

LIFT TROLLEY

- User Manual



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LIFT TROLLEY

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1 Important Information

Before you start using your EdmoLift product, it is important for you to read and understand the contents of this user manual in its entirety.

The user manual contains important safety and maintenance information, and describes potential problems that may arise during use. The user manual is also intended to teach you about the product's functions and properties and how best to use it.

Print out the user manual and then always keep it with the product, as you may need important information regarding the product's use, safety and maintenance. It is also possible to obtain information at www.edmolift.com.

All information, images, illustrations and specifications are based on the product information that was available at the time when this user manual was published. Images and illustrations found in the user manual are typical examples, and they are not intended to be exact representations of various parts of the product. We reserve the right to make changes to the product without prior notice.

1.1 Technical Support

If you need support or service, please contact your EdmoLift sales representative. Always state the serial number and machine type according to the machine label; see section [9.5 Machine Label](#), page 42.

1.2 Spare Parts and Accessories

EdmoLift lift trolleys can be equipped with various accessories, such as additional control units and limit switches that are connected via the connection box on the hydraulic power unit.

Visit www.edmolift.com/installation for more information, and then contact your EdmoLift sales representative.

1.2.1 General

Only EdmoLift original spare parts may be used. The use of other parts will invalidate the product warranty.

EdmoLift keeps all spare parts for standard products in stock. It may sometimes be appropriate to hold some recommended spare parts in your own stock. We can suggest an appropriate stock with respect to your specific conditions.

1.2.2 Ordering

When ordering spare parts, always state the serial number and machine type according to the machine plate. The machine plate is normally located on the crossbeam at the lower arm attachments; see section [9.5 Machine Label](#), page 42.

State the spare part's article number according to the available spare part information at www.edmolift.com/installation and enter the desired quantity. Also state the current operating voltage when it comes to electrical components.

1.3 Recycling

This product is made from recyclable materials or from materials that can be reused. Specialist companies deal with products at the end of their service life, dismantle them and utilise the materials that can be recycled.

When disposing of the product's parts, local environmental legislation must be followed. Waste materials must be taken to the local recycling station and sorted according to local instructions for each type of waste (metal, electronics, batteries, etc.).



Attention

Spilled or waste hydraulic oil is handled as hazardous waste.



Attention

Batteries are handled as hazardous waste.



Attention

Electrical materials and packaging are handled in accordance with local regulations.

Note:

Batteries contain lead and should be disposed of as hazardous waste.



1.4 Warranty

This product comes with a warranty according to the applicable agreement, which is stated on the order specification. The warranty covers material and manufacturing defects that arise during the warranty period in the event of normal use.

For example, the warranty does not cover:

- Normal wear and tear.
- Faults caused by insufficient maintenance.
- Faults caused by incorrect or negligent use.

Note:

The seal on the electrical equipment must not be broken; if this occurs, the warranty will be invalidated.

Warranty repairs must first be approved by EdmoLift AB. Repairs must then be carried out by EdmoLift AB or a contracted partner or in accordance with the agreement made with your EdmoLift sales representative.

1.4.1 Returns

Always contact EdmoLift AB or your EdmoLift sales representative regarding any returns to obtain a return number. The return must be marked with your name, address and telephone number.

Note:

Returns without a return number will be destroyed upon receipt.

Worn, damaged or unusable parts must be returned within 30 days of receipt of the replacement part, if the fault is considered to be covered by the warranty. Do not return parts that have become worn out through normal use or been damaged by accident.

1.5 Product Approval

Products EZ 1001B, EZD 500B and EZL 1000B are different models of lift trolleys. The products are intended to facilitate lifting, assembly and transport, as well as to create an ergonomic working height.

The products meet the requirements according to Standard EN 1570-1.

EdmoLift usually issues an EC declaration of conformity to the Machinery Directive, known as a 2A declaration, for the products, on the basis of EN 1570-1.

In some cases, additions with accessories or assembly to a system will be carried out by a party other than EdmoLift, such as a machine plant or lift builder, or by the customer himself. In such cases, EdmoLift issues what is termed a 2B declaration, *Declaration for the incorporation of partially completed machinery*, in which case the person or company responsible for completion must issue a 2A declaration, *Declaration of Conformity*.

1.6 General Instructions for Machine Owners and Operators

1.6.1 Responsibility of the Machine Owner

- Prevent ill health, accidents and harmful effects.
- Draw up a risk analysis for the entire unit in which the machine is incorporated and take the necessary supplementary measures to achieve satisfactory safety.
- Create safe and healthy working conditions.
- Establish routines for use, service and maintenance.
- Carry out checks, service and repairs.
- Ensure adequate competence.

1.6.2 Basic Requirements for Operators of EdmoLift's Products

- Good vision and hearing
- Sense of responsibility
- Mental balance
- Good judgment

1.6.3 Training

EdmoLift's products may only be used by those who have gained the necessary knowledge about the product's care and operation.

It is therefore essential that you read this user manual before you start using the product and understand its instructions regarding the lift trolley's operation and its associated safety precautions.

Proper use, inspections, maintenance and operation are essential for occupational safety.

Operators of EdmoLift's products are obliged to read the instructions and follow them.



Warning

Avoid dangerous situations! Before use, always check that the lift trolley and its safety features are intact. Inspect the workplace, operate carefully and only use the lift trolley for its intended purpose.

2 Safety Precautions

2.1 General

It is important for you to read and follow the instructions and safety precautions contained in this user manual before you start using the product.

EdmoLift AB is not responsible for personal injury or damage to the product or property that arises as a result of the user or some other person failing to follow the recommendations, warnings and instructions set out in this user manual. EdmoLift AB is not responsible for accidents or injuries as a result of someone failing to demonstrate good judgment.

2.2 Pay Attention!

The user manual contains the following “warning markings”, which are intended to alert you to situations that could lead to unwanted problems, incidents, personal injuries or damage to the product, etc.



Warning

Pay extra attention. Risk of personal injury as well as damage to the product and its surroundings.



Attention

Pay attention.

2.3 Applications



Warning

It is not permitted to use this product for applications or load cases other than those described in this user manual, and any such use will invalidate the product warranty.

2.4 External Safety Measures



Warning

In addition to the product’s built-in safety features, additional safety measures may be required on or adjacent to the product. Discuss appropriate measures with EdmoLift AB or an EdmoLift sales representative, safety representative, inspector or equivalent. A risk analysis must be drawn up at the workplace. See also section [2.7.6 Risks during Use, page 13](#).

2.5 Choice of Product



Warning

The choice of a suitable product takes place on the basis of the load conditions that EdmoLift AB is aware of and that apply in each individual application. Uneven loads, spot loads or horizontal loads should be avoided, unless indicated as permitted in the case in question.

2.6 Prior to Use



Warning

Before each shift, verify that the product is in good working order and that all safety devices are intact. In the event any fault is detected, the fault must be rectified before using the product. Report the fault to the supervisor.

The operator must have a clear view of the lift trolley and its working area during operation. There is a risk of personal injury.

2.7 Operation

2.7.1 General



Warning

This product may only be used by authorised, trained personnel, and only for its intended use. Bear in mind that, as the user, you are responsible for ensuring that no one is injured! Always operate the product calmly, carefully and attentively. This increases the level of safety and reduces maintenance costs and the risk of downtime.

The product must not be overloaded, as this could entail the risk of an accident resulting in personal injury and/or damage to property.

Do not raise the platform unless the area above it is free of obstacles.

The platform must not be in motion during loading or unloading.

When moving a lift trolley with a load, the platform/load must always be in the lowered position.
Risk of tipping over.

Do not lower the platform unless the area below it is free of people or other obstacles.

Do not use the product in connection with welding, unless it is specially adapted for this purpose. The product's surface treatment might emit gases that are harmful to health during welding or grinding. Use appropriate protection and working methods.

