



If caregivers have a choice, they choose Lopital



Instruction for Use Sirocco basic & Sirocco deluxe Shower Stretcher

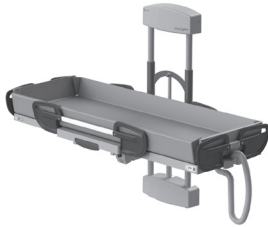


Instruction for Use

IFU2500-2025-01 EN

Sirocco basic & Sirocco deluxe

Shower Stretcher



6100 2500
Sirocco basic (excl. mattress)

Basic UDI-DI:

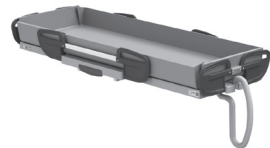
872025610356161002500L7



6100 2510 Sirocco deluxe
(excl. mattress)

Basic UDI-DI:

872025610357861002510S8



6100 2505 Sirocco basic fixed
height (excl. mattress)

Basic UDI-DI:

872025610363961002505QH

The images above show the stretchers with mattress. The length of the mattress determines the size of the lying surface. The following mattresses are available:

Matras t.b.v. Sirocco basic				
Article No.	Gtin	Description	Inside length	Inside width
6720 0005	8720256103585	Matras 186 cm / 73.2 inch	170 cm / 66.9 inch	70 cm / 27.6 inch
6720 0015	8720256103592	Matras 206 cm / 81.1 inch	190 cm / 74.8 inch	70 cm / 27.6 inch

Matras t.b.v. Sirocco deluxe				
Article No.	Gtin	Description	Inside length	Inside width
6720 0010	8720256103523	Matras 186 cm / 73.2 inch	170 cm / 66.9 inch	70 cm / 27.6 inch
6720 0020	8720256103530	Matras 206 cm / 81.1 inch	190 cm / 74.8 inch	70 cm / 27.6 inch

Matras t.b.v. Sirocco basic fixed height				
Article No.	Gtin	Description	Inside length	Inside width
6720 0005	8720256103585	Matras 186 cm / 73.2 inch	170 cm / 66.9 inch	70 cm / 27.6 inch
6720 0015	8720256103592	Matras 206 cm / 81.1 inch	190 cm / 74.8 inch	70 cm / 27.6 inch



If caregivers have a choice, they choose Lopital

Important:


















Read these instructions carefully before using the Sirocco basic / Sirocco deluxe!

Date first used
User
Name
Address

Manufacturer

Lopital Nederland B.V.
Laarakkerweg 9, 5061 JR Oisterwijk
T +31 (0)13 5239300
www.lopital.nl, info@lopital.nl

All of the aids produced by Lopital fulfil the following norms for medical products Class 1 (MDR (EU) 2017/745).

Explanation of symbols in 'instructions for use' and on labels			
	Note		Follow the instructions for use
	Manufacturer details		Read cleaning and disinfecting protocol
	Date of production		Temperatuur
	Conformité Européenne		Air pressure
	Article number		Humidity level
	Serial number		Antibacterial
	Medical device		Maximum load
	GS1 Datamatrix die de volgende informatie bevat: (01) Global Trade Item Number (internationally unique item number) (11) Production date (21) Serial number		Keep the device away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
	24V DC voltage		

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1. Introduction

1.1. Introduction

The Sirocco basic / Sirocco deluxe Shower Stretcher is a medical device for caring for and washing clients in an ergonomically responsible manner. Comfort is the primary consideration for both the client and the caregiver.

The Sirocco basic / Sirocco deluxe Shower Stretcher comprises a base frame and a height-adjustable supporting surface with a soft mattress. The stretcher can be mounted on the wall with the head end on either the left or right side. The Sirocco deluxe also has a back adjustment. There are no essential performances.



The frame of the Sirocco basic / Sirocco deluxe has an antibacterial coating. The coating contains silver ions. Antibacterial coating based on silver ions prevents dangerous micro-organisms such as bacteria, fungi and algae multiply and spread. The effectiveness was confirmed in several tests. Germs were demonstrably reduced in a short time to 99.99%. The coating only affects bacteria that are found on the surface and not on airborne micro-organisms. The coating protects users or others from disease-causing bacteria, germs, viruses or other harmful organisms. On a dirty surface, the coating loses its antibacterial properties. So proper cleaning and disinfection is still a must.

The Sirocco basic / Sirocco deluxe is multi-functional in use and corresponds to the use of other devices such as beds, wheelchairs and shower chairs, hoisting equipment and sliders.

The expected technical life of the Sirocco basic / Sirocco deluxe is 10 years, assuming it is cleaned daily and regularly maintained according to the maintenance schedule supplied (*See chapter 5. Cleaning and maintenance*).

De Sirocco basic / Sirocco deluxe is a class 1 medical device with CE-marking. This marking corresponds with regulation MDR (EU) 2017/745. The Sirocco basic / Sirocco deluxe has been tested for electro-magnetic radiation according to the IEC 60601-1-2.

1.2. Safety



A failure to comply with the following safety points and the further definitions in these instructions for use could lead to hazardous working situations. Please read carefully before use.

Use

- Before you start work with the Sirocco basic / Sirocco deluxe, check that there has been a fully loaded battery placed in the controlbox.

