Lojer Delta

treatment tables

Instructions of use

18.2.2013

Contents

⚠ To avoid injury, follow the instructions given in this document.

02/2013 Rev. 1.0

1 Lojer Delta- treatment tables

Lojer Delta treatment tables are intended for professionals to be used for massage and wide range of physiotherapy. The tables are designed for a treatment given on the lying surface. Delta-tables can also be used as an examination table.

Delta-series include:

1MD4 Professional and Standard

1MD7 Professional and Standard

2MD602 Professional and Standard

1MD1X X-frame

This document gives instructions for operating and maintaining Lojer treatment tables. Please familiarise yourself with these instructions before using the table. 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 Desciption of parts

The sections of the Lojer Delta treatment tables are shown below (Figure 1, Figure 2).

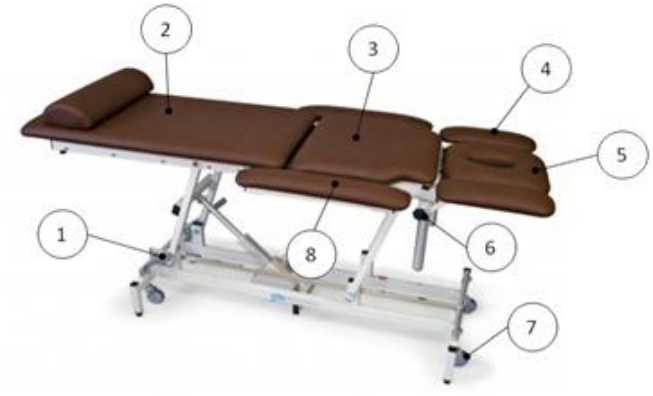


Figure 1: Lojer Delta 1MD7L Standard

1 Central locking pedal
2 Foot section
3 Middle section
4 Arm rest
5 Head section, head section adjustment lever
6 Arm rest adjustment lever
7 Castors
8 Side support

Figure 2: Lojer Delta 2MD602 Professional

1 Castors
2 Place free height adjustment bar
3 Arm rest adjustment lever
4 Arm rest
5 Head section, head section adjustment lever
6 Middle section
7 Foot section
8 Side support
9 Central locking pedal

Figure 3: Lojer Delta 1MD1X X-frame

1 Castors
2 Head section, head section adjustment lever
3 Lying surface
4 Central locking pedal
5 Foot control

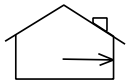
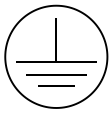
1.2 Options and accessories

Options and accessories available for Lojer Delta treatment tables:

- Place free height adjustment bar
- Castors
- Double hinged head section
- Handswitch
- Foot pedal
- Frame for foot pedal (Standard and Professional)

- Paper roll holder
- Special width (50-60 cm)
- SKAI upholstery

1.3 Symbols used on the device

Symbol	Description
CE	This product meets the requirements of Medical Device Directive 93/42/EEC
IP55	Suojattu pölyltä, kestää vesiruiskun joka suunnasta
	Type B device
	Transformer is equipped with overheating protection.
	Indoor use only.
	Protectively isolated structure
	Protective ground (class I-device)
	Class II electrical device (double isolated)
	Warning labels (squeezing hazard) placed on the place free height adjustment bar or on the lower frame.

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 %.

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 %. If there is chance that device has been exposed to temperatures below 0°C, allow it to adjust to the indoor temperature for at least 5 hours before using any of its features.

Familiarise yourself with the instructions and carry out the following before using the table:

- Make sure that all packing materials have been removed
- Make sure that the device can move freely uo and down.
- Place the device in the location where it will be used and lock the castors.
- Connect the power plug to a socket whose supply voltage corresponds to the voltage shown on the device's type plate. Make sure that the cord runs freely from the connection box.

