

# User manual

## *Patient chair Malin*

- *Model - Rock*
- *Model - Swing*
- *Model - Slim*



Rock



Swing



Slim

# Table of content

<b>1.</b>	<b>Patient chair Malin .....</b>	<b>3</b>
<b>2.</b>	<b>Important - Before use.....</b>	<b>3</b>
2.1	Unpacking and installation .....	3
<b>3.</b>	<b>Product classification and key data .....</b>	<b>4</b>
3.1	Intended areas of use .....	5
<b>4.</b>	<b>Basic adjustmets of the chair .....</b>	<b>5</b>
4.1	Tips for comfortable position .....	6
<b>5.</b>	<b>Battery operation and charging .....</b>	<b>6</b>
<b>6.</b>	<b>Accessories .....</b>	<b>7</b>
6.1	Armrests - fixed and collapsible .....	7
6.2	Armrest for fluorescein injection .....	8
6.3	Driving handles .....	8
6.4	Wireless control .....	8
6.5	Foot support.....	8
6.6	Extended lifting height.....	9
6.7	Electrical brake .....	9
6.8	Wheels with directional control.....	9
6.9	Headrest .....	9
<b>7.</b>	<b>Disinfection, cleaning and repairs.....</b>	<b>10</b>
<b>8.</b>	<b>Safety .....</b>	<b>10</b>
8.1	CE Declaration of conformance .....	10
<b>9.</b>	<b>Technical specification.....</b>	<b>11</b>
<b>10.</b>	<b>Disposal and recycling .....</b>	<b>11</b>
<b>11.</b>	<b>Warranty .....</b>	<b>11</b>

# 1. Patient chair Malin

Thank you for choosing the Rini patient chair Malin.

The chair comes in three models; Rock, Swing and Slim. All offer excellent comfort with ergonomic design, enabling high efficiency in daily patient work for medical professionals.

Special focus has been put in the chair's functionality and ergonomic features. The chair is battery operated and easy to raise and lower by intuitive hand control. Accessories include different armrests, driving handles, foot supports, IR control, headrest and electric brake.

Malin Rock is the most popular base model, Malin Swing can rotate the seat  $\pm 90^\circ$  and Malin Slim has a more narrow front wheel footprint.

All Rini's patient chairs have a robust mechanical design based on a stable adaptive H-stand with four large wheels, accurate electrical height adjustments and brake on back wheels.

Rini is constantly improving existing products and developing new ones. Consequently, we value the professional user's point of view; so don't hesitate to let us know your opinion about any of our product lines.

## 2. Important - Before use



**To ensure patient safety and the lifespan of the product, it is important to observe the following instructions before use. Please read this manual carefully and understand how to use the product before you start.**

### 2.1 Unpacking and installation

Before the product is unpacked make sure that the packaging has not been damaged during transport. If so, document these with a picture and report this to the transport company and your local Rini representative.

In the packages the chair is normally in the following parts:

- Complete chair with wheels and seat mounted
- Backrest and accessories
- Battery charger and user manual



**Be careful when lifting the chair off the pallet. The chair is heavy and may cause injury. Do not use sharp tools when removing the packaging material. This may cause damage.**



**The chair is intended for indoor use and on floors with hard floor standard. The chair may not be equipped with other accessories or components than those authorized by Rini Ergoteknik AB.**

Make sure that the delivery includes all ordered parts. Contact your Rini sales representative if you find any discrepancies.

### 3. Product classification and key data

The product is designed for use in hospitals, specialist clinics or similar care environments by professional staff. The product's risk class in accordance with MDR 2017/745 Annex VIII is "Class 1". Previous generations and similar products are also within risk class "Class 1".



The product is traceable via serial number and Rini has a "Post-market surveillance" system integrated within its quality system that is certified according to ISO13485 for medical devices. Any incidents are reported to the relevant authorities in accordance with applicable laws.

The product has been tested against applicable standards in terms of "General safety and performance requirements", "Demonstration of conformity" and is covered by a "Risk Management" process in accordance with ISO14971.