- The Sirocco basic / Sirocco deluxe switches to standby after a few seconds, when not in use.
- Notify the client before moving the Sirocco basic / Sirocco deluxe.
- Be aware of obstacles and persons in the immediately vicinity when moving or adjusting the stretcher.
- Make sure that the client always places his / her arms / legs inside the mattress in order to avoid anything getting jammed.
- Always close the siderails before moving upwards/downwards the Sirocco basic / Sirocco deluxe with client.
- It is not permitted to load the Sirocco basic / Sirocco deluxe with more than 227 kg / 500 lbs. The Sirocco basic with fixed height can be loaded with a maximum of 150 kg.
- The Sirocco basic / Sirocco deluxe is only suitable for moving and caring for one person.
- Use only original parts, supplied by Lopital. The use of non-original parts can cause dangers.
- The use of components (chargers, cables, actuators, batteries, etc.) that have not been supplied by Lopital may result in increased emissions or decreased immunity of the Sirocco basic / Sirocco deluxe.
- Use the Sirocco basic / Sirocco deluxe in a clean and tidy working environment.
- Charge battery box in a well-ventilated, dry space.
- Swimming pool locations are not considered to be 'normal conditions' and will substantially shorten the lifespan of certain components.
- The Sirocco basic / Sirocco deluxe may only be used indoors.
- Don't touch the battery terminals and the client at the same time.
- Portable and mobile RF communication equipment can affect medical devices. Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Sirocco deluxe / Sirocco basic including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- Medical electrical devices involve special EMC precautions and must be used as per the EMC information outlined in the instructions for use.
- The emissions characteristics of the Sirocco basic / Sirocco deluxe electric make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.
- The stretcher must not be used adjacent to or stacked on other products. However, should that be necessitated, it must be checked whether the stretcher functions normally in this configuration too.

Maintenance

- If the charger or cable become damaged, they must be replaced.

- If the mattress is damaged, replace the mattress for hygiene reasons.
- It is recommended to replace the mattress after 5 years for hygiene reasons.
- The Sirocco basic / Sirocco deluxe must be serviced and inspected at least once a year.
- Servicing and maintenance of the Sirocco basic / Sirocco deluxe may only be carried out by persons with a technical background, who have experience in servicing and maintaining similar products.
- If the Sirocco basic / Sirocco deluxe is adjusted, appropriate inspection must be conducted to ensure continued safe use of the shower stretcher.
- Constructive components of the Sirocco basic / Sirocco deluxe may only be replaced by suitably authorised personnel.
- The Sirocco basic / Sirocco deluxe shall not be serviced or maintained while in use with a client.
- If erroneous use, transport, an accident or improper maintenance leads to deformation of the Sirocco basic / Sirocco deluxe, it may no longer be used and you must contact the supplier or manufacturer.

In the event of breakdowns, you must contact Lopital or your local supplier.

E-mail: info@lopital.nl



The Sirocco basic / Sirocco deluxe may only be operated by persons who have experience working with the target group and have followed the Instruction / trainings video's on the website of Lopital.



The Sirocco basic / Sirocco deluxe has been developed and produced for use in a professional care environment.



Making changes to the construction could affect the safety of the Sirocco basic / Sirocco deluxe. This will also lead to Lopital's liability and warranty conditions being invalidated. As a result, the Sirocco basic / Sirocco deluxe will no longer comply with the regulation MDR (EU) 2017/745 for medical devices.



If a serious incident occurs related to this medical device that affects the caregiver or the client, it must be reported to Lopital or the distributor of the medical device.

