintain required indicators and keep people out of the panel's fall and pinch paths. Follow the unit's response to an alarm; never stand beneath to catch glass.

Verification: Operator monitors attachment status; lift lead maintains communication and boundary.

Reasoning: An alarm requires the prescribed response rather than a faster lift.

5 Support the panel and release vacuum

Hazard: Early release can drop or overturn the panel.

Control: Land on the prepared support and secure the panel by the planned receiving method. Release vacuum only after the designated lead confirms independent support.

Verification: Lead verifies support and restraint before authorizing release.

Reasoning: Independent support ends reliance on the lifting device.

6 Secure the device and hand over

Hazard: An unsecured panel or damaged device can expose the next user.

Control: Confirm the panel's storage or installation restraint, inspect the lifter after use and isolate defects. Communicate actual panel and equipment status.

Verification: Glazing lead checks restraint and the device's closeout condition.

Reasoning: The lift ends with both glass and equipment in a controlled state.

Pause and reassess

- Panel surface, weight or orientation differs.
- Vacuum indicators, alarms or attachment behavior change.
- Wind, travel clearance or receiving support changes.

Improve the controls

Needs improvement: Be careful around the equipment.

More useful: Use the manufacturer's inspection, pad preparation, attachment and specified safe function-check procedure. Verify required indicators and alarms; remove a defective lifter from service.

Needs improvement: Check the area before starting.

More useful: Glazing lead confirms panel identification, weight, condition and surface compatibility with the lifter's configuration and planned movement. Hold unresolved capacity or suitability.

Decisions that change the analysis

Can a hand suction cup replace a vacuum lifter?

Only equipment specifically suitable for the intended load and lifting arrangement can be used. A hand cup's appearance or label does not establish suitability for hoisting; reassess against its instructions and the lift design.

What must be recorded before this example is used on a job?

Replace the scenario with the actual work, identify additional hazards with the crew, and record the applicable instructions, responsible people, inspection findings, unresolved actions and required authorization. A planned verification is not an inspection result.

Training needs

- Actual vacuum lifter setup, checks, alarms and prescribed response.
- Applicable hoist, rigging and signaling roles and qualifications.

Confirm applicable qualifications and actual training evidence for the people assigned. Related toolbox talks support discussion; they do not establish competence.

References and adaptation

OSHA 1926.300 Hand and power tools

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.300>

OSHA 1926.21 Safety training and education

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.21>

References reviewed October 9, 2026. Use actual equipment and product instructions, project design and site requirements. This instructional example supplies no actual inspection results, signatures or work approval.