



# Lojer SCANDIA 310H Operating Table User Manual

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**This user manual should be kept near the operating table and easily accessible.**

# 1 Lojer Scandia 310H Operating Table

This document provides instructions regarding the proper use and maintenance of the Scandia 310H operating table. The Scandia 310H operating table has been designed for carrying out surgical procedures on humans in an operating room environment.

The manually operated operating table consists of four table sections. An optional two-part leg section is also available, making five sections.

The Scandia 310H operating table has various hydraulic and gas spring functions which enable a range of adjustments. These functions are controlled by foot pedals and the function selector lever.



**IMPORTANT** *Read all instructions prior to using the operating table for the first time. Make sure that everyone who works with the operating table has familiarised themselves with these instructions.*

## 2 Parts of the Operating Table

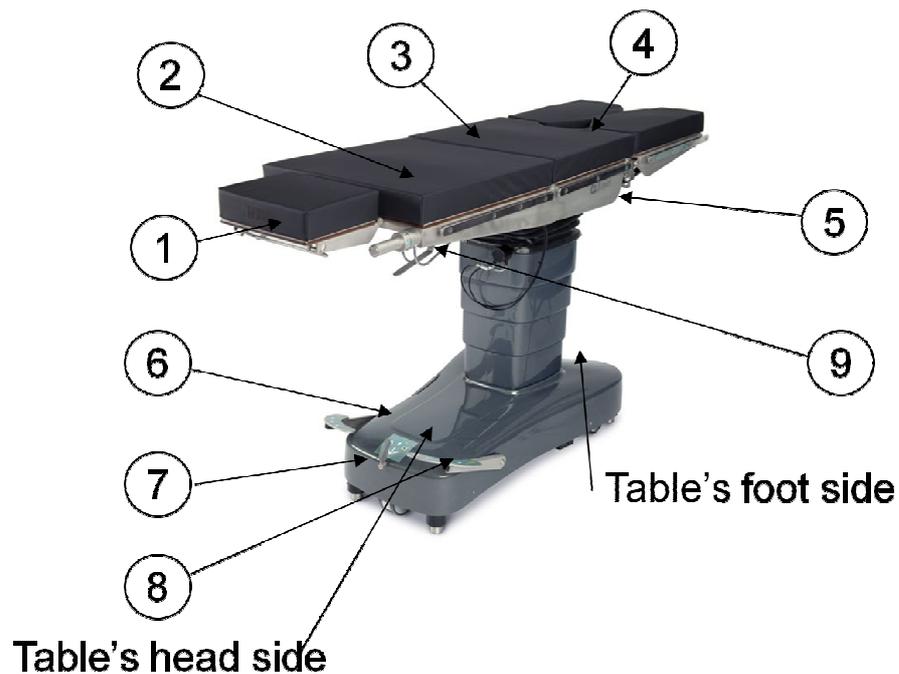
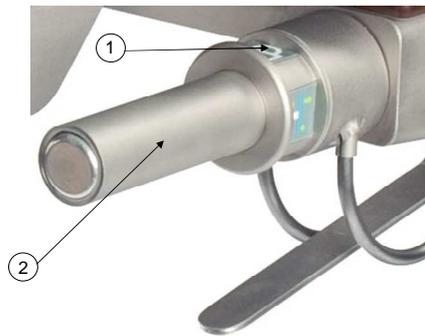


Figure 1: Parts of the Scandia 310H operating table

- 1 Head section
- 2 Back section
- 3 Middle section
- 4 Leg section
- 5 Accessory rail 25x10 mm
- 6 Right foot pedal (see picture)

- 7 Locking the feet / function control switch (see picture 3)
- 8 Left foot pedal (see picture 3)
- 9 Function selector (see picture 2)
- 10 Tool box
- 11 Back section adjustment levers
- 12 Leg section adjustments levers



- 1 Function display
- 2 Selector lever

*Figure 2: Function selector*



- 1 Base lock (feet) / column function switch
- 2 Left foot pedal
- 3 Right foot pedal

*Figure 3: Function selector lever and pedals*

## 2.1 Options and Accessories

The operating table can be ordered with the following extra options:

- Split leg section
- Sliding top function, 250 mm adjustment lengthways (factory fit only).

