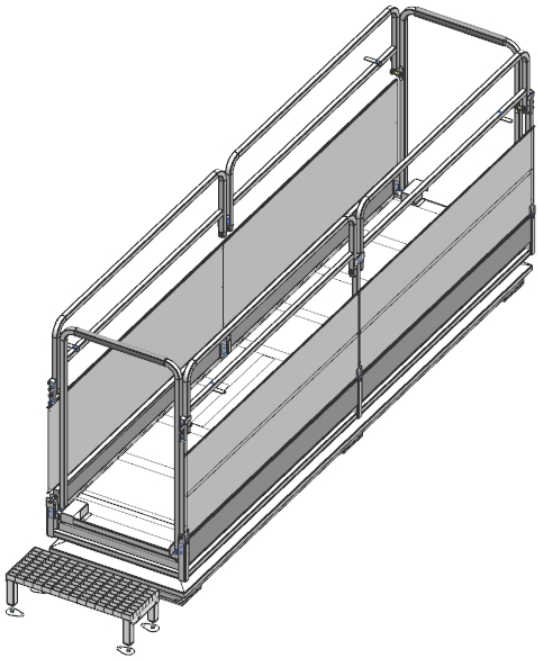
Operating manual



Customer:	SAGE Electrochromics Inc., (Faribault) 2 Sage Way, Faribault, MN 55021 USA
Customer order No.:	Order from 25th of July 2018
Contract-Number:	88440
OLBRICHT Automation Machine Name:	Hydraulic Lift
OLBRICHT Automation Project-No.:	801.01 - 180
Year of manufacturing:	2019
Manufacturer:	-Brünen Phone: +49(0)2856 / 9099960 E-Mail: info@olbricht.de

Table of Contents

1 Important basic information

1.1 Intended use

The Hydraulic Lift constructed in accordance with its intended use and may be used exclusively for the points listed below.

- Lifting or lowering loads to different heights.

Any use outside these specifications is considered as contrary to the intended use. The manufacturer is not liable for any damage resulting from this. The operator bears the entire risk.

Intended use also includes observing the operating, maintenance and service conditions as prescribed by the manufacturer. Only genuine spare parts from the manufacturer may be used as replacements.

The Hydraulic Lift may only be used, serviced and repaired by persons who are acquainted with the characteristics of the machine and who have been advised of the dangers involved.

The instructions concerning the operation, service and safe handling of the machine, as described in this operator's manual and stipulated by the manufacturer in the form of warning signs and warning symbols on the machine, must be observed when using the machine.

The relevant accident prevention regulations and the other generally recognized safety-related must be observed when using the machine.

Unauthorized modifications to the Hydraulic Lift are not permitted. They will exclude the manufacturer's liability for any resulting damage.

1.2 Reasonably foreseeable misuse

A reasonably foreseeable misuse according to the Machinery Directive is defined as the use of the machine in a way not described in these instructions.

1.3 Legal Notes

1.3.1 Warranty instructions

The warranty period for the equipment supplied by the Seller shall be 12 (twelve) months, starting from the date of FAT. The warranty is limited to proprietary parts and manufacturing parts, made by Olbricht Automation GmbH.

In case of defects of equipment, being found during the inspection on site, test-run, or demonstration, the defect will be checked by both parties. If the Seller is responsible for the defect, the Seller shall repair or re-supply the equipment at his own expense. If the Buyer is responsible for the defect, then the Seller will give his assistance to repair or re-supply the equipment to the plant site. Costs thus incurred must be paid by the Buyer.

1.3.2 Copyright

Unless otherwise agreed, we own the copyrights of all of us delivered drawings, programs and documentations.

Drawings, programs and documentations will only be used by our customers and end-customers in accordance with the contract.

It isn't allowed to give drawings, programs and documentations on third parties without permission from the Olbricht Automation GmbH.

1.3.3 EC Declaration of Conformity

Extract of EC Declaration of Conformity:

Olbricht Automation GmbH

Hamminkelner Straße 30, D-46499 Hamminkeln

declare under our sole responsibility that the machine:

Hydraulic Lift

complies with the following provisions in its delivered version:

Machinery Directive 2006/42/EG, Appendix I.

