

# Eva400/Eva450/Eva600

SystemRoMedic™



User manual – English

Bruksanvisning – Svenska

Brukermanual – Norsk

Brugsvejledning – Dansk

Käyttöohje – Suomi

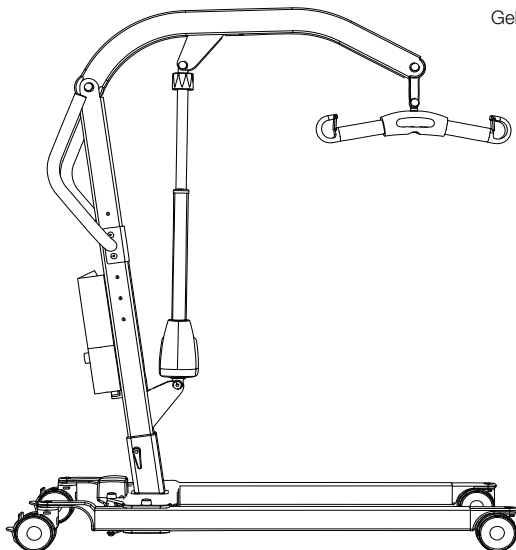
Gebrauchsanweisung – Deutsch

Handleiding – Nederlands

Manuel utilisateur – Français

Manuale utente – Italiano

Manual de usuario – Español



REF

**Eva400EE:** 60100001

**Eva400EM:** 60400011

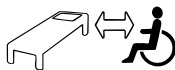
**Eva450EE:** 60100002

**Eva450EE, low legs:** 60100006

**Eva450EM, low legs:** 60100007

**Eva600EE:** 60100003

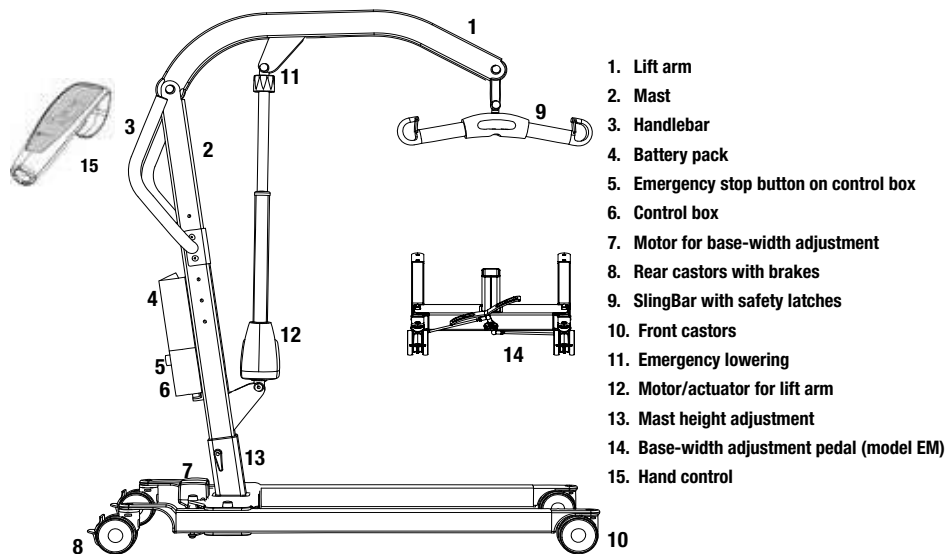
**Eva600EE, low legs:** 60100010



**SWL: 180 kg / 400 lbs**

**SWL: 205 kg / 450 lbs**

**SWL: 270 kg / 600 lbs**



1. Lift arm
2. Mast
3. Handlebar
4. Battery pack
5. Emergency stop button on control box
6. Control box
7. Motor for base-width adjustment
8. Rear castors with brakes
9. SlingBar with safety latches
10. Front castors
11. Emergency lowering
12. Motor/actuator for lift arm
13. Mast height adjustment
14. Base-width adjustment pedal (model EM)
15. Hand control

Mobile lift Eva has been developed to meet most lifting needs in combination with the right accessories. It is a lift unit that can lift user in a seated or supine position. The Eva is made largely of aluminium, which makes it relatively light, considering the weight it can lift.



## Safety information

### Visual inspection

Inspect lift functions regularly. Check to ensure that material is free from damage.

### Before use

Make certain the lift is properly assembled.

Check sling bar connection and safety latch function.

Check lifting function and base-width adjustment.

Check to ensure that the quick-connecting locking pin for the actuator is correctly installed.



## Always read the user manual

Always read the user manuals for all assistive devices used during a transfer.

Keep the user manual where it is accessible to users of the product.

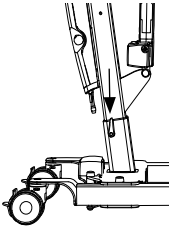
Always make sure that you have the right version of the user manual.

The most recent editions of user manuals are available for downloading from our website, [www.handicare.com](http://www.handicare.com).

Under no circumstances may the lift be used by persons who have not received instruction in the operation of the lift.

It is strongly prohibited to modify the original product.

