

# U S E R M A N U A L

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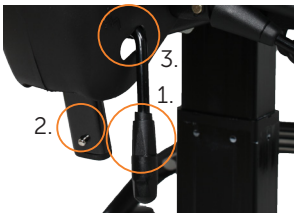
## DISPOSAL

This product contains recyclable materials such as plastic, metal, and electrical and electronic equipment, etc. As a result, product disposal must be carried out in compliance with local legislation and separately from regular household waste. Correct disposal and recycling contribute to preventing the product from having a negative impact on the environment and people.

**Note!** Electrical and electronic equipment and batteries are labelled using the icon below. This identifies equipment that contains materials, components, and substances that can be harmful to human health and the environment if disposed of incorrectly and therefore must be collected separately.



It is important that you hand in used batteries to established institutions. This ensures that batteries are reused in compliance with current legislation and do not cause the environment unnecessary strain.



## ATTACHING THE BACKREST

The lever (1) for backrest adjustment must be in open position. Press the locking pin spring and push the backrest arm through the protective cap (2) and through the hole. Tighten the lever afterwards. The lever for backrest adjustment should be pulled through the protective cap (3) as shown!

**Note:** The backrest arm must be pushed through completely so the pin spring locks the backrest arm. Make sure it cannot be pulled out again.

## **CONGRATULATIONS ON YOUR VELA BLUES 100**

Your new VELA Blues 100 powerchair is designed to make your life easier. We have developed an extremely compact powerchair for indoor use. VELA Blues 100 is designed for simple and logical operation indoors.

When you move about indoors, you will appreciate being able to raise the seat to reach across a table or take something down from a shelf. The seat lift is operated from the powerchair's control box or – depending on the individual construction of the chair – from a separate tilt switch.

We hope that you are happy with your VELA Blues 100. By taking a few minutes to read this manual, you will quickly gain an overview of the construction and possibilities of the VELA Blues 100.

### **IMPORTANT: THE POWERCHAIR MUST CHARGE 12 HOURS BEFORE USE.**

This user manual covers useful information on set-up, operation, maintenance, technical data etc. Please read this manual carefully and keep it for later reference. It must always be available to the user. This user manual must always be kept on the chair.

The manual is also available on VELA's website: [www.vela.eu](http://www.vela.eu)

If you have any questions, please contact our customer service department: VELA, Goeteborgvej 12, 9200 Aalborg, Denmark. Tel. +45 9634 7600.

**SAFETY** This chair carries the CE mark, and complies with all current EU regulations.

### **GUARANTEE AND SERVICE**

Your VELA Blues 100 is covered by VELA's 12-month right of return for any problems that can be attributed to material or fabrication defects. The guarantee does not cover parts that suffer wear, such as tyres, batteries, seat cover etc. VELA provides service on weekdays.

Enjoy your VELA Blues 100.

Vermund Larsen A/S

**VELA**

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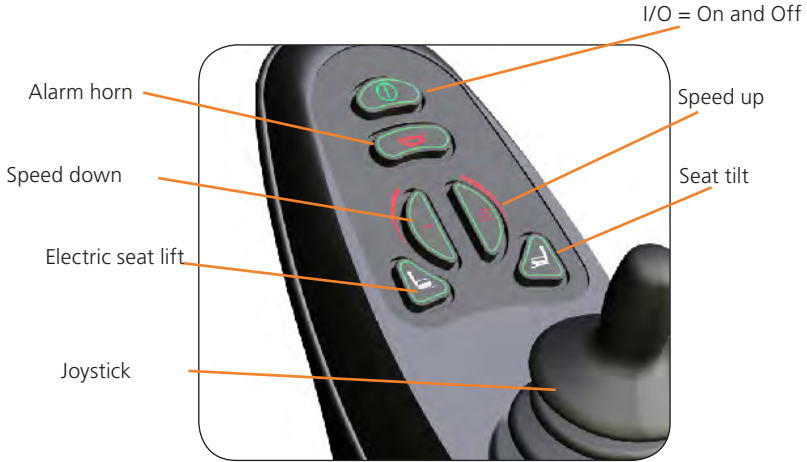
**VELA reserves the right make changes to this document.**

## 1.0. OPERATION

This powerchair is a class A (EN 12184) electric wheelchair. The first attempts to operate the chair should be made in an area with plenty of floor space.


