



## Lojer Scandia SC330- operating table

*Instructions of use*

12.05.2014

CE

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Read these instructions carefully. Follow all warnings and instructions marked on the product

Lojer Group is leading producers of medical furniture and physiotherapy equipment in Nordic Countries. We design and manufacture medical and treatment furniture to be used by health care professionals in various operating environments. Lojer has committed to develop and manufacture these devices in a sustainable manner in order to provide best possible care for the patient today and in the future.

# 1 Lojer Scandia SC330 Operating table

Lojer Scandia SC330 Operating table is designed to be used in surgical procedures for humans carried out in operating rooms by healthcare professionals.

The operating table is designed to be primarily used with batteries. The operating table has various hydraulic adjustments which ensure diverse functions required in various operations. All functions are operated with hand control. Operating table consists of reconfigurable table sections that can be adjusted according to what is required in an operation.

This document gives instructions for operating and maintaining the device. Please familiarize yourself with these instructions before using the device. Use the device only as described and for the specified applications. Store these instructions in an appropriate way, making sure that the instructions are available to all possible users throughout the life of the device.



To avoid injury, follow the instructions given in this document

## 1.1 Content of the package

The operating table is packed in a wooden transport box (Figure 1) which contains:

- grey hand control (1 pcs)
- hand control cable
- auxiliary hand control (grey or blue (Bluetooth))
- 20 A fuse
- RS232 cable for computer connection (service software)
- USB adapter
- USB- memory stick, which contains service software, operating software



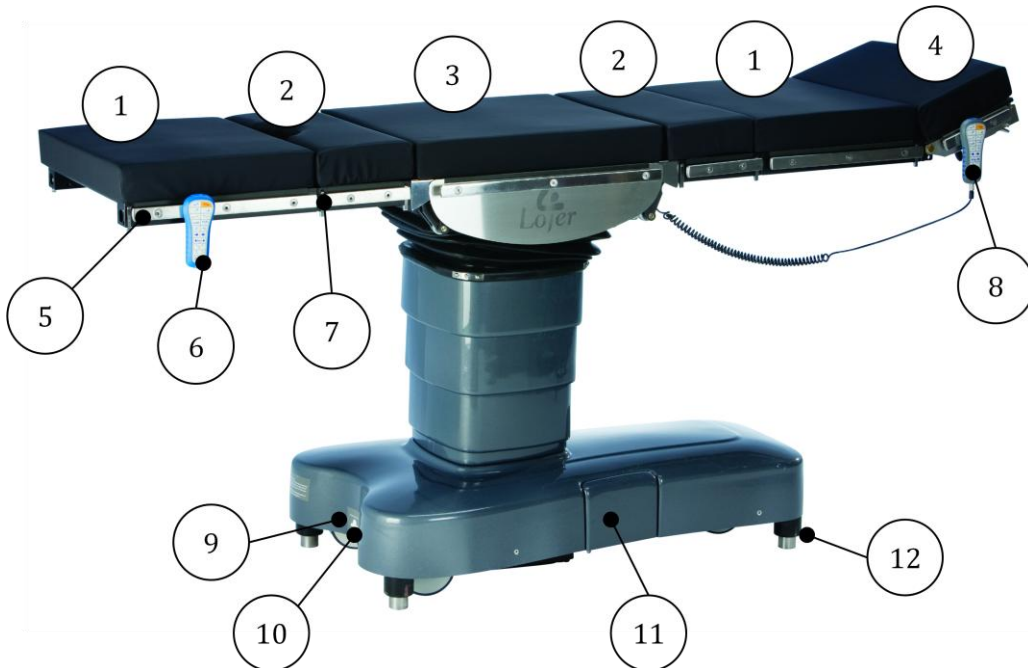
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Figure 1: Lojer Scandia SC330 wooden transport box

## 1.2 Description of parts

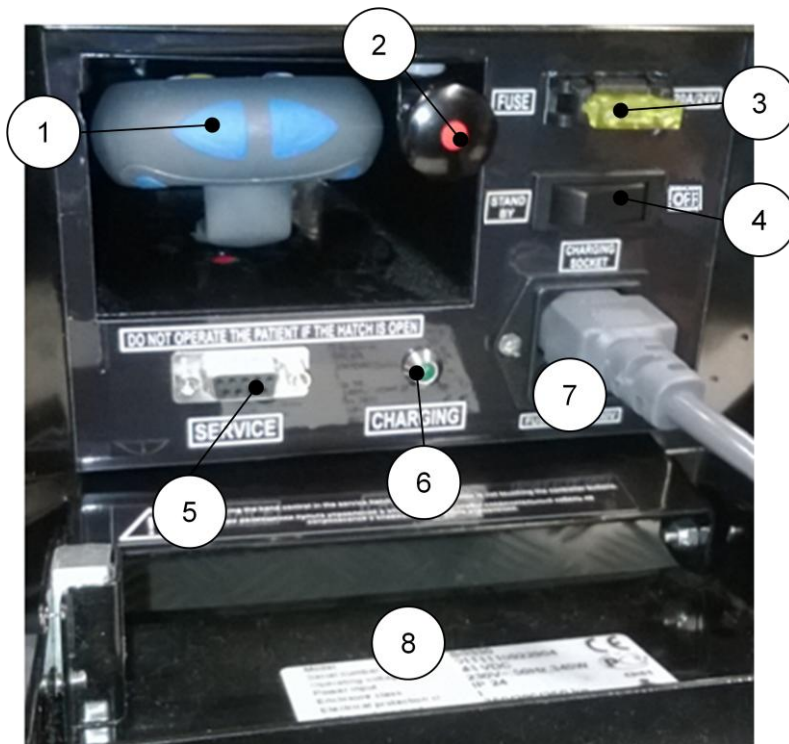
The parts of the Lojer Scandia SC330 operating tables are shown below (Figure 2).



**Figure 2: Lojer Scandia SC330 operating table in standard configuration**

- 1 40 cm section (2 pcs.)
- 2 25 cm section (2 pcs.)
- 3 Middle section
- 4 Head section
- 5 Accessory rail
- 6 Auxiliary hand control (wireless)
- 7 Locking latch
- 8 Hand control
- 9 Potential equalization conductor
- 10 Foot control connector
- 11 Main connection panel
- 12 Floor locks

Main connection panel is shown below (Figure 3).



**Figure 3: Main connection panel**

- 1 Auxiliary hand control
- 2 Emergency release for floor locks
- 3 20 A fuse
- 4 Main switch (OFF/Stand By)
- 5 Computer connection (service software)
- 6 Charging indicator LED (green)
- 7 Charging cable and its connection
- 8 Type plate

## 1.3 Controls

The functions of the table are operated with the hand controls or with the foot control which is available as an option. In order to adjust the table, press the button of the function in question on the control. The movement stops, when the button is released.

### 1.3.1 Hand control

The grey hand control is connected to the table with a cable. The connection point is located on the column under the middle section (Figure 4).



Figure 4: Hand control connector on the column under the middle section

As a standard the auxiliary hand control is grey. The wireless Bluetooth control (blue) is available as an option. The auxiliary hand control is located in hatch on the main control panel (see Figure 3). It is connected to the table with a cable.



Make sure that the auxiliary hand control cable doesn't compress the button, when storing the control in the hatch.

Both hand controls have the same buttons and symbols (Figure 5). Controls operate in parallel e.g. indicator LED's illuminate identically on both controls. However you cannot select functions simultaneously with both hand controls i.e. you can operate the table only with one hand control at a time.