EMC Directive 2004/108/EC

➔ See full „EC Declaration of Conformity“ on CD Rom

2 User instructions

2.1 About this operator's manual

The operator's manual contains important information for safe use and correct use and maintenance of the Hydraulic Lift. Your attention will help to prevent angers, reduce repair costs and downtime and will increase the reliability and service life of the machine.

The entire documentation, which consists of this operator's manual and all documentation provided by the supplier, must be used when working at the machine.

When the machine is sold, the operator's manual must be transferred with it. The operator's manual is intended for the operator of the Hydraulic Lift and anyone involved in operating and maintaining it. It must be read, understood and applied by every person who is entrusted with the following work on the machine:

- Operation
- Maintenance
- Repairing faults
- Safety

The operator's manual does not replace your personal responsibility as the owner and operator of the Hydraulic Lift.

2.2 Structure of the operator's manual

The operator's manual is divided into 6 key areas in terms of content:

- user instructions,
- safety instructions,
- machine details,
- instructions for operating the Hydraulic Lift,
- maintenance

2.3 Instructions and procedures

Steps that the operator must carry out are shown as a numbered list.

1. Instruction for action step 1

2. Instruction for action step 2

Instructions that only have one step are not numbered. The same applies for action steps that do not have a specific sequence. A bullet is placed in front on these instructions:

- Handling instruction

2.4 Abbreviations

CE (dt.: EG, engl.: EC)	Communauté Européen (dt.: Europäische Gemeinschaft, engl.: European Community)
DIN	German Industry Standard
EN	European Standard
PLC (dt.: SPS)	Programmable Logic Controller
EMC	Electromagnetic Compatibility Directive
LVD	Low Voltage Directive
UVV	accident prevention regulation
max.	Maximum
min.	Minimum
ca.	circa
e.g.	for example
etc.	et cetera
VDC	Direct current
VAC	Alternating current
Hz	Hertz (frequency)
N	Neutral conductor
PE	ground
V	voltage
h	hour
min	minute
s	second
d	diameter
L	length
mm	millimeter
m	meter
Type	Kind of object or definition
No.	number
Qty	Quantity

3 Safety

3.1 General Information

The chapter on safety contains basic safety instructions and safety regulations for working and operating when using the Hydraulic Lift.

All instructions in this chapter must be observed to ensure safe handling and trouble-free operation of the Hydraulic Lift.

There are also additional warnings in the other chapters of this operator's manual, which must also be observed. The warning instructions are given before the respective actions.

Warning instructions with regard to OEM components are contained in the applicable supplier documentation. These warning instructions must also be observed.

3.2 Meaning of warnings

The warnings in the operator's manual are classified according to how serious the anger is and the probability of its occurrence. The danger signs and symbols are provided to advise the user of other unavoidable dangers that may be encountered when operating the Hydraulic Lift.

The warning instructions used are structured as follows:

DANGER

Type and source of danger

This warning advice warns of a danger posing an immediate threat to the health and life of persons.

Ignoring this warning will result in very serious injury or death.

- Read this operating instruction carefully and follow the warning advice.

WARNING

Type and source of danger

This warning advice warns of a possible dangerous situation for the health of persons.

Non adherence to this warning advice leads to serious injury.

- Read this operating instruction carefully and follow the warning advice.

CAUTION

Type and source of danger

This warning advice warns of a potentially dangerous situation for personal health or of material and environmental damage.

Ignoring this warning will result in very serious injury or death.

- Read this operating instruction carefully and follow the warning advice.

NOTICE

General instructions include tips for usage and useful information but not warning of dangers.

3.3 General information on the safety of the machine

The Hydraulic Lift is designed and manufactured to the state of the art in technology and the generally accepted rules of engineering. However, operation and maintenance of the machine may involve danger to the health of the user or other persons or may adversely affect the machine and other property.

Therefore, operate the Hydraulic Lift:

- when it is in good condition and safe to operate in traffic,
- with safety and danger awareness.

This requires that you be familiar with the content of this operating manual, the applicable accident protection regulations and the generally recognized rules of safety and apply these rules as required.

3.4 Instructions for the owner

The owner is responsible for the intended use of the Hydraulic Lift.

3.4.1 Qualification of personnel

Persons who are responsible for the operation, maintenance or repair of the Hydraulic Lift must have read and understood these operating instructions, particularly the chapter on safety and warning notices on the corresponding activities, before starting work.

