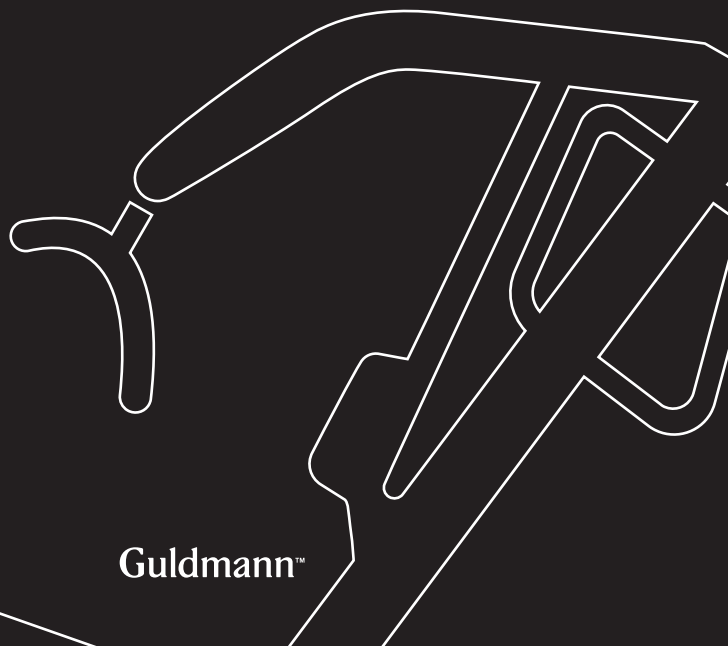




GB/USGL5 mobile lifter

User manual - vers. 1.00

CE



Guldmann™

GL5 mobile lifter

Item nos:
5550xx

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1.00**Manufacturer**

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DK - 8200 Aarhus N
Tlf. +45 8741 3100
Fax. +45 8741 3131

2.00**Intended use**

The Guldmann mobile lifter GL5 is an all-round lifter which covers the needs of hospitals, nursing homes, institutions and private homes. It can be used indoor whenever elderly and handicapped people have to be lifted or moved. The lifter is equipped with Guldmann lifting hanger or with another suitable hanger. Accessories consist of Guldmann lifting slings in various sizes and models.

When the mobile lifter is used the assumption is that:

- The lifter will be operated by a qualified person.
- The mobile lifter is moved at a maximum speed corresponding to normal walking speed.
- The Guldmann mobile 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.

2.01**Where to use GL5**

GL5 is designed to 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 / wheel-chairs
- 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.

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

- Do not exceed the maximum load.
- Use the lifter to lift a person only.
- Use the lifter on an even and level surface only.
- Only use a lifting hanger approved for use with the lifter.
- Don't lift/turn the lifting hanger in vertical direction during the mounting of the straps of the sling.
- 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.



- Risk of entrapment between the top of the lifting actuator and lifting arm.
- Risk of entrapment between the legs and the chassis when adjusting the legs.

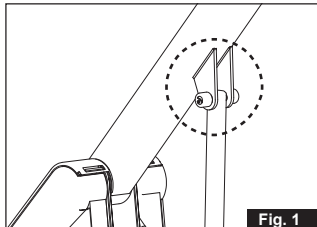


Fig. 1

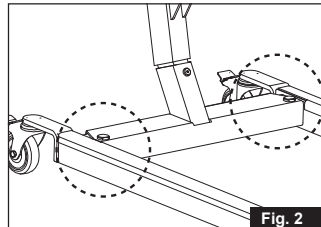
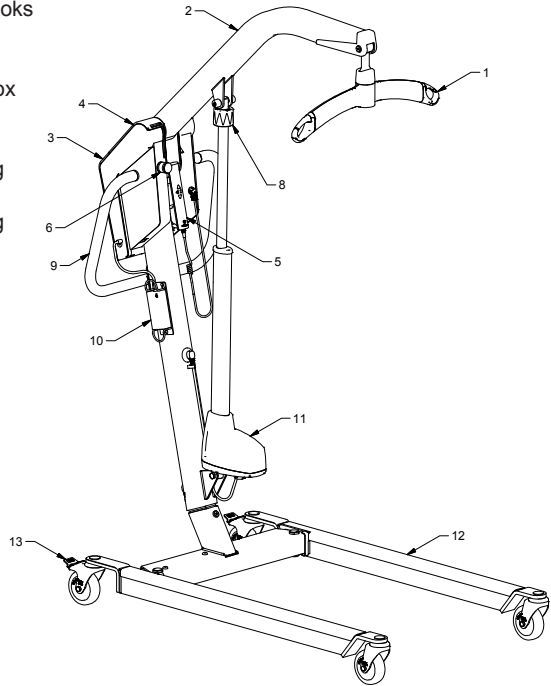