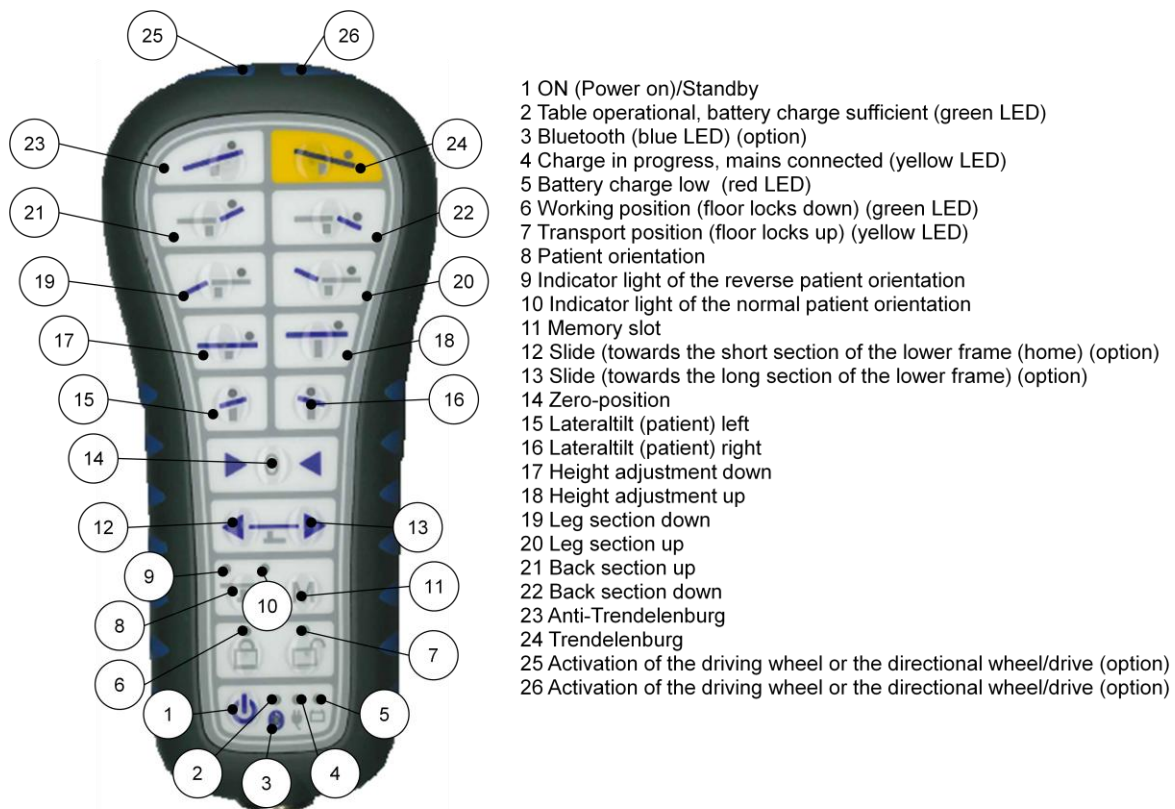


Figure 5: Hand control

### 1.3.2 Wireless (blue) Bluetooth hand control (Option)

The battery of the Bluetooth hand control is automatically charged when the control is connected with the cable to the table.

**NOTE!** The battery of the hand control is charged only when the main switch is on StandBy-position.

When the Bluetooth-control is connected to a operating table, it will be coded (paired) with the table in question. This means that the control cannot be used with any other Scandia operating tables without recoding. In order to code the control, connect it to the table with the cable on the main panel. Turn the main switch to OFF-position and then back to ON-position. Wait 5-10 seconds after which the control is ready to be used. Detach the hand control from the cable and turn it on from the ON/StandBy button (Figure 5 (1)). The indicator LED on the Bluetooth control starts to flash (Figure 5 (3)) and the control starts to establish the wireless connection. Usually this will take few seconds. When the connection is established, before mentioned LED stays ON and the control can now be used wirelessly. The operating range of the Bluetooth control is 5-10 meters in an open space. If the connection cannot be established (usually due to interference or obstacles) approx. within 8 seconds, the control will turn off. Press ON/StandBy button in order to retry establishing the connection.

If the Bluetooth control is not used for 30 min. in wireless mode, the control will go to power save mode. Press the ON/StandBy button in order to reactivate the control.

### 1.3.3 Foot control (Accessory)

The functions of the table can be operated also with a foot control which is available as an accessory (Figure 6). The functions of the foot control are programmed according to the customer's order with the Lojer Service Software. 1-3 functions can be programmed. The symbols are identical with the hand control symbols. The foot control is connected to the table on the short section of the lower frame (see Figure 2 (10)). Remove the cover of the connector and attach the cable by pressing it. Ensure the fastening by tightening the thumb screws.

a)



b)



**Figure 6: a) Foot control (Note! Figure indicative, the symbols depend on the programmed functions)  
b) Foot control connected to the table**

The programmed functions can be changed. Contact the Lojer Service for reprogramming.

## 1.4 Options and accessories

Lojer Scandia SC330 Operating tables are available with following options and accessories:

- Wireless hand control (Bluetooth™)
- Sliding table top (Slide)
- Directional wheel
- Driving wheel
- Stainless steel casing

Accessories:






- Foot control
- Visco elastic or moulded mattresses
- Wide range of accessories



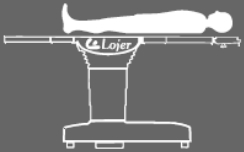

## 1.5 Markings and signs

Markings and signs used in the documentation and on the table are shown below ( Table 1 and Figure 7)

Table 1: Symbols

Symbol	Description
CE	The device is in conformity with essential requirements of the Directive 93/42/EEC (Medical devices)
IP24	Effective against middle sized objects and splashing of water.
	Type B medical device
	Squeezing hazard
	Read the instructions
	Important/Warning
	Warning

Normal Orientation

Safe working load 280 / 350 kg on floor locks (with sliding top out 200 kg)  
Safe working load on wheels: 250 kg  
See user manual before exceeding load 280 kg

**Warning**

- Read user manual carefully before use
- Install and tighten all accessories according to the instructions
- Max weight of accessories 40 kg, max 25 kg on single side rail
- Do not let fluids come in contact with the main connection panel or inner parts of the operating table
- Do not use the operating table for transporting the patient if the floor is uneven (max floor angle is  $\pm 2$  degrees).

Figure 7: Safety signs on the column

## 2 Introduction

### 2.1 Inspection upon delivery

Before the device is taken into use, check that the packaging is intact and that it has not been damaged during transportation. Please notify the transport company and the supplier of any transit damage within two (2) days of receiving the delivery.

Ensure that the delivery contains all the parts detailed in the delivery note. If there is anything missing from the delivery consignment, please contact the supplier immediately.



The device can be stored at a temperature of -5...+60 °C. The permitted humidity is 30...75 %.  
Air pressure 700 hPa...1600 hPa.

























### 2.2 Before use

The device is intended to be used in normal, dry indoor conditions. Ensure that the temperature of the room is between +10...40 °C and the humidity is within the range of 30...75 %. After transport keep the operating table in room temperature for 6 hours before use. If there is chance that device has been exposed to temperatures below 0°C, allow it to adjust to the indoor temperature over night before using any of its features.

Familiarize yourself with the instructions and carry out the following before using the device:

- Make sure that all packing materials have been removed.
- Make sure that the device can freely move up and down.
- Attach the potential equalization cable to the connector (Figure 2 (9)).
- Open the main connection panel and attach the 20 A fuse to its place (Figure 3 (3)).
- Turn the power on from the main switch (ON) (Figure 3 (4)).
- Attach the charging cable to its connector in the main control panel (Figure 3 (7)) and charge the batteries.
- Charge the batteries for 8-12 hours before taking the table in use (see Chapter 3.8).
- Attach the hand control cable on the grey hand control (Figure 2 (8)) and on the column under the middle section (Figure 4) (make sure that the connector is properly in place). Tighten the connector on both ends. Attach the auxiliary hand control similarly to the cable on the main control panel (Figure 3 (1)).
- Test that all function work properly with both hand controls.
- Check that the wheels spin freely and turn 360 °.
- Check that all accessories work properly. Familiarize yourself with the instructions of use carefully before installing the accessories and make sure that they do not compromise the safety.