This product should not come into direct contact with food unless it is specially adapted for this purpose.



Warning

When used in public environments, especially where people may enter the machine's work area, the operator must take sufficient measures to prevent people from entering the danger zone. A risk analysis in accordance with the Machinery Directive must be prepared for the work situation in question.

Avoid physical contact with hydraulic oil, as this can cause an allergic reaction.

Never insert parts of your body or objects under the platform, unless it is in the service position according to section [4.4 Locking the Lowering Motion, page 26](#).

During inspections, repairs and service work, there must not be any load on the platform. Lock the scissor lift with the service locks according to section [4.4 Locking the Lowering Motion, page 26](#).

Do not install the product in such a way that the noise it produces is amplified.

Ensure that the product is used on a firm, flat and horizontal surface. The product must not be used on surfaces with a gradient of more than 2%. When the product is left unattended and when loading and unloading is in progress, ensure that the wheel brakes are applied to avoid unintentional movement.

Use safe and adequate lifting devices when handling loads to and from the product.

Minimise the risk of getting trapped if the product is used adjacent to other equipment, and ensure that the required safety distances are met according to applicable standards and local regulations.

The surface must have sufficient load-bearing capacity for the product, including any load, and a strength class corresponding to concrete C12/15 or higher.

2.7.2 Transporting Passengers



Warning

This product is not intended to carry people. No one may be present on the platform and/or load, unless this is clearly indicated as permitted.

2.7.3 Protective Equipment



Warning

Wear safety shoes and other necessary protective equipment, such as protective gloves and protective clothing, as dictated by the relevant work duties.

2.7.4 Centre of Gravity



Warning

Always endeavour to distribute the load evenly over the platform to avoid instability. Avoid protruding loads. Always ensure that the load is securely positioned and, if necessary, strapped in place.

This product must not be used for handling suspended loads.

The rated load must not be exceeded under any circumstances, as this entails a risk of personal injury as well as damage to the product and its surroundings. See section [10.2 Permitted Load Distribution, page 44](#).

2.7.5 Surroundings



Warning

In its standard version, the product is intended for indoor use in environments with normal air humidity and a temperature ranging from +5 to +40°C.

When working next to machines, there is often a risk of becoming trapped. Always take the utmost care, as there is a risk of personal injury and damage to property!

Never allow moving parts to come into contact with neighbouring objects. Ensure that applicable rules and standards regarding safety distances are met.

Do not use the product in potentially explosive environments unless it is specially adapted for this purpose.

EdmoLift's products are not insulated against electrical currents and do not provide any protection in the event of contact with live objects and wires.

Always maintain a safe distance from live objects and wires.

2.7.6 Risks during Use

This section discusses a number of risks and examples of measures aimed at addressing them. Some accessories that improve safety or contribute to greater efficiency can be found in “Examples of measures”.

Note:

The list does not cover all possible risks, rather it is only intended to be used as a guide in the preparation of an individual risk analysis.

Risk factor	Risk	Example of measure
General risks	Unauthorised use	• Training • Instructions • Clear marking • Lockable main switch • Lockable control unit • Demarcate the work area
	Unauthorised entry under raised platform	• Clear marking • Safety netting or protective bellows • Cordon off the work area
	Overloading	• Training • Instructions • Clear marking • Adjust the load
	Operating errors	• Training • Instructions • Clear marking
	Applicable laws and regulations are not complied with	• Perform a risk analysis • Check applicable laws and regulations for the installation
	Reduced performance	• Adjust the usage intensity
	Shortened service life	• More frequent service intervals and inspections
	Risks in the interface around the lift trolley	• Perform a risk analysis for the installation • Employ a holistic approach

Risk factor	Risk	Example of measure
	The installation is not CE marked	• Draw up an action plan to CE mark the installation
	Crushing risk	• Training • Instructions • Clear marking • Verify that the required safety distances according to the applicable standard are met
	Material may fall off	• Attachment devices • Location of the workplace • Prevent access to the risk area
	Instability	• Training • Instructions • Clear marking • Check the load distribution • Check attachment • Take all lateral forces into account and stabilise if necessary
Surroundings	Extreme ambient temperature	• Use the correct type of oil • Warm the space
	Fire risk	• Use the correct type of oil
	Impact on nature	• Biodegradable oil • Collection vessels for oil
	Impact on food	• Oil approved for food • Adapt detergent to surface treatment
	Impact of moisture	• Regulate moisture content • Adjust corrosion protection
	Impact of dust	• Regulate dust content • Equip with protective bellows around the mechanism

Risk factor	Risk	Example of measure
	Impact of weather	• Protect from precipitation • Adjust corrosion protection • Equip with protective bellows around the mechanism • Take all lateral forces into account and stabilise if necessary
Moving a lift trolley with or without a load	Collision with people or other objects	• Movement must be undertaken with care and a clear view of the surroundings • Consider the size of the load and its location on the platform; the load may have to be secured • The platform must be in the bottom position when being moved
	Uneven surface causes trolley to tip over	
	Material falls off	

2.8 Maintenance



Warning

Regular inspections, maintenance and cleaning are important in order to ensure low maintenance costs, high safety and an increased service life for the product.



Warning

During inspections, repairs and service work, there must not be any load on the platform. There is a risk of personal injury.

During inspections, repairs and service work under the platform, the service locks must always be placed in the lock position; see section [4.4 Locking the Lowering Motion, page 26](#). There is a risk of personal injury.



Attention

Spilled or changed hydraulic oil is handled as hazardous waste.



Warning

Inspections, repairs and service work must be carried out by skilled personnel with sufficient knowledge to be able to carry out the work in a professional manner. There is a risk of personal injury.

3 Design and Function

3.1 General

EdmoLift lift trolleys are intended for lifting parts to a comfortable picking/working height and/or for use as a work table. They are intended for use indoors in dry, temperature-controlled and well-lit premises, unless otherwise agreed with EdmoLift. Modification of the product, poorly aligned loads, point loads and horizontal loads are not permitted, unless this is stated as permitted in the case in question.

A lift trolley may only be moved with the load/platform in the lowered position.

The lift trolleys are available with an integrated battery-powered hydraulic unit with associated battery charger. Large, free-turning wheels with double brakes on the swivel wheels make the trolley safe and easy to operate.

The use of EdmoLift products for other applications or load cases can alter their capacity and result in hazardous situations. Furthermore, this can invalidate the warranty. Do not use the product as a jack for lifting vehicles, for example.

In addition to the product's built-in safety features, additional safety measures may be required on or adjacent to it. Discuss appropriate measures with your EdmoLift representative or a safety representative, inspector or equivalent. We recommend that a risk analysis in accordance with the Machinery Directive be prepared. See also section [2.7.6 Risks during Use, page 13](#).

These instructions must be available to the personnel concerned, stored in a protected place and accompany the product if it is transferred to another workplace.

3.2 Delivery

The EdmoLift lift trolley is delivered fully tested, with standard hydraulic oil according to ISO 32 (see order specification for alternatives).

A lift trolley with battery operation has a battery charger designed for connection to 230 V AC, 50 Hz. The control system is powered by an operating voltage of 12 V DC.

In its standard version, the product is painted in the following colours:

- Blue = RAL 5002
- Orange = RAL 2010
- Black = RAL 9005

3.3 Mechanical Structure

EdmoLift lift trolleys consist of two or more scissor arms, which are mechanically connected thereby ensuring synchronisation of the lifting and lowering motion. The lifting force is provided by one or two single-acting hydraulic cylinders, which are attached to the lower part and the centre beam of the scissor arms.

