



## **GB/US . . . GLS5.2 Active lifter**

User manual – vers. 102.0



**Guldmann™**

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## GLS5.2 Active lifter

Item nos:  
5622XX

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**1.00**

**Manufacturer**

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Tlf. +45 8741 3100

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**2.00**

**Intended purpose**

GLS5.2 is intended for lifting and transferring a person with disabilities.

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**3.00**

**Area of use**

GLS5.2 is suitable for professional use in hospitals, nursing homes, rehabilitation centers, institutions and in private homes and buildings, where operators with medical/clinical training are continually on site or on call.

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**4.00**

**Conditions for use**

GLS5.2 is a mobile active lifter which is designed to assist the user from a sitting to a standing position. It can also be used to assist the user in the toilet procedure or the beginning of the rehabilitation process. The lifter is suitable for lifting or moving a person who is capable of actively participating in the process, the user must also have good communication skills.

When the active lifter is used the assumption is that:

- The user can balance in a sitting position, has strength in the lower and upper body and can communicate.
- The lifter will be operated by a qualified person.
- The active lifter is moved at a maximum speed corresponding to normal walking speed.
- The Guldmann active lifter is used with Guldmann lifting slings.

Guldmann cannot be held responsible for any faults or accidents that may occur due to incorrect positioning of the lifting sling, nor for inadequate attention paid by the helper. We strongly recommend assessment of the user before every lift.

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**4.01****Where to use GLS5.2**

GLS5.2 is designed to be used in hospitals, nursing homes, institutions and private homes. It can be used indoors whenever the user needs to be lifted or moved on a level surface.

- The lifter is designed so its legs can fit under beds, around chairs / wheelchairs.
- The lifter can be used in wet areas however, it must not be exposed to splash water.
- The lifter is designed to be used with multiple users. When moving the lifter to another user / ward / room, perform normal hygienic disinfection.

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**4.02****Warning**

Read the manual fully before using the lifter to familiarize yourself with the controls and safety features of the lifter.

- Do not exceed the max. load.
- Use the lifter to lift a person only.
- Use the lifter on an even and level surface only. The lifter has limited mechanical stability when the lift is placed sideways on a slope.
- When adjusting the legs of the lifter make sure that no persons stand close to the legs due to the risk of being jammed.
- Do not run the lifter into persons or objects.
- Exchange of lifting motor/actuator according to the manufacturer's instructions. See service chapter
- In case of damage, do not use the lifter until authorized by qualified service staff or the Guldmann service team.
- Do not use the lifter in areas where it can be splashed with water.
- Do not use the lifter in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
- Do not modify this equipment without authorization from the manufacturer, including opening battery which can damage cell and generate excessive heat.
- The lifter is not intended to be driving over steps and thresholds.
- The lifter needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in Chapter 17 EMC Information.
- Portable and mobile RF communications equipment can affect the lifter.
- The use of ACCESSORIES, transducers and cables other than those specified, with the exception of transducers and cables sold by Guldmann A/S of the lifter as replacement parts for internal components, may result in increased EMISSIONS or decreased IMMUNITY of the lifter.

- The lifter should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, the lifter should be observed to verify normal operation in the configuration in which it will be used.
- In case the battery is too hot, disconnect it, evacuate the room, and wait for 2 hours before taking further steps
- Risk of entrapment between the top of the lifting actuator and lifting arm.
- Risk of entrapment between manual emergency lowering ring and sealing ring of actuator
- Risk of entrapment between the legs and the chassis when adjusting the legs.

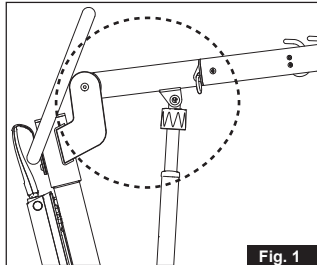


Fig. 1

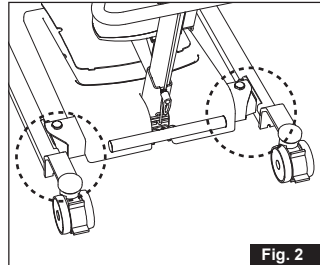
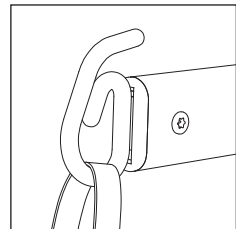
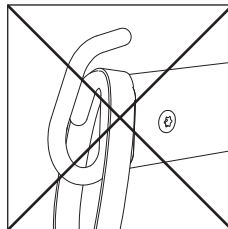
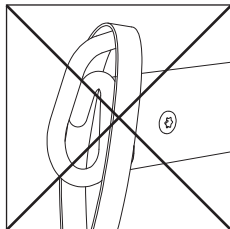