Fig. 2

- Always plan your lift before commencing.
- Only use slings that are designed to be used with the mobile 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

1. Sling attachment hooks
2. Lifting boom
3. Battery
4. Electronic control box
5. Hand control
6. Emergency stop
7. Emergency lowering electrical
8. Emergency lowering manual (option)
9. Push handle
10. Power supply
11. Lifting actuator
12. Chassis leg
13. Brake/release

**Lifting slings**

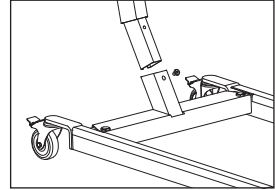
Ask for special brochure from supplier or manufacturer.

Visual check of lifter

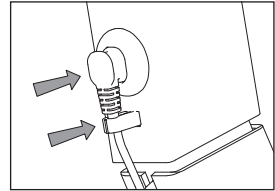
If the packaging is damaged on receipt, each part of the lifter must be carefully examined for visible defects or deficiencies. In case of suspected damage, do not use the lifter until authorized by qualified service staff or the Guldmann Service Team.

Assembling mast/chassis – electrical

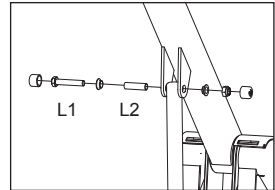
Loosen screw fitted to mast. Position the mast in the base. When mast is in as far as it will go, tighten screw using an M5 Allen key. To dismantle, remove screw to pull mast out of base. Retighten screw in mast.

**Mounting of connectors for motors and hand control**

Fit connectors for width adjustment motor in the mast and hand control in the control box.

**Fitting actuator**

Fasten the actuator using the attached bushing and screw with nut. Tighten screw and nut with a 17 mm spanners, and put on the nut protector.



Bush and bolt for top of lifting actuator

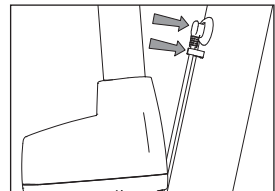
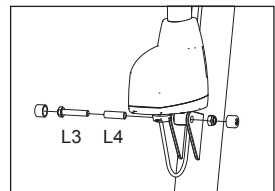
L1 = 55 mm

L2 = 42 mm

Bush and bolt for bottom of lifting actuator

L3 = 50 mm

L4 = 39 mm



Batteries

The batteries supplied with the lifter are not fully charged on delivery. Before use, therefore, the lifter must be charged up. A full charge, which takes about 5 hours, is recommended.

4.01 Checklist before use

- The lifter must be off charge.
- 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 control box is illuminated when the lifter is activated.
- Check that the emergency stop and lowering is working.
- Make sure the lifter is running freely.
- Check the slings for damage or fraying.

Once you have fitted the sling (see section 6.01 - How to use the sling) you are ready to lift.

With the user in a seated position

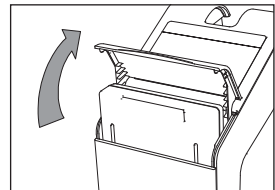
- If the user is in a wheelchair or commode chair the brakes must be applied.
- Open the lifter's chassis leg width adjustment to allow access around the chair.

Working with the Mobile 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 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.

4.02 Charging and installing battery

Before use, the battery needs to be fully charged. See charging procedure. Unpack the battery from its packaging and locate into battery compartment by opening the lid and sliding it into position.

