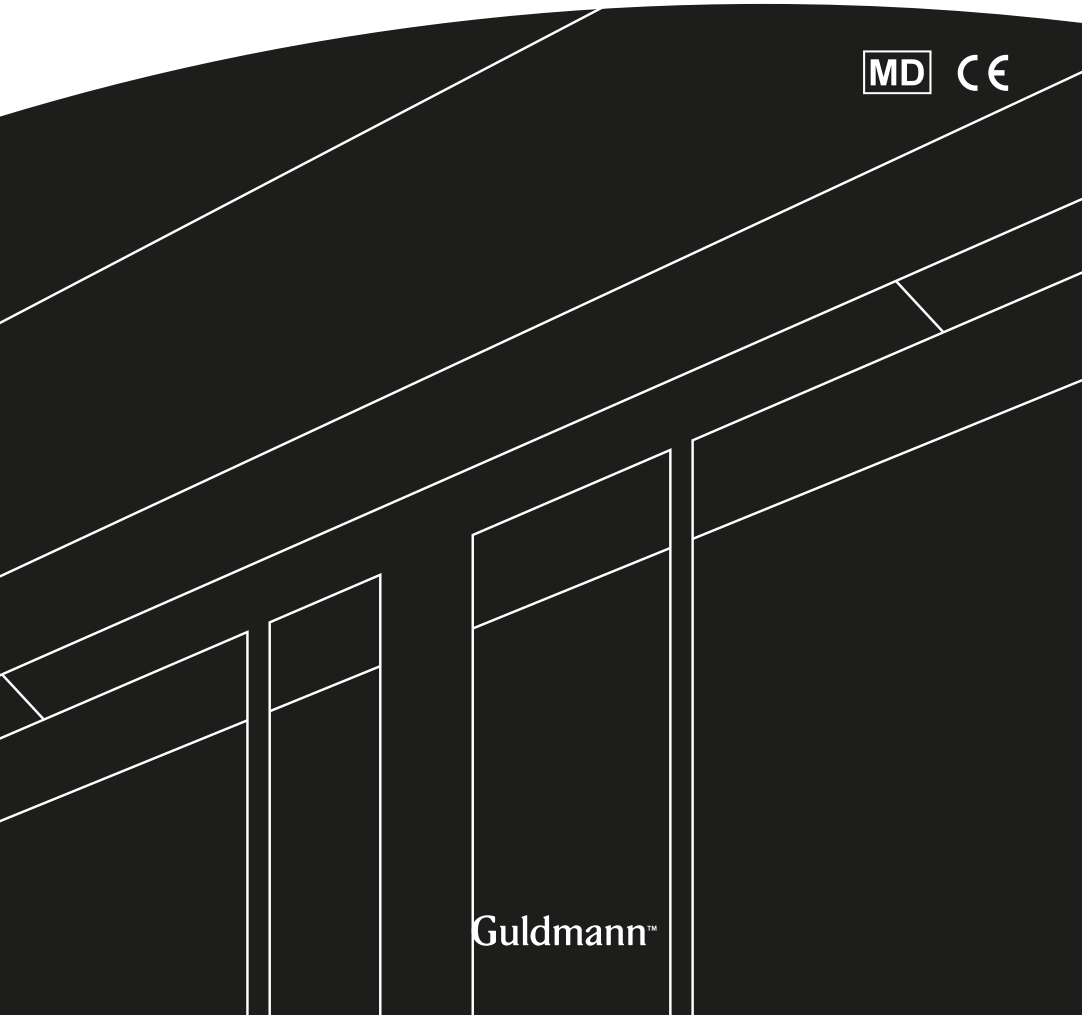
GB/US ..... GHZ Ceiling Hoist

User manual – vers. 101.00



GHZ Ceiling Hoist

Item nos:
556345

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1.00 Purpose and intended use

1.01 Manufacturer

V. Guldmann A/S
Graham Bells Vej 21-23A
DK-8200 Aarhus N
Tlf. + 45 8741 3100
www.guldmann.com

1.02 Intended purpose

The GHZ lifting module is intended for lifting and transferring a person with disabilities and for walking training.

1.03 Area of use

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

1.04 Conditions for use

GHZ is a ceiling-mounted hoist that moves in a Wall rail system.
GHZ is designed to be used with a variety of lifting hangers and lifting slings.

