



INSTRUCTION MANUAL

for the

GLASS BOY DUAL CIRCUIT

For horizontal, oblique and vertical assembly of fixed form glass elements.

SAFE WORKING LOAD:

max. 350 kG at 60% vacuum.

Read carefully before use!



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1 Foreword

To prevent damage to people and product, the regulations and instructions as mentioned in this manual, must be adhered to. Furthermore, the equipment will have to be checked regularly. It is also required that everyone involved in operating this equipment have read and understood this manual and observe its contents.

We reserve the right to carry out technical improvement to the equipment.

Still, if you have problems with the Glass-Boy, you may always contact us. We shall look into your problem and do our utmost to solve it as soon as possible.

2 Use and appropriate operation

This GlassBoy is used for the horizontal as well as the oblique and vertical lifting of flat, fixed form glass elements with a minimum thickness of 4mm as well as sandwich panels with a minimum thickness of 40mm.

ATTENTION! GlassBoy is not suitable for lifting thin, soft sheets (the sheet might peel from the suction cap, causing it to loose its load!)

The workload depends on the number and load capacity of suction caps being used.

Don't exceed the maximum allowable workload of 350 KG.

The S.W.L. mentioned on the suction caps has been determined at 60% vacuum in the unfavorable position, i.e. suction area in vertical position.

Maximum dimensions of the Glass elements:

Thickness	Horizontal (l x b)	Vertical (l x b)
5 mm	1,5 x 1,5 mtr.	2,5 x 2,5 mtr.
10 mm	2,0 x 2,0 mtr.	3,0 x 3,0 mtr.
15+ mm	2,5 x 2,5 mtr.	3,5 x 3,5 mtr.

Maximum dimensions of the Sandwich panels:

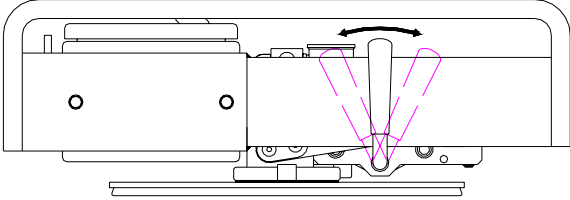
Thickness	Horizontal (l)	Vertical (l)
40 mm	10 mtr.	10 mtr.
60 mm	12 mtr.	12 mtr.
80+ mm	14 mtr.	14 mtr.

The GlassBoy can also be used outside, however, not in places where special kinds of danger may occur (e.g. danger of explosion).

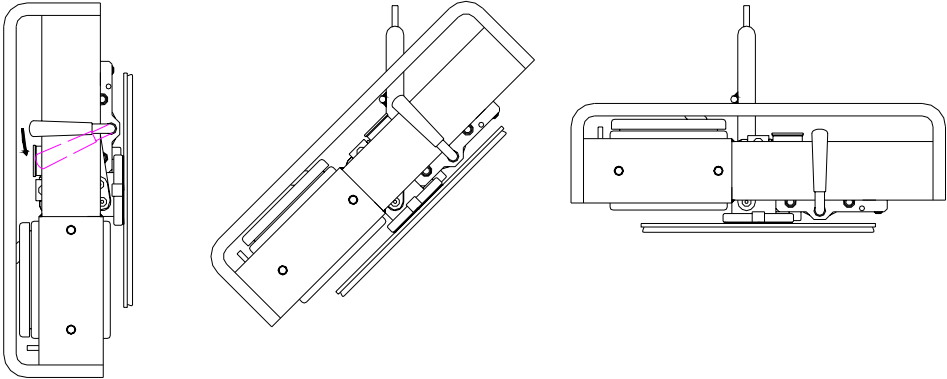
Temperature range in which the GlassBoy can be operated safely: 0 C to + 40 C

Every use not described in this manual is considered **not suitable**.

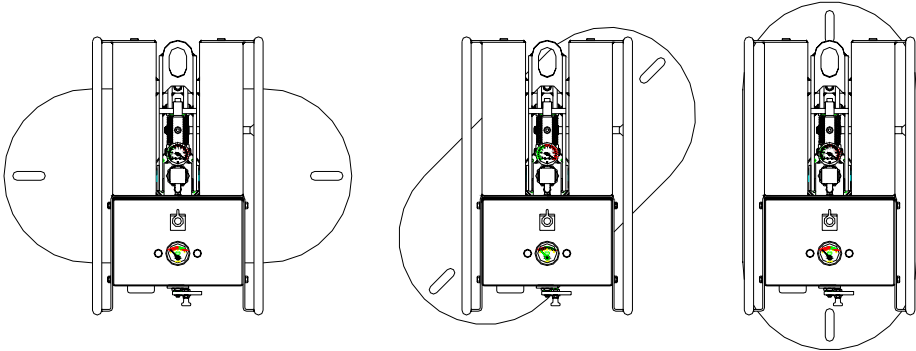
POSSIBILITIES OF THE SUCTION PAD




TILTING max. 90°



PIVOTING max. 360°



3 Safety indications

In this manual you will come upon this  symbol where there is danger of accidents and/or material damage to the GlassBoy, and/or its user.