## Assembly



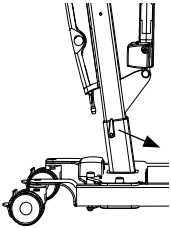
### Check to ensure that all components are included

Mast with lift arm, lift motor, sling bar, control box and battery.

Undercarriage with base-width adjustment motor and locking handle.

Hand control and cord.

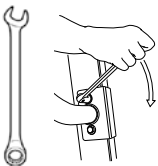
Instructions, charging cable and power supply cord for charging.



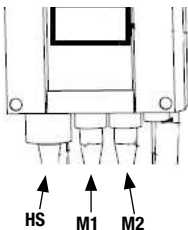
Insert the mast onto the base. There are three alternatives for adjusting the height of the mast. Secure the mast with the locking handle.



Eva450/Eva600: Place the battery in the mount in the control box.



Mount handlebar with two wrenches.

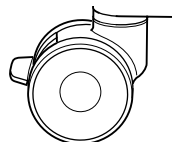


Connect the cables: The cable for the hand control in outlet HS; the cable for the hoist motor in outlet M1, and the cable for the base motor in outlet M2.

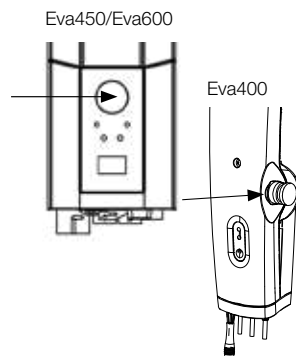
Release the emergency stop and perform a final inspection (see final inspection).

## Final inspection

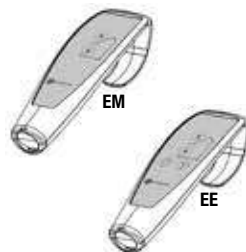
Check to ensure that no parts have been left in the packaging.  
 Inspect the lift for signs of wear and damage.  
 Check all four castor wheels and castor wheel locks.  
 Check all connections and fixtures including screws and bolts.



Check the emergency stop function by activating the emergency stop button, and then pressing either the up or down button. If nothing happens when the up or down buttons are pressed, the emergency stop is functioning properly.



Grasp the hand control, press the up button and run the lift arm all the way up.  
 Then, press the down button and run the lift arm all the way down.  
 Test base-width adjustment function. Press the button for base-width adjustment to widen the base fully, and then press the other button to narrow the base again.



Test lift function by lifting a person (not a user) using an approved sling. At the same time, check the emergency lowering function with someone on the lift. See section on Emergency lowering.

If the lift is functioning correctly, connect the charger and check to ensure that the charging lamp on the control box lights up.

### NOTE!

Before the lift is used for the first time:

- it must be charged for at least 4 hours. See section on charging batteries.
- the control box service counter needs to be reset. To reset the service counters press both lift buttons on the hand control at the same time for 5 seconds. An audio signal will indicate that the timer has been reset.

Keep the user manual where it is accessible to users of the product.

Eva450/Eva600





# Using the product



## Important Information

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- The lift must be assembled according to the instructions provided by Handicare.
- The lift may only be used indoors and on a level floor.
- When lifting from the floor the rear wheels must always be locked to prevent the lift from rolling and colliding with the user. Otherwise, the wheels should not be locked, so that the lift can align itself with the user's centre of gravity.
- Lifting accessories must be properly fitted and tested in relation to the user's needs and functional ability.
- Do not leave the user unattended during a transfer situation. 
- Under no circumstances may max. load be exceeded. See section on Safe working load.
- Never move the lift by pulling on the actuator!   
Do not pull
- The lift must not be used or immersed in or under water including showering.
- The lift should not be left / stored in a high humidity environment.
- The lift must not be charged in a wet room.
- To ensure optimal function, the lift must be inspected regularly. See section on Maintenance.
- Warranty applies only if repairs or alterations are made to the product by personnel who are authorized by Handicare.
- Using lifting accessories other than those approved can entail a risk.
- Verify that all lifting accessories hang vertically and can move freely.

## Safe working load

Different products on the assembled lift system; ie. lift, sling bar, lifting sling and other accessories may have different safe working loads. It is always the lowest maximum load allowed indicated for the respective products on the system that applies for the entire system. Always check the markings on all products in the unit and contact Handicare with any questions.

Eva450/Eva600

## Charging batteries

A tone sounding when using the lift indicates that the battery need recharging.  
Charge the lift after use to ensure that the battery is always fully charged.  
Lock the castor wheels when charging the battery.

### Eva450/Eva600

1. Connect the charging cable to a power outlet and in the connection for charger cable.  
The symbol for charging is shown on the display.
2. Check to ensure that the lamps on the control box light up. The green LED lamp indicates that the charger is receiving power and the yellow LED lamp indicates that the battery is charging.
3. Charging stops automatically when the battery is fully charged.

### Wall-mounted charger

1. Remove the battery pack from the lift and place it in the wall-mounted charger.
2. Check to ensure that the LED lamp on the front of the charger lights up.