Fig. 2

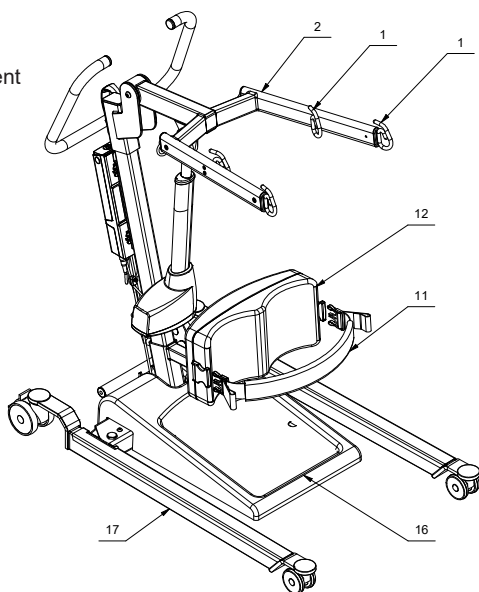
#### 4.03

#### Important

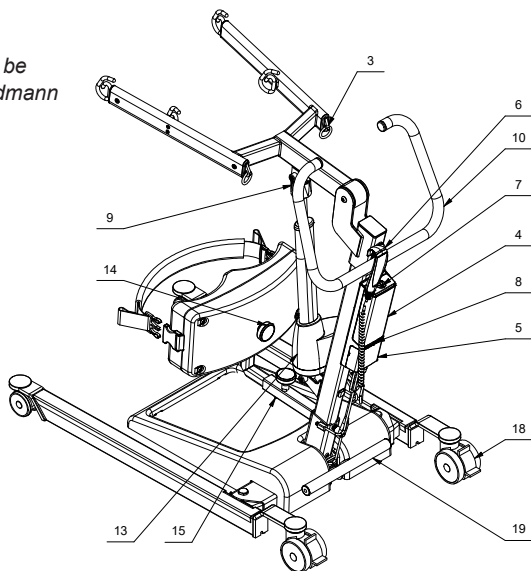
- Always plan your lift before commencing.
- Only use slings that are designed to be used with the active lifter.
- Never use slings that are damaged, frayed or have unreadable labels.
- Check to make sure the user does not exceed the safe working load of the lifter.
- For safety reasons we DO NOT recommend transporting users through standard door frames.
- Caution must be exercised when mounting the sling lifting straps onto the lifting hooks of the boom.
- Any serious incident that occurred in relation to this device should be reported to the manufacturer and the local competent authority.



1. Sling attachment hooks
2. Lifting boom
3. Hip support sling attachment
4. Battery
5. Control box
6. Hand control
7. Emergency stop
8. Emergency lowering electrical
9. Emergency lowering manual
10. Push handle
11. Calf strap
12. Knee pad
13. Lifting actuator
14. Knee pad height adjustment knob
15. Knee pad length adjustment knob
16. Foot plate
17. Chassis leg
18. Brake/release
19. Foot bar



*Accessories can be found in the Guldmann product catalog*



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## 5.01 Accessories for the lifter

### Lifting slings

Ask for special brochure from supplier or manufacturer.

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## 6.00 Unpacking and preparation of the lifter

### Visual check of lifter

If the packaging is damaged on receipt, each part of the lifter must be carefully examined for visible defects or deficiencies. In case of suspected damage, do not use the lifter until authorized by qualified service staff or the Guldmann Service Team.

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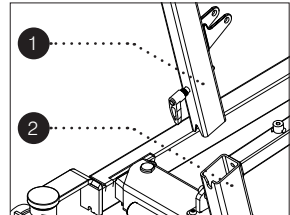
## 6.01 Assembly instruction

Guldmann recommends that the person making the assembly of the Active Lifters have a basic mechanical understanding.

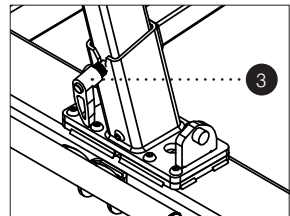
Unpack the lifter on to a level surface and gently remove cable ties and protective-foam.

### Assembling mast/chassis

Insert the mast (*pos. 1*) and lifting arm into the chassis (*pos. 2*), make sure that the mast hits the chassis in the bottom of the chassis tube.



Tighten the assembly screw (*pos. 3*) by turning the handle Clockwise, push to get a firm grip, pull to adjust the handle positio

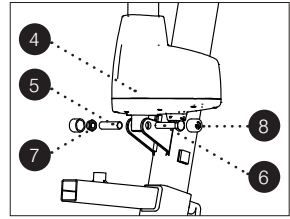




### Fitting actuator

Fasten the lifting actuator base (pos. 4) on to the mast by inserting the Pipe (pos. 5), secure bolt (pos. 6) and locknut (pos. 7) by tightening them.

Complete by adding protective plastic caps (pos. 8) to not and bolt.

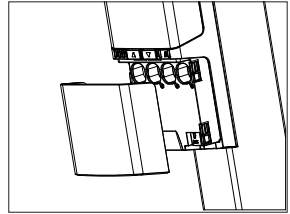


Actuator motor housing must face right seen from the front.

Fasten the actuator on to the lifting arm in the same way.

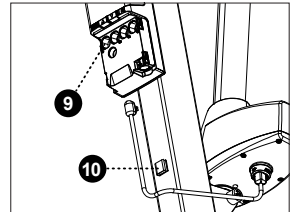
### Mounting of connectors for motors

Start by opening cable cover by sliding down and straight out.

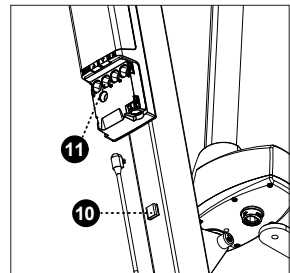


Insert connector from the lifting actuator to port 1 (pos. 9) on the control box.

Insert the cable from the lifting actuator into the cable clips. (pos. 10)



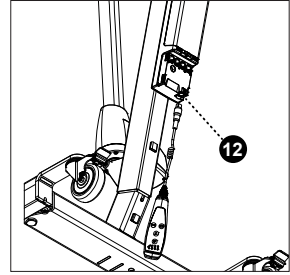
Insert connector for width adjustment motor to port 2 (pos. 11) on the control box. Insert the cable from the width adjustment motor into the 2 cable clips (Pos. 10)



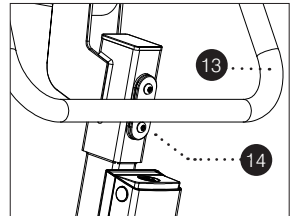
### Mounting of the hand control

Connect the hand control to the DIN port on the control box (pos. 12).