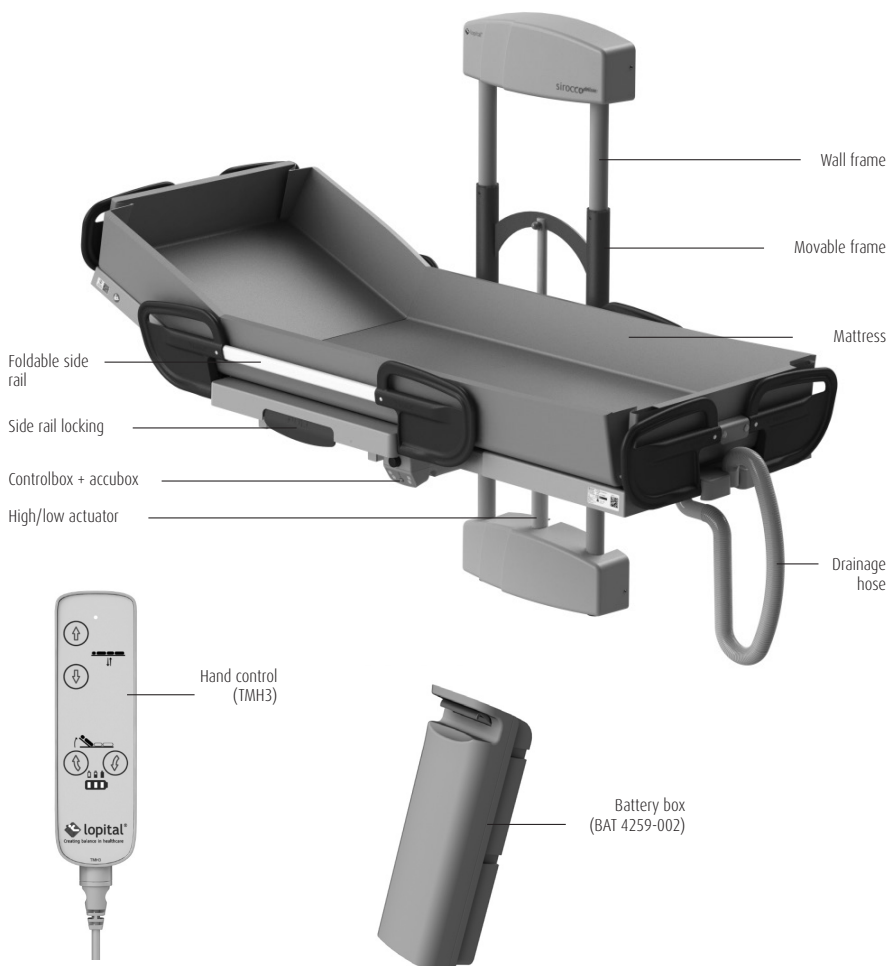
1.3. Warranty

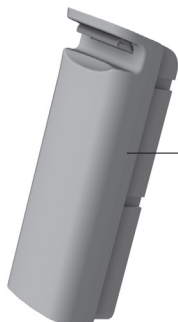
All Lopital products are supplied with a 5-year warranty, on construction and / or material faults, unless otherwise stated. In the event of varying warranty terms, the exact period will be indicated on your invoice; this also serves as the warranty itself. Components and batteries that are subject to wear and tear will not fall under warranty unless there are clear construction and / or material faults.

2. Use

The images below show the components of the Sirocco basic / Sirocco deluxe. The detachable parts of the stretcher are the mattress and the batterybox.

Sirocco basic / Sirocco deluxe (art. nr. (excl. mattress): 6100 2500 / 6100 2510)





0% TiMOTION

Part No BAT - 4259-002

IP rating IP 66

Lead-acid battery pack

To be used with TC 12-4259-001



NOT TO BE OPENED BY UNAUTHORIZED

PERSONNEL

NE PAS OUVRIIR PAR DU PERSONNEL N ON AUTORISE



Laarakkerweg 9
5061 JR Oisterwijk
T: (+31)13-5239300

Mattress for Marina
Shower trolley

Size: --- cm

GTIN (01) 08720256103---

BATCH (10) ---

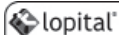
SN (21) 6720 00--



Read cleaning
and disinfecting
protocol before use

Specifications:

Anti bacterial, Flame retardant A2, left and anti-slip coating, Warm/cold resistant up to +70 and
-30 degrees, Phthalate free, Higher scratch resistance, 4 layers single side, Cadmium free



Laarakkerweg 9
5061 JR Oisterwijk
The Netherlands
T: (031)13-5239300

MD

REF

SN

KG/---LB5

IPX-

Weight: ---kg

Type battery: ---

Drives operative: --- V

Charge: ---V---mAh

Non continuous: ---



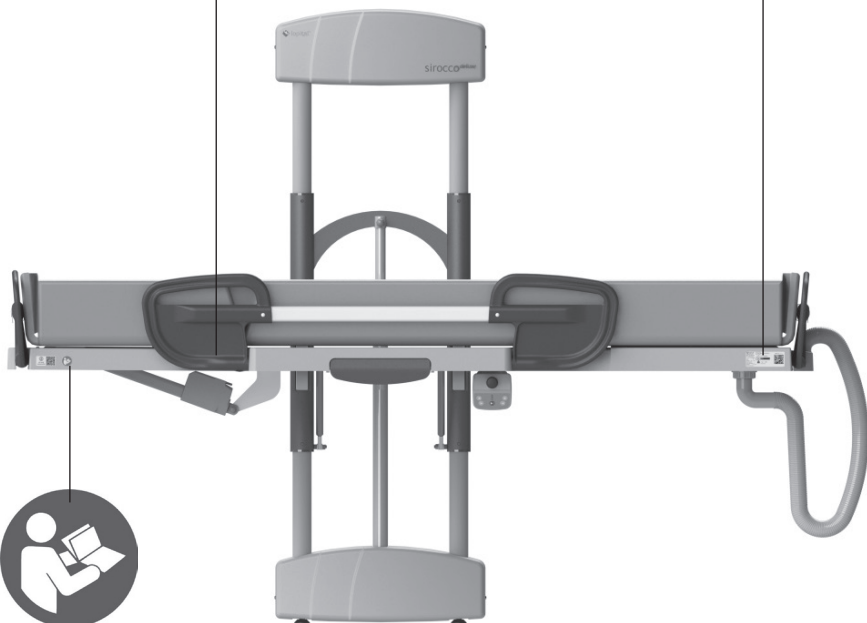
CE

Revision: ---

(01) ---

(11) ---

(21) ---



3. Operation

3.1. Side rail

- The Sirocco basic / Sirocco deluxe is equipped with aluminium side rails that can be collapsed so that sliding transfers can be carried out.
- The side rail is equipped with safeguards (1) so that the client cannot raise the side rails themselves (See figure 1).
- Before the side rail is collapsed downwards, the safeguard must be unlocked.
- Unlock the safeguard by using one hand to pull the protruding handle (1) and rotating the side rail with your other hand (2).
- With folded side rails, the caregiver can lean against the mattress in the middle to better care for the patient.
- Turn the side rail upwards again to close the side rail. The side rail locks automatically (See figure 2).
- The side rail can be placed in 2 positions, wide and narrow. When you fold the side rail upwards, the side rail is first locked in the wide position (See figure 3). By pulling the handle of the lock (See figure 2) you can move the side rail further back to its narrow position.