### Eva400

1. Connect the charger to the charger cable leading from the underside of the control box.
2. Connect the charger to a power outlet (100-240 V AC).
3. When the charger is connected, the control box lamp indicates a yellow light.



### NOTE!

Before the lift is used for the first time, it must be charged for at least 4 hours.  
For maximum battery life, charge batteries regularly. We recommend daily charging when the lift is used daily.  
The emergency stop must be deactivated during charging.

### Eva450/Eva600: Battery information on the display

The battery discharging will be shown in four stages:

**Battery state 1:** The battery is ok, no need for charging (100 - 50 %).

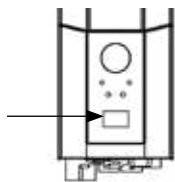
**Battery state 2:** Battery needs charging. (50 - 25 %)

**Battery state 3:** Battery needs charging. (Less than 25 %) A tone sounds when a button is pressed in this battery state.

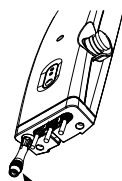
**Battery state 4:** The battery needs charging. (17V or lower) At this stage some of the functionality of the lift is lost. At this battery stage it is only possible to drive the lift arm down. Furthermore an audio signal will sound when a control button is activated. The symbol will switch between the two pictures for 10 seconds.

The battery symbol is shown when the control box is active until power down (2 minutes after use). It is not possible to use other battery types than BAJ1/BAJ2.

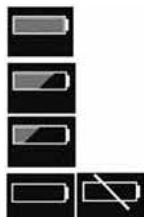
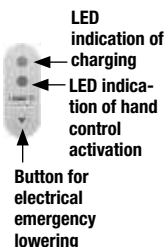
The battery level is measured via voltage. This means that it is possible to experience e.g. that the battery switches from state 1 to state 2 and back to state 1.



Eva400



Charger





### Service information read-out

Basic service information can be read out on the display. To get the service information on the display please press the lifting arm up button for half a second. The information will be shown for ½ minute or until other buttons are activated.

- Total cycles done by the actuator
- Total work done by the actuator (ampere usage times seconds in use)
- Total number of overloads
- Days since last service/Days between services

## Hand control

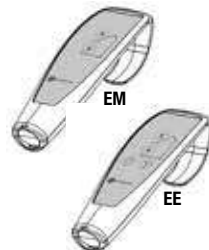
### Raising/lowering the lift arm

Symbol indicate direction of travel.

Motion stops as soon as the button is released.

If the lift arm encounter an obstacle while lowering, the lift will immediately stop the motion.

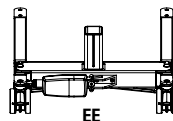
In order to continue, the lift arm will need to be raised slightly by using the hand control before further lowering.



### Electrical base-width adjustment (EE)

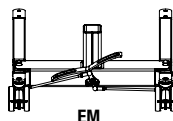
Markings on the buttons of the hand controll indicate function.

Motion stops as soon as the buttons are released.



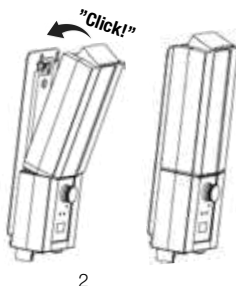
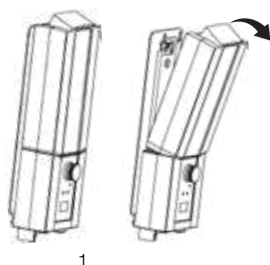
### Manual base-width adjustment (EM)

Push down on the respective pedals at the back of the lift to widen and narrow the base.



## Changing the battery

Eva450/Eva600





## Emergency stop

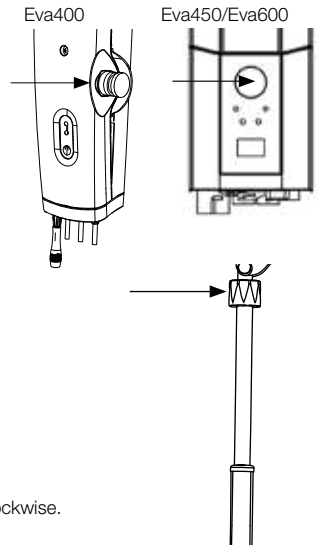
### To activate the emergency stop

Press the red emergency stop button on the control box.

### Resetting

Turn the button in the direction of the arrows until the button pops out.

To prevent battery discharge, we recommend that the emergency-stop button is pressed in when the lift is not in use.



## Emergency lowering

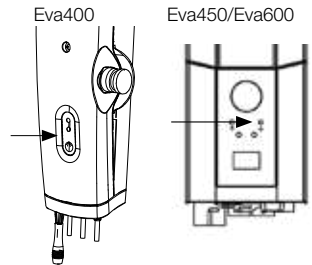
### Manual emergency lowering

For manual emergency lowering, turn the round plastic knob on the actuator clockwise.

### Electrical emergency lowering

For electrical emergency lowering, use the down button on the control box.

Use a narrow object such as a pen.