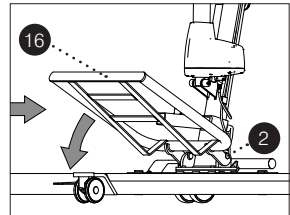
Push cable cover back on directly over designated snaps.



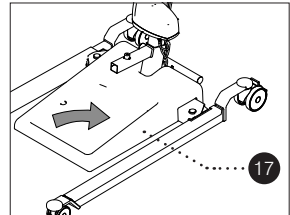
Fasten push handle (pos. 13) to mast by tightening the Two screws (pos. 14).



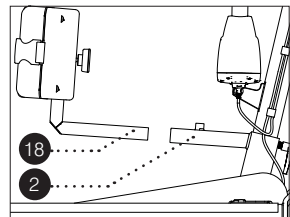
Attach on the footrest (pos. 16) to the chassis (pos. 2) by lifting the end and inserting the footrest, then turn down to lock it in to place.



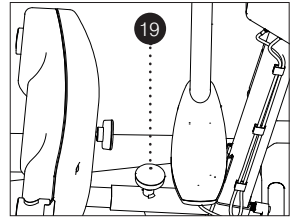
Put on the footrest cover (pos. 17).



Insert the knee pad (pos. 18) in to the square tube on the Chassis (pos. 2).



Secure the knee pad with the adjustment knob (pos. 19).



## 6.02 Checklist before use

- The lifter must be off charge.
- Before first use the service indicator must be reset, done by pressing up and down button at the same time for 5 seconds.
- Check the lifter is lifting and lowering and the legs are opening and closing, if you hear the audio warning (a beeping sound) DO NOT USE THE LIFTER – it needs to be charged.
- Check that the green light located on the hand control is illuminated when the lifter is activated.
- Check that the emergency stop and lowering is working (See section 7.02 - *Safety functions*).
- Make sure the lifter is running freely.
- Check the slings for damage or fraying.

Once you have fitted the sling (See section about placing the sling in the manual for *Standing sling* and *Hip Support sling*) you are ready to lift.

### With the user in a seated position

- If the user is in a wheelchair or commode chair the brakes must be applied.
- Position the lifting boom at lowest position and introduce the lifter square onto the user. The helper should be positioned at the side of the lifter (to ensure the lifter does not run over the user's feet).
- Open the lifter's chassis leg width adjustment to allow access around the chair.
- Position the user's feet flat onto the foot plate and adjust the knee pad - the top of the knee pad should be level with the top of the shin, two fingers below the knee joint.
- OPTIONAL – if the user has a tendency to have involuntary movements you can use the calf strap to ensure the users' feet do not come off the foot plate. If the calf strap is not in use, fasten the strap to the back of the knee pad (avoiding loose straps).
- Raise the lifting boom to gain tension on the sling - ENSURE THE SLING IS STILL SECURE AND ATTACHED BEFORE CONTINUING WITH THE LIFT. Communication should be maintained throughout the lifting procedure. Alternatively you have the option to attach the sling onto the lower hooks; this will facilitate an alternative lifting position and is more suitable for the shorter user. To lower the user back into a seated position push the lifter up to the chair / commode chair / toilet and position the user so the calf is parallel to the chair / commode chair / toilet. Begin to lower and ask the user to push his/her pelvis / hip backwards to ensure the correct seated position.

- Release the sling straps and move the lifter away from the user.
- The sling is ready for removal - see sling user guide.

### Working with the Active lifter

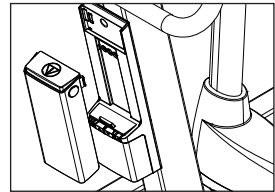
Always maintain a good working posture when applying the sling or working with the lifter. When moving a person use the push handle and walk forward and backwards with the lifter keeping the load as close as possible to your body. NEVER pull or twist at arm's length, this can cause injury to the helper.

## 6.03

### Charging and installing battery

Before use, the battery needs to be fully charged. For details, see 6.04 Charging procedure.

Remove battery packaging and mount the battery on top of the control box. The battery is mounted and secured correctly after hearing a click.



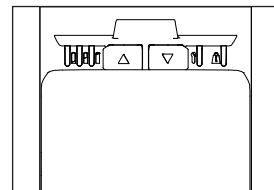
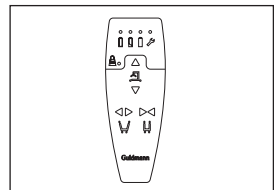
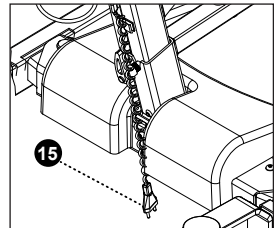
## 6.04

### Charging procedure

Recharge lifter every night or when it is not in use. This maintains the batteries and ensures a long life span. Avoid fully discharging the battery.

#### Recharging

- Recharge by plugging the power cord (pos. 15) into a wall socket. While charging, the green LEDs on the control box are lit.
- The green LED on the control box is lit during charging when the power cord is plugged in.
- The power supply is automatically disconnected when the lifter is fully charged. The green "Charge" LED turns off on the control box.
- Recharge when only 1 green LED positioned above a battery symbol on the hand control is lit.
- When the green LED of the empty battery indicator is lit on the hand control and the alarm sounds, there is limited use of the mobile lifter.
- The lifter cannot be used while charging.
- Do not recharge in wet areas/bathrooms.
- Maximum recharging time is approx. 4 hours.
- After recharging, please allow up to 15 seconds battery capacity calibration before using the lifter.
- When fully charged 3 green LED illuminates on both the control box and hand control.