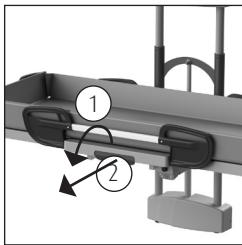


Figure 1 Side rail.

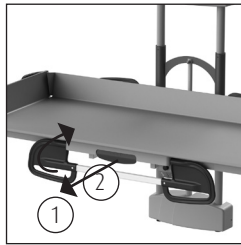


Figure 2 Side rail down.

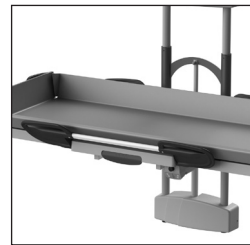


Figure 3 Side rail wide.

3.2. Moving upwards / downwards (Sirocco basic & Sirocco deluxe)

Moving upwards

- The stretcher is moved upwards by pressing the control button with the arrow pointing upwards. The stretcher will then move upwards evenly (1) (See figure 4).
- You can stop the movement whenever you like by taking your finger off the button.
- During the upward movement, maintain contact with the client.
- If the remote control is not being used, it can be hung on the side rail.
- Ensure that the curly cable on the operating device does not get jammed.

Moving downwards

- Move the stretcher downwards by pressing the button that shows a 'down' arrow the stretcher will immediately move downwards (2) (See figure 4).
- You can stop the movement whenever you like by taking your finger off the button.
- During the downward movement, maintain contact with the client.

When the hand control is lost or defect, the shower stretcher can be adjusted in height by pressing the buttons on the control box (See figure 5).



Before moving the stretcher, check to ensure there are no persons or objects in the immediately vicinity of the stretcher.

3.3. Backrest adjustment

Electrick back adjustment (Sirocco deluxe)

The stepless electric back adjustment is operated by pressing the buttons on the hand control (See figure 7). Release the button when the backrest is in the correct position.

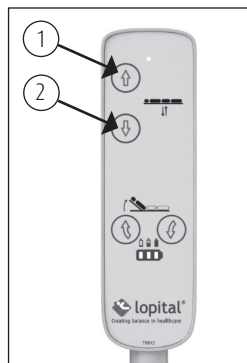


Figure 4 Hand control.

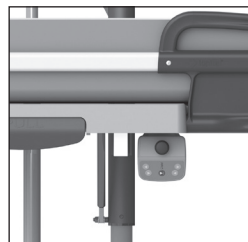


Figure 5 Control box operation.



Figure 6 Back adjustment electrical.

3.4. Waterdrainage

Water is drained away from the Sirocco basic / Sirocco deluxe via a drainage hose. To do this, remove the hose from the recess (1) and route it to the lowest possible drainage point (See figure 8). Always click the hose into the recess of the lying plate, in connection with leaking and dripping.

3.5. Changing battery

(Sirocco basic & Sirocco deluxe)

The Sirocco basic / Sirocco deluxe is an electrically adjustable high-low stretcher and works on a battery.

- The battery is located at the head-end of the stretcher (See figure 9).
- There is a battery indication on the hand control (See figure 10).
- Charge the battery on the chargerstation (See figure 11).
- In order to remove the battery, use one hand to unlock the catch (1) on the battery, then slide the battery forward (See figure 9).
- To install the fully charged battery, it must first be positioned next to the electronic housing and then clicked into the holder.
- You can better insert and remove the battery when the back adjustment is in the folded position (*Only Sirocco deluxe*).



Make sure that the Sirocco basic / Sirocco deluxe is always ready for use by having a fully charged reserve battery on standby. If this is not the case, lift the client from the stretcher with a patient hoist or manually with at least 2 persons.



When the battery box is fully charged, it will be able to perform the high / low movement in combination with the back adjustment approximately 45 times.



After 4/5 years it is recommended to replace the battery box.



Only use batteries that are supplied with the Sirocco basic / Sirocco deluxe. The batterybox that is used for the Sirocco basic / Sirocco deluxe is the 'Ti-motion BAT-4259-002' 2.9 Ah, 24 V.

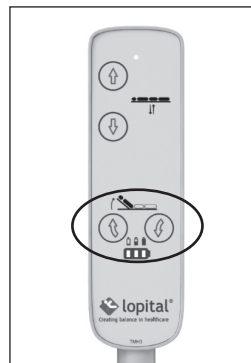


Figure 7 Electrical back adjustment.

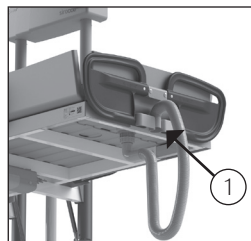


Figure 8 Waterdrainage.