The use of the GHZ is subject to the following:

- The GHZ should only be used by trained personnel.
- The maximum load limit indicated on the hoist must never be exceeded *(section 1.06)*
- The instruction offered by Guldmann to all customer groups in connection with the purchase of a ceiling-mounted hoist has been received.
- The helper pays attention to the well-being of the user when using the hoist.
- The hoist is used in Guldmann Wall rail systems which are installed, tested and approved according to DS/EN ISO 10535 and Guldmann's stipulations.
- Only technicians/installers who have been certified by Guldmann may install and test the rail systems.
- The hoist is used with a Guldmann lifting hanger *(section 1.11)*.
- The hoist is used with a Guldmann lifting sling or with other suitable slings *(section 1.12)*.

1.05 Important/Precautions

- Read the instructions carefully before using the hoist and in connection with cleaning and service of the hoist.
- The hoist's maximum load must never be exceeded.
- The hoist may only be used to lift a person.
- The red strap for the emergency stop and the emergency lowering must be adjusted to the helper's reach, and must not be removed.

- If a defect appears during use of the hoist, stop using the hoist and contact the Guldmann Service Team for repairs.
- The hoist is controlled by a microprocessor PCB, which can be damaged by static electricity if touched without the necessary precautions, (*see point 1.10)* The electronics may only be serviced by Guldmann approved service technicians.
- The user may not hold their hands around the lifting strap during lift and transfer.
- The lifting hanger must not be mounted or replaced when the hoist is positioned over the patient.
- The GHZ must not be used outdoor and in strongly corroding environments such as swimming pools.
- Do not modify this equipment without authorization of the manufacture
- The GHZ needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in Chapter 10 EMC Information.
- Portable and mobile RF communications equipment can affect the GHZ.
- Accessories, transducers and cables must always be original Guldmann components. The use of other spare parts than those supplied by Guldmann may result in poor EMC protection. This may cause damage to the GHZ lifting module as well as electrical products in the nearby surroundings.
- The GHZ should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, the GHZ should be observed to verify normal operation in the configuration in which it will be used.
- Transport of this equipment should only be undertaken after conditions described in section 3.00 (Environmental conditions).
- Any serious incident that occurred in relation to this device should be reported to the manufacturer and the local competent authority.

Re: EMC
If electromagnetic or other influences occur between this product and other products, these products must not be used together.

1.06 Load limits on GHZ system

Read the label which indicates the maximum load limits for each component. The component, e.g. lifting hanger, lifting sling, etc. labelled with the lowest load limit determines the maximum load limit for the entire system.
This maximum load limit must not be exceeded.
Please note that the max load may change when different components are used, such as lifting hangers, lifting slings, etc.

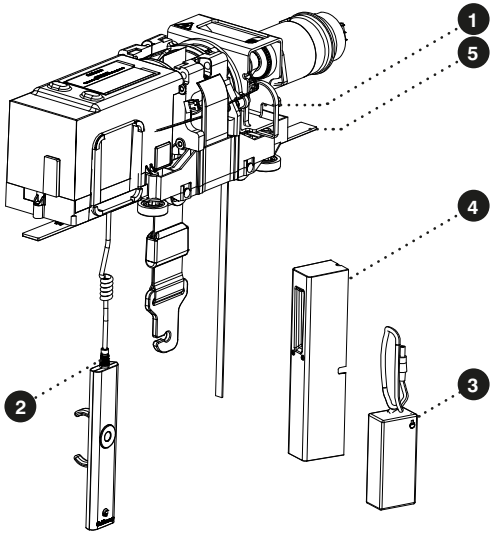
1.07 Unpacking and preparation

Visual check of the lifting module
If the lifting module is thought to be damaged upon reception, it must not be used until it has been checked and approved by a qualified person or the Guldmann Service Team.

Contents of the box

1. GHZ lifting module
2. Hand control
3. Power supply
4. Docking station
5. Bottom covers

6. Manual
7. Label for rail system



Button for reset of emergency stop
GHZ is delivered with the emergency stop activated in order to ensure that the battery is not being discharged during long-term storage. Reset the emergency stop by pressing the “RESET” button on the bottom of the hoist *(see point 2.04)*.

1.08 Installing a new GHZ lifting module in an existing Wall rail system

Please notice when installing a GHZ in an existing Wall rail system it must be ensured that:

- The rated max load of the Wall rail system, must be equal or higher than the max load of the new hoist.
  - If there is no max load mentioned on the Wall rail system, the rail system must then be checked according to the guideline in the Installation manual.
  - A load test with 1,5 x max load of the hoist must be performed minimum 20 min.
    The deflection of the rails must not be higher than 1/200 of the length of the rail.
  - If it is not possible to do any of the above mentioned, please contact Guldmann or their representative.

1.09 Installing / deinstalling GHZ in the rail

See the Installation manual for GHZ.

1.10 Power supply

GHZ is equipped with a battery that requires regular recharging.
The power supply supplied must ***always*** be used.