## 3 Safety Instructions

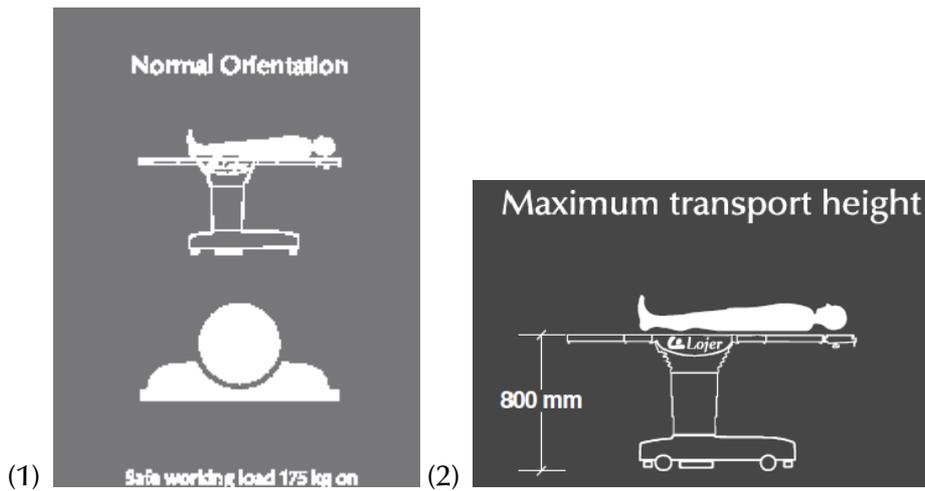
	<b>IMPORTANT</b>	<i>Sliding top adjustments (optional) must be carried out when the table is in a horizontal position.</i>
	<b>IMPORTANT</b>	<i>To avoid the build-up of static electricity, use anti-static mattresses and padding.</i>
	<b>IMPORTANT</b>	<i>Do not use the operating table in positions or configurations other than those shown in this document, even if it would be mechanically possible to do so.</i>
	<b>IMPORTANT</b>	<i>Ensure that the table top sections are properly attached before making adjustments or using functions.</i>
	<b>IMPORTANT</b>	<i>To avoid injury, ensure that the patient and staff members keep body parts clear of moving parts or sections while adjustments are made to the operating table top and/or accessories.</i>
	<b>IMPORTANT</b>	<i>When adjusting table top sections downwards, make sure that no parts of the table come into contact with the base or the floor. This is particularly important when the operating table is in a lowered position.</i>



**WARNING!** Children or other individuals who do not know or have no experience of the device must not use the treatment table. Children must be supervised in order to ensure that they do not play with the device!

### 3.1 Warning Signs

Observe the following warning signs, which are fixed to the base of the operating table:



(3) **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

(3)

**Sticker**

- (1) Maximum load (SWL) is 175 kg in normal position and 175kg with the sliding top extended.
- (2) Maximum patient transport height 800mm.
- (3) - Read instructions carefully before use.  
 - Install and tighten all accessories according to their instructions.  
 - The maximum combined weight of accessories is 40 kg, with 25kg maximum on a single accessory rail.

Figure 4 Warning Stickers

	<b>IMPORTANT</b>	<i>The safe working load (SWL) is the maximum load including the patient, mattresses and accessories. Overloading may cause the operating table to tilt or tip over.</i>
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## 4 Before First Use