Choose a low operating speed (press the "down button" a few times) until you have become accustomed to the chair.

### JOYSTICK



### 1.1. BEFORE OPERATION

Before starting the powerchair, you should check the following:

- The footrest is in place and both feet are placed properly on the footplate.
- The electric lift (seat lift) is in the lowest position.
- The electric tilt (seat tilt) is in neutral position.
- Both motors are connected. The arrow points to: 
- The powerchair is turned on by pressing the I/O button.



### ENTERING AND EXITING

Always turn off the power before entering or exiting the chair (the I/O button).

### FOOTRESTS

Any footrests should be swivelled to the side or the footplate should be folded up before exiting the chair.

Warning! Do not stand on the footplate or footrests – the chair can tip and you may lose your balance.

## 1.2. OPERATION

### VR2 CONTROL BOX

VELA Blues 100 will normally be equipped with a VR2 control box. The powerchair is turned on and off with the I/O button. To operate a function, press the left button = electric seat lift. To operate a function, push the joystick forwards (up) or backwards (down).

The 'speed up' button increases operating speed: Press the button repeatedly and you will see the indicator light move up.

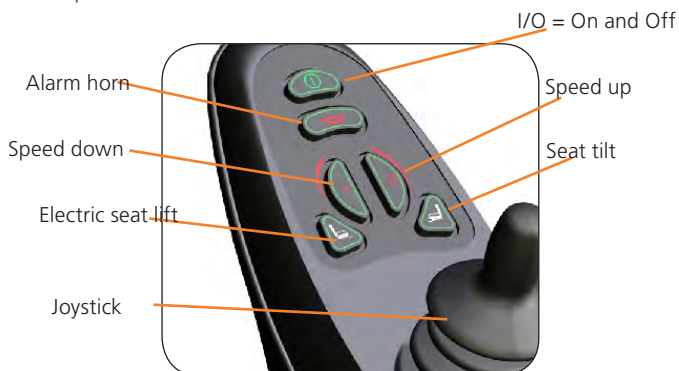
The 'speed down' button reduces operating speed: Press the button repeatedly and you will see the indicator light move down. Two of the powerchair's functions are controlled from the control box (normally lift and tilt). Choose one of the functions by pressing the function button, pushing the joystick forwards to move forwards or backwards to move backwards. (It is possible to change between the two functions by moving the joystick to the side). The control box has a signal horn.

### STEERING WITH THE JOYSTICK

Move the joystick in the direction you want the chair to move. Acceleration and speed are controlled by moving the joystick: Large movement = fast acceleration and high speed. Small movement = slow acceleration and low speed.

It is not possible for the user to reprogram the control box.

**Warning!** Do not subject the joystick and control box to vertical pressure and do not push hard on the joystick as this can damage parts in the box!



## CONTROLLING THE POWERCHAIR

Pushing the joystick forwards, activates both wheels synchronously and the chair moves forwards. Pushing the joystick backwards, activates both wheels synchronously and the chair moves in the opposite direction. If the joystick is pushed diagonally in one direction, the speed is distributed between the two wheels asynchronously (and in some cases in separate directions). This will cause the chair to move on a path in the right direction.

**NOTE!** When changing directions, the chair's swivel wheels should change position: they will swing on the axle of the front fork until the wheels are pointing in the direction you wish to go. When the powerchair is standing still before changing direction in this way, a large amount of motor power is needed to drive the wheels. This power can cause a jolt to the front end (leg supports) or back end (if the chair is front-wheel drive) of the chair. The effects of this jolt can be minimised by increasing power gradually and moderately (small movements of the joystick).