## Brakes

### Locking the wheels

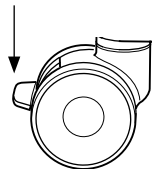
Lock the rear wheels by pressing down on the brake pedals on both rear wheels with your foot.

Wheels should not be locked during lifting, so that the lift can align itself with the user's centre of gravity.

The only time the wheels should be locked is during lifting from the floor; otherwise, there is a risk of the lift rolling and colliding with the user's head.



Locked wheels during lifting increase the risk of the lift tipping.



### Unlocking the wheels

To release the wheel brakes, lift the brake pedals upwards with your foot.



## Trouble shooting

### **If the lift or base-width adjustment cannot be activated, check the following:**

- That the emergency stop button is not pressed in.
- That all cables are properly and securely connected. Pull out the contact and plug it in again firmly.
- That battery charging is not in progress.
- That the battery is charged.

If the lift is not working properly, contact your dealer.

### **If the lift makes unusual noises:**

- Try to determine the source of the sound. Take the lift out of operation and contact your dealer.

# Accessories

## Lifting slings

Handicare's SystemRoMedic™ line includes a wide range of functional and comfortable, high-quality lifting slings that are adapted for all types of lifting and for users with different needs. The lifting slings are available in several materials and in sizes ranging from XXS to XXL. There are also special lifting sling models in XXXL and XXXXL for extremely large and heavy users. All models are safe and very easy to use.

## Sling bars

SlingBar is a two-point aluminium sling bar available in four variants with different width. All variants of SlingBar have safety latches which prevent the sling straps from creeping out of the sling bar and all variants are for users weighing up to 300 kg/660 lbs.

To get more room in a lifting sling when using SlingBar two-point sling bar, SlingBarSpreader M side bars can be used as an accessory. SlingBarSpreader M open up the lifting sling and provide for a more reclined position.

SlingBar XS article no.: 70200071

SlingBar S article no.: 70200001

SlingBar M article no.: 70200002

SlingBar L article no.: 70200003

SlingBarSpreader M article no.: 70200042

StretcherBar, article no.: 70200006, and StretcherSling, article no.: 46502007, for lifting in a supine position.

Sling bar RFL X4, Article no.: 70200017, is a four-point sling bar designed to provide more space in the sling, for example, for obese and/or pain-sensitive users.

SwiftHook for sling bar article no.: 70200008



## Hand control

Hand control HB33-6, article no.: 70200089, with service, battery status and overload indicator.

## Scales

Charder MHS2500 is used together with a stationary or mobile lift for weighing of users.

Article no.: 70100002, SWL: 300kg/660lbs

Article no.: 70200003, SWL: 400kg/880lbs



## Assistive devices for positioning

Handicare's SystemRoMedic™ range includes a wide selection of functional, comfortable, high-quality assistive devices for positioning that can be adapted for different types of lifting and for users with different needs.

# Maintenance

The lift must undergo thorough inspection at least once per year. Inspection must be performed by authorized personnel and in accordance with Handicare's service manual.

Repairs and maintenance may only be done by authorized personnel using original spare parts.



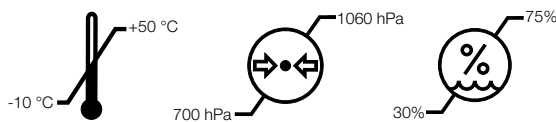
Used batteries are to be left at the nearest recycling station. Used batteries can also be returned to Handicare or a Handicare dealer for recycling.

## Cleaning/disinfection

If necessary, clean the lift with warm water or a soap solution and check that the castors are free from dirt and hair. Do not use cleaning agents containing phenol or chlorine, as this could damage the aluminium and the plastic materials. If disinfection is needed, 70 % ethanol, 45 % isopropanol or similar should be used.

## Storage and transportation







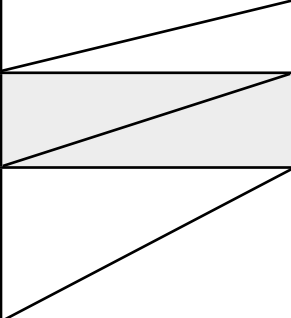



If the lift is not to be used for some time or e.g., during transport, we recommend that the emergency stop button be pressed in. The lift should be transported and stored in -10 ° C to + 50 ° C and in normal humidity, 30% -75 %. The air pressure should be between 700 and 1060 hPa. Let the lift reach room temperature before the batteries are charged or the lift is used.



## Service agreements

Handicare offers the possibility of service agreements for maintenance and regular testing of your mobile lift. Contact your local Handicare representative.

## Symbols

	Eva400	Eva450/Eva600
	Read user manual	
	May not be discarded in domestic waste	
	The product complies with the requirements of the Medical Devices Directive 93/42/EEC.	
	Type B, according to the degree of protection against electric shock.	
	The device is intended for indoor use.	
		Class II equipment
		Conforms to ISO 10535:2006 with ANSI/AAMI ES 60601-1:2005 and is certified to ISO 10535:2006 with CSA-C22.2 No. 60601-1:08
		This product is tested and approved in regards to safety in the workplace according to the requirements of the US Occupational Safety & Health Administration. "US" stands for compliance with the requirements of US authorities, "C" for compliance with Canadian requirements.
		Always read the user manual

## EMC

This equipment/system is intended for use by healthcare professionals only. This equipment/system may cause radio interference or may disrupt the operation of nearby equipment. It may be necessary to take mitigation measures, such as reorienting or relocating the equipment/system or shielding the location.