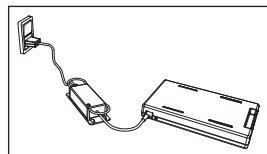
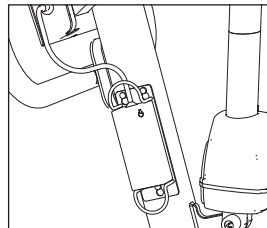


Recharge lifter every night or when it is not in use. This maintains the batteries and ensures a long life span.

Only use power supply provided by Guldmann.

Recharging

- Recharge by plugging the power supply lead into the wall socket
- Recharging should be carried out when the yellow or red LED is illuminated
- When the yellow LED illuminates there are approx. 10 lifts remaining
- When the red LED illuminates and the audio warning sounds, it is only possible to lower the patient
- The power supply will turn off automatically when lifter is fully recharged
- Recharging must not take place in wet rooms/ bathrooms
- Maximum recharging time is approx. 5 hours.

**Alternative charging procedure**

Remove the battery and place it on a dry surface. Connect power supply plug to mains.

Now insert the male connector into battery.

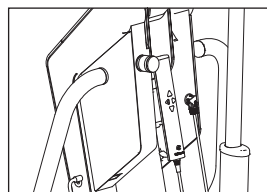
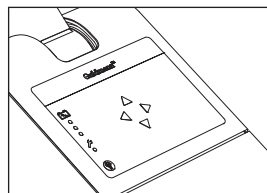
Note:

Please be sure that main power is switched off during connection of power supply and battery.

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

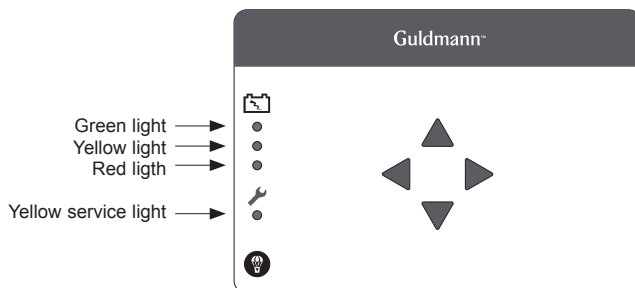


- To lift the patient press UP arrow and to lower the patient press DOWN arrow on the hand control or the control box.
- On GL5 mobile lifter the leg spread width adjustment of the chassis is operated via the sideways arrows on the hand control or the control panel on the control box.
- Use maximum width setting when lifting to/ from wide chairs, or as necessary when lifting to/ from bed, toilet and floor.
- The hand control is designed to be parked on the retainer between the control box and the lifting actuator, for easy access when handling patient.
- When maneuvering the lifter the chassis legs must be in the closed narrow position.



5.01 Indicator lamps and audio signals

Status	Indicator lamps	Audio signals	Possible GLS signals			
			Up	Down	Leg spread	Emergency down
Off-stand by	Off					
All OK	Green		x	x	x	x
Low battery	Yellow		x	x	x	x
Critically low Battery	Red	Beeps at button activation		x		
Fault on lifter	Yellow		x	x	x	x
Over load		Beeps at button activation		x		x
Lifetime actuator will exceed in 1.000 lifts	Yellow		x	x	x	x
Lifetime actuator exceeded	Yellow flashes	Beeps at button activation	x	x	x	x

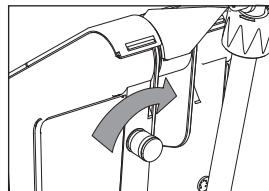


Only use the emergency stop button and emergency lowering functions in emergencies. If it has been necessary to apply the emergency/safety functions due to an error on the lifter, the supplier must be contacted prior to using the lifter again.



Activating the emergency stop function

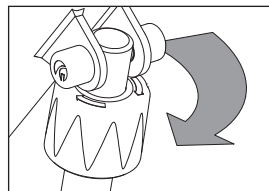
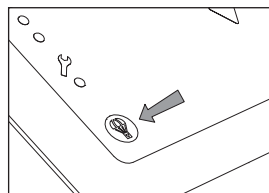
Should the lifter not respond to the functions selected on the hand control when it is in motion, press emergency stop. When the emergency stop function is applied, the lifter ceases to function. Switch the lifter on again by turning the emergency stop button in the direction of the arrow until it springs up.