The hydraulic cylinder has a hose burst valve in combination with a double-sealed electric lowering valve that is installed on the hydraulic cylinder or on a pipe between two hydraulic cylinders. The electric lowering valve is activated during lifting and lowering, depending on which control button is pressed; see section [3.4.2, page 18](#).

In the hydraulic unit's valve unit, there is a flow control valve. On delivery, it is set for a suitable lowering speed (maximum 60 mm/s). If a different lowering speed is required, see section [7.2 Flow Control Valve Setting – Lowering Speed, page 37](#).

A handle is used to make moving the lift trolley easy. The handle is spring-loaded with a gas spring to simplify handling of the lift trolley when pulling it along.

The EdmoLift lift trolley has a base frame with two fixed wheels and two swivel wheels. The swivel wheels have a parking brake. The brakes must be applied to prevent unintentional movement when handling goods on the platform, or if the lift trolley is placed on an inclined surface.

To protect against crush injuries, the lift trolley is equipped with a safety frame under the outer edges of the platform. If activated, the lowering motion is stopped. To resume lowering, the platform must be raised so the function of the safety frame can be reset.

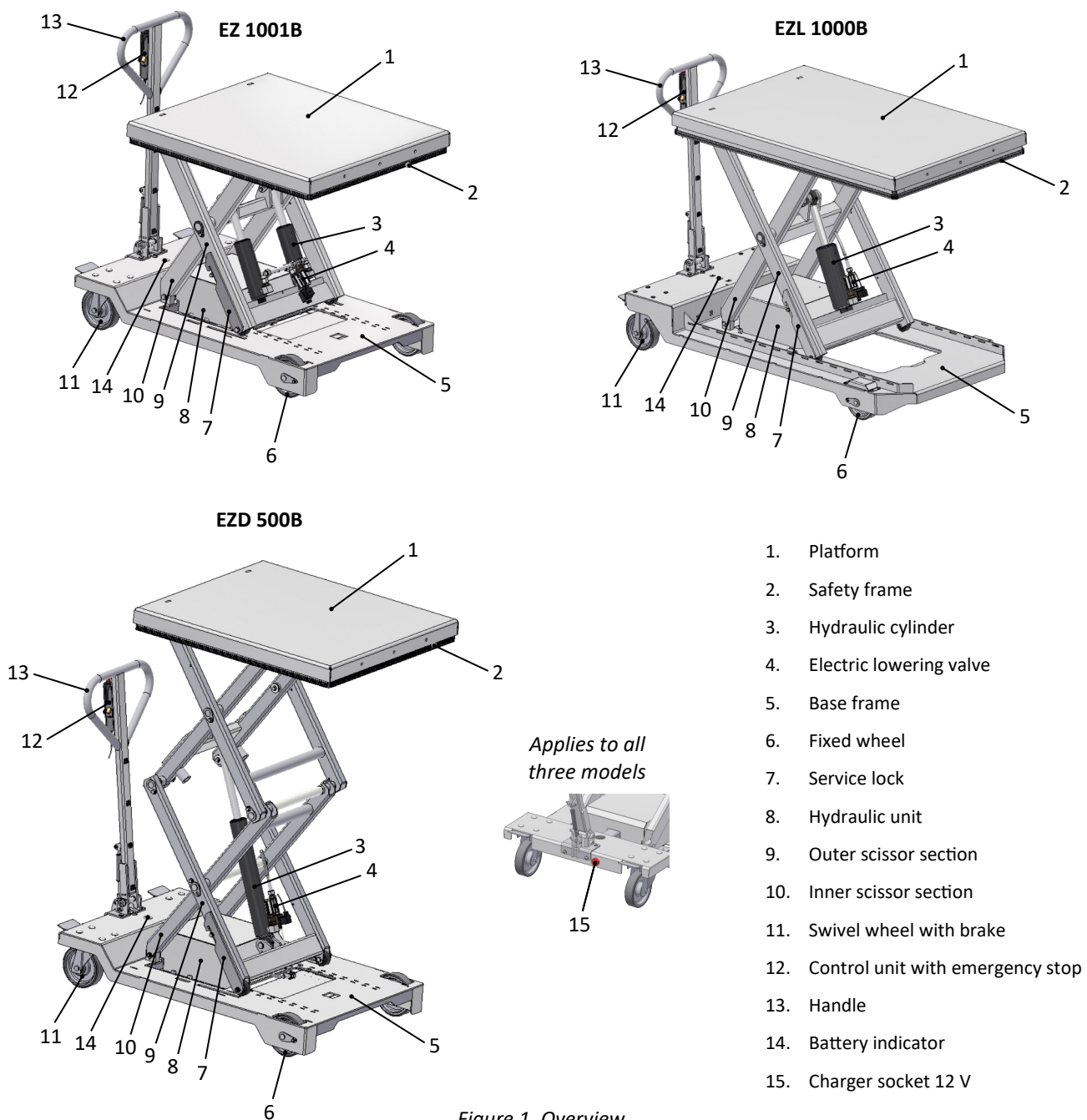


Figure 1. Overview

3.4 Control Unit

3.4.1 General

The control unit is mounted on the handle.



Figure 2. Control unit on handle

3.4.2 Control Buttons

The control unit consists of control buttons for operation and an emergency stop.

1. Emergency stop
2. Up
3. Down

The buttons have what is termed a continuous pressure function, which means that when you release the control button, the platform stops moving.

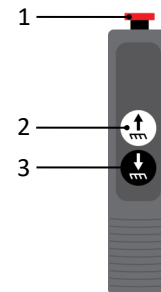


Figure 3. Control unit

3.4.3 Emergency Stop

There is an emergency stop on the control unit. This is red, clearly marked and used in an emergency to stop all electrically operated functions.

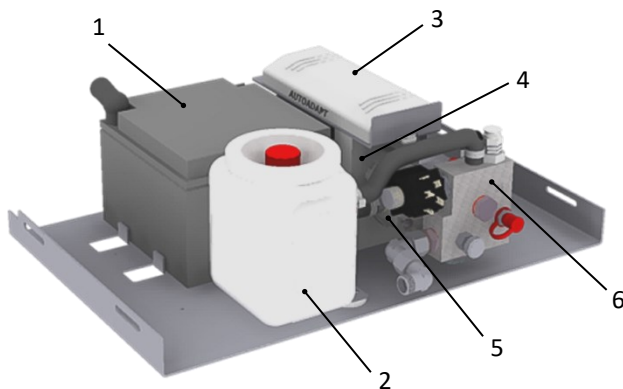
3.5 Hydraulic System

In order for the hydraulic system to work optimally, it is important to use the right type of hydraulic oil and to ensure a high level of cleanliness.

The EdmoLift lift trolley has a built-in battery-powered single-acting hydraulic system as standard. Due to the product's great versatility, the hydraulic system is often adapted to individual needs. The relevant hydraulic and wiring diagrams are then included with the delivery.

3.5.1 Hydraulic Unit

The hydraulic unit has the following components:

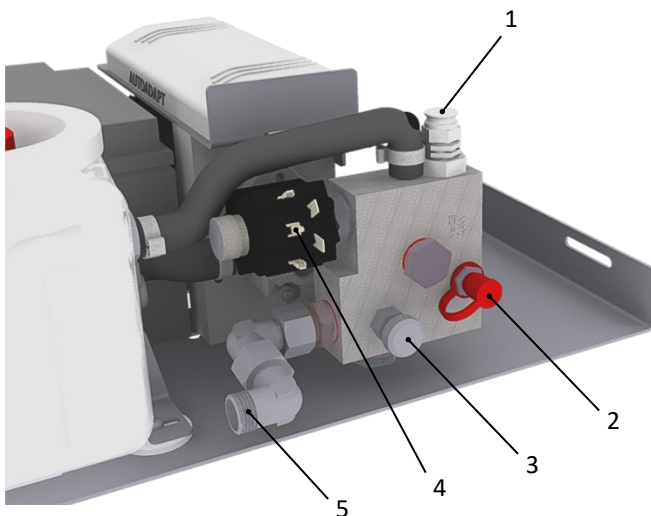


1. Battery
2. Oil tank
3. Connection box
4. Electric motor
5. Pump
6. Hydraulic valve

Figure 4. Hydraulic unit

3.5.1.1 Hydraulic Valve

The hydraulic valve is mounted in the hydraulic unit.