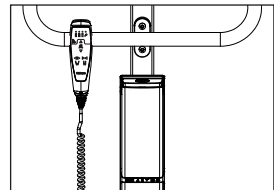
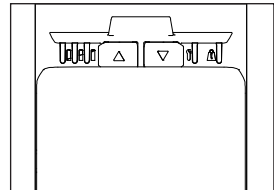
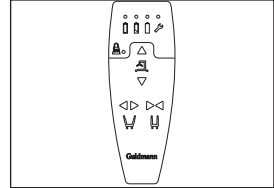
**Note!**

Ensure the wall socket is turned off when connecting the power cord to the control box to charge the battery.

**7.00****Operation**

To lift/lower and adjustment of chassis leg in/out

- ▲ • To lift the patient press UP arrow and to lower the patient press DOWN arrow on the hand control or the control box.
- ▼
- ◀ ▶ • On GLS5.2 mobile lifter the leg spread width adjustment of the chassis is operated via the sideways arrows on the hand control. To switch between modes on hand control, one button needs to be released before activating the next.
- Use maximum width setting when lifting to/from wide chairs, or as necessary when lifting to/from bed, toilet and floor.
- When not in use, the hand control is designed to be placed on the push handle.
- When maneuvering the lifter the chassis legs must be in the closed narrow position.
- The lifter will go into standby after 2 min. without use.



# 7.01 Indicator lamps and audio signals

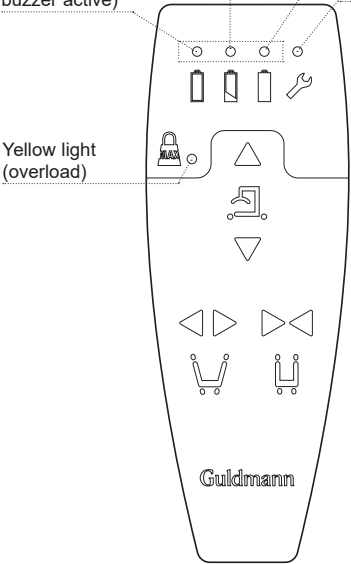
Status	Indicator lamps	Audio signals	Possible GLS5.2 signals			
			Up	Down	Leg spread	Emergency down
Hand control						
Battery charged 75-100%	3 Green lights		x	x	x	x
Battery charged 50-75%	2 Green lights		x	x	x	x
Battery charged <50%	1 Green light		x	x	x	x
Critical low battery, two cycles left	1 Yellow light	Beeps at button activation	x	x	x	x
Lifter service	Yellow Is lit during use and 2 minutes after		x	x	x	x
Overload	Yellow Flashes 3 times + lights up for 10 seconds			x		x
Control box						
Charger	Green - flashes					
Charged	Green					

One green light (battery < 50%)  
Yellow flashing light (battery, two cycles left, buzzer active)

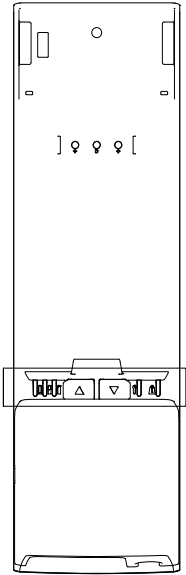
Two green lights (battery 50-75%)

Three green lights (battery 75-100%)

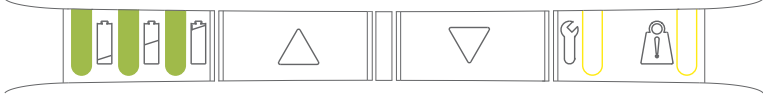
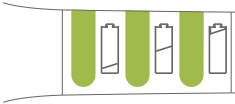



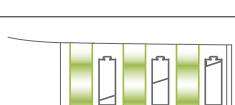

Yellow lifter service light

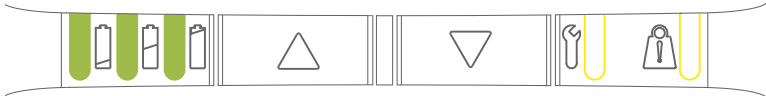









Hand control



Control box

		
LED 1 - LED 2 - LED 3	LED state (Not listed = off)	States while charging
	LED 1 - 3 constantly on	90 - 100%
	LED 1 + 2 constantly on LED 3 flashes slowly	65 - 90%
	LED 1 constantly on LED 2 flashes slowly	40 - 65%
	LED 1 flashes slowly	0 - 40%
	LED 1 + 2 + 3 flash slowly	Charging stopped due to low battery temperature, high battery temperature or other error conditions
	No light in LEDs	Charging stopped due to lost communication to battery

					
PRIORITY	LED 4 + LED 5	LED state (Not listed = off)	States in normal use/charging	Comments	Reset
0		LED 4 flashing according to Bluetooth pairing state*	Pairing Bluetooth	Not ready to drive	Wait until ready
1		LED 4+5 constantly on	Emergency stop activated	Not ready to drive	Reactivate emergency stop
2		LED 4+5 flashing fast (synchronous)	FATAL ERROR Cannot drive, has to be reset	No movement possible	Contact supplier prior to using lifter again
3		LED 5 flashing slowly	OVERLOAD	Momentary not ready to LIFT	Reduce load
4		LED 4 flashing slowly	Duty cycle guard	Momentary not ready to LIFT	Wait until ready
5		LED 5 constantly on	Position not to be trusted	Drive is possible	Drive into End of Service
6		LED 4 constantly on	Service needed	Drive is possible	Contact supplier prior to using lifter again

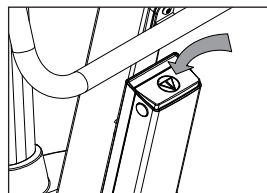


Only use the emergency stop button and emergency lowering functions in emergencies. If it has been necessary to apply the emergency/safety functions due to an error on the lifter, the supplier must be contacted prior to using the lifter again.