**Warning!** Despite an approved EMC test, we make no guarantee that the powerchair is not affected by electromagnetic fields from e.g. mobile phones and radio transmitters, or that the powerchair does not transmit electromagnetic fields that can affect its surroundings, such as e.g. shop security systems.

## NEGOTIATING OBSTACLES

The VELA Blues 100 can handle a difference in surface level of up to 3.5 cm, which makes it possible to cross e.g. doorsteps and many types of ramps. Always drive as straight as possible when negotiating such obstacles. For abrupt changes in level, it helps to increase the length and speed of your approach.

**Warning!** The electric seat lift must be lowered to the lowest position before negotiating obstacles as a raised seat reduces stability and can cause the chair to tip over!

## NEGOTIATING SLOPING SURFACES

The powerchair has enough traction to negotiate standard household ramps. (Max. gradient with load of 75 kg: 12°). When moving down ramps, the chair must always move perpendicular to the sloping surface and at a slow speed.

**Warning!** The electric seat lift must always be lowered to the lowest position before negotiating sloping surfaces as a raised seat reduces stability and can cause the chair to tip over!

**Warning!** The chair must never be driven diagonally or sideways across a sloping surface as this can cause the chair to tip over!

## BRAKING

To stop the powerchair, return the joystick to the central position or let go of it.

The VELA Blues 100 is equipped with an electric brake that is activated automatically moments after the drive motors stop. This brake ensures that the chair is fully locked when entering and exiting, parking on ramps etc.




## EMERGENCY BRAKE

The powerchair can be stopped immediately by turning it off:  
Press the I/O button.

**Warning!** When the powerchair is turned off, the electric brake is activated immediately. This will cause a very sudden stop. The chair must therefore only in emergencies be turned off while it is still moving. There is a risk of the user falling out of the chair and/or of the chair tipping over!

## RELEASE


Should it be necessary to manoeuvre the chair manually, the electric brake and motor can be released by turning the two handles located on top of the motor blocks clockwise to .




HALTED



RELEASED

**Note!** It is not possible to operate the VELA Blues 100 powerchair electrically when the release function is in use. Turn the two handles back to  immediately after manoeuvring the chair.

**Warning!** Do not attempt to manoeuvre the chair manually when the motor is still in gear, when the chair is on a sloping surface, on a landing or in a similar situation where the chair might start rolling or lose control. 

## STANDING STILL AND PARKING

Always use the I/O button to turn the powerchair off as soon as you no longer want to drive it.

**NOTE!** When the chair is turned on, power is consumed from the batteries. It is therefore a good idea to turn off the chair when it is parked.

## 2.0. SAFETY POINTS

For your safety, the following should always be observed:

- The VELA Blues 100 is for indoor use only. It should only be operated on level surfaces in places where the user feels confident.
- Always turn the VELA Blues 100 off before entering or exiting the chair, as moving the joystick inadvertently can cause the chair to move.
- Never stand on the footplates when entering or exiting the chair as this can cause the chair to tip over.
- Always lower the electric seat lift to the lowest position before negotiating obstacles and before moving at high speeds.
- Always lower the electric seat lift to the lowest position before negotiating sloping surfaces.
- Never drive sideways or diagonally on a sloping surface as this can cause the chair to tip over.
- The chair must never be subjected to rain or extreme moisture as moisture can damage the electronics.
- Never cover the battery charging unit during recharging as it produces heat. The battery charging unit must be placed on a firm, well-ventilated surface.
- Electric wheelchairs must not be charged in a wet or damp environment.
- When moving backwards and when operating the electric functions, make sure that other people are well out of the way.
- The wheelchair can be configured for use as a passenger seat during transport, but only as a specially configured version (see item 7 re. transport)

**Warning!** The VELA Blues 100 is not approved as a passenger seat for use in cars, buses or trains. The chair is not designed to be lifted during transport.



### 3.0. SET-UP

#### ASSISTANCE WHEN EXITING THE CHAIR

The electric seat lift can help in connection with entering and exiting the chair.

For instance, the electric seat lift can be placed in the highest position before sliding out over the front edge of the seat with legs as stretched out as possible.