1. Adjustment of maximum working pressure
2. Outlet for pressure gauge, type TEMA 100
3. Flow control valve
4. Solenoid
5. Connection for hydraulic hose

Figure 5. Hydraulic valve

3.5.2 Hydraulic Pump

The hydraulic pump supplies the product's hydraulic cylinders with oil, via hoses and/or pipes and valves, and provides power to the hydraulic function.

3.5.3 Hydraulic Cylinder

EdmoLift lift trolleys are equipped with a hydraulic cylinder that provides power for the various functions. In the standard version, the hydraulic cylinder is single-acting.

3.6 Electrical and Control System

A connection box with M12 connectors is installed in the hydraulic unit, see section [3.5.1 Hydraulic Unit, page 19](#).

A battery charger is built into the lift trolley. Unless otherwise requested, the battery charger comes delivered for connection to 1-phase/230 V/50 Hz. The charger plug should be connected to a 220–240 V AC wall socket. The charger regulates the charging current automatically and switches itself off when the batteries are fully charged. For information regarding the battery charger, please see the manufacturer's user manual.

The battery indicator does not show the exact battery capacity, it only provides an approximate indication of the remaining capacity. The battery indicator can be retrofitted to the lift trolley; contact EdmoLift for separate instructions.

For a wiring diagram, see section [11 Wiring Diagrams, page 45](#).

Note:

Any troubleshooting of electrical and control systems must be carried out by a competent electrician.

4 Operation

4.1 General

After use, the platform should be lowered to the bottom position. Leaving the lift trolley with the platform in the raised position may inconvenience others or be a source of risk. If the platform is left in the raised position, its level may change for several reasons:

- Oil volume changes with temperature changes
- Leaks in valves or pipes
- Leak in cylinder



Warning

This product may only be used by authorised, trained personnel, and only for its intended use. Bear in mind that, as the user, you are responsible for ensuring that no one is injured! Always operate the product calmly, carefully and attentively. This increases the level of safety and reduces maintenance costs and the risk of downtime.

The product must not be overloaded, as this could entail the risk of an accident resulting in personal injury and/or damage to property.

Do not raise the platform unless the area above it is free of obstacles.

The platform must not be in motion during loading or unloading.

Never insert parts of your body or objects under the platform, unless it is in the service position according to section [4.4 Locking the Lowering Motion, page 26](#).

Do not lower the platform unless the area below it is free of people or other obstacles.

Do not use the product in connection with welding, unless it is specially adapted for this purpose. The product's surface treatment might emit gases that are harmful to health during welding or grinding. Use appropriate protection and working methods.

This product should not come into direct contact with food unless it is specially adapted for this purpose.

When used in public environments, especially where people may enter the machine's work area, the operator must take sufficient measures to prevent people from entering the danger zone. A risk analysis in accordance with the Machinery Directive must be prepared for the work situation in question.

During inspections, repairs and service work, there must not be any load on the platform. Lock the scissor lift with the service locks according to section [4.4 Locking the Lowering Motion, page 26](#).

Avoid physical contact with hydraulic oil, as this can cause an allergic reaction.

When moving a lift trolley with a load, the platform/load must always be in the lowered position. Risk of tipping over.

Do not install the product in such a way that the noise it produces is amplified.

Ensure that the product is used on a firm, flat and horizontal surface. The product must not be used on surfaces with a gradient of more than 2%. When the product is left unattended and when loading and unloading is in progress, ensure that the wheel brakes are applied to avoid unintentional movement.

Use safe and adequate lifting devices when handling loads to and from the product.



Warning

Minimise the risk of getting trapped if the product is used adjacent to other equipment, and ensure that the required safety distances are met according to applicable standards and local regulations.

The surface must have sufficient load-bearing capacity for the product, including any load, and a strength class corresponding to concrete C12/15 or higher.

4.2 Prior to Use



Warning

Always endeavour to distribute the load evenly over the platform to avoid instability. Avoid protruding loads. Always ensure that the load is securely positioned and, if necessary, strapped in place.

This product must not be used for handling suspended loads.

The rated load must not be exceeded under any circumstances, as this entails a risk of personal injury as well as of damage to the product and its surroundings. See section [10.2 Permitted Load Distribution, page 44](#).

4.2.1 Installing the Handle and Start-up Charging

1. Install the handle by first screwing the bottom two screws (A) through the bracket into the base frame, leaving a gap of approximately 10 mm. Place the handle in a suitable position and tighten the screws (A). Then screw in and secure the top two screws (B). See Figure 6.
2. Connect the control unit's connector from the handle to the connector from the electrical control in the base frame (C).
3. Charge the battery with the supplied charger via the socket (D).

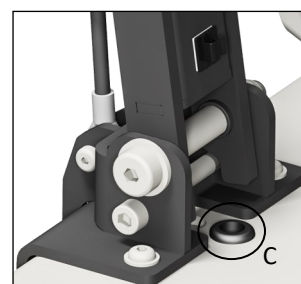
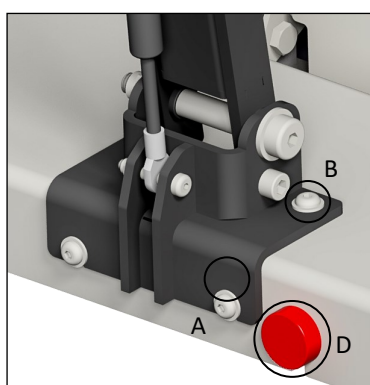


Figure 6. Installing the handle and start-up charging

4.2.2 Safety Frame

The function of the safety frame must always be checked prior to use; see section [4.5 Checking the Function of the Safety Frame, page 27](#). If the safety frame has been activated, the cause of the stoppage must be investigated and eliminated. To resume lowering, the platform must be raised so the safety frame function can be reset.



Warning

Before each shift, verify that the product is in good working order and that all safety devices are intact. In the event any fault is detected, the fault must be rectified before using the product. Report the fault to the supervisor.

The operator must have a clear view of the lift trolley and its working area during operation. There is a risk of personal injury.

4.3 Operation

Note:

The electrical equipment enters stand-by mode after 30 minutes of inactivity. To reactivate it, press either button (up or down). It will then work as normal.

After 60 minutes of inactivity, the electrical equipment enters sleep mode. To reactivate it, activate and deactivate the emergency stop. It will then work as normal.

An EdmoLift lift trolley must be operated calmly, carefully and attentively! The control functions involve what is termed a continuous pressure function, which means that when you release a control button, the platform stops in its current position. After use, the platform should be lowered to the bottom position.

Verify that you are not at risk of injuring anyone or damaging anything when you lower the platform. Pay particular attention to ensure that the platform does not extend over any object, on which it can catch.

1. Emergency stop
2. Up
3. Down

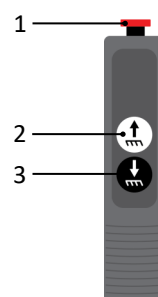


Figure 7. Control unit

4.3.1 Emergency Stop

4.3.1.1 Activation

Press the emergency stop to stop all electrical functions.

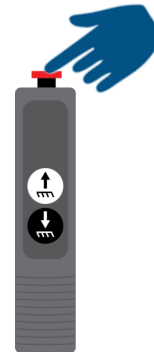


Figure 8. Activating emergency stop

4.3.1.2 Resetting

Turn the emergency stop clockwise to reset.



