

Vacuum Lifter Operation & Maintenance Guide

Supplementary guidance for suspended pad-frame vacuum lifters. Revision 14 October 2026 | ET-OM-PAD-EN-01.

Use this guide with the operating instructions supplied for the specific machine. It explains preparation, inspection and fault records; it does not establish load limits, vacuum thresholds, supply ratings, permitted motions or inspection intervals. Tube lifters and self-propelled glazing robots have different systems and require their own instructions.

Before any lift

The operator must be trained for the equipment and the planned task. Identify the machine and its applicable manual, the approved pad configuration and the workpiece. Confirm the lifting equipment is suitable for the combined lifter and workpiece load, using the applicable rated information and lifting plan.

When to stop

Do not begin a lift with damaged pads, hoses, suspension parts, unreadable capacity information or an unresolved warning. If grip, movement or an indication becomes abnormal during use, follow the machine-specific safe-response procedure and keep people clear. Do not recreate the event to obtain a photograph or a measurement.



A real pad assembly: rubber sealing edge, hose connection, local valve and spring-mounted support. The photograph identifies parts; it does not establish a fault, valve position or load rating.

02 Pre-use checks

Carry out visual checks with the equipment safely supported and the load stable. Function checks must follow the applicable operating instructions. Record a defect instead of working around it.

Check	What to establish before proceeding
Machine identity	Model, serial number, current operating instructions and readable load/configuration labels match the equipment.
Workpiece	Material, dimensions, thickness, verified weight and surface condition fit the approved application. Confirm that only the intended piece will be picked up.
Pads and contact	Required pads are correctly installed and connected, with suitable contact areas. Look for cuts, splits, wear, contamination and obstructions to sealing.
Frame and suspension	Look for damage, deformation, missing or loose parts and abnormal mount condition. Use the prescribed fastening and inspection requirements; do not guess torque values.
Hoses and cables	Look for abrasion, kinks, trapped sections, loose connections or unsupported routing that can snag during the planned movement.
Supply and indication	Verify the installed supply arrangement and the model-specific startup, warning and indicator checks. Similar-looking controls can have different meanings.
Work area	Plan the route and landing support. Maintain clearance from people and obstacles, and follow the required exclusion and lifting arrangements.

Installed does not mean effective

A fitted pad may be disconnected, isolated or not sealing against the workpiece. All three states matter: installed, connected and making effective contact. Do not calculate a new capacity by multiplying a presumed per-pad capacity or by dividing a nameplate rating by pad count.

03 Operation checkpoints

These checkpoints help confirm that the machine-specific procedure is being followed. They are not a replacement button sequence or a test method.

Stage	Required decision
1. Prepare	Use the approved configuration and lifting arrangement. Confirm that the workpiece is stable, suitable and within the documented application.
2. Establish contact	Place the pads as specified, without forcing a seal across an unsuitable surface, edge, seam or obstruction. Verify the required pad connections.
3. Confirm readiness	Follow the specified attachment and indication checks before lifting. A running pump or a familiar gauge reading alone is not permission to lift.
4. Lift and move	Follow the permitted orientation, motion and operating limits. Monitor the workpiece and indications; keep the load clear of people. Do not use this guide to set speed or acceleration.
5. Place and release	Place the workpiece on suitable stable support and confirm it is fully supported before operating the prescribed release controls. Never release a suspended load.
6. Finish	Follow the prescribed shutdown and storage arrangements. Protect pads and hoses from damage, and record abnormal behaviour before the next use.

If a warning, slip or loss of grip occurs

Follow the supplied emergency/safe-response instructions, keep people clear and arrange a safe supported condition. Do not bypass protection, continue lifting to finish the job, or turn off a loaded system to test how long it will hold. Remove defective equipment from service until the fault and the required verification are resolved.

A changed workpiece is a changed application

A new film, coating, moisture condition, flexibility, shape or movement may require application reassessment. Success on a previous batch does not establish suitability for a different one.

04 Maintenance and component care

Maintenance requires an unloaded, safely supported machine and the prescribed isolation of electrical, pneumatic and other stored energy. Work must be performed by competent personnel. Energised diagnostic work needs an approved service procedure; it is not part of routine operator cleaning.