- Representatives of Olbricht Automation GmbH will instruct the operator in the operation and maintenance of the Hydraulic Lift.
- The operator must ensure that new operating and maintenance personnel are instructed with the same care and to the same extent in operating and maintaining the machine, taking these operating instructions into consideration.
- The machine may only be operated by trained personnel authorized by the owner.
- Persons who are apprentices, in training or under instruction may only work on the machine under the supervision of an experienced person.
- Maintenance and repair work must be carried out by appropriately qualified persons.

3.4.2 Accident prevention

The owner of the machine is responsible for observing the regulations applicable in the country of operation.

The following instructions must also be observed:

- Do not climb up on the machine.
- Long hair must be tied back or otherwise secured and garments must be close-fitting. Jewelry, like chains, is not allowed.

3.5 Information on operating safety

To avoid dangerous situations, the Hydraulic Lift must only be used in an operationally safe condition.

3.5.1 Checks before putting the machine into operation

Before the first and every subsequent operation, check the Hydraulic Lift to make sure that it is safe to operate.

- Is all safety equipment on the Hydraulic Lift installed and functional?
- Is there any person in the danger zone of the Hydraulic Lift?

3.5.2 Operation

- If the Hydraulic Lift malfunctions, stop the machine immediately and lock it. Have the fault repaired immediately by qualified technicians.
- Operate the Hydraulic Lift only with the protective covers.
- Rotating machine components can cause serious injury. Make sure that body parts or clothing never come close to rotating components.

3.5.3 Maintenance and repair

Maintenance and repair work involves additional hazards that do not occur during operation of the machine.

- Take particular care when carrying out maintenance and repair work. Work very carefully and with awareness of danger.

3.5.4 Spare parts

- Observe the maintenance and repair intervals specified in this operator's manual exactly.
- Also observe the maintenance and repair intervals for the supplied components. See the supplier documentation for the relevant intervals
- Spare parts must at least comply with the technical standards specified by the manufacturer. This is assured with original spare parts.

3.5.5 Maintenance and repair work

- Disconnect the power supply before all cleaning, maintenance and repair work and when troubleshooting. Wait until all moving parts of the machine have stopped moving.

.

- Disconnect the power supply before working on the electrical system.

- Make sure that no unauthorized person can switch on the Hydraulic Lift.

3.6 Safety equipment on the machine

WARNING

Type and source of danger

This warning advice warns of a possible dangerous situation for the health of persons.

Non adherence to this warning advice leads to serious injury.

- Read this operating instruction carefully and follow the warning advice.

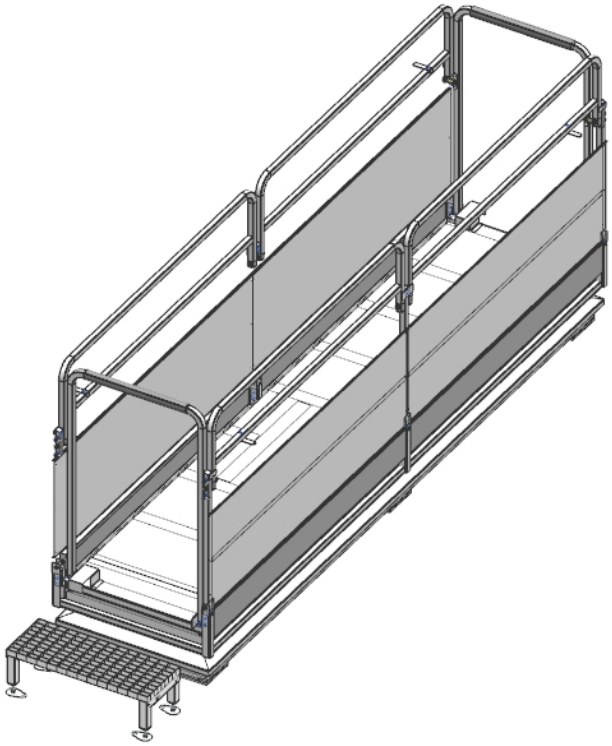
3.6.1 Warning stickers

Sticker	Designation
	**Read operator's manual and safety instructions** Before placing the machine in operation, read and observe the operator's manual and warning instructions. The operator's manual explains in detail how to operate the machine and contains information on safety, operation and maintenance.
	Wear safety gloves!
	Wear safety-work-shoes!
	Wear protective clothes!
	Wear safety glasses!
	Warning! Crushing of hands. ➔ To warn of a closing motion of mechanical parts of equipment