### Activating the emergency stop function

Should the lifter not respond to the functions selected on the hand control when it is in motion, push red button on top of battery. When the emergency stop function is applied, the lifter ceases to function.

To release the emergency stop, take off battery by using thumb and index/middle finger to push buttons on battery sides, and pull battery out. To replace the battery again, grab battery on sides and steer battery base on steering pin, and push in place.

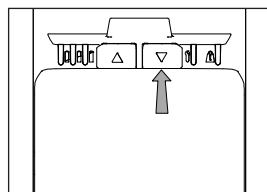


In order to disconnect the lifter from mains supply, pull the mains plug out of the power out-let.

### Activating the emergency lowering function

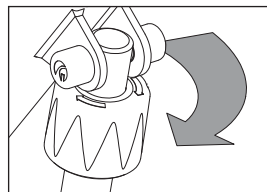
If the lifter fails to lower, activate the following:

1. Press the arrow key ▼ on the control box. This functions as an emergency lowering in case the hand control does not work.



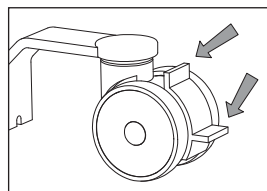
If the lifting boom does not lower

2. Turn the red knob on the lifting boom in the direction of the arrow (Optional)



### Use of brakes

The rear castors are fitted with brakes. Apply the brake by stepping on the lower kick pedal. To release the brake, kick the top part of the kick pedal.

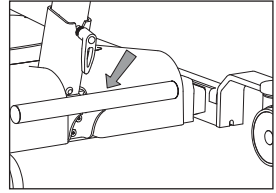


In daily operating the lifters castors are not locked for the lifter to center itself according to the patient's line of gravity. If the brakes are activated in these situations, shearing of the patient's skin or the patient being pulled out the lifter is a potential hazard. Individual circumstances might lead to clinical assessments where the lifter castors must be locked.

The brakes must be activated when the lifter is parked.

### Use of foot bar

The foot bar is there to assist the helper to initiate movement, and to facilitate the clearing of door thresholds, without a patient in the lifter or to assist loading into vehicles. This is achieved by placing one foot onto the foot bar and gently pulling back on the push handle.

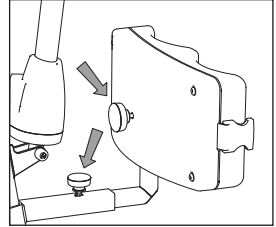


### Adjustment of knee pad

The knee pad can be adjusted in vertical and horizontal direction to fit the different users.

**Vertical:** Adjust by unscrew the yellow knob, lift or lower the knee pad in right position and then tighten the knob.

**Horizontal:** Loosen the yellow knob, then slide the knee pad in or out until it fits the user. Then tighten the knob clockwise to lock the knee pad safely.



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## 8.00

### Use of Active lifter

The lifter is designed to lift from a sitting position only. It is NOT designed to lift from lying position.

Before using the lifter we strongly recommend that a full risk assessment is carried out by a qualified person to ensure the user capability, the correct slings are used and the environment is suitable. Anyone using the lifter should be fully trained on its use.

Before every transfer with the active lifter, we strongly recommend you carry out a quick assessment to assess the user's capability.

#### Quick Assessment

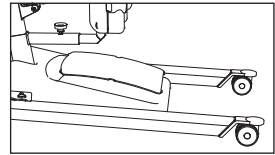
With the user in a seated position in chair / wheelchair / edge of bed - ask the user to push down through his/her knees (feet must be placed flat on the floor) - upon inspection the helper should see the user's quads tighten. This indicates strength to assist with the standing procedure, it also confirms communication skills.

We recommend that the products and the parts patients and caregivers can come in contact with, are cleaned with a damp cloth using warm water and a mild soap solution.

When disinfection is needed, use disinfectant wipes with up to a 85% solution of isopropyl, or a damp cloth using warm water and a disinfectant cleaner, e.g. an chlorine dissolving up to 1500 ppm.

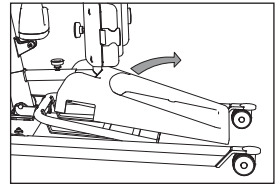
If other chemicals and/or liquids with higher resolution should be used to clean or disinfect these products, please contact Guldmann providing the item's safety sheet chemical composition for consideration.

**Caution:** Take great care to ensure that no liquids get inside the lift. The lift is not water-proof. Failure to protect the lift from liquids may result in damage to the lift and/or may cause personal injury.



For easier cleaning of the foot plate it can be lifted off.

The grey inserted plate can be removed separately for cleaning. Footplate and grey insert plate can be cleaned using hot water and disinfecting soap.



**Error:**

Lifter does not react to input from the buttons on the hand control.

**1. Does the green or yellow LED on the hand control light up when the control buttons are activated?**

Yes see point 6.

No no light visible – see point 2.

No only yellow light visible – see point 3.

No yellow service light visible or audible “Beep”– see “indicator and audio signals matrix” point 13.01.

**2. Is the battery mounted on the lifter?**

Yes see point 4.

No install a fully charged battery.

**3. Is a battery with sufficient charge installed in the lifter?**

No install a fully charged battery or charge the battery.

**4. Is the emergency stop activated?**

Yes To release the emergency stop, take off battery by using thumb and index/middle finger to push buttons on battery sides, and pull battery out.