Activating the emergency lowering function

If the lifter fails to lower, activate the following:

1. Press the emergency lowering button on the control box display, if the lifting boom does not lower
2. Turn the red knob in the direction of the arrow (option)

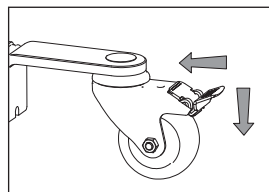


Use of brakes

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.

Only apply the brakes if the user is pushing the lifter away.



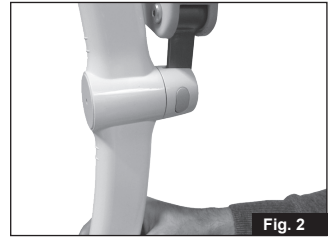
Lifting hanger

The lifting hanger can be mounted on the mobile lifter without the use of any tools.

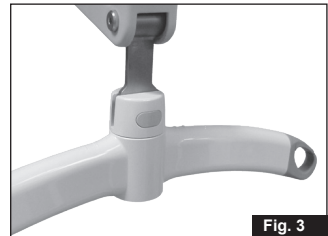
1. Hold the lifting hanger in the right hand and press the yellow button using the thumb as shown. The slot on the lifting hanger's top cover must face up. (fig. 1).



2. Insert the lifting hanger in the slot on the side of the lifting hanger's top cover. (fig. 2).



3. Check that the yellow button has returned to its locked position by checking that it is flush with the cover of the lifting hanger and that the strap attachment can rotate freely. (fig. 3).



Use slings with 4-6 lifting straps designed for fitting on Guldmann lifting hanger as shown in the sling manual.

The Lifter can be positioned under a bed. It can be moved through normal doors. The lifter can be used in wet areas, but must not be exposed to splash water. The lifter is protected against corrosion (9.00). The lifter can be used for multiple users. When moving the lifter to another user, perform normal hygienic disinfection.

Lifting to and from a sitting position

When lifting from e.g. a wheelchair, move the lifter towards the person to be lifted. Lifting boom and lifting hanger should be level with the chest and positioned above the middle of the thigh.

Position the lifting hanger parallel to the user's shoulders. Now fit the lifting sling to the lifting hanger. For instructions on how to fit the sling, see the section entitled "Fitting the lifting sling".

Lifting to and from a lying position in bed

Position lifting boom and lifting hanger right over the bed. Now pull the lifter back until the lifting boom and lifting hanger are positioned above the center of the person to be lifted. The lifting hanger and lifting boom should be parallel with the person's shoulders. Now fit the lifting sling to the lifting hanger. For instructions on how to fit the sling, see section entitled "Fitting the lifting sling".

Working with the mobile lifter

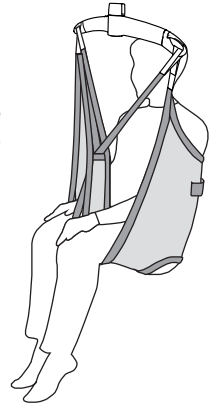
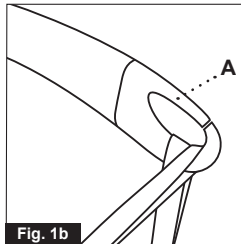
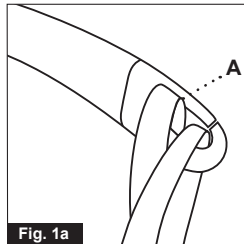
To obtain a correct working posture when moving the lifter, the caregiver should always, by placing one leg in front of the other, push the lifter in a forward motion thus utilizing his/her body weight.

Turning the lifter should be carried out by two persons, otherwise, stand alongside the lifter and push on the side of the mast thereby minimizing the center of rotation. It is a good idea to make the heaviest point of the lifter the center of rotation. If there is limited space, you can use your foot to push on the chassis of the lifter in the direction you wish to turn.

Hook the top set of straps (from the back) to the hooks facing the user. Hook the lower set of straps (from the legs) to the hooks facing away from the user.

Caution!

Be careful when attaching the lifting sling on the hooks. Check that the straps have been pulled completely through the rubber safety catch (A) and into place in the lifting hanger's hooks. When pressing the up button to lift the user, check again that all the straps remain correctly placed in the lifting hanger's hooks (fig. 1a and fig. 1b).