4 Technical Data

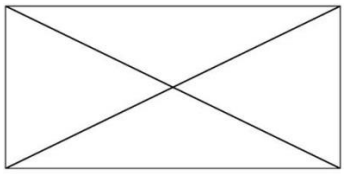
4.1 Functional Description

The general structure of the Hydraulic Lift is shown below. There is a single flat platform on the Hydraulic Lift. This product is used to lift loads to different heights. It has a hydraulic system includes an oil tank, a pump and a cylinder. The platform on it is raised and lowered by the movements of the cylinder. The working pressure is 180 bar.

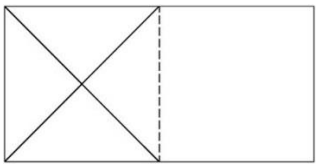


4.1.1 Operational information

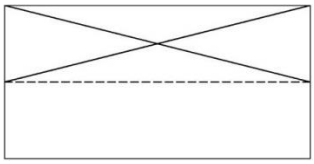
The maximum capacity is valid only if the load is evenly distributed over the platform. The basic requirements under EN 1570 standard are as follows:



The load is evenly distributed on the platform. (100% of the lifting capacity can be used)

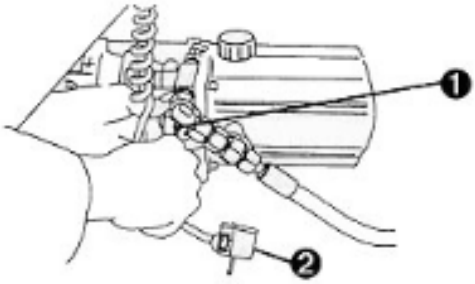


The load is on the half of the platform. (50% of the lifting capacity can be used)

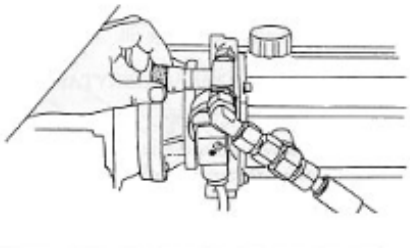


The load is on the half and parallel to the long edge of the platform. (33% of the capacity can be used)

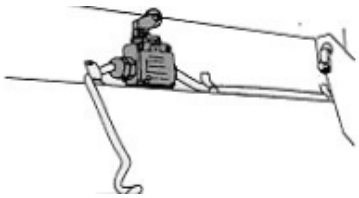
In case of power failure, the lowering valve will not operate. In such cases, the platform can be lowered by manual lowering. You can manually lower the platform by loosening the pin on the lowering head (by turning it counterclockwise). The pin should be loosened gently. After manual lowering, retighten the pin. If the pin is not tightened, the motor will not be able to start and lift.



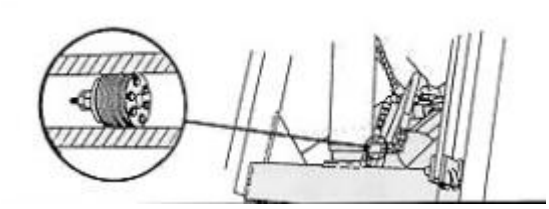
The lowering speed of the platform is made by adjusting bolt on the motor. Open the bolt to lower the platform faster, and tighten the bolt to slow it down. The lowering speed should never exceed 0.15 m / s. (EN 1570)



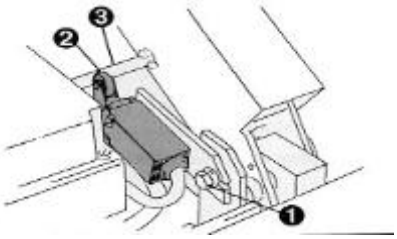
In order to prevent dangerous situations such as foot jams, the safety frame on the top plate stops the system immediately.



In case of oil leakage, the valve seen below prevents the system from locking completely or lowering.