Warning

Emergency stops may only be reset after the cause of the emergency stop has been established and safe operating conditions have been restored.

Note:

Resetting the emergency stop only makes it possible to restart motion, and no function is automatically activated when resetting the emergency stop.

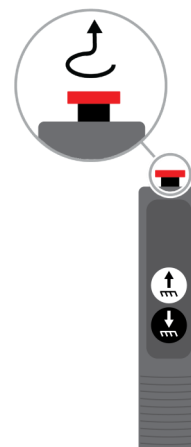


Figure 9. Resetting emergency stop

4.3.2 Up

Press and hold the *Up* button to raise the platform; the movement stops as soon as the button is released.

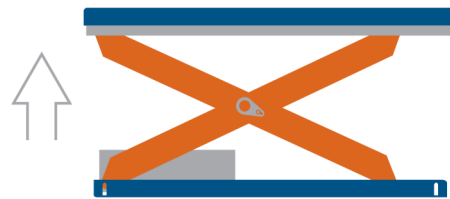


Figure 10. Up

4.3.3 Down

Press and hold the *Down* button to lower the platform; the movement stops as soon as the button is released.

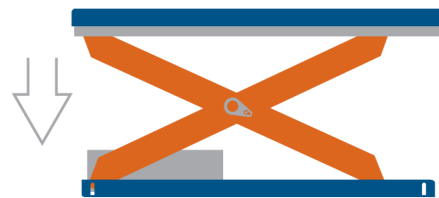


Figure 11. Down

Note:

If the safety frame has been activated, the cause of the stoppage must be investigated and eliminated. To resume lowering, the platform must be raised so the safety frame function can be reset.

4.4 Locking the Lowering Motion



Warning

During inspections, repairs and service work, there must not be any load on the platform. There is a risk of personal injury.

During inspections, repairs and service work under the platform, the service locks must always be placed in the lock position. There is a risk of personal injury.

Always disconnect the operating voltage before starting service work. There is a risk of personal injury.

4.4.1 Activating a Service Lock

1. Raise the platform without any load until the service locks (x 2) can be placed in the lock position.
2. Place the service locks in the lock position.



Warning

Locking must always take place on both sides of the outer scissor arms. Risk of personal injury!

3. Carefully lower the platform until it is resting on the service locks.

4.4.2 Deactivating a Service Lock

1. Raise the platform without any load until the service locks (x 2) can be released from the lock position.
2. Place the service locks in the deactivated position.
3. Lower the platform to its lowest position. Then run a complete lifting cycle without any load:
 - A) Raise the platform to its highest position.
 - B) Lower the platform back to its lowest position.

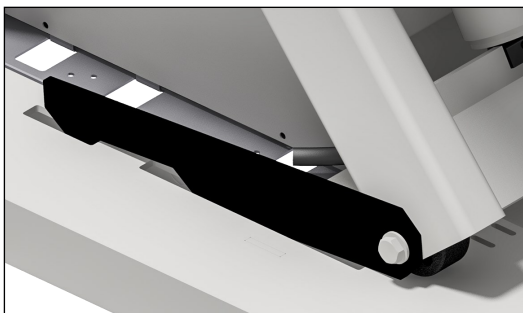


Figure 12. Service lock, activated position

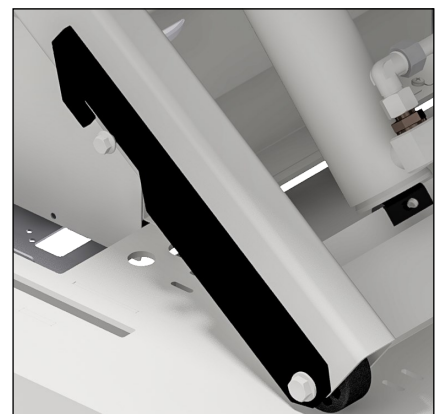


Figure 13. Service lock, deactivated position

4.5 Checking the Function of the Safety Frame

Before each work shift, verify that the safety frame is working.

1. Raise the platform to the appropriate height and ensure that there is no crushing risk.
2. Lower the platform and activate the safety frame by pressing it upwards with your hand.
Repeat the check on all sides of the platform to ensure the safety frame is functioning correctly.

If adjustment is required, see section [7.1 Safety Frame Switch](#), page 36.

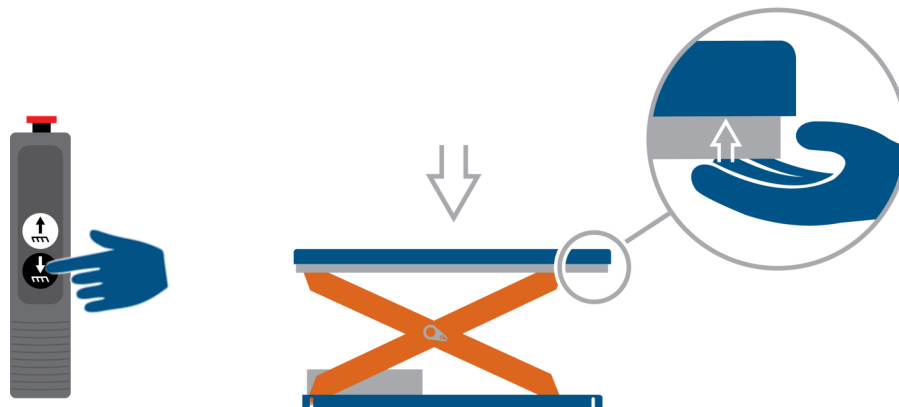


Figure 14. Checking the function of the safety frame

4.6 Battery Charging

The batteries are maintenance-free lead-acid batteries of AGM type. They are completely encapsulated and do not require internal inspection; however, the exterior parts of the batteries should be kept dry and clean. The batteries need to be kept as fully charged as possible, and therefore, charging after each work shift is recommended. Unless otherwise requested, the battery charger supplied is for connection to single-phase 220–240 V AC, 50 Hz.

The battery indicator does not show the exact battery capacity, it only provides an approximate indication of the remaining capacity. Charging should be done as soon as the battery indicator shows a red light, as there is only enough capacity left for a few lifts or runs. The battery can be charged regardless of the color displayed on the battery indicator.

Perform a maintenance charge at least once a month, even if the battery indicator does not show a red light.

If the lift trolley is not going to be used for a period of time, make sure its batteries are fully charged before storing it. Never store the product when the battery indicator shows a red light, as this may cause the batteries to deep discharge and become damaged.



Attention

Before connecting the lift trolley's charger to the mains, check that its voltage corresponds to that of the mains.



Attention

Batteries are handled as hazardous waste.

1. Connect the charger's 12 V plug to the socket on the lift trolley.
2. Connect the charger's power cord to a wall outlet (220-240 V AC, 50 Hz). Start the charger; it will automatically regulate the charging current and turn off by itself when the batteries are fully charged. To check the charging status, check the charger's LED indicator, which shows the charging status in segments. During charging, the LED indicator will blink, and when all segments are illuminated with a steady light, the product is fully charged. If a red triangle blinks, it means the charger has a poor connection or the batteries are damaged, preventing the charging process from starting. The battery indicator will show a green light when the batteries are fully charged and the charger is disconnected.

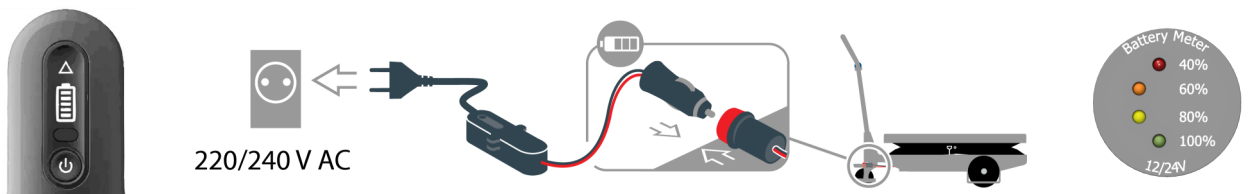


Figure 15. The charger's LED indicator and battery charging, also the battery indicator

Note:

Do not use the lift trolley while charging is in progress. Unplug the lift trolley before starting to use it after charging.