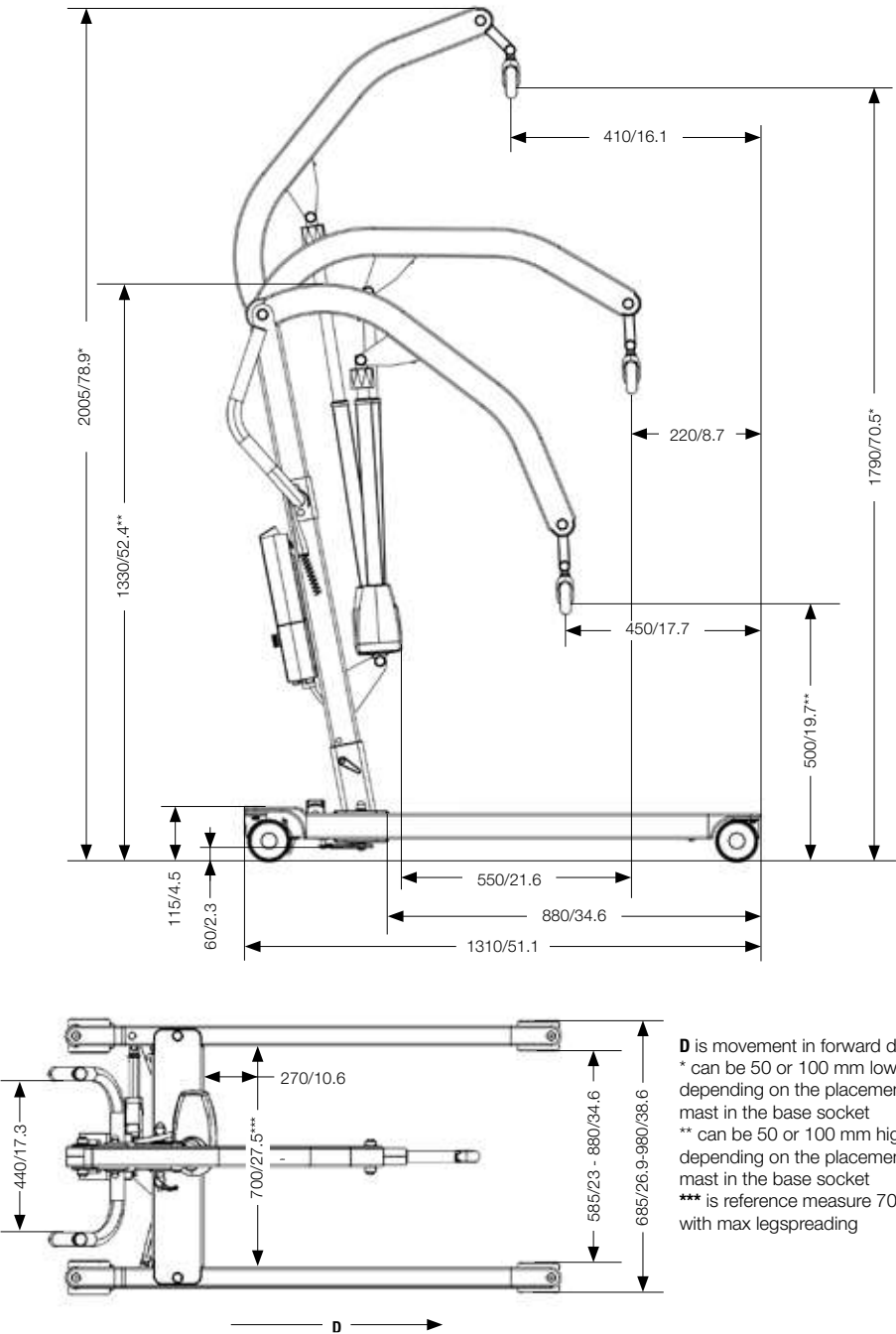
## Technical Information

	Eva400	Eva450	Eva600
Lifting speed	34 mm/s without load.		
Batteries	Two 12V, 2.9 Ah valve-regulated, sealed, lead accumulator (gel-type batteries)		
Internal charger	External: Linak CH01 (9000368) Mains voltage 100-240VAC (50/60 Hz). Max. 400mA	Internal: Included cable. Max. 400mA	
Motor (mast)	DC 24V, 5 A. IP X4. Operationtime: 10% at maximum continous running of 2 minutes, maximum 5 switching cycles per minute. Push: 6000N.	DC 24 V, 10 A. IP X4. Operationtime: 10% at maximum continous operation of 2 minutes, maximum 5.5 cycles per minute. Push: 10 000N.	
Motor (base)	24V, 5 A, IP X4. Operationtime: 10% at maximum continous operation of 2 minutes, maximum 5 cycles per minute. Push: 3000N.	24 V, 3 A, IP X4. Operationtime: 10% at maximum continous operation of 2 minutes, maximum 5.5 cycles per minute. Push: 3000N.	