To replace the battery again, grab battery on sides and steer battery base on steering pin, and push in place.

No see point 5

**5. Is the connector for the hand control fitted in the lifter, and is the lifter reacting to the buttons located on the control box?**

Yes replace hand control

No fit connector

**6. Are the connectors for the lifting motor and/or leg adjustment motor fitted?**

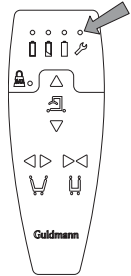
Yes see point 5

No fit connector

Contact the Guldmann Service Team if the fault cannot be found and corrected.

According to the international standard EN/ISO 10535 "Lifter for the transfer of disabled persons - Requirements and test methods" a safety inspection of the lifter must be performed at least once a year.

The lifter has an expected lifespan of 10 years. The lifespan is estimated on the basis of correct use, cleaning and maintenance, plus annual service and maintenance carried out by qualified service engineers of the Guldmann Service Team. At the end of the expected lifespan, the lifter must then be assessed by qualified service staff as to the lifter's future use. The lifespan of the lifting actuator is determined by how regular the lifter is used.



No part of the equipment shall be serviced when in use with a patient.

The lifter is controlled by a microprocessor PC board which can be damaged if it is being touched without the necessary precautions. Therefore the electronics must only be serviced by qualified Guldmann Team.

Spare parts lists and drawings are available from manufacturer or supplier.

**Operation**

The products operational environment:

- Operation temperatures between 10 and +35°C / 50 and 95°F
- A relative air humidity of between 30 and 70 %
- An air pressure of between 700 and 1060 hPa

For safety reasons, please adhere to indicated charging and operation temperature.

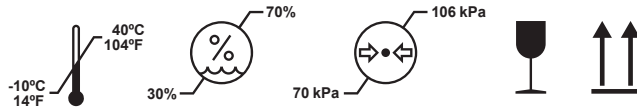
Information is illustrated by symbols on packaging including:

- Fragile
- This side up
- UN 3481 Li-Ion battery

Beside temperature, the same environmental conditions apply for transportation and storage.

- Transport and storage temperatures between -10 and +40°C / 14 and 104°F

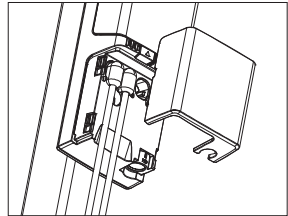
Symbols on the packaging:



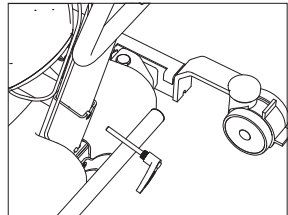
## Transport and storage

The lifter can be dismantled for transport and storage.

1. Detach the power cable that connect lifter's bottom frame to port 2 on control box.



2. Loosen the knob and lift the mast from the base.



## How to pack the lifter for transport

Guldmann recommends that the dismantled lifter is always transported in its original packaging.

## Storage of active lifter

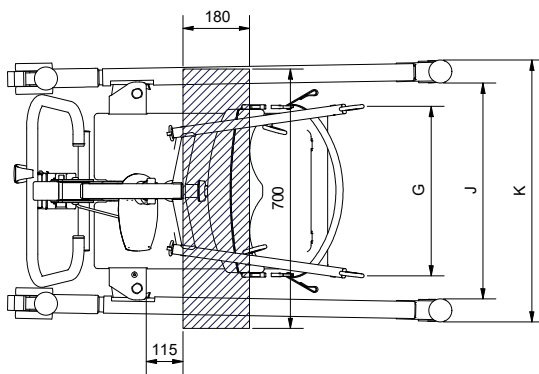
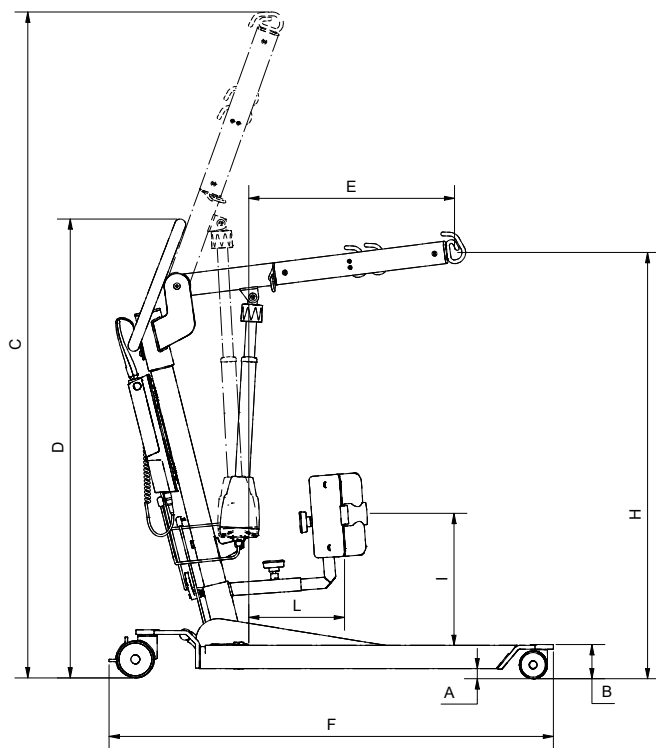
The active lifter should be stored in a dry room. The active lifter must never be stored in bathrooms and similar areas.

Always activate emergency stop when the active lifter is put on storage. If the lifter is not used for a long period, it can be necessary to periodically check or charge the battery.

## How to prevent/avoid corrosion

The active lifter should not be stored/remain in damp surroundings for long periods of time. Water vapor might liquify into water on the active lifter, thus causing corrosion/rust in bearings as well as in the tubular steel frame.