Safety concerning static electricity (ESD)
Service technicians and installers ***must*** use an ESD-safety package consisting of a mat, a ground wire, and a bracelet.
The technician/installer connects the mat to a grounding point, for instance a radiator or a water pipe. The technician/installer must then put on the bracelet and connect it to the mat. If it is not possible to find a grounding point, the mat and the bracelet must be used as a minimum.
Only then is it allowed to work with the PC Board or components where it is possible to come into contact with the PC Board.

Class II equipment
Mobile equipment is Class II epuipment (marked with double-encassed symbol ⧈) and can be connected to the mains direct by the user.
Equipment is disconnected from supply mains by detaching the mains plug from the wall outlet.

1.11 Installation of the Guldmann lifting hanger before use

Lifting hangers from other manufacturers
Guldmann shall not be liable for faults or accidents that may occur as a result of using lifting hangers made by other manufacturers.

If there is any doubt about the selection or use of a lifting hanger, please contact your supplier.

The lifting hanger can be installed to the lifting strap without the use of any tools.

1. Press the yellow button and hold it in while the lifting strap's hook is inserted into the opening of the top cover of the lifting hanger *(fig. 2a - 2b)*.
2. Release the yellow button *(fig. 2c)*
3. Rotate the strap attachment to a vertical position *(fig. 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.

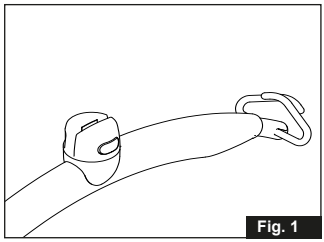


Fig. 1

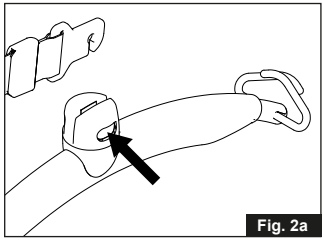


Fig. 2a

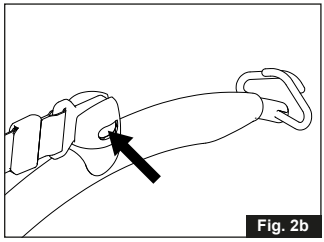


Fig. 2b

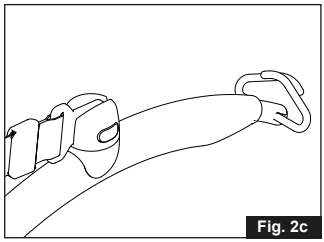


Fig. 2c

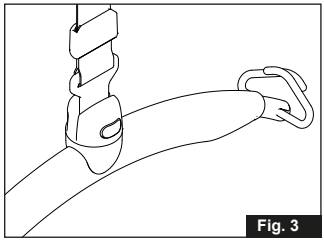


Fig. 3

1.12 Lifting sling

A lifting sling with four to eight lifting straps designed for mounting on hooks should be used when using a Guldmann lifting hanger.

Slings made by other manufacturers

Guldmann shall not be liable for faults or accidents that may occur as a result of using lifting slings made by other manufacturers.

If there is any doubt about the selection or use of a lifting sling, please contact your supplier.

Guldmann shall not be liable for faults or accidents due to incorrect use of the lifting sling, or for reasons of inadequate attention on the part of the carer or user.

Attaching the lifting sling

Place the straps from the lifting sling on the hooks on the lifting hanger. Start with the uppermost set of straps (from the back) and then take the lowest set of straps (from the legs).

Lifting hanger, 4 attachment points

Caution!

Be careful when attaching the lifting sling's straps on the hooks. Check that the straps have been correctly placed in the lifting hanger's hooks. When pressing the up button on the hand control to lift the user, check again that all straps remain correctly placed in the lifting hanger's hooks (Fig. 1).

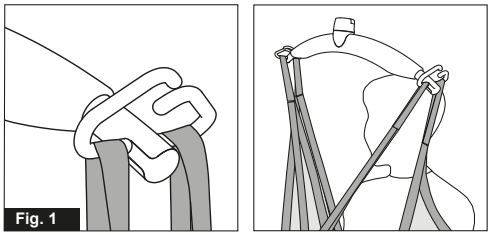


Fig. 1

Lifting to and from a seated position

When lifting a user from e.g. a wheelchair, move the GHZ towards the person to be lifted. The lifting hanger should be at the same height as the user's chest and should not be moved further in over the user than to approximately mid-thigh position.

Place the lifting hanger parallel to the user's shoulders.

Place the lifting sling behind the user's back between the back of the chair and the user's back. The center marks of the lifting sling should follow the user's spine.