Familiarize yourself with the following safety instructions before use:

	Ensure adequate training before use.
	For safety reasons always connect the power cord (charging cable) to grounded socket.
	Do not bind the charging cable to the device. Ensure that the cable is easily detachable in an emergency situation.
	Make sure that the distance to the socket is not more than 2 meters.
	Always detach the charging cable on both ends before moving the device.
	If the charging cable is damaged, unplug it immediately. Do not use the device and contact the service. Use only the original cable.
	Do not modify the structure of the device or install parts other than those mentioned in this document which are approved by the manufacturer.
	Do not use the device or the accessory if it doesn't work properly. Contact the service
	Make sure that during assembly and possible adjustments all the levers are locked properly before using the table.
	Use the device according to the intended use defined by the manufacturer.
	Ensure that the table is not exposed to electromagnetic radiation exceeding applicable norms. Portable and mobile RF communications equipment can affect the operating table.
	Use antistatic mattresses, cushions and textile to ensure discharge of static electric.
	Always use potential equalization when using the table to avoid electrical interference.
	Do not use the operating table in any other configurations than those mentioned in this document (see Chapter 4) even though they might be mechanically possible.
	Make sure that the sections are properly locked before use (see Chapter 3.6)
	Keeps the hand control hanging on the end of the head section to keep it from getting squeezed during transport or adjustment
	Make sure that the patient's limbs do not get caught in the frame of the device or the accessories.
	Make sure that the sections do not crash with lower frame, column or floor when adjusting the height of the table. Pay extra attention to this especially when the table is in lower position.
	Always turn the power off from main switch on the main control panel (switch in OFF-position) during cleaning, service and emergency.
	Always make sure that the table is on working position (floor locks down) before using the table.
	Make sure that there is enough space around, above and below the table for the movements. Notice that the accessories increase the need for space.
	Make sure that the space around the table is safe. There should be no sharp edges or other possibly harmful objects around the table.
	Do not modify the structure of the field operating table or install accessories other than those mentioned in this document.
	Make sure that the loading on the table is as even as possible in order to avoid tilting.



Safe working load (SWL) is the maximum allowed load including the patient, mattresses and accessories. Overloading may result in tilting of the table.



Safe working load (SWL) 350 kg is allowed only with specified configuration (see Chapter 4.2)



Safe working load (SWL) in standard configuration is 280 kg. When Slide is out the SWL is 200 kg.



In reverse standard configuration the safe working load (SWL) is 250 kg (also with Slide out).



On wheels the safe working load (SWL) is 250 kg. The height of the table has to be under 80 cm.



Total mass of the accessories attached on the accessory rails is 40 kg.



Maximum allowed load (SWL) on one accessory rail is 25 kg. The maximum allowed load (SWL) on the accessory rail of the heads section is 10 kg per rail. The maximum combined load on the head section rails is 20 kg.

### 3 Using the device

A movement starts when a button on the hand control is pressed. The movement stops when the button is released. When pressing two buttons at a same time, the table won't move or the movement stops.

Expect following:

- The table adjusts automatically to working/transport position when the button is pressed. The movement stops only by pressing the ON/StandBy- button (Figure 5 (1)).
- The movement will not stop if the same button is pressed from both hand control simultaneously. The movement stops when either one of the buttons is released.
- Pressing the Drive-buttons (Figure 5 (24/25)) does not affect the movements of a table in working position.
- Slide-movement stops for a while and move sequentially.

Trajectory of each movement is restricted with sensors. The movement stops when the button is released or when the movement reaches the set end position. The movement will always stop, when the ON/StandBy-button (Figure 5 (1)) is pressed.



Make sure that the accessories do not hit anything when adjusting or transporting the table.



The operating table will go to low current consumption mode (Stand By) when the ON/StandBy button (Figure 5 (1)) is pressed. This might lead to battery discharge. In order to turn the power off totally, turn the power off from the main switch (Figure 3 (4)).

### 3.1 Indicator LEDs (hand control) and audible signals

The definitions of the indicator LEDs and audible signals are presented below (Table 2). See also Chapter 7.3 Troubleshooting.

Table 2: Indicator LEDs of the hand control and audible signals (see also Figure 5)

Indicator LED or signal	Description	Definition
Green	Continuous (Figure 5 (2))	Table operational, battery charge sufficient.
	Slowly flashing (Figure 5 (2))	Battery charge decreased <i>Note!</i> Observe the state of the battery level and prepare to charge the batteries.
	Continuous (Figure 5 (9))	Chosen patient orientation.
Yellow	Continuous (Figure 5 (4))	Charge in progress, charge cable (mains) connected
Red	Continuous (Figure 5 (5))	Battery charge critically low. Charge the batteries immediately.
Changing green (Figure 5 (6)) and yellow (Figure 5 (7)) LED		The table changing between working and transport positions. Wait until the either one of the LEDs is continuous.
Blue	Flashing (Figure 5 (3))	The hand control is establishing the wireless connection.
	Continuous (Figure 5 (3))	Wireless connection between the hand control and the table is established.
Slowly changing green (Figure 5 (6) and yellow (Figure 5 (7)) LED		Either the directional wheel or the drive wheel is activated (both optional)
All LEDs (Figure 5 (2,4,5)) are flashing simultaneously. During movements sequential audible signal.	Repeated beep.	Internal error mode (see Chapter 7.3)
Short signal	One beep.	Table is adjusting and the desired movement has reached the end position e.g. the leg section is at its end position or the floor lock mode has changed (working/transport position).
Double signal	Two beeps.	Operation cancelled.

### 3.2 ON/StandBy (Power ON/StandBy)

Press the ON/StandBy button on the hand control (Figure 5 (1)) in order to use the table. During start-up sequence the LEDs flash as a string and the table cannot be adjusted. The table is ready for use, when the indicator LEDs for power (Figure 5 (2)), floor locks (Figure 5 (6/7)) and patient orientation are lit. In order to save the batteries, the power is turned off after a period of time (programmable 1-240 min) if no functions are used. All functions can be reactivated by pressing the ON/StandBy button. Turn the power by pressing the ON/StandBy button until the LEDs turn off.



By turning the power off from the ON/StandBy button, all functions are shut down. Use the button when immediate cancellation of movement is necessary.

### 3.3 Working position (Floor locks down)/Transport position (floor locks up)



The table adjusts automatically to working/transport position when the button is pressed. The movement stops only by shutting down the power (pressing the ON/StandBy- button). If shut down the power in order to stop the movement, put the power back on to make sure that the floor locks are completely up or down.

In order to set the table in working position, press the button (Figure 5 (6)) on the hand control. The floor locks descend. Indicator LEDs (green and yellow) start flashing in turn. Short signal can be heard and the indicator LED for working position ( Figure 5 (6)) is lit when the floor locks are completely down and the table is in working position.

In order to set the table on transport position, press the button approx. 1 second (Figure 5 (7)) on the hand control. The floor locks get up. . Indicator LEDs (green and yellow) start flashing in turn. Short signal can be heard and the indicator LED for transport position ( Figure 5 (7)) is lit when the floor locks are completely up and the table is in transport position.



For safety reasons only height and trendeleburg adjustments are operational, when the table is in transport position.

In case of electric malfunction, the table can be returned to transport position manually by pulling out the emergency valve located in the main control panel (Figure 3). Open the hatch and pull out the knob (Figure 8).