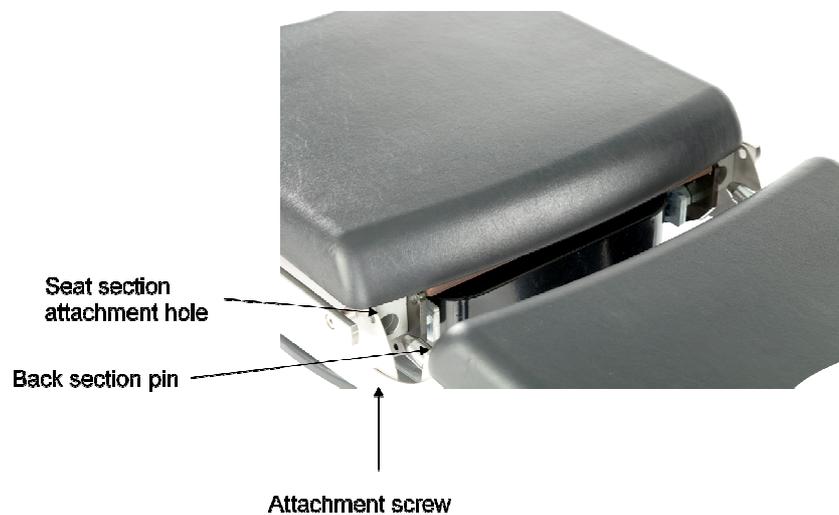
	<b>IMPORTANT</b>	<i>The operating table must only be used in conditions where the temperature is between +10° C and +40 °C and the relative humidity is between 30% and 75%.</i>
	<b>IMPORTANT</b>	<i>After transporting the operating table it must be allowed to stand in suitable conditions for at least 6 hours before being used. If the table has been transported in outside conditions below 0° C it must be allowed to stand overnight before use.</i>

The table top sections are packed as separate parts for delivery – head section, back section, leg section and mattresses.

## 4.1 Preparing the Table for Use

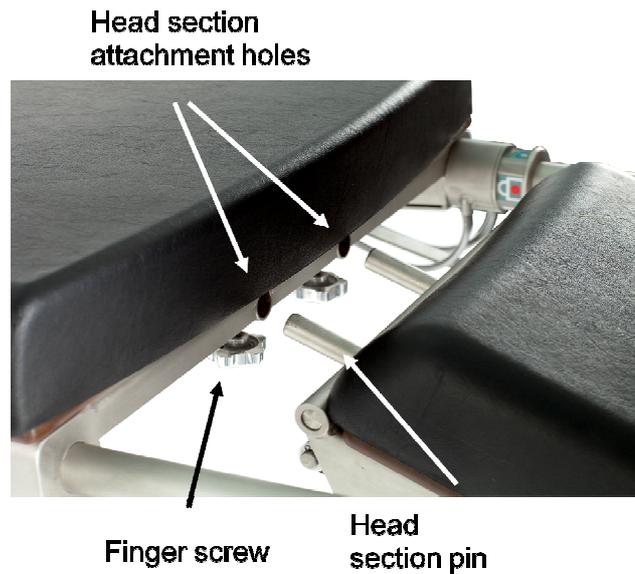
The operating table is assembled as follows:

**The back section:** The back section is attached to the longer side of the base. Attach the back section by pushing its pins into the corresponding holes in the middle section, then tighten the screws under the middle section (2 screws, one either side) with the supplied Allen key (see picture). The tools are stored in the tool box in the base of the operating table.



*Figure 5: Attaching the back section*

**The head section:** Push the head section pins into the corresponding holes in the back section and tighten the screws by hand.



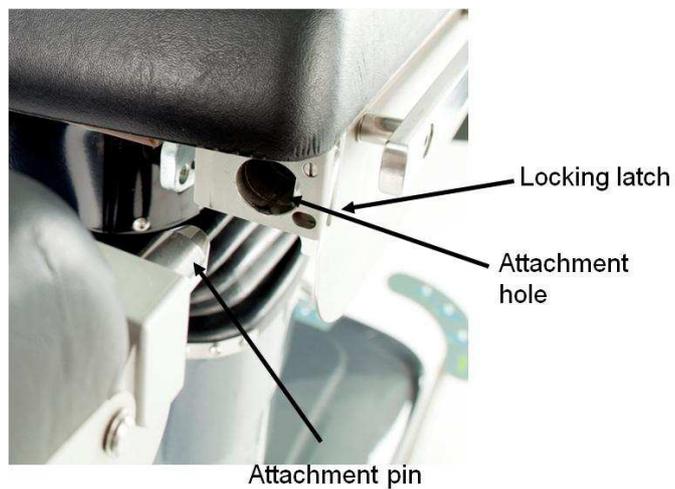
*Figure 6: Attaching the head section*

**The leg section:** Attach the leg section to the middle section of the table top by pushing the leg section's pins into their corresponding couplings until the locking latches click shut.