Sound level	With load: upwards: 43 dB(A) downwards: 44 dB(A).	With load: upwards: 74.7 dB(A) downwards: 52.6 dB(A).	
Material	Aluminum		
Emergency lowering	Manual and electrical		
Castors	Front 4", 100 mm, back 4", 100mm		
Weight	75 lbs, 34 kg		86 lbs, 39 kg
IP class	IP X4		
Expected lifetime	10 years		
Operating forces buttons on hand control	4 N		
Turning diameter	1340 mm/ 54 inch		
Max. load	400 lbs, 180 kg	450 lbs, 205 kg	600 lbs, 270 kg

Medical Device Class I. The product complies with the requirements of the Medical Devices Directive 93/42/EEC.

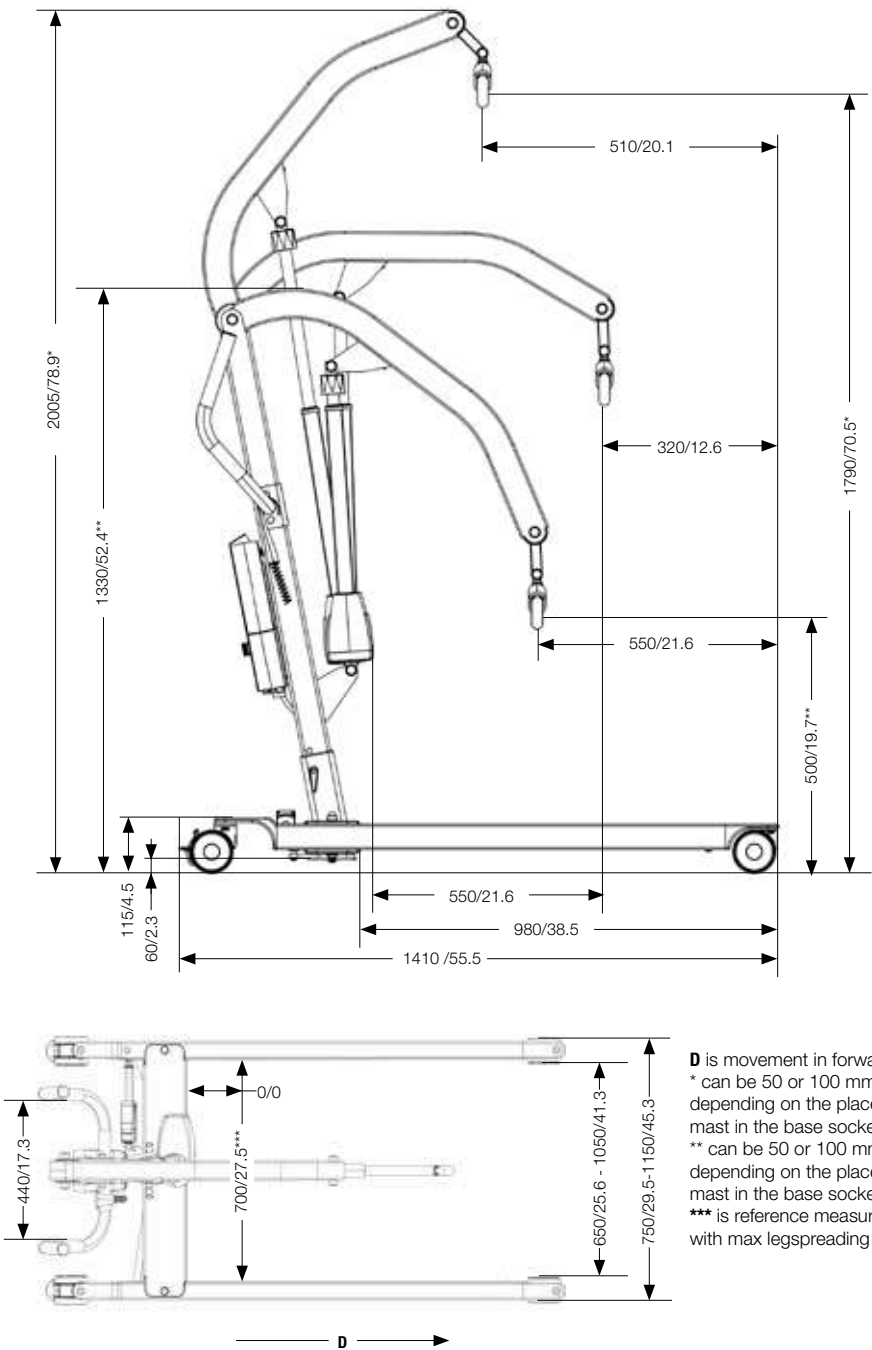
Dimensions Eva400/450

All dimensions are in mm/inch  
Tolerance +/- 5 mm/ 0.2"