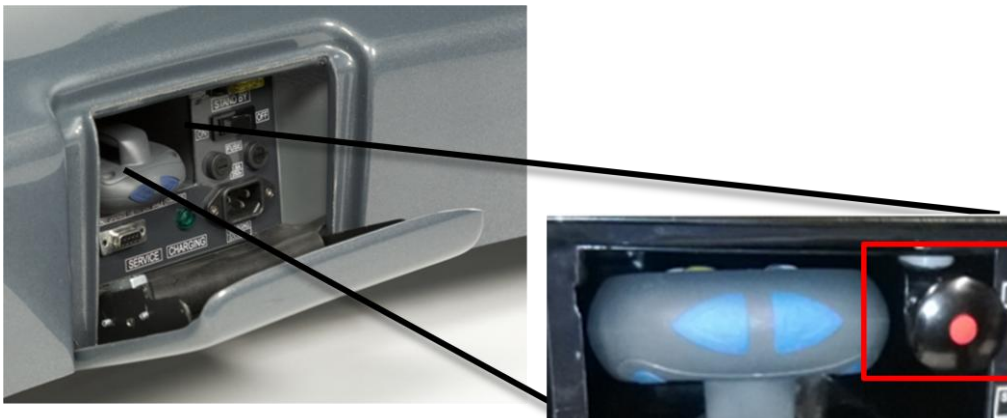


Figure 8: Floor lock emergency valve

The table will immediately lower the wheels (transport position). Push the knob back for normal operation.

### 3.4 Patient orientation

The patient is positioned on the table in normal orientation, when the head is faced towards the long end of the lower frame (see Figure 2). The patient is positioned on reverse patient orientation when the head is faced towards the short end of the lower frame. The indicator LEDs on the hand control indicated the chosen patient orientation: reverse patient orientation (Figure 5 (9)) and normal patient orientation (Figure 5 (10)). In order to change the patient orientation, press the button (Figure 5 (8)) approx. 3 seconds. The chosen orientation will remain until you press the patient orientation button again. Chosen orientation will remain stored when the power is turned off.



For safety reasons you have to press the button approx. 3 seconds in order to activate the function.



The buttons on the hand control always operate according to the chosen patient orientation.

### 3.5 Adjustments

Maximum adjustment range of the table is presented below (Figure 9).



**SQUEEZING HAZARD!** Make sure that nothing gets between the structure or under the device during adjustment.

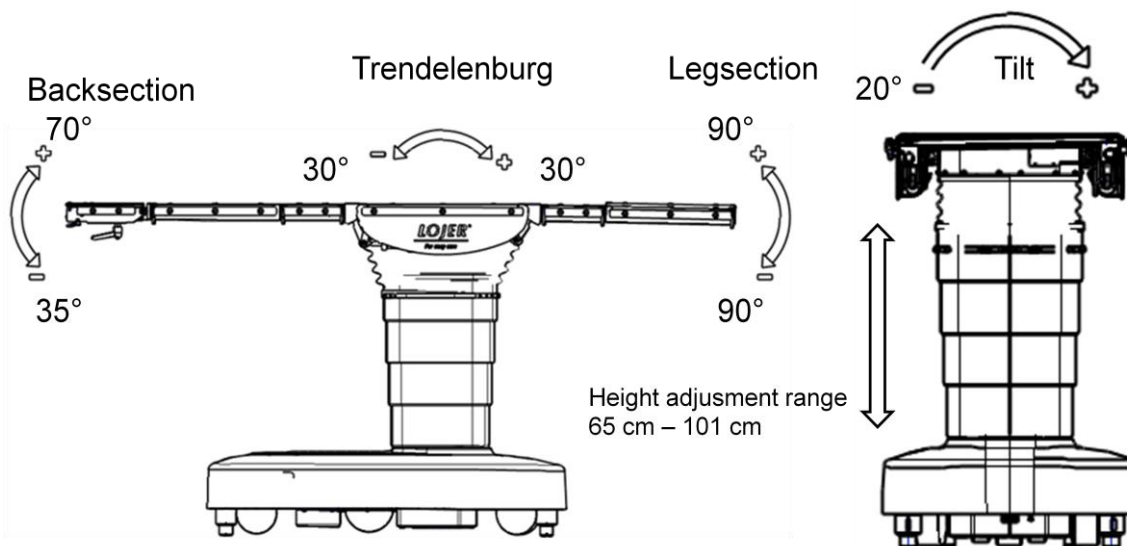


Figure 9: Adjustment range of the operating table

#### 3.5.1 Height adjustment

Adjust the height of the table with buttons on the hand control (Figure 5 (16 & 17)).

#### 3.5.2 Back section adjustment

Adjust the angle of the back section with the buttons on the hand control (Figure 5 (20 & 21)).

#### 3.5.3 Leg section adjustment

Adjust the angle of the leg section with the buttons on the hand control (Figure 5 (18 & 19)).

#### 3.5.4 Lateral tilt

Tilt the table (patient) right by pressing the button on the hand control (Figure 5 (15)). Tilt to left with the button on the hand control (Figure 5 (14)). Maximum tilt 20 ° (Figure 9), when the table is horizontally. When the table is in trendelenburg/antitrendelenburg-position the tilt angle is limited.

#### 3.5.5 Trendelenburg/Antitrendelenburg

Adjust the table to Trendelenburg-position (head down) with the button on the hand control (Figure 5 (23)). Adjust the table to Antitrendelenburg-position (leg down) with the button on the hand control (Figure 5 (22)). Return to the horizontal position either by pressing the Zero-position button (Figure 5 (13)) or before mentioned Trendelenburg/Antitrendelenburg buttons.

### 3.5.6 Zero-position

In order to return the table in horizontal position press and hold the Zero-position button on the hand control (Figure 5 (13)). This will return the slide, tilt, trendelenburg/antitrendelenburg adjustments and back and leg section adjustments to horizontal position. Back and leg adjustment as well as the trendelenburg adjustment returns to zero gradually in 15 ° stages. The height of the table is adjusted separately. When the table is completely driven to Zero-position, short signal can be heard.

### 3.5.7 Slide (Option)

The horizontal slide of the table top is available as an options to Lojer Scandia operating tables. The table top will slide towards the long end of base frame by pressing and holding the hand control button (Figure 5 (12)). The table top will slide on the other direction (towards the homeposition) with the button on the hand control (Figure 5 (11)). Maximum slide is 30 cm.



When using the Slide in normal patient orientation, the SWL is 200 kg. In reverse patient orientation the SWL is 250 kg.



For safety reasons all functions will not work when using Slide.



Slide-button on the hand control work always according to the normal patient orientation.

### 3.5.8 Memory slot

By pressing the Memory slot –button on the hand control (Figure 5 (10)), the table moves to previously saved memory position. Memory position includes the tilt, back and leg section angles and height adjustment. The table is driven to the memory position gradually by adjusting the different inclinations in 15 ° stages. Short signal can be heard when the table is completely driven to the memory position. Factory-installed memory position is a beach chair- position. The position can be changed freely by the user within the allowed range.

Saving the memory position:

- Drive the table to desired position.
- Press simultaneously approx. 8 s. the Memory slot-button (Figure 5 (10)) and the Drive-button (Figure 5 (25)).
- The saved position will remain stored when the power is turned off.



Saving the memory position is possible only with Slide in homeposition.



Before driving to the memory position, make sure that there is enough space around, above and below the table for the movements. Notice that the accessories increase the need for space.



Monitor the table carefully, when driving to the memory position.

### 3.5.9 Transporting the operating table



When the table is in transport position (on wheels), SWL is 250 kg.



For safety reason the height of the table has to be under 80 cm when transporting a patient.



Do not use the table for transporting a patient if the floor is uneven. Max. allowed tilt  $\pm 2^\circ$ .

Before moving the operating table:

- Center the focus of the patient's weight on the column.
- Make sure that the patient is secured safely.
- Lower the height of the table (under 80 cm).
- Make sure that the charging cable is unplugged. Move all possible obstacles. Notice accessories attached to the table during transport.
- At least one person should be on both ends of the operating table always when it is transported.



### 3.5.10 Directional or Driving wheel (Option)

Adjustable directional wheel or motorized driving wheel are available as an option on the Lojer Scandia SC330 operating table. Both wheel work as a directional wheel and make the transporting the table easier.