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**NOTE!** Open locking latches show that the section is not properly attached and might come off when pulled.

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*Figure 7: Attaching the leg section*

The leg section is removed in the following way:

1. Turn the release levers A on both sides outwards, to their furthest point.

2. After turning the levers, take hold of the table top section with both hands and pull steadily towards yourself, in the direction of the table top. Lifting the section upwards slightly whilst pulling it will make the process easier.



*Figure 8: Removing the leg section, and the locking latch in its open position (red marking)*

**NOTE!** Using less force and a smooth, even motion will make it easier to separate the parts.

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#### **Valve adjuster:**

The control cable has been disconnected from the valve on the operating table for transport. Check that that the function selector lever is set to locked position.



Take the valve adjuster key out of the tool box and place it in the valve hole (see picture). Turn the key until the arrow on the end of the key is pointing upwards. The valve shaft is now in the correct position. Remove the key from the hole.



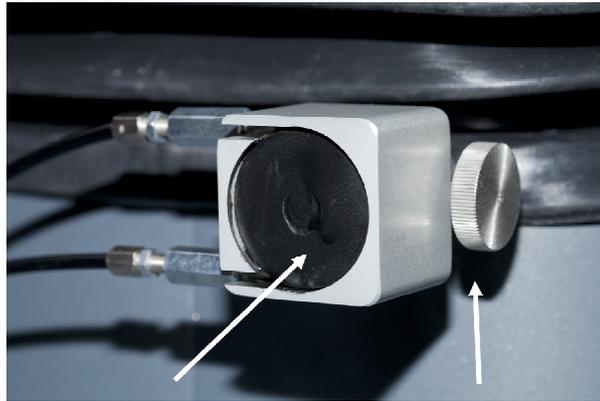
The valve adjuster key



Valve shaft hole    Finger screw

*Figure 9: The valve adjuster key and the valve shaft hole*

**IMPORTANT!** Push the valve adjuster's shaft into the valve hole. See that the outgoing cable attachments are facing left (see picture). Tighten the finger screw.



Valve adjuster

Finger screw

*Figure 10: Attaching the valve adjuster*

**The mattresses:** Attach the mattresses to the table top sections using velcros (visco-elastic mattresses) or mattress attachment holes in moulded mattress



*Figure 11: Attaching the mattresses*

## 4.2 Manual Use of the Selector Lever

The valve adjuster key can also be used in case of malfunction, if the hand lever does not work. In this case remove the valve adjuster, place the key in the valve shaft hole and tighten the finger screw. The key will only fit in one position. The functions can then be selected by turning the key clockwise, which cycles through the functions: lock, lateral tilt, table top lift and trendelenburg.

## 4.3 Locking the Table



**IMPORTANT**

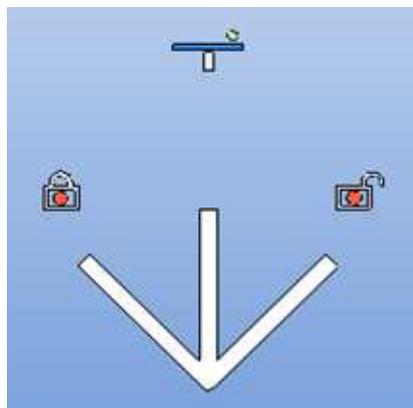
***Always lock the operating table floor locks before transferring the patient onto the table and using the table's adjustment functions.***



**IMPORTANT**

***Ensure that there is sufficient space to work and move freely around the operating table, as well as above and below it, especially when accessories are attached.***

Lock the operating table feet by turning the selector switch, which is low down on the front of the base, to locked position (see picture).



*Figure 12: Table locking / function selector switch*

Ensure that the function selector lever is in the locked position (see picture). Pump the right foot pedal until the feet of the table have lowered and the pedal can no longer be pressed down. Then turn the leg selector switch to the middle position. Now the other functions of the operating table are available to use.