⚠	For safety reasons always connect the power cord to grounded socket.
⚠	Do not bind the power cord to the device as the lifting motion can severe the cord. Ensure that the cord is easily detachable in an emergency situation.
⚠	Make sure that the distance to the socket is not more than 2 meters.
⚠	Always detach the power cord before moving the device. Make sure that the cord doesn't get stuck between parts of the frame or under the castors.
⚠	If the power cord is damaged, unplug it immediately. Do not use the device and contact the service. Use only the original power cord.
⚠	Make sure that the patient doesn't accidentally move/touch the place free bar or any other control device.
⚠	Do not place anything under the device (e.g. chair, because the device has to be able move freely). Make sure that the patient's limbs do not get caught in the frame of the device.
⚠	Do not place the device under any wall structures or too close to the wall.
⚠	Do not modify the structure of the device or install parts other than those mentioned in this document.
⚠	Do not use the device or the accessory if it doesn't work properly. Contact the service
⚠	Do not lift the device from the head section, arm rests or the side supports. Do not push the device on to a door sill.

⚠	**WARNING!** Children or people with no experience of the device or those with restricted understanding must not use the device. Children must be supervised to ensure that they do not play with the device! For safety reasons use the safety switch or unplug the power cord when the device is left unsupervised.

3 Using the treatment table

Note! Do not use the electrical functions of the device non-stop for longer than the permissible two (2) minutes. Longer continuous use may cause the transformer to overheat. If you use electrical functions non-stop for two (2) minutes, keep to the operating time ratio and do not use any electrical functions for 18 minutes.

3.1 Maximum inclination

The height adjustment range of the Delta treatment tables:

Standard; 1MD4 57-87 cm, 1MD7L and 2MD602 58-89 cm

Professional; 1MD4 47-98 cm, 1MD7L and 2MD602 48-100 cm.

The foot section adjustment range to 75 ° angle.

3.2 Central locking of the castors (optional)

⚠ Always remember to unplug the power cord before moving the device. Make sure that the cord is not left between the structure of the table or under the castors.

⚠ Make sure that the castors are locked before starting the treatment.

⚠ Do not use the device for moving the patients.

SQUEEZING HAZARD! Make sure that nothing gets between the structure or under the device during lifting/lowering.

Castors with central locking are available as an option for Delta treatment tables. In order to free the locking, press the pedal on either side of the table down (Figure 4). To set ready for use, release the pedal.

Figure 4: Central locking pedal

3.3 Height adjustment

The height of the table can be adjusted with pneumatic foot control (Figure 5a)). Height can be adjusted also with place free height adjustment bar (accessory) (Figure 5b)).

⚠ Make sure that under no circumstances the patient is not able to touch the foot control or the place free bar. Use the safety switch when necessary.

a) b)

Figure 5: a) foot control b) place free adjustment bar

SQUEEZING HAZARD! Make sure that nothing is between the structure or under the device during lifting/lowering.

Height adjustment is possible from all sides of the table with the place free height adjustment bar. The table top rises when you press the bar and lowers when the bar is lifted.

SQUEEZING HAZARD! Make sure that under no circumstances the patient is not able to touch the foot control or the place free bar. Use the safety switch when necessary.

WARNING! Children or people with no experience of the device must not use the device. For safety reasons use the safety switch or unplug the power cord when the device is left without supervision.

3.4 Adjusting the middle section (drainage)

There is either a mechanical (Figure 6a) (1) or electrical (Figure 6b) (2) adjustment of the middle section depending on the model.

⚠	Do not adjust the middle section while the patient is on the table.

a) b)

Figure 6: Middle section adjustment a) 1MDx-models b) 2MD602-models

⚠	SQUEEZING HAZARD! Make sure that nothing is between the structure or under the device during lifting/lowering.

3.5 Adjusting the foot section

Make sure that the middle section is locked before adjusting the foot section. Lift the foot section to desired position. It will lock to its place automatically. Before lowering free the locking and push the section down.

⚠	SQUEEZING HAZARD! Make sure that nothing is between the structure or under the device during lifting/lowering.

3.6 Adjusting the head section

Lift the adjustment lever (1) (Figure 7) and lift/push the head section to the desired position.

Figure 7: Adjusting the head section

⚠	Max. load of the head section is 50 kg.
⚠	Do not lift the table on the head section.

3.7 Adjusting the arm rests

Open the adjustment lever (1) () and adjust the height of the arm rest. Tighten the lever. The arm rests can be adjusted also sideways.