Lead the leg straps along the outer sides of the user's shins and beneath the thighs between the hollow of the knees and the hip joints. Cross the leg straps in front of the user.

All four lifting straps are now ready to be attached. The lifting sling can now be mounted on the lifting hanger.

Lifting to and from lying position in bed
Bring the lifting hanger over the centre of the person to be lifted. Place the lifting hanger parallel to the user's shoulders.

Turn the user onto his or her side. The Basic High sling should be placed so that its top is at the same height as the top of the user's head. Now position the sling over the user so that the center marks follow the user's spine. Turn the user onto his or her back and pull out the remaining part of the lifting sling. Place the leg straps beneath the user's thighs and cross them. All four lifting straps are now ready to be attached and the lifting sling can now be mounted on the lifting hanger. It is an advantage to elevate the head of the bed so that the user is sitting up.

For further information, please refer to the user manual for the lifting sling in question.

Important!
Only persons who have received competent instruction regarding the use of lifting equipment and fitting of slings should use the hoist.

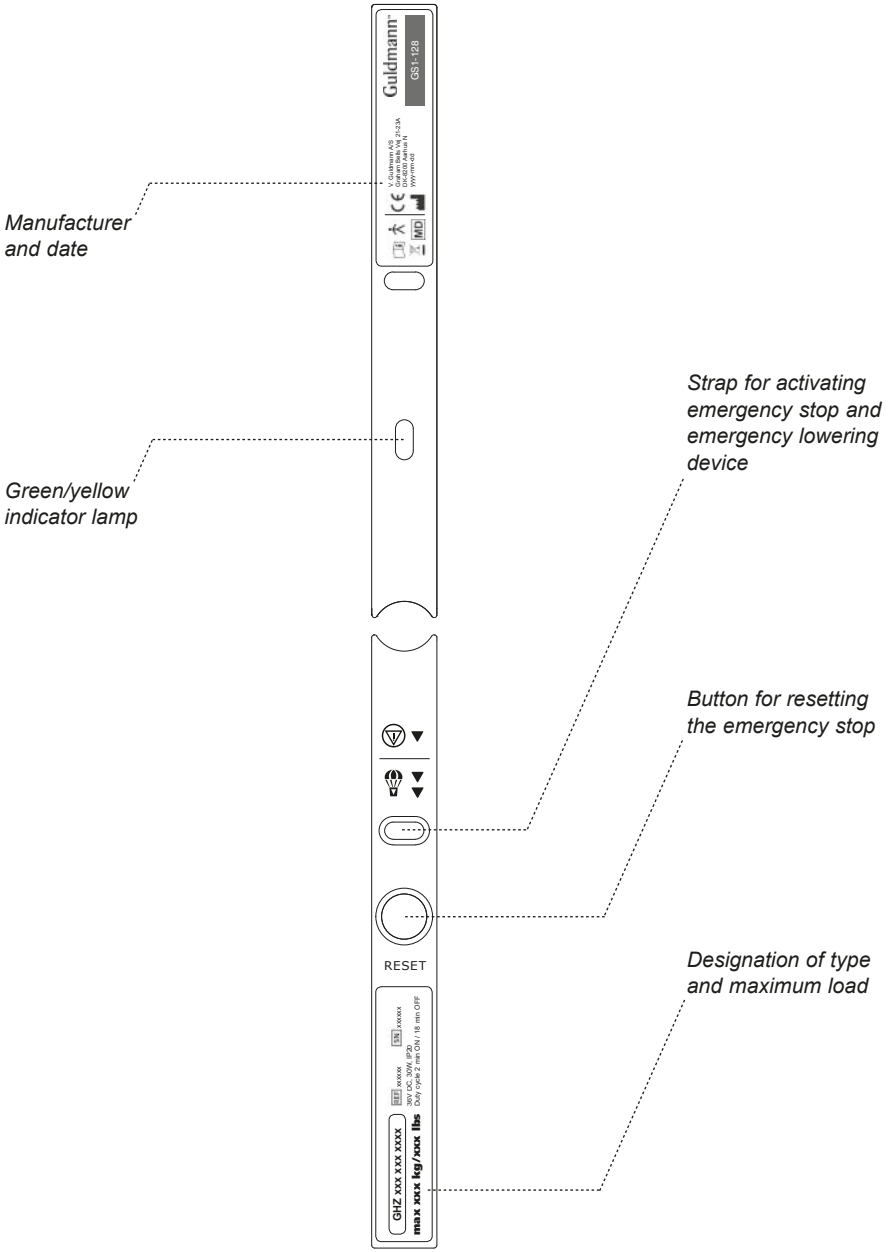
Plan the move. Avoid leaving the user in the lifting sling unattended.