The respective instructions must be observed and passed on to other users, so that accidents and malfunctions of the GlassBoy may be prevented.

The following safety aspects must be observed:

The GlassBoy may only be operated, inspected and used by expert personnel.

Everyone operating the GlassBoy must have read and understood the manual.



For repairs to the Glass-Boy the main switch must be switched off and the power supply must be cut off.

The user is obliged to inform the manufacturer immediately regarding changes which could influence the safety. Furthermore, the user may only operate the GlassBoy in good condition. He has to check the GlassBoy for external damages and defects. Changes not in accordance with the manual, have to be reported in writing immediately.

Self-directed modification or conversion of the GlassBoy, influencing the safety, are not allowed. The user is fully responsible for any damage caused by this. Only original spareparts may be used. In case spareparts of other manufacturers are used, the user is responsible for possible problems.

Under no circumstances may the safety devices be dismantled or put out of operation. In case of a sudden drop in vacuum, the load must be put down as soon as possible.

It is strictly forbidden to stay below a suspending load.

The local safety- and accident regulations apply to working with the GlassBoy.

4 Putting into operation

The GlassBoy is delivered complete and ready to use, with power cable for charging the battery. Before commencement of operations the GlassBoy must first be tested to make sure it meets all requirements; possible freight damage must be reported in writing immediately. Before use, a test movement must be carried out first. Check the voltage by means of the voltmeter; it should be more than 12 V (make sure the battery is being charged).

Vacuum test

Before delivery the GlassBoy has been tested by us. We recommend that you regularly check the GlassBoy for leaks.

Put the GlassBoy on a flat, dry, leak proof surface.

Then switch on the pump and wait until the lights on the warning device change from red to green. Now put the valve in suction mode. The vacuum gauge gives the exact under pressure. The vacuum pump is switched off with the switch.

The drop in vacuum may not exceed 10% per 5 minutes.

In case the drop in vacuum is more, you have to check the connections and tighten possible loose couplings. Also check the suction cap condition, there should be no leaks.

5 Use

Switching on the GlassBoy

Put the main switch on the switch box in pos. 1. Briefly wait for the red light to go out and the green light to go on. In the meanwhile a vacuum of more than 60% has built up in the vacuum accumulator.

The vacuum pump is switched on and off automatically and keeps the vacuum between 63% and 66%. The vacuum pump runs approx. 2-5 sec. In case the vacuum pump runs longer than 10 sec. the battery is low or there is a leak.

The load weight may never exceed the safe workload. In doubt first weigh the product to be moved.



The voltage on the voltmeter must show at least 12 volt, if not recharge the battery first.



Before commencement of operations, first all oil, grease, dirt, ice or excess water at the suction caps area must be removed from the panel.



Don't operate the GlassBoy at wind velocities above 4 Beaufort.

Lifting a load

Put the 3/2 valvesystem in suction mode (lever in the locked position). the product is sucked tight and can be moved as soon as the vacuum level has reached 60%.

Moving a load

With the crane the product can be moved to the required position.

Observe the following:



Never stay below a suspending load during load handling operations.
Danger of dropping load.



In case the red light lights up or the warning siren sounds, the load must be put down immediately.

Putting down a load

Use the crane to move the GlassBoy to the designated area and put it down. When the load is in the right position, put the 3/2 valvesystem on discharge. The suction cap is aerated and the load is immediately released. Now you can pick up a new element.

Switching off the GlassBoy

To switch off you have to put the main switch on 0.

Preferably leave the GlassBoy suspending from the crane, so that the suction cap hang free. In case this is impossible or if the GlassBoy will not be used for a long period of time, it must be put in the appropriate transport-frame/box. This to protect the suction cap.

Charging the battery

The battery must be charged after use. You will find the respective line cord in the box on bottom side of the GlassBoy.

- Put the main switch on pos. 0.
- Plug the line cord in a 220V socket. The charging time is approx. 6 hours.

To avoid damage of the battery by deeply-discharging, they have to be charged after use and minimal 1x per 3 months for minimal 6 hours charging time.

Vacuum controlling gauge:

The GlassBoy is equipped with a vacuum controlling gauge. This vacuum gauge shows if the GlassBoy is ready to use. The gauge is divided in a red section (0% - 60%) and a green section (61%-100%). As long as the gauge is in the red section you may not lift a load. The gauge shows the underpressure at the suction cap, this is only possible in the suction mode.