Technical specification can be found in a separate chapter in this manual. Information about the manufacturer and where and when the product was manufactured appears on the type plate below. For questions about this product, specify the UDI and SN for identification.



#### Label Description

	Warning. Risk is present. Read the applicable information in the user manual.
	Type B product with protection against electric shock.
SWL	Safe Work Load. The product must not be loaded with more than the specified weight.
IPX4	The product is protected from splash of water.
Duty cycle	Average ratio between operating time and idle time of the electrical lifting mechanism.

### 3.1 Intended areas of use

The patient chairs Malin model Rock, Swing and Slim are developed for different types of examination or treatment where the patient needs to be in a stable seated position and the operator need to make fine adjustments during examination. In addition, the chairs are designed to offer mobility and transport of the patient in a flexible and safe way.

Intended areas of uses include: Eye Examination, Eye treatment, General examination/treatment of sitting patient, Transport of patient in sitting position.



**The chair may only be used for the purposes specified in this manual. Any other use may pose a risk to the user. The chair should not be used by patients that weigh more than 150kg.**

## 4. Basic adjustmets of the chair



1. Backrest that can be adjusted in height with a locking clip placed on the backrest bar.
2. Armrests (accessory) either fixed (shown) or collapsible. The height as well as the width between the armrests can be adjusted.
3. Driving handles (accessory) either 450mm long (shown) or 600mm long.
4. Seat with one-hand grip adjustment for seat and backrest position located on the right-hand side (Rock and Slim). Malin Swing has a rotating possibility where seat, armrests and backrest can be rotated  $\pm 90$  degrees compared to the chairs stand.

5. Brake bar acting on the back wheels (shown). Activated by pushing the brake bar downwards. If the chair is equipped with wheels with directional control (accessory) this is activated by pulling the brake bar upwards. Electrical brake control available as accessory.
6. Battery module with charging inlet.
7. Hand control with wire (shown). Wireless IR hand control available as accessory.
8. Foot support (accessory) a plastic plate that can be folded (left chair).

## 4.1 Tips for comfortable position

To achieve a comfortable ergonomic working position the operators chair should first be adjusted and then the examination equipment (e.g. slit lamp, laser etc.). Thereafter the patient chair Malin can be adjusted to fit the examination equipment.



## 5. Battery operation and charging

The Malin chair is battery-powered and is activated starts as soon as the "Up/Down button" or "Brake button" is activated. Under normal working conditions, a fully charged battery lasts up to 3 months. When the battery level is below 20%, it is indicated during operation with a beep sound.



The Malin chair has an associated battery charger that handles 100-240V mains voltage. The charging socket is located on the back of the chair and the status is indicated on the battery charger (see below).

Regular charging of the battery is recommended as full discharge reduces the life of the battery. Recharge the battery every month, but at least every three months to avoid damage to the battery that otherwise occurs through self-discharge. A new or fully discharged battery must be charged for 24 hours.





The indicator on the battery charger shows the following

Status - when connected	Indicator
Battery is charging	
Battery is fully charged	

Batteries have a limited life span, and the battery module must be replaced under normal working conditions after about four years. Year of manufacture and month can be found on the battery. A new battery module is ordered from Rini and is easy to replace.



**Only the dedicated charger for Malin chair must be used.**

## 6. Accessories

Malin chairs are available with blue or black cushion as standard and can be equipped with several accessories to facilitate treatment.

### 6.1 Armrests - fixed and collapsible

To increase patient comfort and control the chairs can be fitted with fixed armrests (left armrest in the picture below) or collapsible armrests (right armrest below). These can be mixed and can be retrofitted after delivery.



**The armrests should not be loaded with more than 20 kg.**

## 6.2 Armrest for fluorescein injection

A tailored armrest is available for fluorescein injections that also can be used for general purpose. It is easy to retrofit after delivery and can be used as a complement to the other armrests.



**The armrests should not be loaded with more than 10 kg.**

## 6.3 Driving handles

With driving handles it is easier to move the chair with or without a patient sitting in the chair. There are two driving handles available with different length. The left picture shows the short driving handle 450mm and the right picture the longer driving handle 600mm.