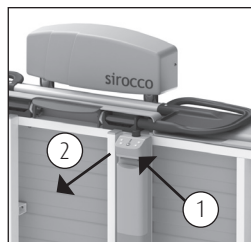


Figure 9 Battery.

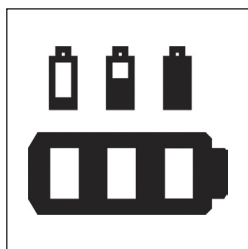


Figure 10 Battery indicator on hand control.



Fully charged.



1/3 capacity, Charging advised.



2/3 capacity.



Charging required, An acoustic signal sounds (red light).

3.6. Charging battery

(Sirocco basic & Sirocco deluxe)

- Place the battery to be charged on the battery chargestation (See figure 12).
- A green light indicates that the battery charger is switched.
- The charged battery can remain on the battery charger without being damaged.



Charge batteries that are not used, once every six months to avoid damage.



Charging the batteries before they are completely empty will extend their lifespan.



The expected battery lifespan depends on following the manufacturer's charging instructions.



The charger that is used for the Sirocco basic / Sirocco deluxe is the 'Ti-motion TBC2'.



Charge batteries in a well-ventilated, dry space.



Figure 11 Chargestation.

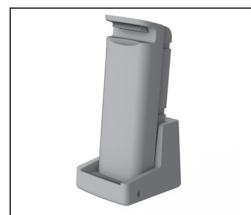


Figure 12 Chargestation with battery.

4. Safety functions

4.1. Emergency stop

(Sirocco basic & Sirocco deluxe)

On the side of the head-end, there is an emergency stop. Operate must be stopped immediately. Once the emergency stop is pressed, the electronic controls will stop working. The emergency stop interrupts all power.

Operation may be continued once the situation is stable again. Turn the emergency stop a quarter turn to unlock it again (See figure 13).

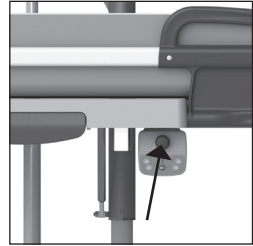


Figure 13 Emergency stop.



First check to ensure the hazard has been removed or the problem has been resolved, before resetting the emergency stop button.



If the button is activated, no leds will light up on the hand control.

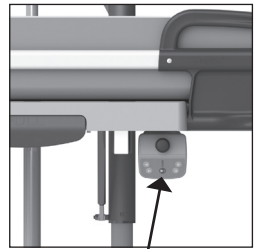


Figure 14 Emergency lowering button.

4.2. Emergency lowering button

(Sirocco basic & Sirocco deluxe)

If the handcontrol stop working and the stretcher is in a raised position, it can be lowered using the emergency lowering button. This button is located on the controlbox (See figure 14).

First check that the stretcher is not in sleep mode!

- Press the emergency lowering button (See figure 14).

The stretcher will now return to the lowest position (make sure no persons or objects are under the stretcher). Take the client from the stretcher and make sure the device is not used until it has been repaired. Place the stretcher in a safe place and indicate that it is out of order.


5. Cleaning and maintenance

The Sirocco basic / Sirocco deluxe must be cleaned after every use, with water and regular household cleaning agents. Do not use any abrasive or other aggressive cleaning products. If necessary, the mattress can be disinfected with a solution of 70% ethanol or propanol.

For the best and most efficient cleaning of the mattress and the lying surface, the mattress can be lifted up and removed. Dry the plate on which the mattress lies.

Maintenance and repairs to the Sirocco basic / Sirocco deluxe may only be carried out by authorised personnel.

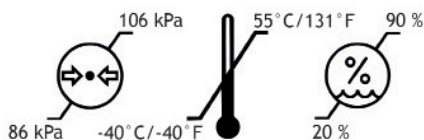
Maintenance schedule

After every use	<ul style="list-style-type: none">• Clean the Sirocco basic / Sirocco deluxe with water and regular household cleaning products.• Clean and disinfect mattress.• Check to ensure all parts of the Sirocco basic / Sirocco deluxe are present.
Weekly	<ul style="list-style-type: none">• Check that the stretcher is still working correctly.• Charge the battery at least once a week.
Annually 	<ul style="list-style-type: none">• According to the regulation MDR (EU) 2017/745 medical devices, a stretcher must be maintained in line with the manufacturer's instructions. Those instructions can be found in the maintenance protocol, see website Lopital (www.lopital.com). <p>This process will preferably be carried out by Lopital or another authorised body. Lopital offers the option of having the stretcher thoroughly inspected and serviced once a year via Periodic Preventative Maintenance.</p> <p>For more information about the maintenance contract, please contact Lopital (info@lopital.nl) or speak to your supplier.</p>

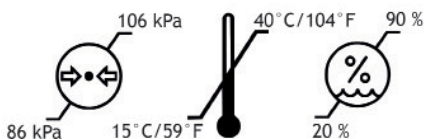
For a detailed explanation regarding cleaning and disinfecting, see the document 'Cleaning and Disinfection Protocol' on our website www.lopital.com/downloads/.

6. Environmental conditions

Conditions during storage and transport



Conditions during use



7. Removal of parts

All parts that are replaced or removed can be sent back to Lopital or your supplier. You may also offer the parts to the engineer for destruction. We will ensure that all parts are processed in an environmentally-friendly manner. If you take care of disposal of the product yourself, you must take account of the fact that batteries and chargers must be disposed of as small chemical waste.