The hoist lifts quickly and powerfully. Before lifting, check that the user is completely free of his/her surroundings. The user's head, arms, hands and feet must not be in danger of becoming trapped. Be careful with any tubes and wires that are attached to the user. The user should not hold the lifting strap during the moving procedure as there is a risk of crushing between the strap's hook and the hoist. Check that the hand control and hand control cable is free of hanger, patient and other object before the hoist is activated up or down moved.

If the hoist is used correctly, the user should only be lifted to the extent that she/he is clear of the surface and should be moved at this height.

2.00 Description of functions

Information panel on the GHZ bottom surface.



2.01 Pictograms

Emergency stop

Emergency lowering function

RESET Reset emergency stop

Danger - rotating parts

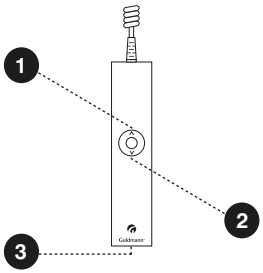
2.02 Indicator lamps and audio signals

Status	Indicator lamps	Audio signals	Possible GHZ Functions		
			Up	Down	Emergency lowering
Off – stand by	Off				
All OK	Green		✓	✓	✓
Low battery	Yellow		✓	✓	✓
Fault on hoist	Yellow	Beeps at button activation			✓
Battery critical low	Yellow			✓	✓
Over load	Green	Beeps at button activation		✓	✓
Hand control placed in docking station	On	3 beeps for charging			

2.03 Operation

Hand control
The GHZ is switched on automatically when a button on the hand control is pressed.

The GHZ is switched off automatically after approx. 8 minutes without activation.



GHZ
1. Lift
2. Lower
3. PDA interface (micro USB)

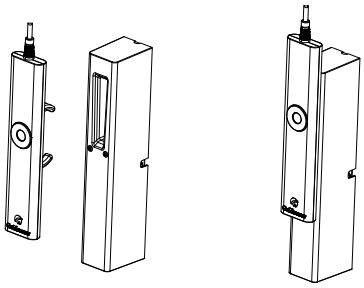
Note: There must be a load on the lifting strap corresponding to the weight of Guldmann's lifting hanger before GHZ's lowering function will operate.

Charging / connection
GHZ is recharged when the hand control is placed in the docking station. Always leave the hand control in the docking station when GHZ is not in use. This guarantees GHZ functionality and maintains the battery to ensure a long lifetime.

The power supply must be connected and switched on before charging can take place. A green indicator lamp on the power supply indicates it is connected and switched on.

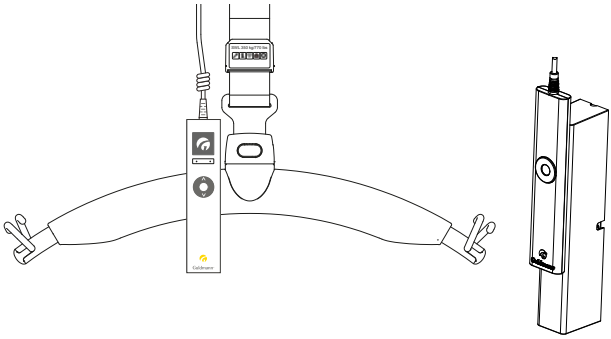
Push the rubber handle into the opening of the docking station. A click indicates that the hand control is placed correctly.

When the hand control is correctly placed in the docking station, you will receive an acoustic signal of 3 beeps. This means that the hoist is now charging.



The indicator lamp on the bottom of the hoist turns yellow if the charge status becomes low. The GHZ then has a limited number of lifts available at a time and must be recharged.

Placing of the hand control
When GHZ is not in use the hand control must always be placed in the docking station. The hand control can also be placed on the lifting hanger if this is necessary in connection with a transfer.



2.04 Safety functions

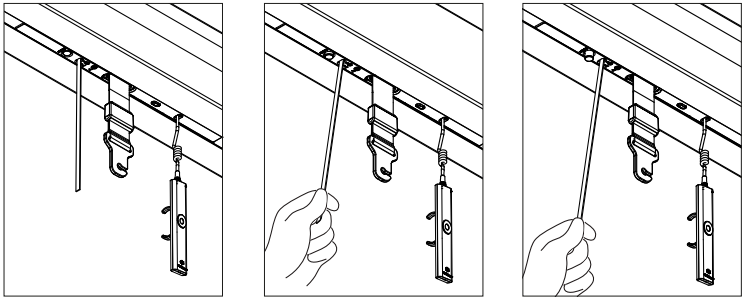
The emergency stop and emergency lower should only be used in the event of hoist failure or fault. The fault must be identified and rectified by a suitably qualified technician before the hoist can be taken back into use. The Emergency stop should not be reset unless by a suitably qualified technician.