## 6.4 Wireless control

This is a factory mounted accessory including a special control box and IR receiver.

## 6.5 Foot support

The foot support makes it easier for to move a patient sitting in the chair and can be retrofitted.





**The foot support should not be loaded with more than 25 kg.**

## **6.6 Extended lifting height**

Extends the lifting height 540 - 940mm.

## **6.7 Electrical brake**

This is a factory mounted accessory to activate or deactivate the brake function via the hand control.

## **6.8 Wheels with directional control**

Directional control keeps the chair in a straight line and facilitated if patients are transported longer distances. Can be retrofitted but not available on chairs with electrical brake.

## **6.9 Headrest**

This is a factory mounted accessory when support of the patient's head is required. Follows the back support and can be adjusted in height.

## 7. Disinfection, cleaning and repairs

The product is in contact with the patient but normally in a non sterile examination or treatment environment.

### Disinfection

Part	Product	Other information
<b>Upholstery and armrests</b>	Virkon (including most disinfectants without alcohol).	1% concentration. (Disinfectants containing alcohol cannot be used due possible to dehydration)
<b>Chassis and buttons</b>	Noedischer Dekonta CCOTRADE RW	1-3% concentration 0,5% concentration

### Cleaning

Part	Product	Other information
<b>Upholstery and armrests</b>	Water and soap	Use damp cloth
<b>Chassis and buttons</b>	Water and soap	Use damp cloth
<b>Battery charger</b>	Water	Use damp cloth

### Repairs

The product should only be repaired by Rini or a Rini authorised service centre. Product to be repaired under warranty must be sent to Rini factory or an authorised Rini service centre.



**Unauthorized repairs and modifications may result in loss of function and void warranty.**

## 8. Safety

The product should only be used as intended otherwise it can cause injury to persons or product. Read this manual before the product is put into service. Necessary knowledge of the product is required before clinical use and this manual should always be available when using the product. No accessories other than those mentioned in this manual may be used. Please note the warning signs on the product.



**Warning signs are used when there is a risk for patients, staff or product.**

### 8.1 CE Declaration of conformance



**Patient chair 120-00103-xx follows EU Medical Device Regulation 2017/745 for medical products**

**Tested according to EN/IEC 60601-1**

## 9. Technical specification

<b>General</b>	
Weight base unit	41kg / 90lb
Length (chassis)	580mm
Width (chassis)	530mm
Medical classification	Class 1 Type B
Standard	EN/IEC 60601
Protective class	IPX4
Battery	24V 2Ah rechargeable lead acid
Charger	100 - 240V
Cushions	Medical classified material – black or blue (standard) or other colours as options
<b>Operator data</b>	
Lifting capacity	150kg / 331lbs (max weight patient)
Height adjustment	540 - 840mm / 21-33in (std) by Hand control (wire or wireless)
<b>Back support</b>	
Type	H 360mm x B 410mm / 14x16in
Inclination and height	Angle -8° till +20° (only model Rock and Slim) Height 340 - 420mm from seat
<b>Seat</b>	
Type	L 450mm x B 470mm / 18x19in
Inclination	Angle +4° till -10° (only model Rock and Slim)
<b>Armrest</b>	
Type	Fixed or collapsible
<b>Brake</b>	
Type	Mechanical brake or electrical for back wheels
<b>Operational environment</b>	
Temperature	+5°C to +40°C / +41°F to +104°F
Relative humidity	20% to 90% at +30°C / +86°F
Atmospheric pressure	700 to 1060hPa
<b>Transport and storage</b>	
Temperature	-10°C to +50°C / +14°F to +122°F
Relative humidity	20% to 90% at +30°C / +86°F
Atmospheric pressure	700 to 1060hPa

## 10. Disposal and recycling

The product is mainly made from environmentally recyclable materials as steel, stainless steel, aluminum and plastics. Rini recommends that the material be sorted and recycled in connection with the destruction of the product.



**Electronic parts and cables shall be handled as electronic waste in accordance with local requirements. The battery contains lead and is disposed according to current environmental legislation.**

## 11. Warranty

The warranty is valid one year from the date of purchase. Please contact Rini for further information.

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