Warning device:

Linked to the vacuum pressure switch an electronic warning device is installed, which gives an optical and acoustic signal in case the vacuum drops too low. GlassBoy is not ready to use as long as the red light is illuminating or as long as the siren is sounding.



The warning device operation must be checked daily. In case of malfunction there is danger of the load falling down caused by a drop in vacuum.



When the vacuum is too low, you may not lift and/or move a load. Loads already lifted must be put down immediately.

6 Maintenance

Checking

Malfunctions because of negligent and/or infrequent checking can cause high repair costs and long downtime periods. That is why frequent checking is imperative.

The National labour authority requires a yearly checking by an expert.

Only original spareparts may be used. A local stock of spareparts is recommended.

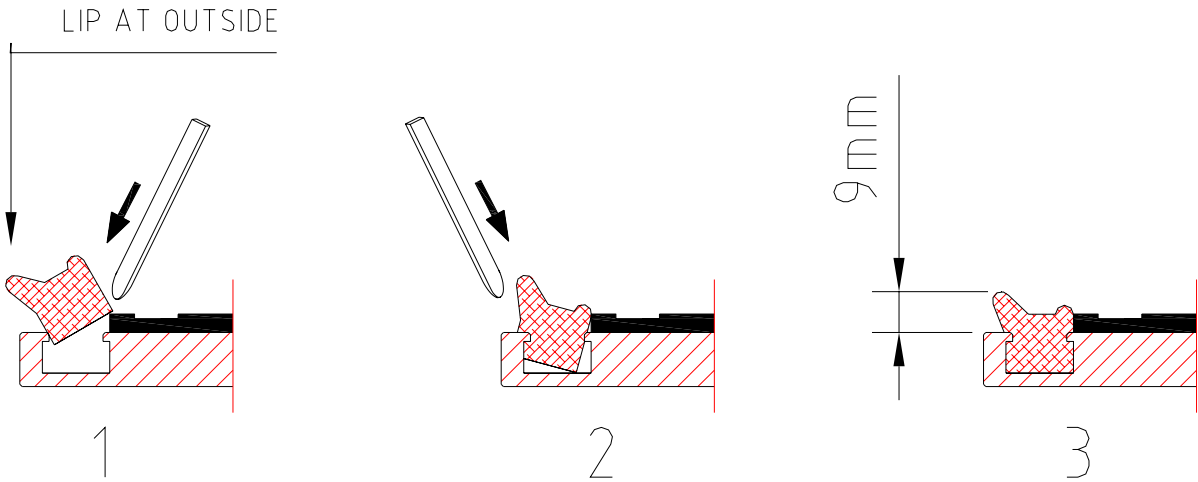
Spareparts may only be changed by expert personnel!

Inspection and maintenance list

Range:	Part to be checked:	Freq.:	Maintenance:
1. Vacuum	Vacuum pump		Refer to separate manual.
	Vacuum filter	weekly	Clean the filter with compressed air or replace if necessary.
	Suction caps, sealing	daily	Replace faulty caps
	Hose connections	daily	If necessary tighten hose connections
2. Vacuum test	Performance check	daily	Compare the red- and green light switch with the vacuum gauge; make sure the siren is activated at the same time the red light lights up. Check the maximum values of the vacuum gauge.
3	Actuating valve	daily	Function suction - discharge.
4	Complete equipment	daily	Check for visible damage and malfunctions
		yearly	Check by an expert

Replacement of the suction pad seal

For the safe use of the machine it is important that the rubber seal is in good condition. The suction pad is equipped with a replacable seal. It can easily be replaced with a special press in tool.



7 EC-declaration of conformity



EC-declaration of conformity



according to the EC- Directives Machines: 89/392 EWG, enclosure II A Low voltage:72/23/EWG

Machine type: Vacuum lifting unit
Type: Glass Boy Dual Circuit
Machine no.: 935

has been developed, constructed and built in accordance with the EC-Directives,
with full responsibility for:

VIA-VAC vacuum lifting BV
Linnaeusweg 21
3401 MS IJsselstein
Holland

The following standards have been consulted:

- EN 292 Part 1 & 2	Safety of machines and systems
- EN 457	Acoustic warning signals
- PR EN 842	Optical warning signals
- PR EN 1005 - 2	Manual handling of components
- EN 60 204.1	Electrical equipment for industrial machines

The following national standards, directives and specifications have been observed:

- NEN- EN 13155	Hoisting and lifting equipment "vacuum lifting units"
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Technical documentations and the original manual are available at the company
VIA-VAC vacuum lifting BV.

12 June 2008

A.E. de Groot

Date:

Name

Signature

8 Maintenance history

Data may be filled in by clear handwriting

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Name and address of examination company	Data of examinations, delivery, changes or repairs	Date of examinations	Stamp of company and signature of competent person

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