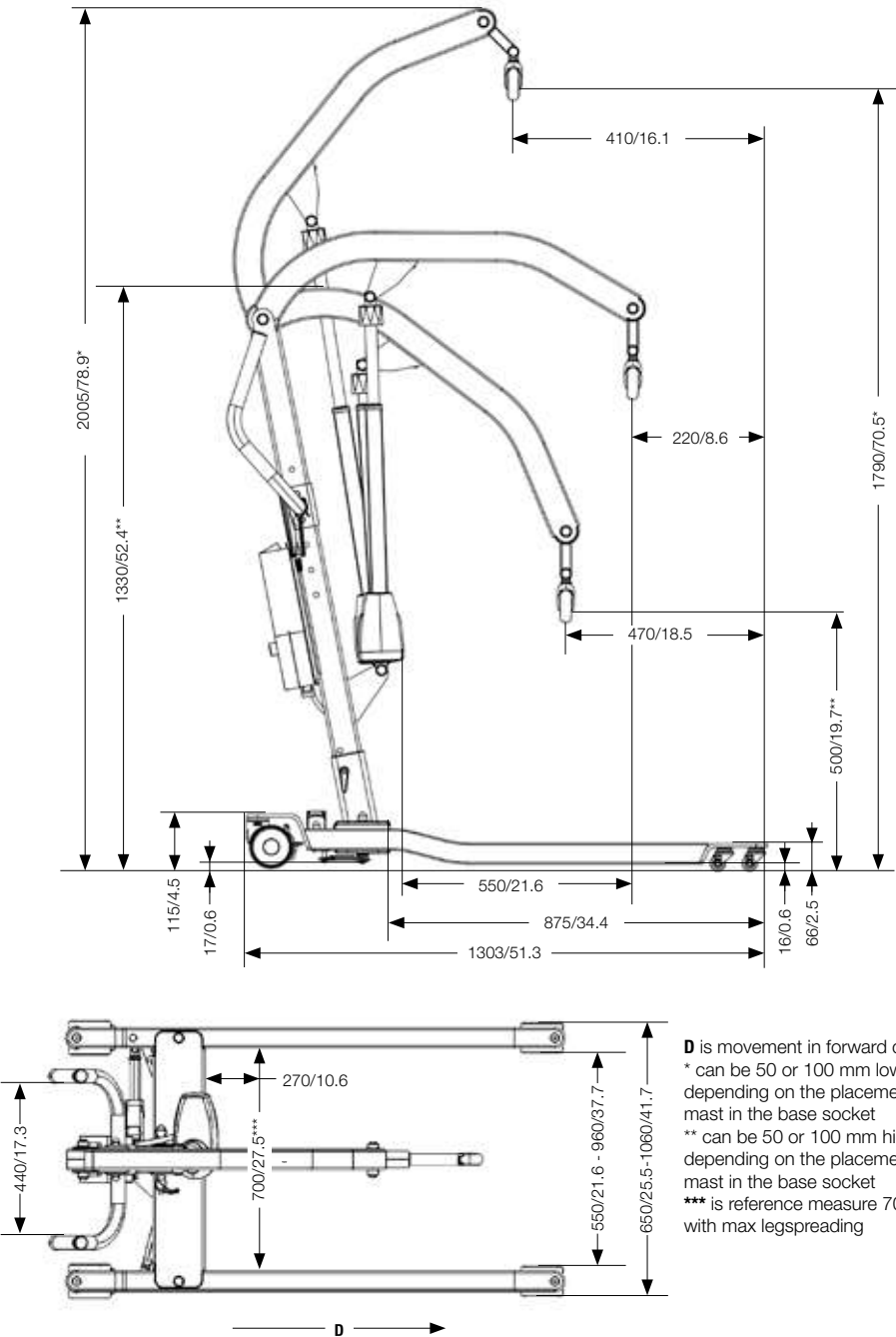
Dimensions Eva600

All dimensions are in mm/inch  
Tolerance +/- 5 mm/ 0.2"