8. Technical specifications

Thee Sirocco basic / Sirocco deluxe is splash-proof; this means that the Sirocco can be used under the shower. This is given with instruction IPX4. The electronic components used in the Sirocco basic / Sirocco deluxe electrical are IPX6.

8.1. Structure

Frame:	Stainless steel / steel pipes and sheet metal with an antibacterial coating
Covers:	ABS with PMMA coating
Mattressfilm:	PVC Plastic parts (except base plates) Glasvezel gevuld PA
Fasteners:	Roestvast staal + verzinkt staal
Weight:	6100 2500 : 71 kg 6100 2510 : 73 kg 6100 2505 : 57 kg
Maximum load Sirocco basic / Sirocco deluxe:	227 kg
Maximum load Sirocco basic fixed height:	150 kg

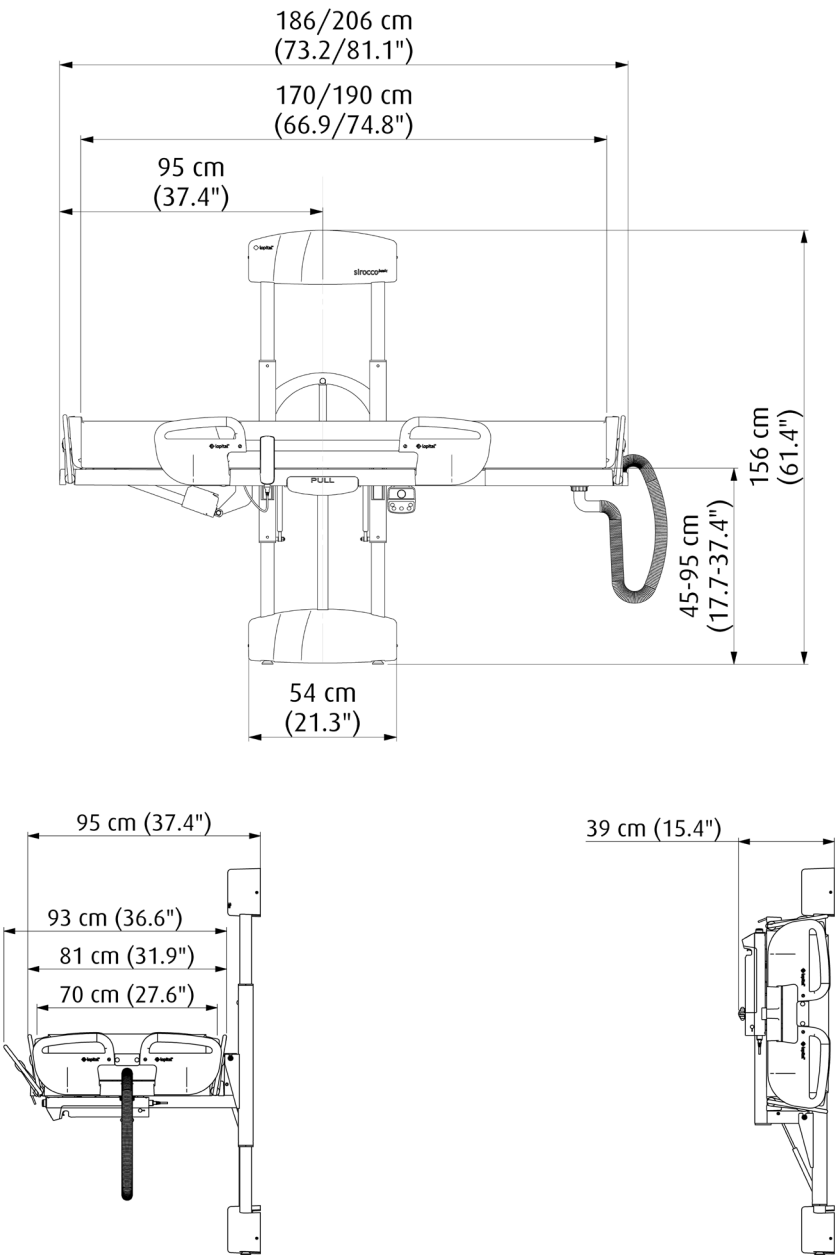
8.2. Drive

High/low drive:	Electric, push-only
Controlbox:	24VDC, max. 250W
Batterybox:	24V, 2.9 Ah
Battery charger:	100-240V AC, 50-60 Hz, max. 1 A, Charge station
Mode of operation:	Non-continuous (10% 2min ON, 18 min OFF)

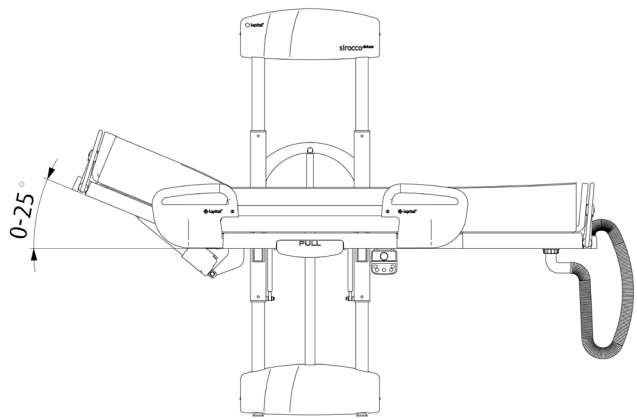
8.3. Dimensions

External dimensions (lxwxh):	186x95x156 cm 206x95x156 cm
Net lying space (lxw):	170x70 cm 190x70 cm
Mattress edge height:	ca. 20 cm
Bed base height:	minimum 45 cm, maximum 95 cm
Water drainage hose:	internal Ø4 cm