Lock

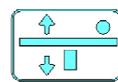
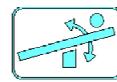


Table up/down



Trend./-antitrendelenburg



Lateral tilt

*Figure 13: Function selector lever (hand selector) symbols*

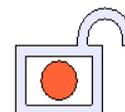


**IMPORTANT**

***When changing the table's direction of movement the foot pedal must be pressed down once to activate change of direction.***

## 4.4 Releasing the Table

Turn the function selector lever to the locked position. Turn the leg selector switch to the right, to the unlocked position. The legs have now been released and the table is on wheels.

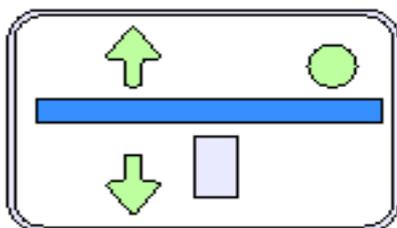


## 4.5 Patient Orientation

Normal patient orientation is when the patient's head is at the end that is closer to the longer end of the operating table base.

## 4.6 Height Adjustment

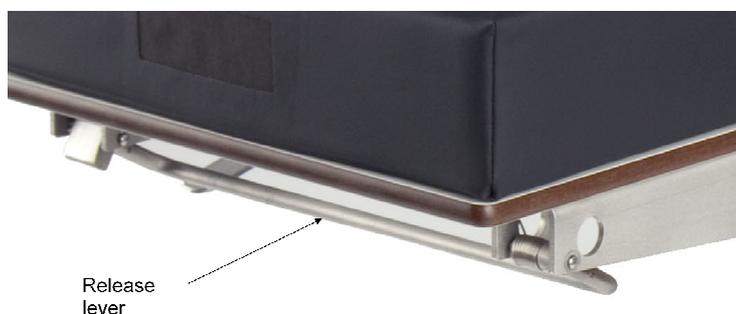
Ensure that the function selector is in the middle position (see picture) and that the table is standing on its feet. Turn the function selector to the position bearing the symbol for table height adjustment (see picture). Use the right foot pedal to pump the table upwards. The table is lowered using the left foot pedal.



*Picture 14: Table height adjustment symbol*

## 4.7 Head Section Incline Adjustment

Turn the adjustment handle to make it accessible, lift it upwards and turn the head section to the desired position, then release the handle.



*Picture 15: Head section adjustment*

## 4.8 Back Section Incline Adjustment

The back section is adjusted using a gas spring. Adjust the back section by pressing both its levers (see picture) whilst turning the back section up or down, to the desired position. The maximum adjustment angle upwards is 70°, downwards 30°.

**WARNING!** *If the back section is adjusted while the patient is on the operating table, make sure you have a good grip of the handles. The top is especially likely to move down if the patient is heavy.*

## 4.9 Leg Section Incline Adjustment

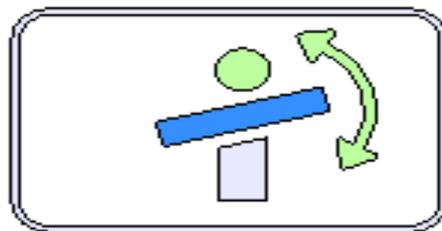
The leg section is adjusted using a gas spring. Adjust the leg section by pressing its levers and raising or lowering the leg section to the desired angle. The maximum angle upwards is 16° and downwards 85°.

**WARNING!** *If the leg section is adjusted while the patient is on the operating table, make sure you have a good grip of the handles.*

## 4.10 Lateral Tilt

Turn the function selector to the lateral position (see picture). Pumping with the right foot pedal tilts the table to the left. Pumping with the left foot pedal tilts the table to the right.

The maximum tilt in both directions is 20°

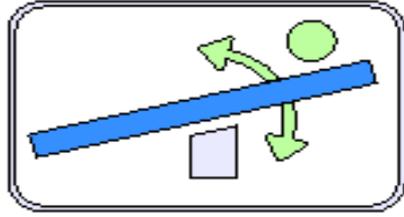


*Picture 17: The lateral tilt symbol*

## 4.11 Trendelenburg and Anti-Trendelenburg

Turn the function selector to the trendelenburg position (see picture). Pumping with the right foot pedal lifts the table to the anti-trendelenburg position. Pumping with the left foot pedal lowers the table to the trendelenburg position.