Adjustment of the limit switches can be done as follows. Lift the platform to the required point. Loosen the bolt (1) and turn the switch so that it touches the stop (2), adjust to the stop point (3), then tighten the bolt.



4.2 Product description

WARNING

Malfunction of machine

Any use outside these specifications is considered as contrary to the intended use. The manufacturer is not liable for any damage resulting from this. The operator bears the entire risk.

The Hydraulic Lift is built for the purpose of lifting the loads (see tables below).

Specifications	Value
Capacity	500 kg
Max. Hydraulic Pressure	180 bar
Oil Tank	8 liter
Hydraulic Motor	0.75 kW

4.3 Dimensions

Dimension	Value
Min. Height	300 mm
Max. Height	2300 mm
Length	3200 mm
Width	700 mm
Stroke	2000 mm

5 Transport

5.1 Delivery

The condition and completeness of the machine must be checked. In case of damages caused by transport, make photos. It must be recorded and the report must be signed. Serious damages caused by transport, which have impact on the functioning and safety of the machine, must be processed only in agreement with the manufacturer.

5.2 In-house Transport

- ✓ During transport of the Hydraulic Lift, damage may occur which cannot be removed due to fall or impact.
- ✓ The Hydraulic Lift must only be transported with special ropes under the supervision of trained personnel.
- ✓ Safety precautions must be taken before transport.
- ✓ Care must be taken not to damage the Hydraulic Lift during transport.
- ✓ A forklift suitable for the size of the equipment to be transported must be used.
- ✓ Transport should be done by fixing the equipment close to the center of gravity.
- ✓ Do not forget any tools on the equipment during transport.
- ✓ During transport, care must be taken not to damage the hydraulic and mechanical systems and transport should not be carried out from the hydraulic system.

CAUTION

Damaging of machine and hurting of people

- The transport of machine must only be carried out by suitable, trained and expressly authorized personnel.
- Establish the transportation route in good time and remove possible obstacles.
- A check must be made to ascertain that all safety and transport devices are fit for operation.

5.3 Storage

- The machine must be stored in closed rooms at a room temperature between 5° and 40° and a relative humidity of max. 60% (non-condensing).
- In case of a longer storage time, it's necessary to preserve all uncoated metal machine parts (shafts, bearings etc.) e.g. the corrosion preventive compound Tectyl 846 K19, this is based on wax (for preserving until 12 month).
- For removing any corrosion preventive compound use cleaning solvent.
- Cover the machines with suitable cover-material to keep them free from dust.
- In case of sea transport a hermetically sealed foil is also allowed.

6 Installing and commissioning

6.1 Safety

CAUTION

Damaging of machine and of hurting people

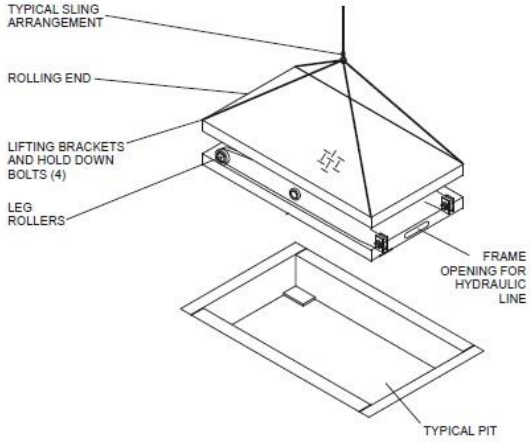
- The machine may only be assembled and disassembled by qualified technicians. These persons must be familiar with relevant regulations relating to the prevention of accidents and industrial safety.
- Work on the electrical and pneumatic systems must be carried out by qualified technicians only.

- The working area should be neat, tidy and hazard free.
- Only appropriate, tested and calibrated tools may be used.

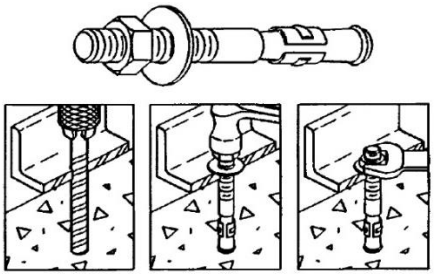
6.2 Assembly and disassembly

6.2.1 Assembly

If the lift is to be installed in a pit, suitable rope and chain must be used to lower the lift to the installation area as below.