Under no circumstances should the user attempt to reset and continue to use the hoist where the emergency stop has been activated due to fault or failure. The hoist issue should be referred for service and rectification by a suitably qualified technician.

Emergency stop and lowering strap

The red strap has the following functions:

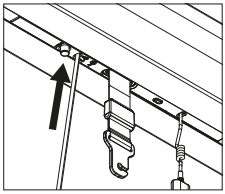
- One pull: Emergency stop is activated.
- Constant pull: Emergency lowering is activated.



Emergency stop

If the GHZ does not stop/react to the hand control when the GHZ is in use, pull the red strap and the lifting/lowering functions (except emergency lowering) are deactivated. When the emergency stop is activated, the hoist will not function. The green lamp is switched off.

Reset emergency stop
Reset the emergency stop by pressing the yellow button on the bottom of the hoist.



The yellow button that appears when the emergency stop is pulled, must be pressed manually before the GHZ is ready for use.

Emergency lowering function, electric
If the GHZ fails, the electrical emergency lowering function is used to lower the user safely. The emergency lowering function is operated by a constant pull on the red strap that is used for the emergency stop.

When releasing the red strap, the emergency lowering function will be replaced by the emergency stop.

Note:
In case of a critical mechanical failure, the hoist contains a mechanical protective system that stops the strap reel.

Warning!
After the mechanical protective system has been activated in the GHZ, the hoist MUST be serviced by a qualified technician or by the Guldmann Service Team.

2.05 Accessories

Guldmann – Lifting slings and hangers
Obtain a product catalogue from Guldmann, or see our product range at www.guldmann.com where it is also possible to watch a video about the use of lifting slings and to download user manuals for our products.

Extension strap
The extension strap is used where the distance between the lower part of the rails and the floor exceeds 3.5 m / 137 inch. The extension strap is available as an accessory.

Battery
NiMH Battery 24V/2000mAh, Guldmann type number 550574.

Power supply
Guldmann item number 551244.

Cable for power supply
Guldmann item number 55xxxx.

Docking station
Guldmann item number 559962.

Lifting strap
Guldmann item number 550547.

Hand control
Guldmann item number 559961.

Extension cable for Hand control
Guldmann item number 552620.

Hand control for extended cable
Guldmann item number 552619.

3.00 Environmental conditions

Operation

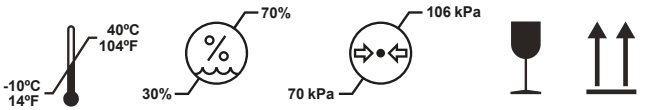
The products operational environment:
– Operation temperatures between 10°C and +35°C / 50°F and 95°F
– A relative air humidity of between 30% and 70%
– An air pressure of between 700 hPa and 1060 hPa

Information is illustrated by symbols on packaging including:
– Fragile
– This side up

Beside temperature, the same environmental conditions apply for transportation and storage.
– Transport and storage temperatures between -10°C and +40°C / 14°F and 104°F

The equipment is not designed to be used at altitudes higher than 2000m / 6561 ft. above sea level.

Key to symbols on the packaging:



Transport and storage
Guldmann recommends that the products are always transported and stored in the original packaging.

4.00 Maintenance and storage

4.01 Cleaning and disinfection

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 waterproof. Failure to protect the lift from liquids may result in damage to the lift and/or may cause personal injury.

4.02 Storage

See 3.00

For long-term storage of GHZ the emergency stop must be activated. This ensures that the battery is not being discharged.

4.03 The owner's daily maintenance duty

Check the lifting sling for wear and damage before use.
Do not use the lifting sling if it is damaged or defective.
Do not use hoist if the lifting strap or the lifting hanger are damaged or defective.
Contact your supplier and order a new lifting sling or a replacement of the lifting strap. Replacement of the lifting strap must only be performed by the Guldmann Service Team or by a qualified technician in accordance with Guldmann's instructions.

4.04 Disposal of the GHZ including battery

Local and national regulations on environmentally correct recycling must be observed. Batteries (type NiMH) must always be delivered to an approved recycling point.

5.00 Service and lifetime

5.01 Lifetime

The product have an expected lifetime of 15 years, on the condition of correct use and correct service inspections, see section 5.02.