Avoid checking the battery indicator during operation, as it may not display accurate information while the lift trolley is in use. Allow the lift trolley to remain idle or inactive for a minimum of 5 minutes before checking the battery capacity.

5 Maintenance

The following maintenance should be carried out regularly, approximately once every three months or at intervals of 1,000 lifting cycles if this occurs earlier. Some types of operating conditions and working environments may require more frequent service intervals. Discuss with your EdmoLift sales representative to determine the appropriate service interval.

All work relating to inspections, service and repairs must be carried out by skilled personnel or a person who possesses sufficient knowledge to be able to carry out the work in a professional manner. Always replace broken and damaged parts.

Only EdmoLift original spare parts may be used. The use of other parts will invalidate the product warranty.

For detailed information about repairs, please contact EdmoLift's sales representative.



Warning

Regular inspections, maintenance and cleaning are important in order to ensure low maintenance costs, high safety and an increased service life for the product.



Warning

During inspections, repairs and service work, there must not be any load on the platform. There is a risk of personal injury.

During inspections, repairs and service work under the platform, the service locks must always be placed in the lock position; see section [4.4 Locking the Lowering Motion, page 26](#). There is a risk of personal injury.



Attention

Spilled or changed hydraulic oil is handled as hazardous waste.

5.1 Hydraulic System

- Verify that oil reservoirs, pipes, hoses, couplings and hydraulic cylinders do not have any damage or leaks. Fix any leaks and replace damaged parts.
- Check the oil level. Top up if necessary.
If the oil is dirty, it must be changed.

The EdmoLift lift trolley is delivered with standard hydraulic oil according to ISO 32 (see order specification for alternatives).

Note:

The tank's maximum volume is reached when the platform is in the bottom position.

5.2 Electrical Equipment

- Ensure that all electrical equipment is working properly.
- Test the operation of all emergency stops present; see section [4.3.1 Emergency Stop, page 24](#).
- Test the operation of the safety frame; see section [4.5 Checking the Function of the Safety Frame, page 27](#).
- Inspect all cables. Verify that they are not loose or pinched. Rectify if necessary. Replace damaged cables.

5.3 Mechanical Equipment

- Check that the wheels and pins are securely locked in place.
- Verify that there is no abnormal play in bearings.
- Verify that there are no breaks or ruptures.
- Verify that the safety frame profiles and their attachments are intact.
- Verify that all labels are in place and fully legible; see section [9 Labels, page 40](#).

5.4 Lubrication Points

During lubrication, the bearing points must not be loaded! See section [4.4 Locking the Lowering Motion, page 26](#).

1. Piston rod bearings

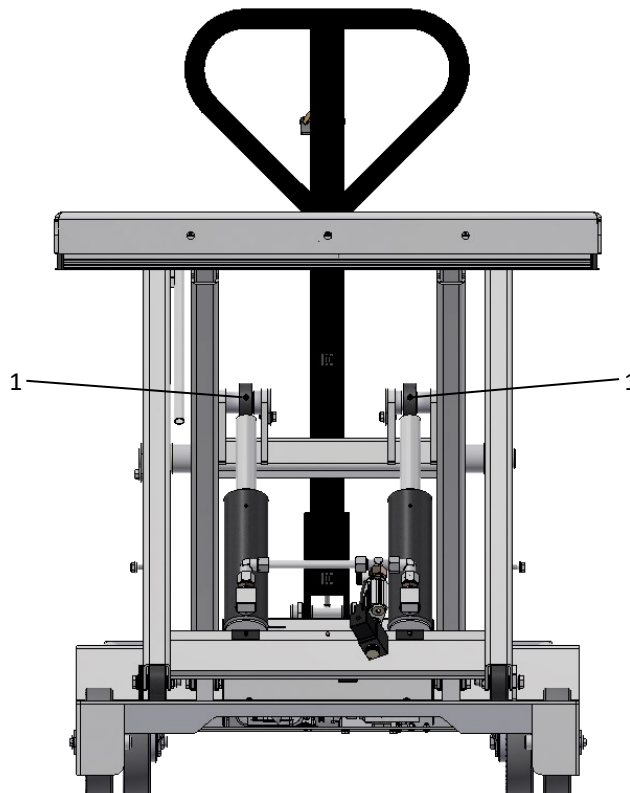


Figure 16. Lubrication points

5.5 Batteries

Battery-powered lift trolleys contain maintenance-free AGM batteries. One battery is included per battery-powered lift trolley. Perform a maintenance charge at least once a month, even if the battery indicator does not show a red light.



Attention

Batteries are handled as hazardous waste.

5.5.1 Battery Replacement



Attention

Wear protective goggles when replacing a battery.



1. Place the lift trolley in the service position; see section [4.4 Locking the Lowering Motion](#), page 26.

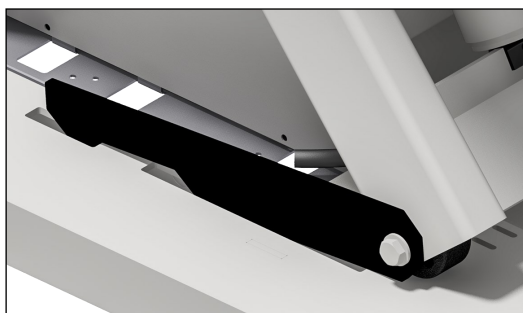


Figure 17. Activating a service lock

2. Remove the four screws that secure the metal cover to the base frame and lift off the metal cover.
3. Remove the terminal protectors from the battery terminals. First disconnect the battery's negative (-) terminal, then disconnect the positive (+) terminal. Lift out the battery.
4. If the battery to be replaced is of an older make and the connections present have terminal clamps fitted, remove the terminal clamp from the cable connection. This applies to both the positive and the negative terminal connections.
5. Replace the terminal protectors with the black terminal protectors included in the spare parts kit.
6. Visually check the terminals of the new battery and clean them if necessary. Lift the new battery into place in the base frame.
7. First attach the cable lug to the battery's positive (+) terminal, then attach the cable lug to the battery's negative (-) terminal. Make sure the cable lug is attached in the right direction.
8. Put the metal cover back on.
9. Deactivate the service locks; see section [4.4 Locking the Lowering Motion](#), page 26.

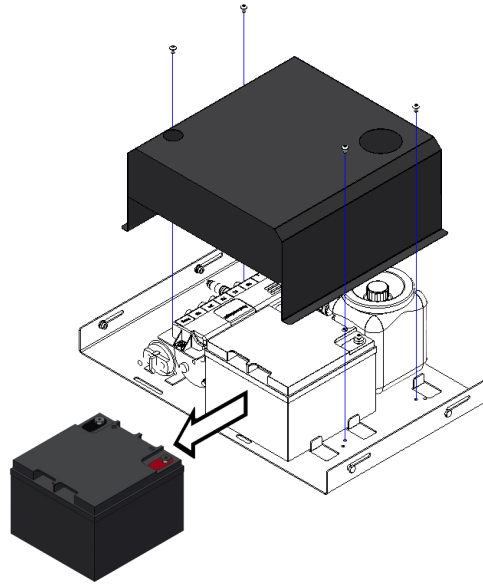


Figure 18. Remove the metal cover. Remove the connections to the battery terminals (negative first).
Lift out the battery.