For safety reasons either one of the wheel do not work with the wireless connection or when the batteries are charged.



Table top adjustment will not work when directional or drive wheel is activated.

In order to activate the directional wheel press the button on the hand control (Figure 5 (24)). Indicator LEDs (Figure 5 (6/7)) start to slowly flash, when the directional wheel is activated. The wheel will lower down and you can move the table back and forth. It is not recommended to move the table side ways when the directional wheel is activated. The directional wheel will go up to homeposition within 7 s. if not used or by pressing the button on the hand control (Figure 5 (6)).

Using the motorized driving wheel:

- Hang the hand control on the accessory rail on the right side of the head section (the table in standard configuration) (Figure 2).
- Press either one of the Drive-buttons (Figure 5 (24/25)). Double signal can be heard and after a while the driving wheel lowers down. Indicator LEDs (Figure 5 (6/7)) start to slowly flash, when the driving wheel is activated.
- Press the Drive-buttons (Figure 5 (24/25)) according to the desired direction (Figure 10). Double signal indicates that the table starts to move. Motion stops, when the button is released. Moving and stopping happen softly.
- The driving wheel will go up to homeposition within 7 s. if not used or by pressing the button on the hand control (Figure 5 (6)).
- In order to alter the speed, please contact Lojer Service.



Figure 10: Using the driving wheel

### 3.6 Attaching/removing the table top sections

The table top sections of the Lojer Scandia SC330 Operating table are easy to attach with a simple locking mechanism.

- Take a firm grip of the section
- Align the pins with the holes



Figure 11: Attaching the table top section

- Insert the section by pushing evenly so that the pins engage at the same time

- To lock pull the section so that the latches on both sides snap into place (Figure 12).



Make sure that the section is properly locked. If the red signs are visible (Figure 12), the section is not properly locked.

a)

b)



**Figure 12: Locking latches a) open b) locked**

Removing the table top sections:

- Raise the locking latches to their upper most position on both sides (Figure 13).

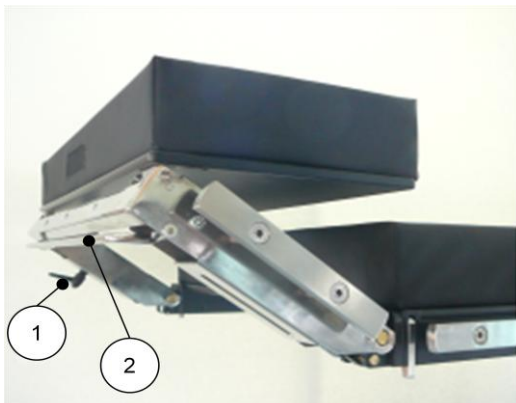


**Figure 13: Opening the locking latches**

- Grasp the section with both hands and pull evenly towards yourself. The more evenly you pull, the easier the removal is. Raising the section slightly will also help.

### **3.7 Head section adjustment**

Adjust the angle of the head section by opening the locking lever 1) (Figure 14). Turn the head section to desired angle and tighten the lever. If necessary you can adjust the head section angle parallel with the table top (shown below) by pressing the adjustment bar 2) (Figure 14). Release the bar in order to lock the head section.



**Figure 14: Adjusting the head section**

### 3.8 Charging the batteries

The batteries of Lojer Scandia SC330 operating tables are connected in series and are designed for cyclic use. The lifetime of the batteries depend on the length of the charge/discharge periods. In order to ensure long lifetime of the batteries, charge the batteries as described below. The need for change depends on the internal resistance of the batteries (the internal resistance of a new battery is 12 mΩ ). The battery manufacturer's recommendation is to change the batteries when the resistance has increased to 16,8 mΩ. Batteries must be changed when the resistance has increased to 21,6 mΩ. According to the manufacturer the resistance should be measure with Hioki 3554 Battery Tester. Always unplug the charging cable when the charging is finished. If the cable is not unplugged the capacity of the batteries might be decreased. In normal use the batteries will last up to one week of use, but it is recommended that the batteries are charged after use. The charging of completely discharged batteries will take approx. 8-12 hours.



Serially connected batteries should have similar characteristics. Thus always change both batteries at the same time so that their capacity stays optimal.



Use only batteries specified by the manufacturer.



Always detach the charging cable when the charging is finished. If the cable is not detached, the capacity of the batteries might be decreased.

In normal use the



The charging is recommended to be executed after use so that the patient is not on the table.



Take precautions if the batteries are charged with the patient on the table. Because the hatch is open, make sure that liquids do not get to the main control panel.

- Lock the table to Working position with the hand control (Figure 5 (6)).
- Open the hatch of the main control panel and attach the charging cable to the connector (Figure 15).



Figure 15: Charging cable and its connector

- Plug the other end of the charging cable to a grounded socket. Green indicator light on the main control panel lights up (Figure 15). Indicator LED on the hand control is yellow when the charge is in progress (Figure 5 (4)).
- Unplug the charging cable after the recommended charge time is over.
- Close the hatch of the main control panel



The batteries should be changed after 3 years or when the needed charge/discharge cycle has become more frequent than 6-8 hours.

## 4 Table top configurations

You can change the table top configurations according to the need. The configurations allowed are described in the following sections.



In the allowable configurations (without accessories) the system prevents most typical collisions of the table parts, provided that there are no obstacles above or underneath the table top.

### 4.1 Standard configuration

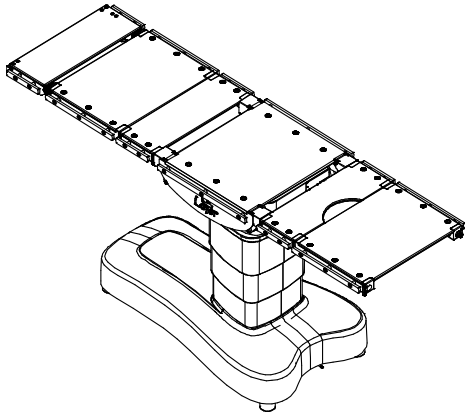


Figure 16: Standard configuration, head section according to the normal patient orientation

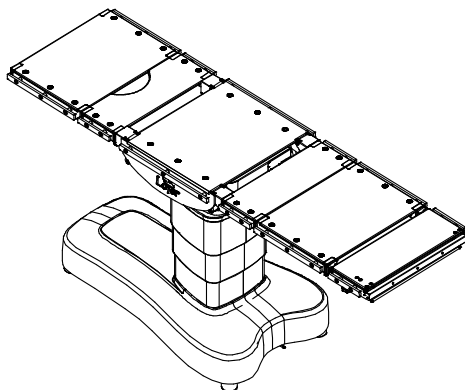


Figure 17: Reversed standard configuration, head section according to the reversed patient orientation

### 4.2 Safe working load (SWL) 350 kg

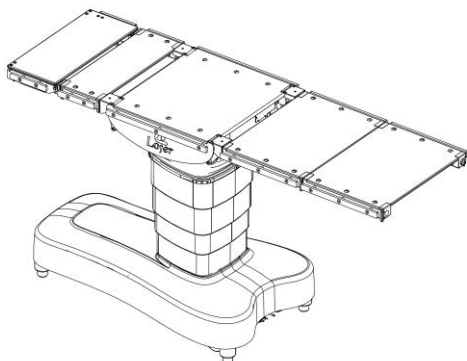


Figure 18: SWL of the operating table, head section according to the normal patient orientation



SWL of 350 kg is only allowed with the configuration in Figure 18, head section according to the normal patient orientation and the patient centered on the column.



The table has to be on its working position (floor locks down) before transferring the patient on the table.



The use of Slide is prohibited.