The reverse procedure can be followed when entering the chair.

The self-locking conical guideways in the armrest bars ensure that the armrests cannot be pushed down unintentionally.

Thus, it is safe to use the armrests as support when entering and exiting the chair.

#### SITTING POSITIONS

A correct sitting position is achieved when the chair back is placed with approx. three fingers of space between the front edge of the seat and the hollows of the knees. The chair back can be moved (using tools) forwards and backwards above the seat to adjust for seat depth. The armrests are in the correct position when the user is sitting up straight with elbows in to the body and arms resting comfortably without lifting the shoulder blades.

#### ARMREST ADJUSTMENT

The height of the armrests can be adjusted by loosening the hand screw in the armrest bar.

The distance between the armrest can be adjusted by loosening the hand screw under the seat.

Remember to tighten the hand screws again.

#### SEAT LIFT

The VELA Blues 100 has, as standard equipment, a seat lift. It is operated by pressing the bottom left function button.

To raise the seat, press the left function button while pushing the joystick forwards.

To lower the seat, press the left function button while pushing the joystick backwards.



## FOOTRESTS

### E-FOOTRESTS, STANDARD

The VELA Blues 100 has, as standard equipment, e-footrests. The VELA Blues 100 can also be equipped with a set of adjustable footrests attached to the seat frame. The footrest can be moved out of the way when entering and exiting the chair by lifting the bar approx. 3 cm up and swinging the footrest around the side at the same time. The depth of the footrest can be adjusted using the tool for adjusting the sliding bar in the seat frame either forwards or backwards. The footrest can be adjusted to suit leg length by regulating the length bar in its hollow tube. The foot angle can be adjusted using the tool in the swivel part of the footplate.

### HEEL STOPS

It is possible to fit heel stops to the footrests.

### FOLDING S-FOOTREST WITH PLATE (OPTIONAL)

The footplate saves space and follows the height of the seat when the electric seat lift function is used. The length of the footrest is regulated by loosening the six-sided bolt on the bar down by the footplate. The desired position for the footplate is selected and the six-sided bolt is tightened again. The s-footplate can be folded up when entering and exiting the chair.

### ADJUSTMENT OF CHAIR BACK/SEAT DEPTH

The chair back is released by loosening the fastener on the chair back bar located in the back under the seat (A). The chair back is placed in the desired position and then tightened again. The chair back bar is equipped with a pull stop to ensure that the chair back bar is correctly anchored in the chair back holder. Destruction of the pull stop and extreme pressure on the chair back bar can cause damage to the chair back holder. The back angle is adjusted by pulling the lever (B), and locking simply by removing your grip on the lever.

### HIP STRAP

It is also possible to fit a hip strap.

### PLACEMENT OF CONTROL BOX

#### PARALLEL FITTINGS

The control box is mounted on either the right or the left side according to customer specifications. The VELA Blues 100 is delivered with parallel fittings as standard, making it possible to slide the control box along the armrest so that the chair can e.g. come all the way up to a table. Be careful with your fingers when sliding the control box back/forward using the parallel fitting.



## 4.0. BATTERIES AND CHARGING

### BATTERIES

The VELA Blues 100 is equipped with two 12V-24 Ah maintenance-free and vapour-free batteries. Good quality new batteries provide the equivalent of three hours of continuous operation. Experience shows that this covers the daily needs of most users. The batteries are dimensioned to be fully run down 200 times. Their lifetime will be extended significantly if they are only partially run down before charging. Defective batteries must be replaced with batteries of the same type. We recommend that battery replacement be carried out by a service technician.

**NOTE!** When installing batteries, extreme care must be taken to connect + / - correctly. Red wire to the + pole. Incorrect connection can damage the powerchair's electronics.

**NOTE!** Batteries must not be disposed of with ordinary household rubbish. Used batteries and other electrical equipment must be deposited at an approved recycling centre according to the marking on the product.