From a chair, wheelchair or other sitting positions

Place lifting sling behind user's back e.g. between the back of the chair and the user's back.

The center band of the lifting sling should follow the user's spine. As for the slings type Active, the strap showing the size of the sling should be opposite the spine. Bring the leg straps along the outer thigh and then under the thigh between the back of the knee and the hip.

Now cross the leg straps in front of the user.

All four straps are now ready to be mounted onto the lifting hanger.

Lying position in bed, on a mattress or on the floor

Turn the user on his side. Place the high back sling so that its upper edge is flush with the top of the user's head. Put the sling on the user so that the center band follows the spine. Turn the user on his back and pull the sling out. Bring the leg straps under the thigh and cross them over.

All four straps are now ready to be mounted onto the lifting hanger.

If in doubt about how to use the sling, please contact your supplier.

Guldmann cannot be held responsible for any faults or accidents that may occur due to incorrect positioning of the lifting hanger, or for reasons of inadequate attention paid by helpers or the user.

6.02 **Method of cleaning and disinfection**

Cleaning

We recommend that any parts of the mobile lifter that users/helper may come in contact with are cleaned with Novadan Des Wipes, Novadan Disinfect O or similar disinfection product.

Novadan Des Wipes:

Use a disposable wipe for cleaning and disinfection of all types of surfaces, machines and instruments in the healthcare sector.

NB: Do never clean the lifter with strong acid, base or alcohol. Never clean the lifter in an autoclave machine.

7.00 **Troubleshooting**

Error:

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

1. Does the green or yellow LED illuminate on the lifter when the control buttons on the hand control are activated?

Yes see point 6.

No no light visible – see point 2.

No only red light visible – see point 3.

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

2. Is the battery installed in 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.

4. Is the emergency stop activated?

Yes turn emergency stop in the direction of the arrow to allow it to release and press any button on the hand control.

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

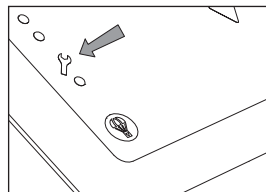
Contact the Guldmann Service Team if the fault cannot be found and corrected.

8.00

Service and lifespan

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 life span of 15 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.



Guldmann mobile lifter has intelligent monitoring of the usage pattern. The control box monitors the numbers of lifts, weight being lifted and duration of the lifts. The service light on the control panel will then indicate when the lifting actuator needs replacing. This means that the life span of the actuator is dependent on the usage pattern of the lifter.

The lifespan of the lifting actuator - examples

Lifts/day	User weight – 85 kg/187 lbs.	User weight – 120 kg/243 lbs.
	Lifespan lifting actuator	Lifespan lifting actuator
5	17 years	15 years
20	4.5 years	4 years

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.

During the inspection a service report shall be made, describing what has been checked and exchanged.

Worn or defective parts shall be replaced by new spare parts from V. Guldmann A/S.

1 Visual check of the product

- Check the product for wear and tear
- Check the product for any deformity
- Check that the product does not show any other deficiencies.

2 Lifting motor/actuator

- Check the lifting motor/actuator for visible outer damage and leaking oil as well as any abnormal sound during operation.
- According to the manufacturer's instructions the lifting motor/actuator shall be exchanged after 11.000 cycles or at least every 5 years.

3 Test of the product, as during normal use

- Check all functions on the product, with and without load, (I.e. Up, down, forward, backward, out and in).
- Check the emergency lowering is operational.
- Check the emergency stop is operational.
- Check the charging indicator is operational.

4 Check the electrical condition of the products

- Check the batteries and measure the:
 - Input/Voltage
 - Output/Voltage
- Check electrical functions and signals
- Check all wirings for errors and defects
- Check wire lead-ins
- Check all possible connections, plugs etc.

5 Check the mechanical condition of the product

- Clean the product for dirt and other impurities
- Inspect and evaluate the vital parts of the product
- Exchange defective and worn parts of the product
- Check and tighten all moving parts
- Grease the product.