Maximum adjustment angles: trendelenburg 28° and anti-trendelenburg 30°



Picture 18: Trendelenburg and anti-trendelenburg symbol

## 4.12 Zero Position

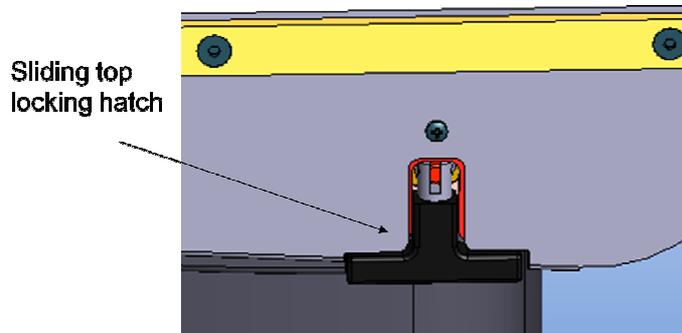
The supplied spirit level can be used to help return the table to the horizontal position. The spirit level is used by attaching it to the accessory rail on the middle section of the table. It is stored in the tool box, which is located in the base of the table.



Picture 19: Spirit level

## 4.13 Slide Function (Optional)

The table top can be moved forwards 250mm. Lift the selector lever, located in the left side of the middle section, and pull it outwards. The top can now be moved 250 mm forwards. The top will lock into place when you release the lever.



Picture 20: The Slide function locking lever

The lever's protective cover turns to cover the lever when the trendelenburg angle has been altered. In this case the slide function cannot be used when there is a patient on the table.



**IMPORTANT**

*When there is a patient on the table, lengthways (slide) adjustments can only be made when the table is horizontal.*

## 4.14 Moving the Operating Table

Move the function selector to 'locked' position. Turn the selector switch in the base to 'unlocked' position, freeing the legs. The table can now be moved on its wheels. The table has one swivelling wheel under the front section of the base and two fixed wheels at the back of the base. The table cannot be moved sideways.

**WARNING!** *When a patient is on the operating table the table top must be lowered to below 80 cm height for moving. Moving the table in a higher position may cause the table to tilt.*

Before moving the operating table:

1. Ensure that the patient is properly secured to the table.
2. Centralise the patient's weight over the operating table lifting column.
3. Lower the table top to below 80 cm.
4. Move any obstacles.
5. When moving the operating table with a patient on it there must be at least one person at each end of the table.
6. Push the table with the leg section facing the direction of travel.

*Picture 21:*

## 5 Table Configurations

The operating table top can be arranged in the configuration that best suits the procedure being carried out. The allowed configurations are presented below.

## 5.1 General Configuration



*Picture 22: General configuration, head section according to normal patient orientation*



*Picture 23: Split leg section configuration (optional)*

## 6 Operating Table Movement Limitations

Some movements of the operating table are mechanically limited. Pumping the foot pedal will not adjust the movements past these limits. Not all values can be achieved when the table is in a low position.



### **IMPORTANT**

*If you use configurations or movements that are not described in the following table, ensure that no part of the operating table hits the floor, wall or other obstacles.*

Action	Position/Adjustment	Situation
Operating table height	670 mm	Table top minimum height
	1030 mm	Table top maximum height

Action	Position/Adjustment	Situation
Trendelenburg Table top in highest position	-28°	Normal maximum adjustment angle
	-18°	Max. adjustment angle when lateral tilt is $>\pm 10^\circ$
	-13°	Max. adjustment angle when head section angle is $-15^\circ$
Anti-Trendelenburg	-30°	Maximum adjustment angle
	-20°	Max. adjustment angle when lateral tilt is $> \pm 10^\circ$
	-10°	Max. adjustment angle when leg section angle is $> 55^\circ$ downwards
Lateral tilt	$\pm 20^\circ$	Normal maximum tilt
	$\pm 5^\circ$	Maximum tilt when Trendelenburg or anti-Trendelenburg $> 20^\circ$
	Not possible	Leg section angle $> 65^\circ$ downwards
Leg section	-85°	Maximum adjustment angle downwards
Table top horizontal adjustment (slide)	250 mm (50mm steps)	Lengthways adjustment towards the head section with the patient in normal orientation
		Can only be moved when the table top is horizontal