The active lifter should not be exposed to sudden cold or warmth. This means that one should not take a cold active lifter into a hot bathroom. In swimming baths and bathrooms where strong gases may be present, the active lifter is particularly exposed to corrosion and should always be removed from such places after use.





## Functions

Lifting capacity, max ..... 155/205 kg

## Operation

Lift ..... Electric  
Width adjustment ..... Electric  
Pushbuttons - max. .... 3.3 N  
Knee pad ..... Manual  
Lifting boom ..... Manual

## Weight

Totally ..... 54 kg  
Chassis without foot plate & knee pad ..... 23 kg  
Mast and lifting boom incl. control box & battery ..... 20 kg

## Measurements

A ..... 25 mm  
B ..... 90 mm  
C ..... 1770 mm  
D ..... 1237 mm  
E ..... 575 mm  
F ..... 1210 mm  
G ..... 460 mm  
H min/max ..... 850/1740 mm  
I min/max ..... 350/450 mm  
J min/max ..... 560/1190 mm  
K min/max: ..... 670/1310 mm  
L min/max ..... 230/320 mm

## Turning radius

Turning radius ..... 1360 mm

## Safety Features

Emergency stop ..... Yes  
Emergency lowering ..... Yes, electronic. Mechanical on request  
Protection against trapping ..... Yes

## Electrical parts

On/off ..... Automatically  
Integrated Power supply for charging  
Input ..... 120-240Vac, 50-60 Hz, 30 VA  
Battery, replaceable Li-Ion ..... 25.2 V / 2.9 Ah  
Charging time ..... Max. 4 hours  
Consumption/power of actuator ..... 24V, max 8A  
Duty Cycle ..... Max 10%, max. 2 min on, 18 min off.  
Battery protection ..... Switches off automatically at low voltage.  
..... Diode light up to indicate critical voltage.

Class of tightness

Mobile hoist	IP 30
Hand control	IPX 4
Integrated Power supply	IPX 6
Battery	IPX 6
Actuator	IPX 4

Labelling

The product is manufactured in compliance with the Council Directive 93/42/EEC of June 14th 1993, including amendments, as medical device Class I.

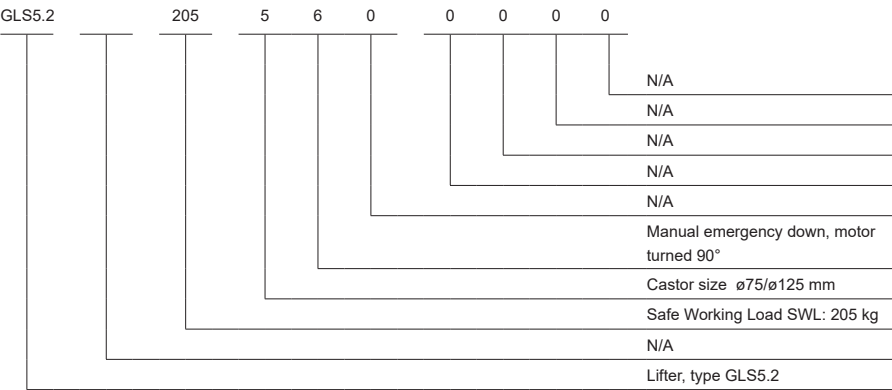
Classified

Acc. to ISO 9999	12 36 03
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13.00 Product configuration table

GLS5.2 active lifter, configurations									
Guldmann lifter type	Product line	Load in kg	Castors type	Actuator type	Additional functions	Scale module	CLM module	Service module	User interface
GLS5.2	(x)	xxx	x	x	x	x	x	x	x
GLS5.2		155	5	6					
		205	5	6					

Example: GLS5.2 205 560 000



**Pictograms/labels used on product**

Read the manual before use



CE-marking



Medical Device Class I in accordance with EU MDR Regulation



Type B in accordance with EN 60601-1



Battery condition and charging



Must not be disposed of as standard household waste, but must be recycled.



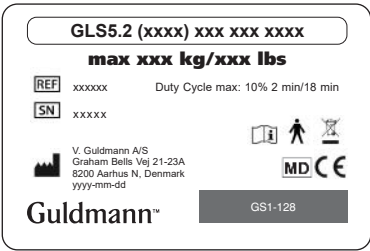
Lifting boom vertical up and down movement



Leg adjustment

Examples of labels

Serial number label



Hand control



Control box



Battery



Actuator



**15.00 EU-Declaration of conformity**

The product is manufactured in compliance with regulation (EU) 2017/745 of the European parliament and of the Council of 5 April 2017, as medical device Class I.

**16.00 Environmental policy statement - V. Guldmann A/S**

Guldmann is continuously working towards ensuring that the company's impact on the environment, locally and globally, is reduced to a minimum.

It is Guldmann's goal to:

- Comply with the current environmental legislation (e.g. WEEE and REACH directives)
- Ensure that we, at the widest possible range, use RoHS compliant materials and components
- Ensure that our products do not have an unnecessary negative impact on the environment regarding use, recirculation or disposal
- Ensure that our products contribute to a positive working environment in the places they are utilised

Inspections are made annually by the Department for Nature and Environment from the Municipality of Aarhus using the Danish Environmental Protection Act, section 42 as a reference.

**17.00 EMC Information**

**Tabel 1**

**Guidance and manufacturer's declaration – electromagnetic emissions**

The GLS5.2 is intended for use in the electromagnetic environment specified below.  
The customer or the user of the GLS5.2 should assure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The GLS5.2 uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Class A	The GLS5.2 is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

**Tabel 2****Guidance and manufacturer's declaration – electromagnetic immunity**

The GLS5.2 is intended for use in the electromagnetic environment specified below.  
The customer or the user of the GLS5.2 should assure that it is used in such an environment.