If the unit of the platform is in a separate cabin; electrical cables, Hydraulic Lifting Platform, hydraulic hose and switcher should be connected to each other. This line should never be exposed. A suitable spiral or underground line must be made for the platform unit. Make sure that the pegs thrown to the floor must be of appropriate size and quality.



Strength class	Screw tightening torque MA acc VDI 2230 (Nm)									
	M5	M6	M8	M10	M12	M16	M20	M24	M27	M30
8.8	6.2	10.5	25	50	86	215	410	710	1050	1400
10.9	8.7	15	36	70	121	300	580	1000	1450	2000
12.9	10.5	17.5	43	84	145	360	700	1200	1750	2400

6.2.2 Disassembly

- Before start disassembling, make sure that no load is placed on the machine and that the power supply (air and electric power) for the complete system has been switched off!

6.3 Electrical Installation

- Motors and other electrical components are pre-installed.
- Limit switches have to be wired.

6.4 Commissioning

6.4.1 Preconditions

NOTICE

Before the system is released, a qualified person must carry out a visual and functional test.
This is to make sure that the machines are in a safe condition and there are no defects or damages due to improper installation.

- Mechanical equipment installed.
- Transport securing devices dismounted.
- Electrical equipment installed and connected.
- Hydraulic equipment installed.
- Safety and monitoring equipment installed and functioning.
- The function test checks all processes occurring without goods during operation of the machines

7 Operation manual

➔ See document „Operation manual of M2S Load-Unload-System“ on CD Rom

8 Service and maintenance

8.1 Safety

WARNING

Moving parts

For cleaning and lubrication all drives of the machine and adjacent machines must be switched off from the power supply. The maintenance work may only be started when the entire machine system has come to a standstill.

CAUTION

Working with chemicals

The safety data sheets and the specific regulations of all chemicals and cleaning agents used for the operation and maintenance of the machine, must be observed.

8.2 Maintenance

- Excess oil and grease must be removed immediately. After completion of the maintenance work, it must be checked whether all protection and safety devices are correctly installed again.
- The machine must be cleaned regularly to ensure a long life of the machine and its production. A weekly cleaning is recommended. Some parts need special care.
- Geared motors, electric drives and other purchased machine parts are to be maintained in accordance with the operating instructions of the manufacturers.
- All fasteners on moving machine parts must be checked for their correct fastening and securing at intervals of 3 months.

8.2.1 Hydraulic Oil Details

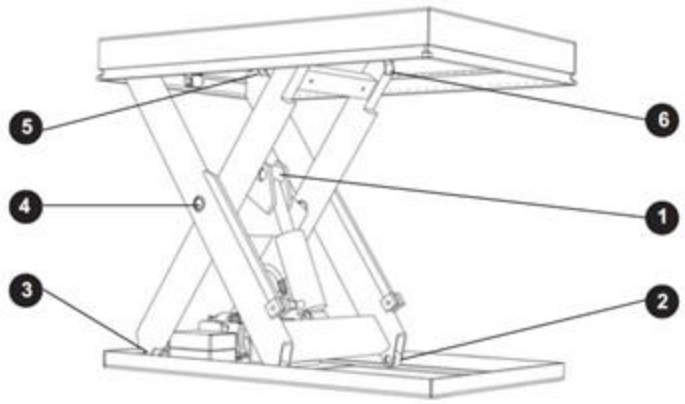
Dimension	Value
Density	872
Flash point	210 °C
Freeze point	-39 °C
Viscosity at 100 °C (212 °F)	8.2
Viscosity at 40 °C (104 °F)	46
Viscosity İndex	153

8.2.2 Maintenance schedule

Parts	Activity / Remark	Time interval
The whole system	Visual check	Daily
Connections	Check for integrity	Daily
Pulleys	Check for integrity	Daily
Oil	Check oil level	Daily
Lowering/lifting	Check for integrity	Daily
Security labels	Check for integrity	Daily
Electrical system	Check for integrity	Monthly
Electrical connections	Check for integrity	Monthly
Moving parts	Check for integrity	Monthly
Bushes and bearings	Check for integrity	6-monthly
Hydraulic oil	Replace oil	Yearly

8.2.3 Lubrication

Picture below shows the lubrication points



1. Piston connection point
2. Lower platform pulley
3. Lower platform connection point
4. Bushes
5. Upper platform pulley
6. Upper platform pulley

8.3 Service Address

OLBRICHT Automation GmbH
Hamminkelner Str. 30
D-46499 Hamminkeln-Brünen

T:+49 (0) 28 56 / 9 09 96-0
F:+49 (0) 28 56 / 9 09 96-60
info@olbricht.de
www.olbricht.de

9 Disposal

9.1 Safety

WARNING

Pollution of the environment due to unsuitable disposal of gear oil.