#### **4.3 Lithotomy configuration, step 1**

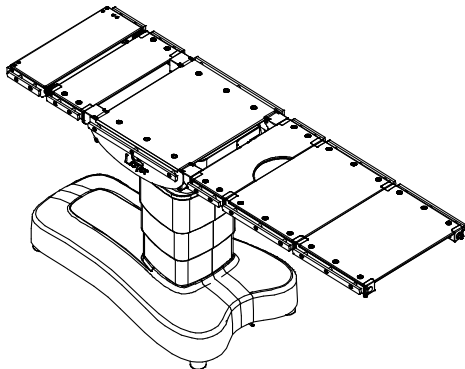


Figure 19: Lithotomy configuration, step 1

#### **4.4 Lithotomy configuration, step 2**

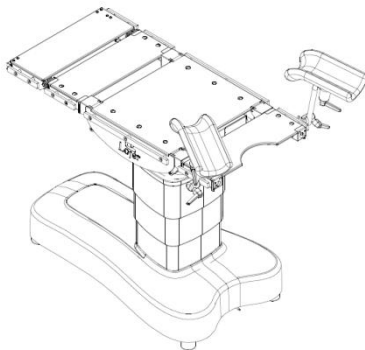


Figure 20: Lithotomy configuration, step 2

#### **4.5 Cardiovascular configuration**

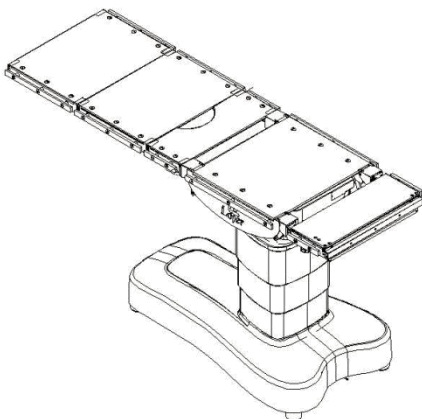


Figure 21: Cardiovascular configuration

## 4.6 TUR configuration

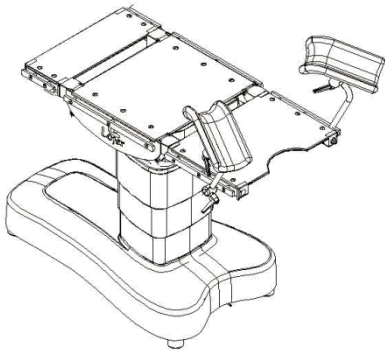


Figure 22: TUR configuration with extension plate 60150

## 4.7 Prohibited configurations



Do not use below illustrated configurations ( ) even though they might be mechanically possible. The use of the prohibited configurations can endanger the patient safety, because the stability of the table is compromised.

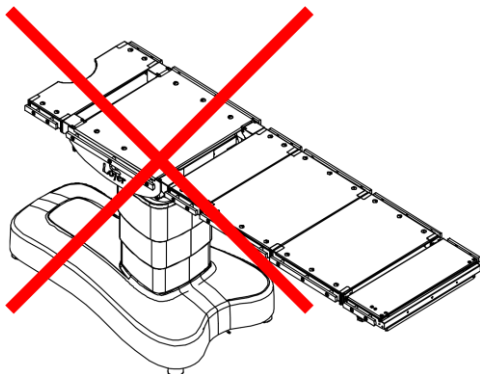


Figure 23: Prohibited configuration 1, head section according to reversed patient orientation

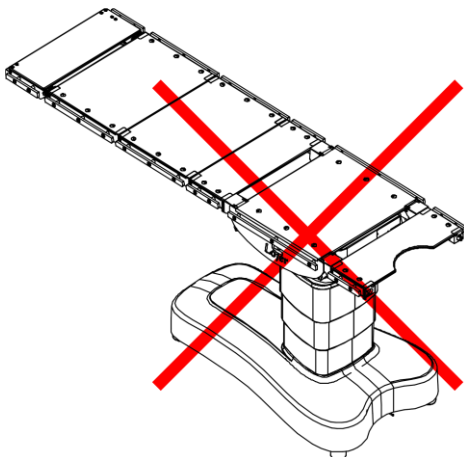


Figure 24: Prohibited configuration 2, head section according to normal patient orientation

## 5 Movement limitations

The movements of the operating table are limited by the software. The table has reached a limit, when the movement stops and a signal can be heard. The limitations are presented on the table below (Table 3). The first line of the Position/Adjustment column presents the min/max position/adjustment in normal situation. The min/max values of special situations are presented on the following rows.

**Table 3: Movement limitations**

Function	Position/Adjustment	Situation
Height of the table	65 cm	Normal minimum height
	98 cm	Minimum height, when the leg section angle is > 65° down.
Trendelenburg	-30°	Normal maximum angle
	-20°	Maximum angle, when the tilt angle > ±5°.
	-20°	Maximum angle, when the back section angle is -20° and the height is > 80 cm.
	-10°	Maximum angle, when the back section angle is -20° and the height is < 80 cm.
Anti-trendelenburg	-30°	Normal maximum angle
	-20°	Maximum angle, when the tilt angle > ±5°.
	-17°	Maximum angle, when the leg section angle is > 65° down and the height is > 80 cm.
	-12°	Maximum angle, when the leg section angle is > 50° down and the height is < 80 cm.
Tilt	±17°	Normal maximum angle
	±20°	Maximum tilt in horizontal position.
	±5°	Maximum tilt when the trendelenburg/anti-trendelenburg angle is >20°
	Disabled	Leg section angle is > 65° down.
Leg section	-90°	Normal maximum angle down
	-65°	Maximum angle when the height of the table is <98 cm.
Slide	30 cm	Normal slide towards the long end of the base frame.
	Disabled	Trendelenburg/Anti-trendelenburg >13°
		Leg section angle is > 1° down.

## 6 Cleaning and disinfecting

- Before cleaning remove all accessories
- Make sure that the charging cable is unplugged.
- Clean stains as soon as possible.
- In order to keep the surfaces in good condition do the cleaning regularly. Do cleaning/disinfectant always between patients. Do more thorough cleaning once a month. Follow the cleaning/disinfecting instructions given by the respective facility.

### **Metal and plastic surfaces**

Clean the metal and plastic surfaces and the hand controls with a damp cloth and weak alkaline cleaning fluid. Use small brush for corners and other difficult spots. Rinse with clean water and dry carefully after cleaning. Do not use excessive fluids

Use disinfectant (alcohol or chlorine) and follow the disinfectant manufacturer's instructions for use. Let dry by evaporation in room temperature.

**Plastic surfaces (ABS, HDPE, PP)** are highly resistant to chemicals. Plastic is resistant to bleaching agents (alkaline compounds), dilute organic or inorganic acids. Also solvents and cleaning agents may be used. Plastic surfaces may get damaged if aromatic hydrocarbons (benzene and its derivatives), ketones, ethers, esters and chlorinated hydrocarbons are used. Plastic might also deteriorate if it is exposed to various chemicals at the same time.

**Stainless steel surfaces** are highly resistant to chemicals. Use for mild detergent solution for cleaning. Ammonia and most of the solvents can be used to remove difficult stains. Avoid chlorine based solutions.

**Painted or chromed metal surfaces** can be cleaned with mild detergent. They are also highly resistant to chemicals. Do not use harsh abrasive powders on these surfaces.



All surfaces must be dry before connecting to mains and using the device.



Turn the main switch to position OFF.



Always unplug the charging cable before cleaning.



Do not use water spray (shower, high-pressure water guns) for cleaning. Do not use steam or extremely hot water.



Do not clean in high temperature and air humidity. This might cause interference in electric or hydraulic system.



Do not expose the device to excessive moisture which can result in liquid pooling.



Do not use solvents or petrol for cleaning. Do not use acids for cleaning.



Always dry the surfaces after cleaning and disinfecting.



Disinfecting wears out the surfaces. After disinfecting clean the surfaces with clean, damp cloth. Dilute the disinfectant according to the manufacturer's instructions.



Do not let any liquids enter the main connection panel or the inner parts of the table.