Figure 8: Adjusting the arm rest

⚠	Do not sit on the arm rest. Max. load 30 kg.
⚠	Do not lift the table on the arm rests.

3.8 Adjusting the side supports

Lift the side support up and push it towards the head section in order to lock it (Figure 9). In order to lower the support push it towards the foot section and turn it down.

Figure 9: Adjusting the side support

⚠	Do not sit on the side support. Maximum load on the side support is 30 kg.
⚠	Do not lift the table from the side supports.

3.9 Double hinged face section (accessory)

The counter adjustment can be adjusted by freeing the adjustment lever (1) while lifting/pressing the head section (Figure 10).

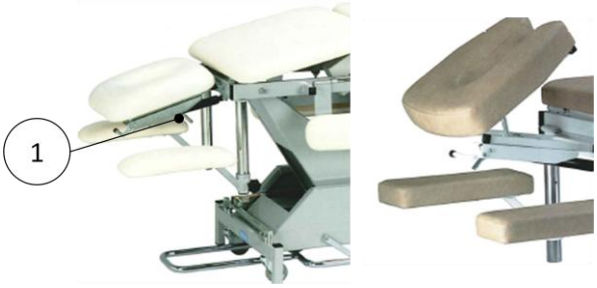


Figure 10: Adjusting the double hinged head section

SQUEEZING HAZARD! Make sure that nothing is between the structure or under the device during lifting/lowering.

4 Cleaning and disinfecting

Before cleaning remove all accessories.

Unplug the power cord.

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.

4.1 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 derivates), 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 using the device.

For safety reasons before cleaning unplug the power cord.

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

Do not clean in high temperature and air humidity.

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.

Dry all surfaces thoroughly after cleaning or disinfection.

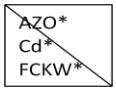
Disinfecting wears out the surfaces. After disinfecting clean the surfaces with clean, damp cloth. Dilute the disinfectant according to the manufacturer's instructions.

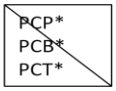
4.2 Upholstery

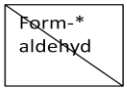
Skai-material:
PROPERTIES:

- LONG SERVICE LIFE
- FLAME RETARDANT
- AGREEABLE IN USE
- RESISTANT TO DISINFECTANTS
- ABRASION RESISTANT
- TEAR-RESISTAMT

- EASY TO CLEAN
- DURABLE
- LIGHT FAST







*Prescribed by law

⚠	Please follow the instructions of the respective manufacturer when using common cleaners.
⚠	Do not use oil or grease based solutions.
⚠	Do not use chemical or dry cleaning on the material.
⚠	The material is not resistant to solvents, chlorides, washing/polishing agents or aerosol sprays.
⚠	Colourings (by jeans or other textiles) are excluded from any guarantee.

For hygienic reasons cover the upholstery with protective cloth or paper.

Remove any stains as quickly as possible with lukewarm water and a damp cloth. Microfiber cloth is recommended for this purpose. In case of heavy soiling, use a mild cleaning agent and soft brush.

Recommendable cleaning agent: Lojer Desiplint (1:10), which is effective against bacteria without drying the upholstery material.

Repeat the cleaning procedure if necessary. (Composition of Lojer Desiplint: Chlorhexidine-digluconate 0,1 – 0,2 %, water 99,8 %.)

Use the recommended disinfectants (get matrix from service@lojer.com). Lojer cannot be held responsible for the effects of other solutions than those mentioned in the matrix. Wipe the surface with a clean, damp cloth after disinfecting.

Dried substances or substances that have penetrated for an extended period may not be able to be removed completely.

5 Maintenance

⚠	Always unplug the power cord before service.
⚠	Only trained person may carry out service and repair. Maintenance carried out by an authorized person may cause injury or damage to the device which the manufacturer is not responsible for.
⚠	All service and repair operations must be documented.

5.1 Biannual measures

Check the condition and functioning of following parts at least every six months.

- Power cord and its fastening.
- The wiring of the motors.
- Controls and their wiring.
- The fastening of the accessories.
- The fastening of the castors. Proper functioning of the central locking.
- Go through all adjustment and make sure that the table 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. Only authorized personnel can open or change the actuator/control unit.