Figure 19. Fit the cable lug to the battery terminal (positive terminal first), without the terminal clamp.
Make sure the cable lug is attached in the right direction. Use the new terminal protectors.

Note:

Batteries contain lead and should be disposed of as hazardous waste.



6 Installation

Note:

Verify that the product has not sustained any transport damage.

Do not lift the lift trolley, as it could sustain damage with resulting malfunctions.



Figure 20. Do not lift the lift trolley



Warning

Never allow moving parts to come into contact with neighbouring objects. Ensure that applicable rules and standards regarding safety distances are met.

Ensure that the product is used on a firm, flat and horizontal surface. Otherwise, there is a risk it will tip over.

The surface must have sufficient load-carrying capacity for the product, including the load. When installing a fixed control unit, position the control unit so that the operator has a clear view of the product's hazardous areas and its load.

Minimise the risk of getting trapped if the product is used adjacent to other equipment, and ensure that the required safety distances are met according to applicable standards and local regulations.

On a lift trolley with a battery-powered hydraulic unit, check that the specified voltage of the battery charger corresponds to the mains voltage.

1. Place the lift trolley in a prepared location, where the surface must be flat and have sufficient load-bearing capacity.

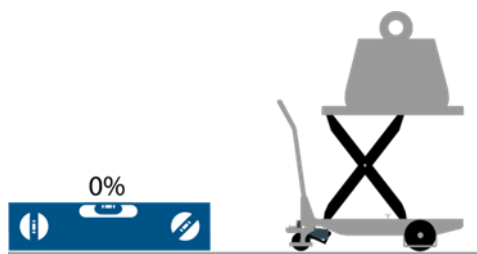


Figure 21. Place the lift trolley on a flat surface with sufficient load-bearing capacity

2. Lock the swivel wheels by pushing down the locking lever above each wheel.

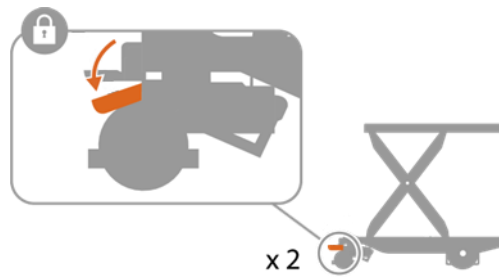


Figure 22. Push the locking lever down to lock the swivel wheels

3. Install the lift trolley's handle by first screwing the bottom two screws (A) through the bracket into the base frame, leaving a gap of approximately 10 mm. Place the handle in a suitable position and tighten the screws (A). Then screw in and secure the top two screws (B).

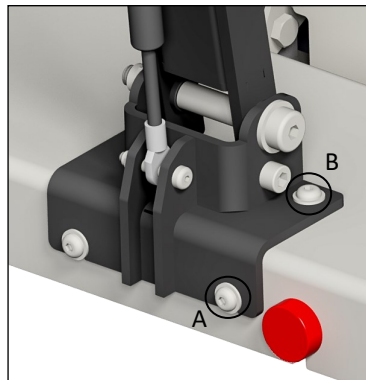


Figure 23. Installing the lift trolley's handle

4. Connect the control unit's connector from the handle to the connector from the electrical control in the base frame (C).



Figure 24. Cable entry for base frame connector

5. Charge the battery with the supplied charger via the socket (D).

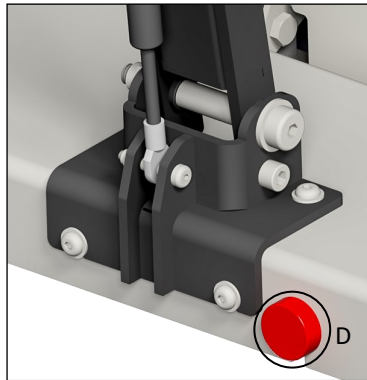


Figure 25. Battery charging

6. Check that all the control unit's functions, including the emergency stop, are working.
7. Verify that all labels and markings are intact and that they are correctly positioned; see section [9 Labels](#), page 40.

7 Settings and Checks

7.1 Safety Frame Switch

7.1.1 Checks

Verify that there is a clearance of 0.5–1.5 mm between the platform and the switch; see Figure 26 below.

7.1.2 Setting

The distance between the safety frame and the switch is adjusted by changing the position of the safety frame; see Figure 26 below.

1. Place the lift table in the service position; see section [4.4 Locking the Lowering Motion, page 26](#).
2. Adjust the position of the safety frame by turning the nut on the attachments.



Warning

Make sure that all the safety frame attachments are adjusted equally, so that the safety frame is parallel with the platform. Risk of personal injury.

3. Check the clearance according to section 7.1.1; see above.

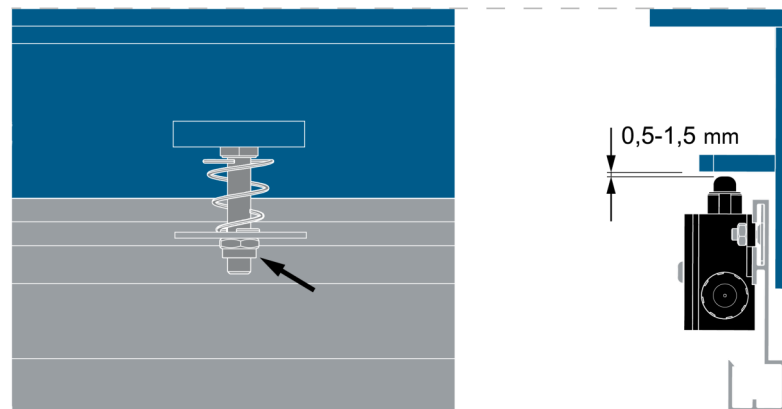


Figure 26. Setting the safety frame switch

7.2 Flow Control Valve Setting – Lowering Speed

The lowering speed can be set using the flow control valve knob.



Warning

High speed entails an increased risk of instability. The lowering speed must not exceed 60 mm/s.

1. The valve package is mounted on the hydraulic unit; see Figure 27 below.
2. Release the knob's position by loosening the counter-nut.
3. The product is equipped with valve VE25. Adjust the speed using the knob. Turn clockwise to reduce the speed. Turn anticlockwise to increase the speed.
4. Lock the knob's position by tightening the counter-nut.

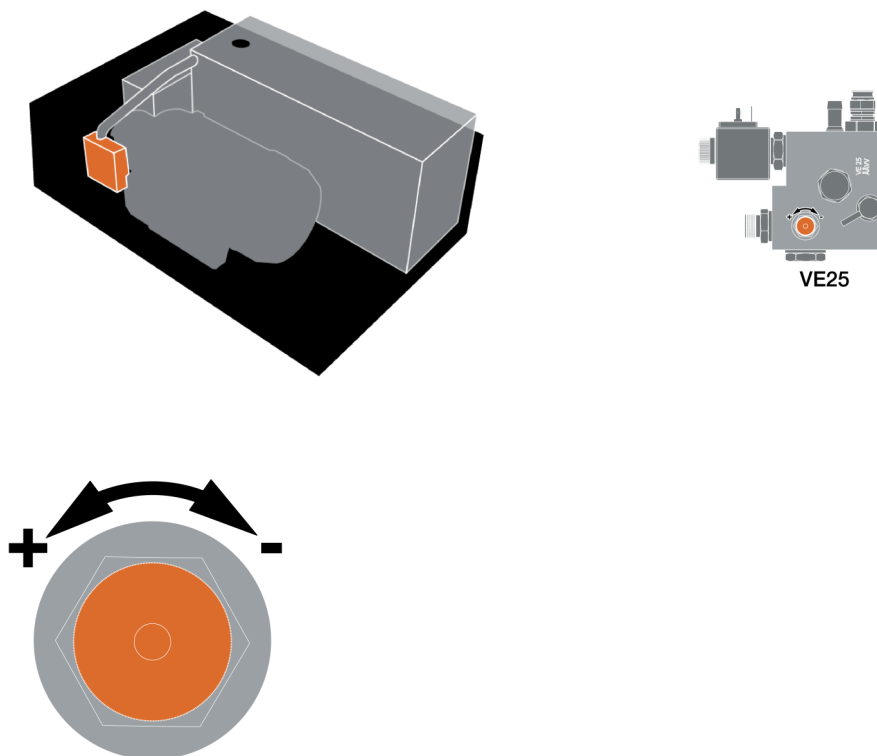


Figure 27. The valve package is mounted on the hydraulic unit. Adjust the lowering speed using the flow control valve knob.