### **Mattresses and straps**

Remove the table top pads before cleaning. Wash mattresses and straps carefully with warm water (50°) and neutral (pH7) detergent. Rinse with clean water, wipe them dry and leave to dry in room temperature. Use small brush for corners and other difficult spots.

Spray a disinfectant (70% methylated spirit or 1000-5000 mg/ltr solution of hypochlorite in water) directly onto the pads. Rinse with clean water. Wipe clean with absorbent soft paper and let dry by evaporation in room temperature.

If necessary brush the Velcro bands, the pads and the tabletop with a non-metallic brush.



Do not let hypochlorite solution to come into contact with metallic parts. Long-term contact with mattresses may damage them.



If non-Lojer mattresses are used, refer to the table mattress manufacturer's instructions on the use of disinfectants.



Check mattresses regularly for damages and wearing. Replace mattress with damaged surface with new one immediately.



Do not storage mattresses in close distance with sharp edges, and not leave them to high temperate.



The mattresses must not be exposed to ozone.

## **7 Service and maintenance**



Only trained and manufacturer authorized person may carry out service and repair. Maintenance carried out by an unauthorized person may cause injury or damage to the device which the manufacturer is not responsible for.



Professional user can replace the hand controls, standard hand control cable, the fuse on the main control panel and the fuse on the charger.



All service and repair operations must be documented.

### **7.1 Monthly maintenance**

The professional user is responsible for executing monthly maintenance tasks.

Execute following check-ups at least once a month:

- Check all functions with both hand controls one by one by driving the movement to its limit and back.
- Remove all table top sections. Clean all surfaces of the locking mechanism (holes, pins, levers). Lubricate them with appropriate lubricant. Check that the sections lock properly.
- Check that the wheels spin freely and turn 360 °.
- Check all cables and connectors for damages. Make sure that all connections work properly.
- Check the fastenings of the accessories.

If you notice that any defects e.g. the table is making unusual noise or operates inadequately, stop using the table and contact the service.



If the table or its part is not working properly make sure that the table is not used before appropriate service.

### **7.2 Annual service**

In order to ensure safe use of the operating table, it should be serviced at least once a year. Annual service can be performed by trained personnel which is authorized by the manufacturer. Annual service task are presented in a separate Service manual.

### 7.3 Troubleshooting

The most common failures and actions are presented on the table below (Table 4). The operating table can be operated in failure mode. The failure mode is presented by flashing of the indicator LEDs and repeated beep (see Table 2) when the table top is moved.

**Table 4: Troubleshooting of Lojer Scandia SC330 operation table**

Symptom	Cause	Action
None of the hand control functions operate and no LEDs are visible.	The cable of the hand control is not connected.	Check the cable connections and that the cable is intact. Check that the connector is tightened.
	The battery of the auxiliary (Bluetooth) hand control is empty.	Charge the battery by connecting the auxiliary hand control to the operating table with a cable. In the meanwhile, use the standard hand control.
	The main switch is turned to position OFF.	Turn the main switch to position Stand By.
	Batteries are empty.	Connect the charging cable and charge the batteries (see Chapter 3.8).
	Defective hand control.	Try another hand control. Contact Lojer Service in order to change the control.
Bluetooth-control cannot establish the wireless connection.	The hand control is turned off in order to save power (time limit)	Turn the power off from the main switch and back on. Try re-establishing the connection.
Foot control doesn't work properly.	The cable is not connected properly.	Check the cable connection.
The hand control is ON, but the functions do not operate.	The table is not in working position (floor locks down)	Press the Working position button on the hand control (Figure 5 (6))
Directional wheel won't lower down or the drive won't start..	The table is in working position (floor locks down)	Press the Transport position button on the hand control (Figure 5 (7))
	Charging cable is connected.	Unplug the charging cable.
Table is difficult to move sideways.	Directional or Driving wheel is activated (indicator LEDs, see Table 2).	Press the Transport position button on the hand control (Figure 5 (7)) in order to deactivate directional/driving wheel.
All LEDs are flashing simultaneously. (see also Table 2)	Table is in working position and during movement signal can be heard.	Try to reset the failure by turning the main switch OFF and back to Stand By.  The table can be used temporarily in order to finish ongoing operation.  Contact Lojer Service in order to check the table.
Incorrect Zero-position.	The position saved on the Zero-position is incorrect.	Contact Lojer Service in order to reprogram appropriate Zero-position.

Zero-position button doesn't work (all other buttons function)	Internal failure mode, all LEDs flashing (see Table 2)	Contact Lojer Service.
Charge indicator LED stays lit up even though the cable is unplugged.	The charge level of the batteries is high after charging.	Does not affect the operation of the table. Indicator LED will go out when the table is used for a while.
Some of the functions do not work..	One or more movement has reached the limit (see Table 3) or the software is preventing the movement because of a collision risk.	Press the Zero-position button on the hand control for a few seconds.
	Slide is not in home position.	Drive Slide to home position and continue using the table.
When adjusting the table the movement stops and double beep can be heard.	The movement has been stopped because of a failure.	Contact Lojer Service if the failure cannot be resetted.
	Defective hand control.	If the auxiliary control is working, use that to replace the standard control. If the problem is not solved the cable might be damaged. Contact Lojer Service in order to change the control/cable.
	Bluetooth- connection has been switched off.	Turn the power off from the main switch and back on. Try re-establishing the connection.  Use the control closer to the table and make sure that there are no obstacles between the table and the control.  If the problem is not solved Contact Lojer Service.
Movement stays on.	Defective button on the hand control.	Press the ON/StanBy-button (Figure 5 (1)) on the hand control to stop the movement. If the auxiliary control is working, use that to replace the standard control. Contact Lojer Service in order to change the control.

To order spare parts contact the Lojer Service. Before contacting, find out the following information from the type plate of the device:

- Name, model and the serial number of the device
- Date of purchase
- Description of the problem (pictures/videos are helpful)

## 7.4 Electrical safety

The electrical characteristics and normal operation of the device should be performed according to the EN 62353 standard. In order to maintain the performance of the device, tests should be executed at least every 3 years. Electrical equipment should be inspected by an approved service technician or some other party approved for servicing medical devices.

EN 62353 applies to testing of medical electrical equipment during maintenance, inspection and servicing to assess the safety of the devices. Tests should be performed by qualified personnel. Qualification should include training, knowledge and experience with the relevant test procedures, technologies and regulations. The personnel assessing the safety should be able to recognize possible consequences and risks related to non-conforming devices.



Tests performed by non-qualified personnel might cause injury or damage to the device which the manufacturer is not responsible for.

<p>PROTECTIVE EARTH RESISTANCE</p>	<p>Test is performed only for Class I equipment. All accessible conductive parts should be included into test. Measurement current should be 200 mA. The total resistance should not exceed 0,3 Ω. Detachable power cords kept ready for use should be measures as well. Their resistance should not exceed 0,1 Ω. Before testing check the earth conductors and change them if necessary. Test is performed between the protective earth connector of the mains plug and protectively earthed accessible conductive part. The measured resistance should not exceed 0,2 Ω. Test both the potential equalization point and the frame. If the device is disassembled or the protective earth conductors have been changed, protective earth resistance should be measured from various points.</p>
<p>LEAKAGE CURRENTS</p>	<p>The measuring device should be appropriate for testing leakage currents. Detach the power cord of the medical device and connect it to the measuring device. Attach the protective earth measurement lead to the point under test (change points if necessary). Attach the applied parts to the measuring device. (Note! In Class I equipment a leakage current measurement can be performed only after the protective earth testing has been passed.) Use the correct measurement method and procedures related to that. Currents to be measured: Equipment leakage current (current from the mains part to earth through protective conductor and accessible parts and applied parts): Class I, type B applied part 500µA. Applied part leakage current (current from the mains part and the accessible parts to applied parts of the device): Class I, type B applied part 5000µA.</p>
<p><b>EVALUATION:</b> The evaluation of safety of the tested equipment should be performed by electrically skilled person, who has the appropriate training for the equipment under test.</p>	
<p>FUNCTIONAL TEST</p>	<p>Perform the procedures mentioned in Section 7.1. Go through all functions in order to make sure that the device is working correctly. Stop using the device if you notice any defects e.g. the device is making noise or functioning in sufficiently. Contact the service.</p>
<p>REPORTING OF RESULTS</p>	<p>All test performed should be documented. The documentation should include at minimum the identification of the testing organization, name of the person who performed the tests, identification of the equipment, details of the tests, date and the result of the functional tests and measurements.</p>