## 7 Cleaning and Disinfecting



### **IMPORTANT**

*Never use a shower, pressure washer or similar to clean the operating table. Steam or very hot water must not be used under any circumstances.*



### **IMPORTANT**

*Do not clean the table in an atmosphere with high temperature and/or humidity; doing so may damage the hydraulic systems.*



### **IMPORTANT**

*Do not allow liquids to enter the internal parts of the operating table. Do not clean using solvents.*



**IMPORTANT** *Dry all surfaces with care after cleaning or disinfecting them.*

## 7.1 Metal and Plastic Parts

Clean metal and plastic surfaces with a damp cloth and mild alkaline cleaning solution. Use a small brush to clean difficult to reach places. Rinse with clean water and dry all surfaces after cleaning.

Disinfect metal and plastic parts using a disinfectant such as 70% denatured alcohol. Always follow the directions given by the disinfectant manufacturer. Allow to air dry.

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**NOTE:** All surfaces must be dry before the operating table is used.

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## 7.2 Operating Table Mattresses

Remove the operating table mattresses before cleaning. Clean the mattresses thoroughly with warm (50°) and neutral (pH7) cleaning solution. Use a small brush to clean corners and other awkward places. Rinse with clean water, dry with a cloth and leave in room temperature to dry thoroughly.

Spray some disinfectant (70% denatured alcohol or 1000-5000 mg/litre hypochlorite solution) directly onto the mattresses and rinse with clean water. Wipe clean with soft, absorbent paper towel and allow to dry thoroughly in room temperature before refitting to the operating table.

If necessary, brush the fastening tapes, mattresses and table top with a brush (but not a metal brush).

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**NOTE!** Do not allow hypochlorite to come into contact with metal parts. Long-term contact with mattresses may damage them.

**NOTE!** If mattresses by manufacturers other than Lojer are used, follow the appropriate instructions for use and cleaning provided by the manufacturer. **NOTE!** Replace damaged mattresses with new ones immediately.

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Check the mattresses regularly for wear and tear. Damaged mattresses must be replaced without delay. Do not store mattresses near sharp edges or in temperatures higher than normal room temperature. The mattresses must not be subjected to ozone.

## 8 Maintenance

### 8.1 Monthly Service

Carry out the following checks and service procedures at least once a month:

- Check all the functions of the operating table one at a time, adjusting them to their maximum adjustments and back again.
- Remove all table sections. Clean all parts of the locking mechanism (holes, pins, levers). Lubricate them with machine oil or surgical instrument oil. Check that the sections lock into place properly.
- Check that all wheels turn freely and that the front wheel swivels 360°.

### 8.2 Annual Service

The operating table is an extremely technical piece of equipment, and to ensure a long and trouble-free life it should be serviced annually by qualified service personnel. Service procedures are detailed in a separate service manual.

Contact Lojer Service for spare parts.

## 9 Technical Data

**Country of Manufacture** Finland

### **Weights and Dimensions**

Overall length 2170 mm

Operating table surface width 550 mm

Overall width 605 mm

Weight 240kg

Safe working load (SWL) in normal orientation / 175 kg

### **Adjustment ranges**

Height (without mattresses) 670-1030 mm

Trendelenburg/Anti-Trendelenburg 28° / 30°

Lateral tilt (right/left)	20° / 20°
Back section tilt (up/down)	65° / 30°
Head section tilt	+40°/-40°,
Leg section tilt (up/down)	16° / 85°
Lengthways slide function (optional)	250 mm

### Transport and Storage Conditions

Temperature	- 10° C .. + 50° C
Relative humidity	10 % .. 85 %
Air pressure	700 hPa .. 1060 hPa

### Operating Conditions

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

The technical data, spare parts catalogues and service procedures for this equipment are detailed in a separate publication "Lojer Scandia 310H Maintenance Manual".