6 Point 3 is carried out one more time as a control function**7 Have new errors or problems arisen in point 7?**

- If new problems have arisen, go back to point 3
- If no problems have arisen, finish the inspection.

8 When a service inspection including service work or exchange of components has taken place, the final check should comprise a weight test with the product's nominal load.

The owners' daily maintenance consists of general cleaning.

The lifter can be dismantled for transport and storage.

1. Remove the electrical cable to the base from the connection plug on the mast.
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 mobile lifter

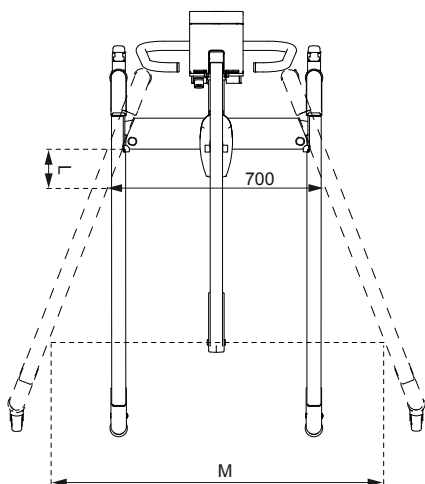
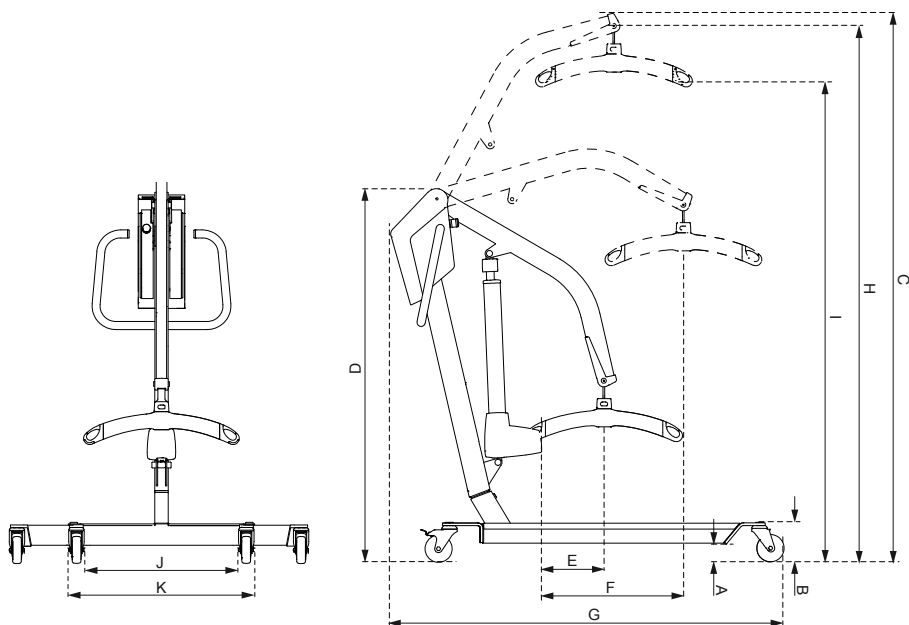
The mobile lifter should be stored in a dry room, where the humidity does not exceed 70%. The mobile lifter must never be stored in bathrooms and similar areas.

Always activate emergency stop when the mobile lifter is put on storage.

How to prevent/avoid corrosion

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

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



A	69 mm *
B	143 mm *
C	2013 mm *
D	1370 mm *
E	229 mm
F	518 mm
G	1382 mm
H min/max664/1967 mm *
I min/max456/1759 mm *
J min/max530/1300 mm
K min/max695/1410 mm
L	120 mm
M	1090 mm

* If wheels Ø 80 mm are used,
deduct 25 mm

Functions

Lifting capacity, max: 155/205 kg

Operation

Lift: Electric

Width adjustment: Electric

Pushbuttons - max.: 3.3 N

Weight

Totally: 46 kg

Chassis: 22 kg

Mast and lifting boom incl. control box & battery: 25 kg

Charger + handcontrol: 1 kg

Turning radius

Turning radius : 1295 mm

Safety Features

Battery protection for insufficient voltage: Yes, disconnects

Electrical parts

On/off: Automatically

Power supply for charging

Input: 100-240Vac, 47-63Hz, 0.6-0.4A

Output: 36V, 0.83A

Battery, replaceable NiMH: 24V /4.5 Ah

Charging time: Max. 5 hours

Consumption/power of actuator: 24V, max 8A

Duty Cycle: Max 10%, max. 2 min on, 18 min off.