### BATTERY CHARGE INDICATOR

The control box has a built in battery indicator. For fully-charged batteries, three groups of coloured LEDs light up. During use, the voltage in the batteries falls and the row of lights decreases: one at a time each light goes off.

- Green signal = DRIVE
- Yellow signal = Recharging needed soon
- Red signal = Recharging needed immediately

The battery indicator will flash to call attention to low battery power.

### BATTERY CHARGING UNIT

Batteries are charged using the accompanying charging unit. The charging time is approx. 8 hours, depending on the condition of the battery. It is recommended that the batteries be charged every night. The charging unit is fully automatic and controls the power and voltage during the charging. When the batteries are fully charged, power consumption will be minimal, so you can safely continue to allow the charging unit to be connected until the next time you use your VELA Blues 100.





## WHAT TO DO

1. Park the chair and turn off the power (press the I/O button).
2. Plug the charging unit into the socket on the front of the underside of the control box. **NOTE!** The chair cannot be turned on when the charging unit is connected.
3. Plug the charging unit to the mains power (230 V) and turn it on. The yellow light on the front panel of the charger shows that the batteries are being charged.
4. When the batteries are fully charged, the “completed” light on the front panel of the charger will be green.

**NOTE!** For extended periods of disuse (days/weeks/months) the battery charger should be connected to ensure optimum power when your VELA Blues 100 is used again.

**NOTE!** In some cases, batteries that have been run down too far (flat) cannot be recharged by the charging unit. This is for your own safety, because dangerous vapours can develop when flat batteries are recharged. Call your VELA service technician.

## 5.0. MAINTENANCE AND TROUBLESHOOTING CLEANING

Wipe/wash the wheels as needed using mild soap and water. Wipe the protective motor cover with a soft cloth. Do not use abrasive sponges or brushes.

Clean the seat and back with a vacuum cleaner or a brush. The fabric is a standard polyester type, which has been chosen for optimum comfort. It is not recommended that the seat cover be washed as it may shrink. Dry-cleaning recommended.

The control box can be cleaned with a damp cloth and a little washing-up liquid if necessary. The armrests can be wiped off with a damp cloth and warm soapy water if necessary.

## MAINTENANCE

Daily maintenance can be carried out by the user. Repairs and servicing must be carried out by trained service staff or by VELA's service technicians. It is recommended that the powerchair is serviced once a year by VELA's service technicians when all moving parts will be lubricated and checked for wear.

PART	MAINTENANCE CARRIED OUT BY	MAINTENANCE	INTERVAL
WHEELS	User	<p>Check that the tyres are not worn and that stones or other objects are not sitting in the tread.</p> <p>If the wheels are pneumatic, check the air pressure, which must be between 2.20-3.5 Kilo Pascal.</p> <p>The wheel can be inflated with either a car pump or at a service station.</p>	Once a month, depending on use
CHANGING WHEELS	VELA	Contact VELA	
CONTROL BOX	User	<p>The control box and the rubber seal around the joystick must always be kept clean. Once a week, you should check that the joystick returns to its original position and that the rubber seal has not been damaged. If this is not the case, contact VELA.</p>	Once a week
TESTING CONTROL BOX FUNCTIONS	User	<ol style="list-style-type: none"> <li>1. Check the on-off switch.</li> <li>2. Check the horn.</li> <li>3. Check the speed – try accelerating and decelerating.</li> <li>4. Check the seat lift – raise and lower the seat to its full extent.</li> <li>5. Check the seat tilt – tilt the seat all the way backwards and all the way forwards.</li> </ol> <p>If any of the functions do not work or if anything feels different to normal, contact VELA.</p>	Once a month
BATTERIES	VELA	<p>Batteries must be replaced by VELA.</p> <p>If the batteries are leaking, avoid touching them as the contents are corrosive.</p>	In the event of flat or defective batteries
ACCESSORIES	User	<p>All accessories such as footrests, armrests and body supports must be adjusted using the tools supplied.</p>	Once a month

## TROUBLESHOOTING

If your VELA Blues 100 should stop working, check the following first:



### CHAIR DOES NOT START

Speed indicator is blinking: Check that both connection handles above the motor are set at 

### CHAIR LOSES POWER

- Check that the charging unit is connected correctly.
- Check that the charging functions normally (read LED lights on front panel of charger).
- Call a service technician to have the condition/age of batteries checked.
- Call a service technician to have the wiring to batteries checked.