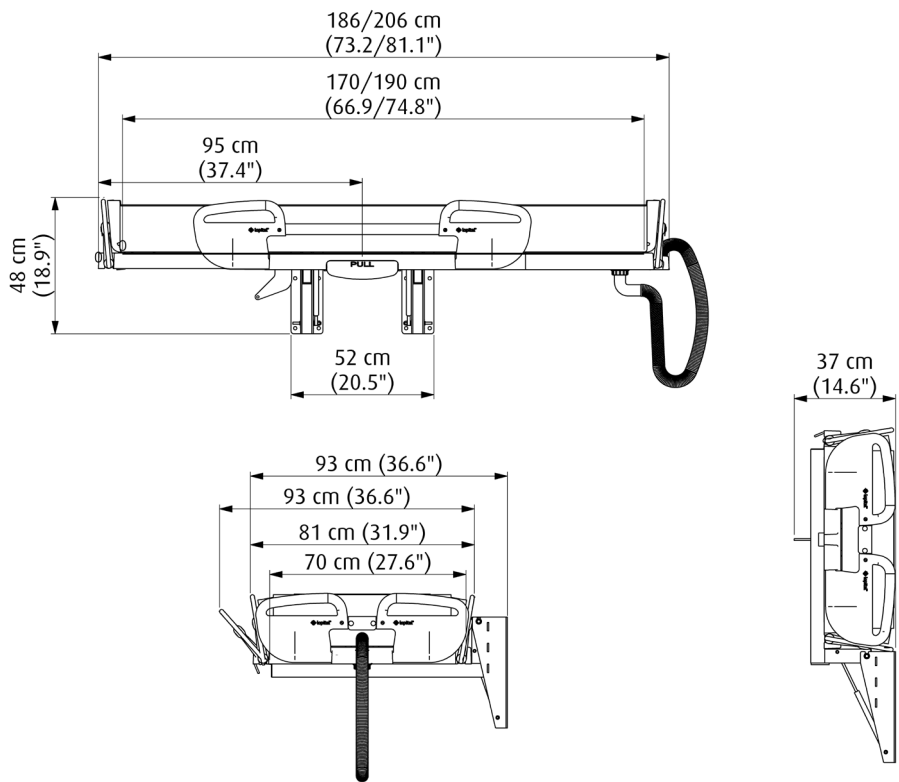
Sirocco basic & Sirocco deluxe



Sirocco deluxe




Sirocco basic fixed height



8.4. Length adjustment

The Sirocco basic / Sirocco deluxe is equipped with a length adjustment. For example, the shower stretcher can easily be extended or shortened.

 **If you want to adjust the length of your Sirocco basic / Sirocco deluxe, we recommend that you have this done by Lopital or by persons qualified by Lopital.**

Each length has his own mattress:

Sirocco basic:

- Mattress 186 cm, article number: 6720 0005
- Mattress 206 cm, article number: 6720 0015

Sirocco deluxe:

- Mattress 186 cm, article number: 6720 0010
- Mattress 206 cm, article number: 6720 0020

Sirocco basic fixed height:

- Mattress 186 cm, article number: 6720 0005
- Mattress 206 cm, article number: 6720 0015

To adjust the length of the shower stretcher, the mattress must be removed. Then dismantle the lying plate (See figure 15). The length adjustment is now visible. Loosen the bolts of the length adjustment (1) (See figure 16). Slide the adjustable frame out or in of the base frame and fix it at the desired length (2). Then mount the lying plate and place the correct mattress on the lying plates.



Figure 15 Disassembly of lying plate and mattress.

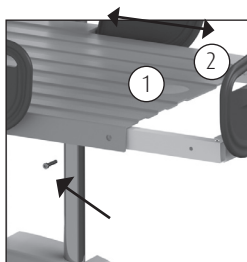


Figure 16 Length adjustment.

8.5. Replacement of parts

The following components can be replaced by service personnel in event of damages.

- Mattress
- Drainage hose
- Lying plates



If other parts needs to be replaced, this must be done by authorised personnel. Contact your dealer or contact Lopital.

Mattress

1. To remove the mattress you have to loosen the push buttons.
2. You can lift the mattress. Please note, it can occur that the mattress is clamped to the drainage point. Lift the mattress at this point carefully.
3. Place the new mattress and fasten the push buttons.

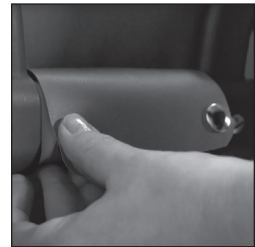


Figure 17 Replacing mattress.

Drainage hose

1. Unscrew the drainage hose.
2. Place the new drainage hose.



Figure 18 Replacing drainage hose.