Class of tightness

Mobile lifter: IP 30

Hand control: IP 44

Power supply: IP 20

Labelling

The product is manufactured in compliance with the Council Directive 93/42/EEC of June 14th 1993, including amendments, as medical device class 1.

Classified

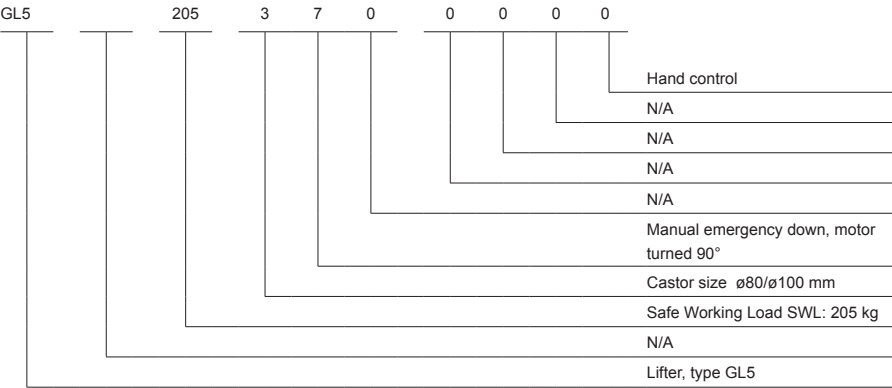
Acc. to ISO 9999: 12 36 03

11.00 Product configuration table

GL5 mobil lifter, configurations									
Guldmann lifter type	Product line	Load in kg	Castors type	Actuator type	Additional functions	Scale module	CLM module	Service module	User interface
GL5	(x)	xxx	x	x	x	x	x	x	x
GL5		155	3	7					
		205	3	7					

Example: GL5 205 560 000

GL5		205	3	7	0	0	0	0	0
-----	--	-----	---	---	---	---	---	---	---



Castor type:
3 = 80 mm. castor
4 = 100 mm. castor

Actuator type:
5 = Mechanical emergency down
6 = Mechanical emergency down – motor turned 90°
7 = W/O Mechanical emergency down
8 = W/O Mechanical emergency down – motor turned 90°

Pictograms/labels used on product and user manual

Read instructions before use



CE-marking



Type B in accordance with EN 60601-1



Activating the emergency lowering function



Activating the emergency stop function



Battery condition and charging



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



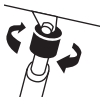
Lifting boom vertical up and down movement



Leg spread movement



Emergency stop button



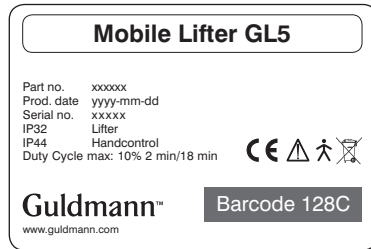
Emergency lowering manually

User guide on control box



Examples of labels

Serial number label



Power supply



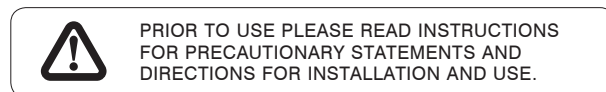
Hand control

Part no. xxxxxx
Edition xxx
Date xxxx-xx-xx
IP44

Charger input.



Warning label



13.00 EC-Declaration of conformity

The product is manufactured in compliance with the Council Directive 93/42/EEC of June 14th 1993, including amendments, as medical device class 1.

14.00 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.

USA and countries outside the EU

A. **Users guide**

Before using the product, read the entire operation manual including warranty.

B. **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.

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 designated technician. Any parts or components repaired or replaced by a Guldmann designated technician will be guaranteed for the remainder of the Warranty Period.

The warranty does not cover any part of the equipment which has been subject to damage or abuse by the user or others. The warranty does not cover any part of the equipment which 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.

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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