Gear oil is not fully biodegradable. Therefore oil must not be disposed of in the environment in an uncontrolled manner.

- The proper disposal of used oil must only be undertaken by the authorized maintenance personnel.
- Soak up or dam up oil that has run out of equipment with sand, soil or absorbent material.
- Collect gear oil in a suitable container provided for the purpose and dispose of it in accordance with the local statutory requirements.
- Draining and penetration of oil into the sewerage system.
- Penetration of oil into the water drain by setting up barriers of sand or earth or other appropriate barrier methods.

WARNING

Environmental pollution due to the unsuitable disposal of packaging material

Packaging material contains chemical compounds, which must be dealt with appropriately.

The specialized disposal of packaging material takes place via an appropriately authorized disposal company with adherence to the national regulations.

Do not burn packaging materials or dispose of it as household refuse.

Disposal only by authorized companies.

9.2 Disposal

The following points apply without restriction. The precautions that laid down as a result of national regulations are to be carried out implicitly.

1. Make sure that no load or any products lie on the Hydraulic Lift.
2. Switch off the supply of air and electric power.
3. Wear personal protection equipment.
4. Dismantling of machine.
5. All parts, auxiliary and operating substances are to be removed from the Hydraulic Lift by specialist personnel. In so doing these parts are to be sorted into specific categories.
6. All waste products are then to be disposed of in accordance with local regulations and directives for recycling or special refuse categories by authorized companies.

10 Spare parts

10.1 Spare parts

10.1.1 Classification of spare parts

The parts lists of the assembly drawings have a column “Spares” (see figure below). It shows where the spare parts are located. The spare parts are labeled with **I, II, III**.

	**Classification of spare parts according the need to keep them available**
Classification	**Explanations:**
I	Spare parts that should be available at start-up, because they can fail at any time.
II	Spare parts to be expected for replacement within a two-year operation life-time, depending on normal wear and stress.
III	Spare parts, to be expected for replacement after more than a two-year operation life-time, depending on normal wear and stress, it is recommended to have them on stock.

OLBRICHT Glass Processing & Handling Technologies	Olbricht Automation GmbH		Project No / Machine ID:			801.01	
	PART LIST		Customer name:			SAGE	
			Owner:			Ahmet ALGUR	
			Edit by:			HS,AA,AT,RE	
			Rev. date & No:			19/12/2019	
#	Part / Component No.	Part / Component Name	Unit	Quantity	Brand		CLASS.
1	GN 7017-6-M10-CK-ST	Indexing piston	Pcs	8	ELESA GANTER		II
2	IFS306	Sensor	Pcs	2	IFM		I
3	DELPHI 80B-4	80B-4B14 60Hz-480V-0.9kW-1.2Hp Motor	Pcs	1	Motive s.r.l.		III
4	XCKN2149P20	limit switch XCKN - plastic roller lever Ø50 var.length - 1NC+1NO - snap - M20	Pcs	2	TELEMECANIQUE		I
5	10 lt	Oil Tank	Pcs	1	Hidros		III
6		Central Manifold.	Pcs	1	Hidros		II
7	Onder Lift	Hydraulic Cylinder	Pcs	2	Onder Lift		II

10.1.2 Instruction for the use of spare parts

- Only use original-manufactured-equipment (OEM)-spare parts.
- When ordering spare parts, please refer always to Olbricht Automation assembly-drawing-number and part-number. Proprietary spare-parts have to be identified with:
  a) Name of supplier/manufacturer
  b) Component designation
  c) Component identification-number
- The part-number in the part list is identical with the part-number on the associated assembly drawing.
- Some spare parts need special assembly instructions, operating manuals or data sheets.
  ➔ See folder „Assembly drawings” on CD ROM.