## 8 Technical information

### Dimensions and weights

Overall length	2,07 m
Width of table top	55 cm
Width over accessory rails	60,5 cm
Weight of the operating table	260 kg
Safe working load (SWL) in normal orientation	350/280 kg
Safe working load (SWL) in reverse orientation	250 kg

### Adjustment ranges

Height (without pads)	65-101 m
Trendelenburg/Anti-Trendelenburg	30° / 30°
Lateral tilt (right/left)	17° / 17°
Back section (up/down)	70° / 35°
Head section	+26°/-58°, can be raised 13,5 cm
Leg section (up/down)	90° / 90°
Slide (option)	30 cm
Speed of Driving wheel unit (option)	Max 0.7-0.8 m/s (full load)

### Electrical data

Main power supply (EU)	230 V~; 50 Hz
Maximum current consumption	1,5 A x 230 V
Ingress protection system	IP 24
Electric protection class	Class I, type B applied part
Internal power supply (main batteries)	2 x 12VDC connected in series, total 24VDC, 20 Ah
Operating rate	2,5 min / 10 min

### Ambient conditions for transport and storage

Temperature, transport	- 10° C to + 40° C
Temperature, storage	+ 10° C to + 40° C
Relative air humidity	30 % to 75 %
Air pressure	700 hPa to 1060 hPa

### Ambient conditions for operation

Temperature	+10° C to + 40° C
Relative air humidity	30 % to 75 %
Air pressure	700 hPa to 1060 hPa

Warranty	2 years (batteries and mattresses 1 year)
Manufactured in	Finland

Check also the type plate of the device (Figure 25).



Model	SC330
Serial number	LOSA201310100608
Power input	345 VA
Operation voltage	24 VDC
Enclosure class	IP24
Electrical protection cl	I
Safe working load	350/280/250 kg
Weight	260 kg
Operating time rate	2,5/10min
Lojer Oy, Tel. +358 (0) 10 830 8700 Pitäjätie 42 FIN-38210 SASTAMALA FINLAND	



CH01



Figure 25: Type plate located on the hatch of the main control panel (picture suggestive)

## **8.1 Standards**

The device is in conformity with essential requirements of the Directive 93/42/EEC (Medical devices) and the corresponding Finnish National Law no. 629 (2010). The device is marked with CE marking. The device is classified as Class I medical device according to the directive.

## **8.2 Recycling**

Most of the materials used in the device are recyclable. When the device is removed from usage, it should be disassembled and recycled appropriately. Recycling should be done by specialized company. Do not dispose the device in the household waste.

Remove the battery from the device. The oil from the hydraulic system should be removed and disposed appropriately. Gas springs should be unpressurised and oilfree before recycling.

Following materials should be separated before recycling:

- METALS: frame, screws, nails, springs etc.
- ENERGY WASTE (combustible waste): wood and wood-based materials.
- ELECTRIC WASTE: wires, power cords, actuators etc.
- HOUSE HOLD WASTE: plastic, upholsteries and other materials which cannot be separated further.

Contact your local disposal authority for more details of how to recycle. Follow the instructions given in local collection points.

## 9 Limited international warranty

The warranty period is determined in the agreement documents. Unless otherwise agreed, the warranty period for manufacturing and material defects is **2 years**, except the steel structure and welds which carry a warranty of **10 years**. For wearing parts (like mattresses and batteries) the warranty is **1 year**.

### Warranty Conditions

The warranty is only valid if the warranty demand is presented together with the original invoice or sales slip or (order) confirmation, and the serial number on the product has not been defaced.

LOJER's obligations are limited to the repair or, at its discretion, replacement of the product or the defective part. Defective parts shall be replaced with new or equivalent "as new" parts. If necessary, the entire product shall be exchanged with an identical or functionally identical product. The value of the warranty service is always limited to the value of the defective product. The defective parts removed from a product as part of a warranty case shall become the property of LOJER and shall be retained for by the End Customer for LOJER, if necessary. If these parts cannot be returned to LOJER upon request, LOJER is entitled to charge for a corresponding amount. When genuine LOJER parts are installed in a LOJER product under warranty, only the remaining warranty period of the repaired device applies.

Warranty repairs must be carried out by LOJER or authorised LOJER Dealers. No re-imburement will be made for repairs carried out by a non-LOJER representative, and any such repair work or damage to the products caused by such repair work will not be covered by this warranty.

The product is designed and manufactured to meet the requirements for CE-marking. This product is not considered to be defective in materials nor workmanship if it requires adaptation in order to conform to other local or national technical or safety standards.

This warranty covers none of the following:

- a) Periodic checks, maintenance and repair or replacement of parts due to normal wear and tear (such as upholsteries, cables, ropes or reduced capacity of accumulators);
- b) Costs relating to transport, removal or installation of the product;
- c) Misuse, including the failure to use this product for its normal purposes or incorrect installation;
- d) Damage caused by lightning, water, fire, acts of God, natural catastrophes, war, public disturbances, incorrect mains voltage or any other cause beyond the control of Lojer;
- e) Spillage of chemicals or liquids, or use of any other hazardous or non-instructed substances, which may affect the product;
- f) Minor defects or deviations from the product specifications which are immaterial, negligible or trivial as regards to the value or the functioning of the product

### Proceeding in a Warranty Case

The following information is an explanation of what you must do in the case of a warranty claim. First, please contact your LOJER dealer and describe the problem (possibly with photographs or videos) and inform LOJER of the product type and serial number. LOJER's technicians will help to diagnose defects and malfunctions, and are often capable of eliminating the malfunction over the phone.

In the event that warranty service is required, you should return the product to the dealer from whom it was purchased, or directly to LOJER's factory in Finland. In this case, the customer is responsible for the dispatch and insurance of the product, and the transport and insurance costs shall be borne by the customer. LOJER shall assume the costs for the materials / spare parts and the labour costs as required, as well as the standard return transportation to the sender. In case of difficulty, details of local dealers are available online at [www.lojer.com](http://www.lojer.com). You may also contact the service centre in Finland (e-mail: [service@lojer.com](mailto:service@lojer.com)).

The guarantee will become void if:

- A Lojer product is equipped or used with parts that have not been approved by Lojer for the product in question;
- Someone other than a person authorised by Lojer has serviced/repaired or otherwise modified the device and these measures have caused a fault in the product;
- The product is cleaned with cleaning agents other than those specified in the operating manual, or if the product is allowed to come into direct contact with agents other than those specified in the manual;

Regular maintenance has not been performed.

## 10 Contact information

### Manufacturer

Lojer Oy  
P.O. Box 54, Putajantie 42  
FI-38201 Sastamala  
Tel.. +35810 830 6700  
Fax. +35810 830 6702  
Email: [firstname.lastname@lojer.com](mailto:firstname.lastname@lojer.com)  
[info@lojer.com](mailto:info@lojer.com)  
[www.lojer.com](http://www.lojer.com)

### Service

Tel. +35810 830 6750  
Email: [service@lojer.com](mailto:service@lojer.com)

Your local Lojer dealer, see [www.lojer.com/distributors](http://www.lojer.com/distributors)

Model: \_\_\_\_\_

Serial number: \_\_\_\_\_

Date of purchase: \_\_\_\_\_

Your local Lojer dealer: \_\_\_\_\_