Estimated life time before change (status can be seen in the SIC program):
Lifting strap – 20.000 normal lift (85 kg/1000 mm) / (187 lbs/39¼")
Timing Belt – 20.000 normal lift (85 kg/1000 mm) / (187 lbs/39¼")
Battery – 20.000 normal lift (85 kg/1000 mm) / (187 lbs/39¼")

Replacement of components
Replacement of batteries, PCBs and lifting straps must be performed by a qualified service technician or the Guldmann Service Team.

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

5.02 Safety/service inspections

In accordance with international standard DS/EN ISO 10535 "Hoist for the transfer of disabled persons – Requirements and test methods" an inspection should be performed on the hoist at least once a year.
Guldmann recommends that regular safety/service inspection is performed at least once a year with regard to the pattern of usage.

Safety/service inspections of the products must be performed by a qualified service technician or the Guldmann Service Team. In connection with the purchase Guldmann may offer a service agreement for this inspection.

During the safety/service inspection a report must be prepared on what was checked and replaced. Parts that are worn or defective must be replaced with new parts from Guldmann. Spare parts drawings and documentation can be obtained from the manufacturer or supplier.

Documentation/checklist regarding safety/service inspection can be obtained from the manufacturer or supplier.

5.03 Troubleshooting

The hoist does not respond to the hand control's keys

1. Check that the emergency stop is not activated *(see section 2.04)*.
2. Check that the hoist has power supply and that the battery is recharged *(see section 2.02)*.
3. Check that the power supply is switched on and connected to the docking station.
4. Place the hand control in the docking station and recharge the hoist *(see section 2.03)*.
5. Contact the Guldmann Service Team if the fault cannot be found and corrected.

6.00 Classification

CE marking

Medical Device Class I in accordance with EU MDR Regulation

Type B in accordance with IEC/EN 60601-1

Read the manual before use

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

Class II equipment . . . . . Non-permanent installation without protective ground

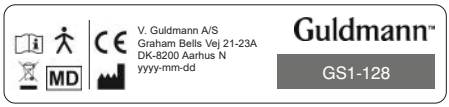
The equipment is not suitable for use in the presence of flammable mixtures.

Degree of protection against harmful ingress of liquids (water)

Lifting module. . . . . IP 20
Hand control. . . . . IP 44
Docking station . . . . . IP 20
Power supply . . . . . IP 20

Examples of labels

Lifting module



Power supply

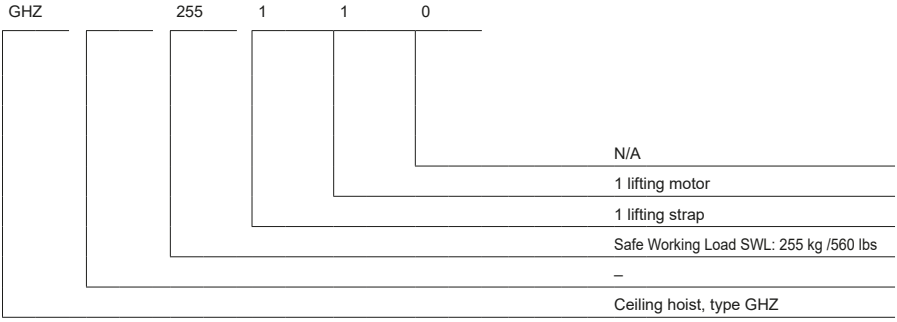
Lifting hanger

Hand control

7.00 Technical specifications

GHZ Lifting modules, configurations						Options									
Guldmann hoist type	Product line	Load in kg	Number of lifting straps	Number of lifting motors	Number of horizontal drive motors	IR remote	Service module	CLM module	Scale module	WiFi module	Class III scale	Trainer module	Coating	Excl. Turbospeed	UL	Charg. HC
GHZ	(x)	xxx	x	x	x	Configuration code (xxxxx)										
GHZ		255	1	1	0											•

Example: GHZ 255 110 (xxxxx)



Functions

Lifting capacity, SWL . . . . . 255 kg (560 lbs)
Operation . . . . . Hand control
Sound level . . . . . .63 dB (A)

Lifting speed

85 kg (187 lbs) load . . . . . 40 mm/sec. (1.6 inch/sec.)
150 kg (330 lbs) load . . . . . 40 mm/sec. (1.6 inch/sec.)
Max capacity load, SWL . . . . . 40 mm/sec. (1.6 inch/sec.)
Max. 5 kg (11 lbs) load . . . . . 40 mm/sec. (1.6 inch/sec.)