## 6.0. TECHNICAL DATA

### CHAIR IDENTIFICATION NUMBER

The serial number is found on the chassis between the swivel wheels.

### DRIVE MOTORS

- Electronic disc brakes.

### BATTERIES

Two 12V-24Ah vapour-tight and maintenance-free powerchair batteries.

Dimensions: 126 x 167 x 176mm

Charging time approx. 8 hours with the battery charging unit.

### ELECTRONICS

Power network: 24VDC analogue wiring

Electric seat lift: Aktuator VELA MBL

## TECHNICAL DATA

	<b>VELA Blues 100</b>
<b>Drive motors</b>	2 x 24V
<b>Locking brake</b>	24V DC Electromagnetic
<b>Batteries</b>	2 x 24 Ah
<b>Electronics</b>	VR2 Force to manage the joystick Forward/backward: 1.3 Nm Sideways: 1.0 Nm Effect box: PG VR2 60A-2akt.
<b>Charger</b>	8Ah 230V AC / 24V DC
<b>Drive wheels</b>	200 x 50 mm solid
<b>Swivel wheels, front</b>	175 x 40 mm solid
<b>Seat size</b>	35 x 45 cm, 40 x 50 cm, 44 x 44 cm, 45 x 50 cm, 47 x 49 cm, 50 x 50 cm
<b>Sitting height</b>	50-70 cm
<b>Seat height front edge, no-load</b>	50 cm
<b>Height without seat</b>	40 cm
<b>Back size</b>	37 x 30 cm, 43 x 45 cm, 35 x 38/43 cm, 40 x 50/60 cm, 45 x 50/60 cm, 50 x 50/60 cm
<b>Back tilt, manual</b>	-15° /+12°
<b>Back tilt, electric</b>	20° (95°-115°)
<b>Clearance</b>	3,5 cm
<b>Frame, width</b>	56 cm
<b>Max. load</b>	110 kg
<b>Weight</b>	65 kg
<b>Max. speed</b>	4.3 km/h
<b>Range</b>	19 km
<b>Max. gradient</b>	12°
<b>Obstacles, max.</b>	3.5 cm
<b>Turning radius</b>	65 cm
<b>Turning width</b>	100 cm

## 7.0. TRANSPORT

### LASHING RING (OPTIONAL)

The chair can be fitted with a lashing ring which is used if the chair is to be transported by car, bus or train. The lashing rings can only be mounted if the chair is configured with a C-profile seat frame. (Contact VELA for further information)

### PASSENGER SEAT (OPTIONAL)

VELA Blues 100 can be configured for use as the passenger seat of a car. The chair must be constructed as below, and the work must be carried out by a VELA technician or suitably trained personnel.

### CONFIGURATAION FOR USE AS A PASSENGER SEAT

For the VELA Blues 100 – 200 – 300 to be used as the passenger seat in a car, the chair must be configured as shown below: (in case of doubt please contact VELA)

- SW seat and back system (width 40 – 45 – 50 cm)
- WB headrest
- Folding or fixed armrest
- Electric or manual chair back
- Electrically operated leg support or E-leg support + swivel footrest

### POSITIONING THE 3-POINT SEAT BELT ON THE USER

IMPORTANT: The 3-point seat belt must not be tightened across sharp edges.

The drawing illustrates the incorrect positioning of a 3-point seat belt. The seatbelts must not be held away from the body by parts of the wheelchair, such as armrests, wheels, etc.



### THESE TWO DRAWINGS ILLUSTRATE THE CORRECT POSITIONING OF A 3-POINT SEATBELT

The seatbelt must have full contact with the shoulder, chest and hips. The lap belt must be positioned as close as possible to the hips.