NOTICE

By using other spare parts, the safety and function of the machine are not guaranteed any longer. In this case Olbricht Automation assumes no responsibility.

10.1.3 Spare parts lists

➔ See folder „Spare parts list” on CD ROM.

11 Applicable Documents

11.1 Assembly Drawings

➔ See folder „ Assembly drawings” on CD ROM.

11.2 OEM Parts Documentation

➔ See folder „ OEM Parts Documentation” on CD ROM.

11.3 Wiring diagrams

➔ See folder „Wiring diagrams” on CD ROM.

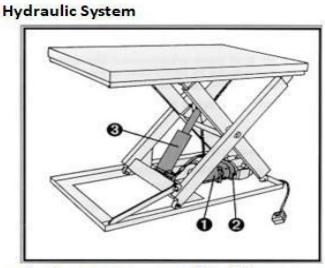
11.4 Spare parts list

➔ See folder „Spare parts list” on CD ROM.

12 Preventive Maintenance

<table>
<tr><td colspan="2">Intervention:</td><td colspan="2">CHECK</td></tr>
<tr><td colspan="2">Maintenance:</td><td colspan="2">Preventive</td></tr>
<tr><td>Components</td><td>Frequency (hours)</td><td>• Check
✓ Maintenance</td><td>Warnings</td></tr>
<tr><td rowspan="3">Sensors</td><td rowspan="3">5760 (12 months considering 16 hours a day every day including holidays)</td><td rowspan="3">• Integrity
• Fixings
• Check correct operation</td><td>In case of failure or malfunction, replace.</td></tr>
<tr><td>Clean using a dry and clean cloth. If necessary, use suitable detergents</td></tr>
<tr><td>For further information, refer to the manufacturer’s instructions manual.</td></tr>
<tr><td colspan="4"> 
Pictures are only for illustration purpose.</td></tr>
</table>

<table>
<tr><td colspan="2">Intervention:</td><td colspan="2">CHECK</td></tr>
<tr><td colspan="2">Maintenance:</td><td colspan="2">Preventive</td></tr>
<tr><td>Components</td><td>Frequency (hours)</td><td>• Check

✓ Maintenance</td><td>Warnings</td></tr>
<tr><td rowspan="3">Hydrolic Unit</td><td rowspan="3">2880 (6 month considering 16 hours a day every day including holidays)</td><td rowspan="3">✓ Change the oil
• Hydraulic hoses at all moving points
• oil level</td><td>Check that the hydraulic oil has started to darken. Change the oil if necessary</td></tr>
<tr><td>Raise and lower the platform repeatedly and make sure there is no abnormal noise or vibration</td></tr>
<tr><td>Check for water in the hydraulic oil</td></tr>
<tr><td colspan="4">Hydraulic System
 

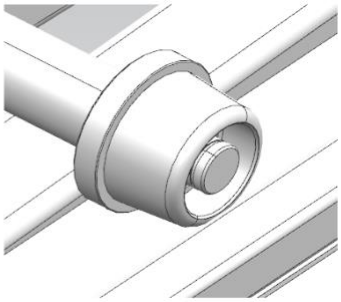
Hydraulic system consists of the following parts:
• Hydraulic oil tank (1)
• Hydraulic pump (2)
• Hydraulic cylinder (3)</td></tr>
</table>

<table>
<tr><td colspan="2">Intervention:</td><td colspan="2">CHECK</td></tr>
<tr><td colspan="2">Maintenance:</td><td colspan="2">Preventive</td></tr>
<tr><td>Components</td><td>Frequency (hours)</td><td>• Check

✓ Maintenance</td><td>Warnings</td></tr>
<tr><td rowspan="2">Sliding Wheels</td><td rowspan="2">120 (weekly considering 16

hours a day every day including holidays)</td><td>• Damage
• Noise Level
• Fluidity

• Fixing
✓ Lubrication

✓ Sliding
✓ Tightening nuts,screw,ring nuts</td><td>if wheel is dry,lubricate using special grease nipple on the wheel</td></tr>
<tr><td>after greasing,remove any grease leakage with a cloth</td></tr>
<tr><td colspan="4">  
Pictures are only for illustration purpose.</td></tr>
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