Dimensions Eva450 Low legs

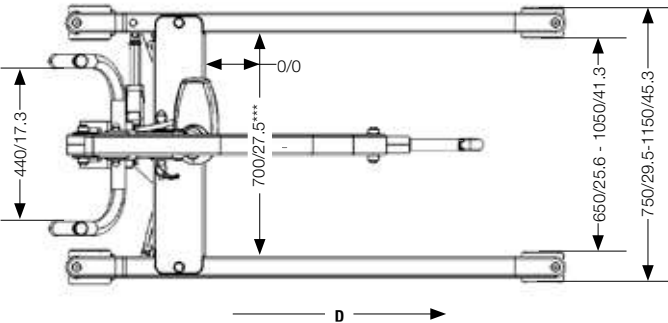
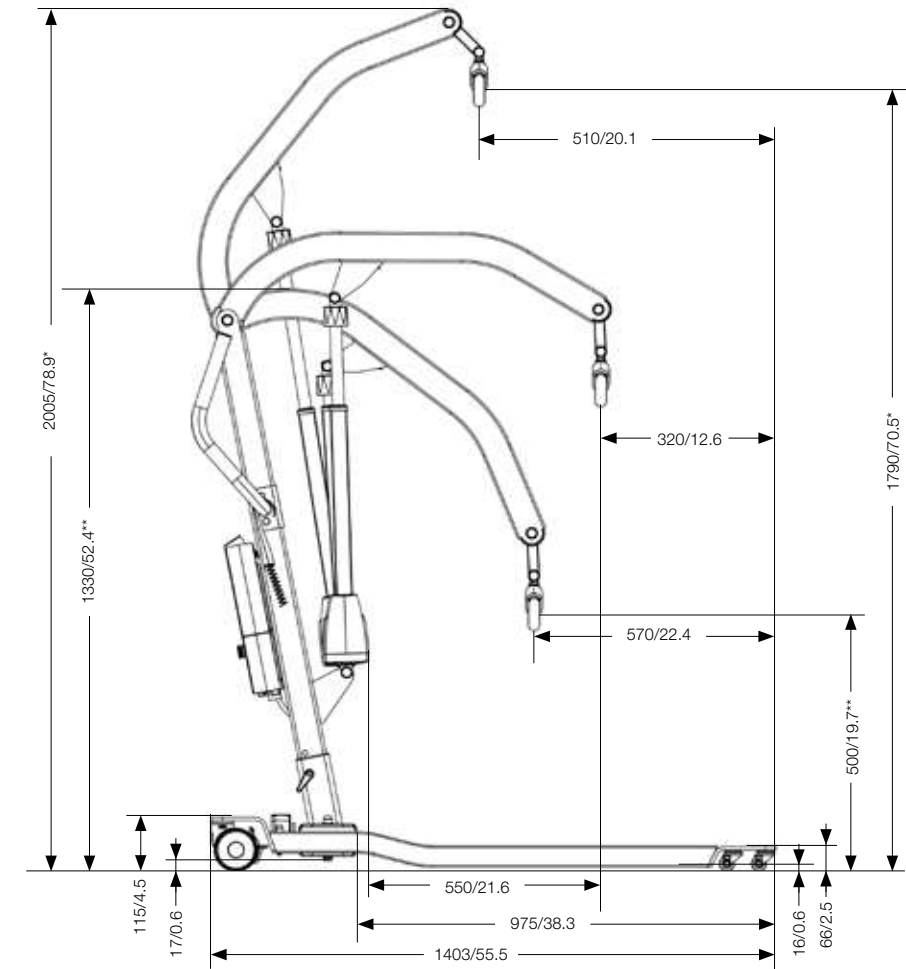
All dimensions are in mm/inch  
Tolerance +/- 5 mm/ 0.2"





Dimensions Eva600 Low legs

All dimensions are in mm/inch  
Tolerance +/- 5 mm/ 0.2"



D is movement in forward direction  
\* can be 50 or 100 mm lower depending on the placement of the mast in the base socket  
\*\* can be 50 or 100 mm higher depending on the placement of the mast in the base socket  
\*\*\* is reference measure 700 mm with max legspreading

## Serial number



# SystemRoMedic™

## Simple solutions for great results

SystemRoMedic™ is the name of Handicare's unique easy transfer concept, the market's widest and most comprehensive range of clever, easy-to-use and safe transfer and lifting aids designed to make life easier, both for the user and for the caregiver. SystemRoMedic™ is a complete solution that provides for the majority of patient transfer or manual handling requirements. From the simplest to the most complex scenarios, from the lightest to the heaviest. The concept encompasses assistive devices for four different categories of transfers:

- Transfer, assistive devices for manual transfers of users between two locations.
- Positioning, assistive devices for manual repositioning of users within the same location.
- Support, assistive devices for mobility support e.g., during sit-to-stand or gait training.
- Lifting, assistive devices for manual and mechanical lifting of users.

## Improved work environment, improved quality of care and cost savings

The philosophy behind SystemRoMedic™ is focused on the prevention and reduction of occupational injuries while allowing users to experience a greater sense of independence and dignity. Through a unique combination of training and a complete range of efficient transfer aids, SystemRoMedic™ offers improvement of both work environment and quality of care and, at the same time, achieves significant cost savings.

## Always make sure that you have the correct version of the manual

The most recent version of all manuals are available for downloading from our website; [www.handicare.com](http://www.handicare.com).

## For questions about the product and its use

Please contact your local Handicare and SystemRoMedic™ representative. A complete list of all our partners with their contact details can be found on our website; [www.handicare.com](http://www.handicare.com).

***Handicare offers solutions and support to increase the independence of disabled or elderly people as well as to improve the convenience of those who are caring for them.***

*The Handicare Group is one of the leading healthcare companies in Europe with its own manufacturing organizations and sales companies in Norway, Sweden, Denmark, Germany, the Netherlands, Great Britain, France, China, Canada and the USA. Handicare's products are also distributed by partners in more than 40 countries worldwide. Our wide range of high-quality products includes a complete easy transfer system and other patient handling aids, stairlifts, car adaptations and bathing and toileting products.*



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