## 9.1 Identification Plate

The identification plate is fixed to the inside of the tool box flap, in the base of the operating table.



Picture 24: Identification plate

## 9.2 Symbols



Potential equalization conductor

NOTE: Read user and service manual carefully.

This operating table fulfils the requirements of the European Union Medical Devices Directive 93/42 EEC.

## 9.3 Recycling

When Lojer operating tables and their parts reach the end of their useful life, recycling is the final important stage in their life cycle. Over 90% of the weight of this operating table is steel and other metals, making it highly recyclable for an industrial product. Recycling must be carried out by a specialist company or facility, and the operating table or its parts must never be disposed of with mixed waste.

### Prior to Recycling

Remove the oils from the hydraulic system. These materials are harmful to the environment and must be separated and sent to a specialised waste disposal facility.

### Dismantling and Recycling

The next step is to remove and dismantle systems and components from the main frame, so that they can be reused as raw materials for other products or disposed of appropriately. Some of the materials, such as plastics, can also be incinerated to generate energy.

The frames are then cut into pieces and sorted by type, after which the materials are moved on for processing, recycling or recovering the materials as appropriate, using different technologies. These processes greatly reduce the amount of waste materials sent to landfill sites.

## 9.4 Standards

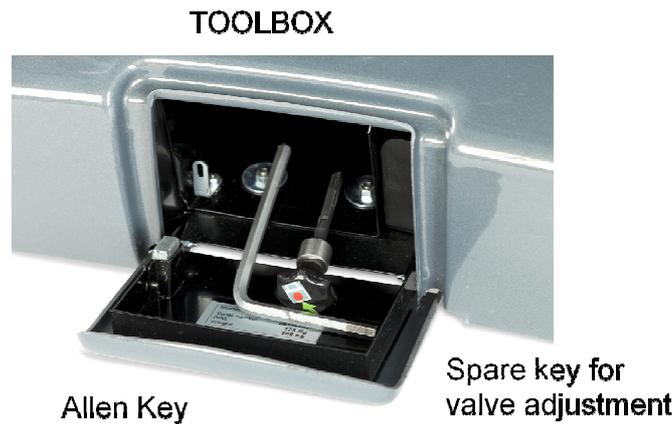
The Lojer Scandia 310H operating table fulfils the following standards:

- **IEC 60601-1:1988 + A1:1991 + A2:1995** Medical electrical equipment. General requirements for safety and essential performance.
- **IEC 60601-2-46:1998** MEDICAL ELECTRICAL EQUIPMENT- PARTICULAR REQUIREMENTS FOR THE SAFETY OF OPERATING TABLES.
- **LOJER SCANDIA 310H** is a class I piece of medical equipment (European Council Directive 93/42/EEC Class I). Lojer Oy is an ISO9001 certified company (1994).

## 9.5 Operating Table Tools

The tool box located in the base of the operating table contains tools that are important for the assembly, adjustment and use of the table. The tools should always be kept in the tool box.

- Allen key 1 pce
- Valve adjuster /manual use key 1 pce
- Spirit level 1 pce



*Picture 25: Tools and tool box*

## 9.6 Operating Table Accessories

The Scandia 310H operating table can be further equipped for specific surgical procedures using accessories that attach to the accessory rails. Lojer, Allen Medical and Amatech branded accessories can be used with the 310H.

The table top can be equipped with Lojer's shoulder surgery device 60280, orthopaedic attachment 60290 and split leg sections 60160 and 60161. Special head supports can be attached using the Lojer 60110 adapter. Other authorised accessories include the Lojer anaesthesia frame 10310 and arm rest 10380.

## 10 Lojer Warranty

The product warranty period is **2 years**. See maintenance manual for warranty terms.

## 11 Contact Details

**Manufacturer: Lojer Oy**  
P.O Box 54, Putajantie 42  
FI-38201 SASTAMALA, FINLAND  
Tel. +358 10 830 6700  
Fax +358 10 830 6702

**Lojer Service**  
Tel. +358 10 830 6750  
**Email:** [service@lojer.com](mailto:service@lojer.com)  
  
**www.lojer.com**