Weight and materials

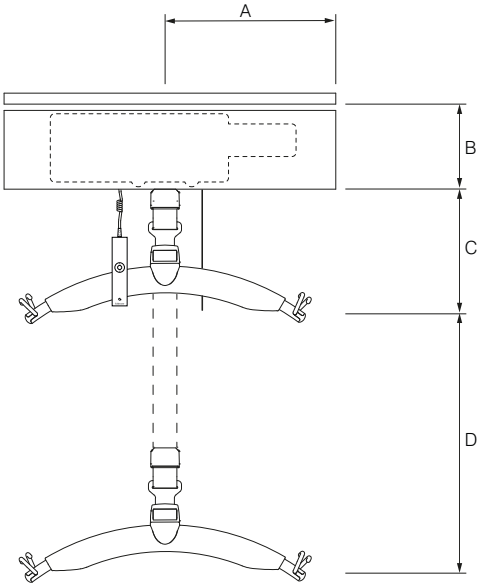
SWL . . . . . 255 kg (560 lbs)
Own weight . . . . . 8.0 kg (17.6 lbs)

Cover . . . . . Impact-resistant UL 94 V-0 flame
. . . . . .retardant recyclable plastic

Dimensions

A . . . . . .450 mm (17½ inch)
B . . . . . .172 mm (6¾ inch)
C . . . . . 254 mm (10 inch)
D . . . . . 2.500 mm (98 inch)

Depth of hoist . . . . . 155 mm (6 inch)



Safety

Emergency stop . . . . . Yes
Emergency lowering device . . . . . Yes, electrical
Control of lifting strap . . . . . Yes
Cut-off angle . . . . . .10° along the rail
. . . . . .45° across the rail

Electronics

On/off . . . . . .Automatic when used. Soft start/stop
Overload protection . . . . . Automatic
Low battery protection . . . . . Automatic
Power supply . . . . . 36 V DC, 0.83 A
Supply voltage, power supply . . . . . .100-240 V AC, 47-63 Hz

Battery . . . . . 24 V NiMH
SWL: 255 kg (560 lbs) . . . . . 2.0 Ah

Continuous operation with short time loading with
3 hours without recharging . . . . . 10/90 % (2 min. operation/18 min. pause)

Max number of lifts in series with:
85 kg (187 lbs) . . . . . 55/1000 mm (39¼ inch)
SWL: 255 kg (560 lbs) . . . . . 21/1000 mm (39¼ inch)

Max charging time at 25ºC (77ºF):
SWL: 255 kg (560 lbs) . . . . . 3 hours

Operating temperature . . . . . 10°C - 35°C (50°F - 95°F)

Degree of protection against harmful ingress of liquids (water)

Lifting module . . . . . IP 20
Hand control . . . . . IP 44
Docking station . . . . . IP 20
Power supply . . . . . IP 20

8.00 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.

9.00 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.

10.00 EMC Information

Tabel 1

Guidance and manufacturer's declaration – electromagnetic emissions

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

Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The GHZ 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 GHZ 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 GHZ is intended for use in the electromagnetic environment specified below.
The customer or the user of the GHZ should assure that it is used in such an environment.

IMMUNITY test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
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_T) for 0,5 cycle	<5 % U_T (>95 % dip in U_T) for 0,5 cycle	Mains power quality should be that of a typical commercial or hospital environment. If the user of the GHZ requires continued operation during power mains interruptions, it is recommended that the GHZ be powered from an uninterruptible power supply or a battery.
	40 % U_T (60 % dip in U_T) for 5 cycles	40 % U_T (60 % dip in U_T) for 5 cycles	
	70 % U_T (30 % dip in U_T) for 25 cycles	70 % U_T (30 % dip in U_T) for 25 cycles	
	70 % U_T (30 % dip in U_T) for 25 cycles	<5 % U_T (>95 % dip in U_T) for 5 s	
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 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 GHZ is intended for use in the electromagnetic environment specified below.
The customer or the user of the GHZ 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	Portable and mobile RF communications equipment should be used no closer to any part of the GHZ, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d=1,2\sqrt{P}$ $d=1,2\sqrt{P}$ 80 MHz to 800 MHz $d=2,3\sqrt{P}$ 800 MHz to 2,5 GHz 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 [a] should be less than the compliance level in each frequency range [b] Interference may occur in the vicinity of equipment marked with the following symbol: 

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.

[a] 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 GHZ is used exceeds the applicable RF compliance level above, the GHZ should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the GHZ.

[b] 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 GHZ

The GHZ is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the GHZ can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the GHZ 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 $d=1,2\sqrt{P}$	80 MHz to 800 MHz $d=1,2\sqrt{P}$	800 MHz to 2,5 GHz $d=2,3\sqrt{P}$
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.

11.00 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.

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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