Lying plates

1. To replace the lying plates, you have to detach the mattress and the drainagehose.
2. Unscrew the 4 screws from the lyingplates.
3. Remove the lying plates.
4. Place the new lying plates on the frame and fix it with the 4 screws.
5. Mount the drainage hose.
6. Place the mattress on the lying plates.

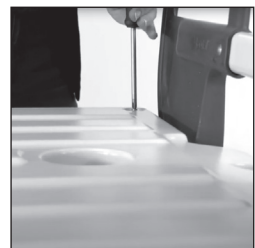


Figure 19 Lying plate.

9. Checklist for technical problems

Problem	Cause	Solution
Sirocco basic / Sirocco deluxe does not move upwards or downwards.	Emergency button is used.	Turn emergency button 90 degrees to the right.
	Battery empty.	Charge battery.
	Plugs removed.	Check plugs (To side of control box).
	Manual control is not working.	Check plug.
	Motor, pump or control box defect.	Contact Lopital or your supplier.
The light on the charger is not on.	(Wall) charger is no connected	Connect charger.
	(Wall) charger is defective	Contact Lopital or your supplier.
Sirocco basic / Sirocco deluxe stops	Emergency button is used.	Turn the emergency button 90 degrees to the right.
	Technical issue.	Contact Lopital or your supplier.

For all other issues please contact Lopital or your supplier.

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10. Relation with other supports

Hoist / Ceiling hoists

The Sirocco basic / Sirocco deluxe has been designed for optimal use in combination with a patient lift. The shower stretcher has a lying surface height of 45 to 95 cm.

Wheelchair

In lower settings of 45-55 cm / 17.7-21.7 inch, clients can be transferred from shower stretcher to wheelchair and vice versa. An ideal device to be used during this operation is the small slide sheet (and possibly a sliding board).

11. Electromagnetic compatibility

Professional healthcare environment

Guidance and Manufacturer's declaration-electromagnetic emissions		
The Sirocco basic / Sirocco deluxe is intended for use in the electromagnetic environment specified below. The customer or the user of Sirocco basic / Sirocco deluxe should assure that it is used in the following environment.		
Emissions Test	Compliance	Electromagnetic Environment - guidance
RF emissions CISPR11	Group 1	The Sirocco basic / Sirocco deluxe uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR11	Class A	The Sirocco basic / Sirocco deluxe is suitable for use in all establishments, other than domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Not applicable.	
Voltage Fluctuations/ Flicker emissions IEC 61000-3-3	Not applicable.	

Guidance and Manufacturer's declaration-electromagnetic immunity			
The Sirocco basic / Sirocco deluxe is intended for use in the electromagnetic environment specified below. The customer or the user of the Sirocco basic / Sirocco deluxe should assure that it is used in the following environment:.			
Immunity Test	IEC 60601-1-2 Test level	Compliance level	Electromagnetic Environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±8 kV contact ±15 kV air	Floors should be made of wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%..
Electrical fast transient/burst IEC 61000-4-4	±1 kV for input/output lines	±1 kV for input/output lines	
Surge IEC 61000-4-5	Not applicable.	Not applicable.	
Voltage dips, short interruptions, and voltage variations on power supply input lines IEC 61000-4-11	Not applicable.	Not applicable.	
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Guidance and Manufacturer's declaration-electromagnetic immunity						
The Sirocco basic / Sirocco deluxe is intended for use in the electromagnetic environment specified below. The customer or the user of the Sirocco basic / Sirocco deluxe should assure that it is used in the following environment:						
Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - guidance			
Conducted RF IEC 61000-4-6	3 Vrms 6 V in ISM bands 150 kHz to 80 MHz	3 V 6 V in ISM bands				
Radiated RF Electromagnetic Field IEC 61000-4-3	3 V/m 80 MHz to 2,7 GHz	3 V/m				
Proximity fields from RF wireless communication systems IEC 61000-4-3	Refer to table below	Refer to table below				

Test frequency (MHz)	Band ^{a)} (MHz)	Service ^{a)}	Modulation ^{b)}	Maximum power (W)	Distance (m)	Immunity test level (V/m)
385	380 - 390	TETRA 400	Pulse modulation ^{b)} 18 Hz	1,8	0,3	27
450	430 - 470	GMRS 460, FRS 460	FM ^{c)} ± 5 kHz deviation 1 kHz sine	2	0,3	28
710	704 – 787	LTE Band 13, 17	Pulse modulation ^{b)} 217 Hz	0,2	0,3	9
745						
780						
810	800 – 960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation ^{b)} 18 Hz	2	0,3	28
870						
930						
1720	1 700 - 1 990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation ^{b)} 217 Hz	2	0,3	28
1845						
1970						
2450	2 400 – 2 570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation ^{b)} 217 Hz	2	0,3	28
5240	5 100 – 5 800	WLAN 802.11 a/n	Pulse modulation ^{b)} 217 Hz	0,2	0,3	9

NOTE If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.

a) For some services, only the uplink frequencies are included.
b) The carrier shall be modulated using a 50 % duty cycle square wave signal.
c) As an alternative to FM modulation, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.



If caregivers have a choice, they choose Lopital



For more information also visit our website: www.lopital.nl

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