⚠	If some part of the device is damaged, detach the power cord and stop using the device. Contact the service.

5.2 Annual measures

Check and lubricate (e.g. Wurth HHS 2000 lubricant spray) the following parts once a year or more often if necessary.

- Joints
- Bearings
- Bearing points of the underside rods

5.3 Troubleshooting

Indication	Defect	Action
One of the actuators doesn't work	The wiring is damaged or loose.	Check the fastening and condition of the wirings.
	Defective foot control or place free bar.	Check the control operation by testing with similar working foot control. Change the foot control if necessary. Contact the service
	Defective actuator.	Contact the service.
	Defective control box.	Contact the service.
Any of the actuators won't work.	Defective foot control	Check the control. Contact the service
	No power	Check that the power cord is properly plugged.
	Defective power cord	Check the cord and contact the service.
	Defective relay	Contact the service.
Device is making noise	The lubrication of the joints has worn out.	Lubricate the joints.
	The actuator is worn out or overloaded.	The actuator might stop working. Contact the service.

In order to change the actuators, control or control box and ordering spare parts contact the Lojer service. Before contacting the service, 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

5.4 Preventive maintance

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 a 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.

PROTECTIVE EARTH RESISTANCE	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.
LEAKAGE CURRENTS	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.
EVALUATION: 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.	
FUNCTIONAL TEST	Perform the procedures mentioned in Section 5.1. 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.
REPORTING OF RESULSTS	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.

6 Technical information

Check the information also from the type plate (Figure 11).

Operating voltage	230 V ~50 Hz
Input power	510 W
Duty cycle	25 s/300 s (Standard) 25 s/400 s (Professional)
Ingress protection rating	IP55
Electric classification	Class II, B-tyypin applied part
(Safe Working Load)	200kg
Width	55 cm
Length	195 cm
Weight	60-75 kg
Transport temperature	-5…+60 °C, humidity 30…75 %
Storage temperature	-5…+60°C, humidity 30…75 %
Operating temperature	+10…+40 °C, humidity 30…75%

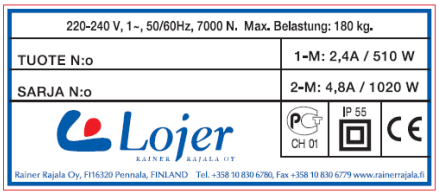


Figure 11: Type plate

6.1 Circuit diagrams

Circuit diagram is shown below (Figure 12).

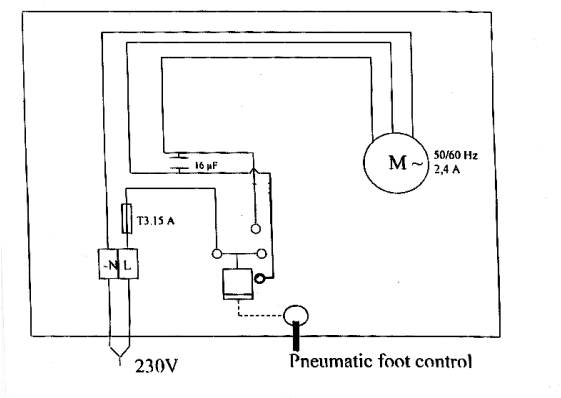


Figure 12: Circuit diagram of Delta tables

Spare parts for the Delta-tables are shown below.

Nro	Nimitys	Koodi	
1	Hanning actuator	M01SL80 (Standard) M01SL957000 (Professional)	●
2	Safety switch (related to place free height adjustment)		●
3	Hand control Foot control	M02002/M02003 M02001	
6	Power cord	R28445806	
7	Gas spring head section	J01670677	●

Parts marked with ● needs to be changed by an authorized personnel.

6.2 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.

7 Recycling

Most of the materials used in the device are recyclable. When the device is removed from usage, it should be dissembled 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.

8 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

info@lojer.com

www.lojer.com

Service

Tel. +35810 830 6750

Email: service@lojer.com

Your local Lojer dealer, see www.lojer.com/distributors

Model: _____

Serial number: _____

Date of purchase: _____

Your local Lojer dealer:_____

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