Component	Maintenance boundary
Pad and sealing edge	Inspect for cuts, cracking, wear and contamination. Use the cleaning method and compatible materials specified for the pad. Do not improvise solvents or apply lubricants to improve sealing.
Hoses and connections	Inspect routing and condition. Replace damaged parts with the specified suitable components. Do not substitute a connection or hose solely because it physically fits.
Filters and flow path	Check the correct part, condition and installation against the manual. Do not remove or bypass filtration to keep lifting. A restricted flow path and a leak require different investigations.
Mounts and fasteners	Inspect the frame, suspension, pad supports, springs and fasteners as required. Do not infer tightening torque, adjustment or serviceability from a photograph.
Power and controls	Damaged cables, unusual electrical behaviour and defective warning functions require qualified attention and the applicable isolation and verification procedure.

Set intervals from the actual machine

Use the delivered maintenance schedule and applicable inspection requirements. Operating conditions, contamination and damage can require earlier attention. This guide intentionally gives no universal filter life, battery interval, vacuum threshold or inspection frequency.

Record the date, machine identity, findings, parts used, work performed and responsible person. A component replacement is not complete until the relevant prescribed checks have been passed and the equipment is authorised to return to service.

05 Troubleshooting without guessing

Use observations already available. Investigate with the load safe; do not repeat an unsafe lift. Possible causes below are investigation categories, not confirmed diagnoses.

Observed symptom	Investigation direction
Vacuum will not establish	Review pad contact, surface suitability, connection leakage, seal condition, supply and the specified valve/control state.
Vacuum builds more slowly	Distinguish added air leakage from restricted removal. Review hoses, filter/flow path and recent maintenance or part changes before blaming the pump.
Abnormal pressure or repeated warnings while stationary	Record actual values, units, timing, instrument location if known, source state and workpiece condition. Have the relevant circuit checked under an approved procedure.
Problem appears during movement	Review existing event records for hose kinking or snagging, changing contact, workpiece flexure, motion and connections. Recovery at rest does not prove the problem is resolved.
Gauge looks familiar but workpiece slips	Treat slip as an abnormal condition. Pressure at one measuring point does not verify every pad, contact friction, load direction or support arrangement.

Record what the pressure display means

On a gauge referenced to atmospheric pressure, a change from -60 kPa to -40 kPa means weaker vacuum. Those values explain terminology only; they are not lifting criteria. Record whether the display uses gauge pressure, absolute pressure, vacuum percentage or another scale.

Three questions before changing the pump

Is air entering through a seal, connection or the workpiece? Is the flow path restricting air removal? Has the supply, configuration or application changed? A larger pump does not repair a damaged seal or restore missing pad contact.

06 Service record and return to service

Copy the following fields into the machine service record. Preserve unknown details as unknown, and attach existing photographs or readings without repeating a hazardous operation.

Record field	Information to retain
Machine / date / personnel	Model, serial number, manual revision, date and time, operator and competent service person.
Application / configuration	Workpiece material, dimensions, thickness, weight, surface/film, and installed, connected and contacting pad states.
Symptom / conditions	Stage of use, indication and units, timing, supply, motion, recent maintenance and environmental conditions relevant to the event.
Finding / corrective action	Observed defect or unsuitable application, actual work, part identity and unresolved questions.
Verification / release	Prescribed procedure used, recorded result and the responsible return-to-service decision. Do not write only "seems OK".

Before returning the equipment to use

Confirm that the cause has been addressed, correct parts and settings have been used, the relevant safety and functional checks have been completed under the approved procedure, and required records and authorisation are in place. Unexplained recurring warnings remain unresolved faults.

Document basis and limits

Prepared from Easytech operating and maintenance material for suspended pad-frame lifters, including configuration, hose routing, inspection and troubleshooting sections. Ambiguous indicator descriptions, conflicting intervals and unverified numerical limits have not been converted into generic instructions. The valid instructions supplied for the individual machine govern operation.

Further reading: UK Health and Safety Executive, "Vacuum lifting equipment":

<https://www.hse.gov.uk/work-equipment-machinery/vacuum-lifting-equipment.htm> . This is general safety context, not a statement of certification or universal legal compliance.

Equipment support: jennyzhan@auto-easy.com | www.auto-easy.com. Include the model, serial number and the relevant service record when requesting the applicable manual or technical support.