<b>IMMUNITY test</b>	<b>IEC 60601 test level</b>	<b>Compliance level</b>	<b>Electromagnetic environment – guidance</b>
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV differential mode ± 2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % $U_T$ (>95 % dip in $U_p$ ) for 0,5 cycle	<5 % $U_T$ (>95 % dip in $U_p$ ) for 0,5 cycle	Mains power quality should be that of a typical commercial or hospital environment. If the user of the GLS5.2 requires continued operation during power mains interruptions, it is recommended that the GLS5.2 be powered from an uninterruptible power supply or a battery.
	40 % $U_T$ (60 % dip in $U_p$ ) for 5 cycles	40 % $U_T$ (60 % dip in $U_p$ ) for 5 cycles	
	70 % $U_T$ (30 % dip in $U_p$ ) for 25 cycles	70 % $U_T$ (30 % dip in $U_p$ ) for 25 cycles	
	70 % $U_T$ (30 % dip in $U_p$ ) for 25 cycles	<5 % $U_T$ (>95 % dip in $U_p$ ) for 5 s	
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	The power frequency magnetic field should be measured in the intended installation location to assure that it is sufficiently low.

NOTE  $U_T$  is the a.c. mains voltage prior to application of the test level.

**Tabel 4**

**Guidance and manufacturer's declaration – electromagnetic immunity**

The GLS5.2 is intended for use in the electromagnetic environment specified below.  
The customer or the user of the GLS5.2 should assure that it is used in such an environment.

IMMUNITY test	IEC 60601 TEST LEVEL	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2,5 GHz	3 Vrms 3 V/m	<p>Portable and mobile RF communications equipment should be used no closer to any part of the GLS5.2, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p><b>Recommended separation distance</b> <math>d = 1,2\sqrt{Pd} = 1,2\sqrt{P}</math> 80 MHz to 800 MHz <math>d = 2,3\sqrt{P}</math> 800 MHz to 2,5 GHz</p> <p>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey <sup>a)</sup> should be less than the compliance level in each frequency range <sup>b)</sup> Interference may occur in the vicinity of equipment marked with the following symbol:</p> 

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.  
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

<sup>a)</sup> Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the GLS5.2 is used exceeds the applicable RF compliance level above, the GLS5.2 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the GLS5.2.

<sup>b)</sup> Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

**Tabel 6**

**Recommended separation distances between  
portable and mobile RF communications equipment and the GLS5.2**

The GLS5.2 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the GLS5.2 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the GLS5.2 as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz d=1,2√P	80 MHz to 800 MHz d=1,2√P	800 MHz to 2,5 GHz d=2,3√P
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

**18.00      Warranty and service conditions**

**A.      Warranty**

Guldmann warrants its equipment is free from material defects under normal use, and will perform substantially in accordance with the specifications set forth in documentation provided with the equipment.

This express warranty shall be in effect for one year from the date of original purchase and installation (the "Warranty Period"). If a valid claim is made during the Warranty Period for malfunction or equipment defect, Guldmann will repair or replace the equipment at no additional cost to you. Guldmann retains sole discretion as to whether the equipment will be repaired or replaced.

The warranty does not cover any part of the equipment that has been subject to damage or abuse by the user or others. The warranty does not cover any part of the equipment that has been altered or changed in any way by the user or others. Guldmann does not warrant that the lifting device functions will meet your requirements, be uninterrupted or error free.

The warranty set forth is in lieu of all other express and implied warranties, whether oral, written or implied, and the remedies set forth above are your sole and exclusive remedies. Only an authorized officer of Guldmann



may make modifications to this warranty, or additional warranties binding on Guldmann. Accordingly, additional statements such as advertising or presentations, whether oral or written, do not constitute warranties by Guldmann.

This warranty shall be null and void if the equipment is operated and maintained in any manner inconsistent with its intended use or the instructions provided with the product. Further, in order for the warranty to remain in effect for the full Warranty Period, all service to the equipment must be provided by a Guldmann certified technician. Any parts or components repaired or replaced by a Guldmann certified technician will be guaranteed for the remainder of the Warranty Period.

#### **Only for USA**

This warranty shall be null and void if the equipment is operated and maintained in any manner inconsistent with its intended use or the instructions provided with the product. Further, in order for the warranty to remain in effect for the full Warranty Period, all service to the equipment must be provided by a Guldmann Certified Technician. A Guldmann Certified Technician is a technician who has successfully completed Guldmann Service Training, and who holds a valid Service Training Certificate from Guldmann, and is in possession of a valid password to access Guldmann's Service and Information Console (SIC). A Guldmann Service Training Certificate and SIC password are valid for three years (only USA) from the date the technician is first certified. Thereafter, the technician must undergo re-certification training to obtain a new valid certificate and password. Any parts or components repaired or replaced by a Guldmann Certified Technician will be guaranteed for the remainder of the Warranty Period. In the event the warranty is rendered null and void, the purchaser shall indemnify and hold Guldmann harmless of and from any and all claims or liability arising as a result of equipment malfunction or misuse.

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#### **B.**

##### **Service or Repair**

Contact Guldmann Repair for an authorization to return any defective item during the Warranty Period. You will be provided with a return authorization number and address for returning the item for warranty service or replacement. Do not return items to Guldmann under warranty without receiving a Return Authorization Number.

If mailing the item, pack it carefully in a sturdy carton to prevent damage. Include your Return Authorization Number, a brief description of the problem and your return address and phone number. Guldmann does not assume the risk of loss or damage while in transit, so it is recommended you insure the package.





| Time to care |

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