7.3 Checking the Hydraulic System Pressure

The valve package is mounted on the hydraulic unit and is fitted with a Tema 100 outlet for connecting the pressure gauge.

Note:

For the relevant maximum pressure at full load, see section [9.5 Machine Label, page 42](#).

1. The product is equipped with valve package VE25; see Figure 28.
2. Connect a suitable pressure gauge to the outlet; see position 4, Figure 28. The outlet is supplied with a protective cover that must be removed prior to connection.
3. Raise the platform to its highest position, read off the hydraulic system pressure on the previously connected pressure gauge when the lifting function is moving towards the mechanical stop.
4. Disconnect the pressure gauge after completing the check.
5. Place the protective cover back on the outlet.

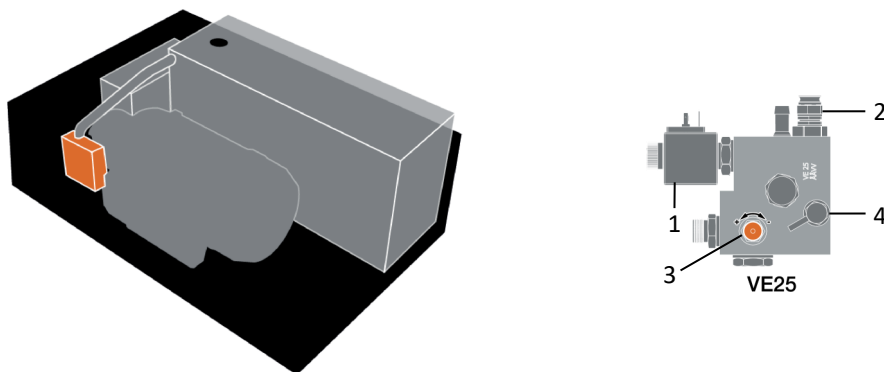


Figure 28. Valve package

- | | |
|---|--|
| 1. Solenoid | 3. Flow control valve for lowering speed |
| 2. Adjustment of maximum working pressure | 4. Outlet for pressure gauge |

8 Troubleshooting

This section contains a troubleshooting guide that describes a number of faults and incidents that may arise while using your product, as well as suggestions for remedial measures. Please note that this guide does not describe all the problems and incidents that may arise, and you should always contact the EdmoLift sales representative in case of uncertainty.

Symptom	Possible cause	Solution
The motor does not start	Low battery charge	Charge the battery.
No lifting motion	The overflow valve opens	The lift trolley is overloaded. Remove the overload.
	The lowering valve is not closed	Check that the lowering control has not been damaged, or whether it needs adjusting.
	Other cause	Contact EdmoLift.
Maximum lifting motion is not achieved	The oil volume is insufficient	Fill with oil, although only enough to reach the top position. Too much oil can cause oil to flow out of tank when lowering.
	The overflow valve opens	The lift trolley is overloaded. Remove the overload.
Jerky raising or lowering motion	Air in the hydraulic system	Check the oil level. Operate the product 2-3 times at intervals of around 5 minutes.
The platform will not lower	The lowering valve does not open	Check that the lowering control has not been damaged, or whether it needs adjusting.
	Service lock in activated position	Deactivate the service lock.
	Emergency stop activated	Turn the emergency stop knob clockwise.
	Safety frame activated	Remove the cause of activation. Briefly press the UP button, and then the DOWN button.
Platform drops without activation of the lowering control or the Down button	Dirt in the hydraulic system	- Operate the product a few times to remove particles from the valve seats. - Remove the lowering valve cartridge and clean it. - Replace the lowering valve cartridge and change the oil.
The lowering speed is higher or lower than desired	The lowering valve is not closed	Check that the lowering control has not been damaged, or whether it needs adjusting.

9 Labels

Regularly verify that the labels on the product at the time of delivery are intact, completely legible and in the correct language. Labels that have been damaged or are illegible must be replaced with new labels.

In certain cases, a location other than that shown here may apply. Additional labels may also be present in connection with certain accessories or usage situations.

The labels and location shown in this section apply to all three models described in this user manual.

The following labels must be installed:

1. EdmoLift label, x 2. See section 9.1.
2. Warning label, x 1. See section 9.4.
3. Max load label, x 2. See section 9.2.
4. Machine label, 2 labels, x 1 of each. See section 9.5.
5. Maintenance label, x 2. See section 9.3.

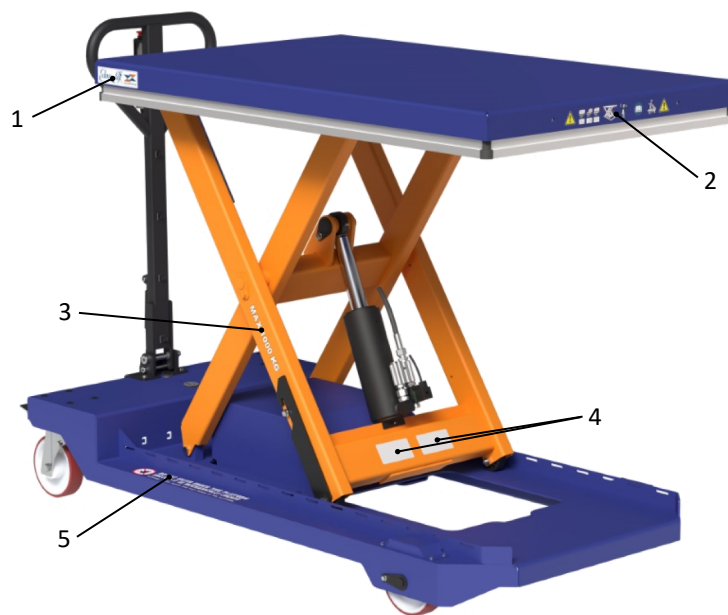


Figure 29. Labels

9.1 EdmoLift Label

Label with logo and web address.



Figure 30. EdmoLift label

9.2 Max Load Label

The label indicates the maximum permitted load for the product, which is 1000 kg. The label must be positioned so that it is clearly visible from all operating positions.

MAX 1000 KG

Figure 31. Max load label

9.3 Maintenance Label

The label specifies that work and inspections must not be carried out under the platform unless the service locks are placed in the lock position.



Figure 32. Maintenance label

9.4 Warning Label

The label provides information about load distribution, whether transporting passengers is or is not permitted and the location of the service locks, and urges you to read the instructions before use and service work.



Label specifying that transporting passengers is not permitted

Label specifying that transporting passengers is permitted

Figure 33. Warning label

9.5 Machine Label

The machine label is divided into two labels. These contain the following information:

Label 1:

1. Product type
2. Year of manufacture
3. Hydraulic pressure
4. IP class
5. Serial number
6. Maximum load
7. Empty weight
8. CE marking

Label 2:

1. Client/supplier
2. Reference number/serial number
3. Recipient

		 	
TYPE	MAN YEAR	PRESSURE	IP-CLASS
SERIAL NO.	MAX. ED LOAD	DEAD WEIGHT	
EdmoLift AB Härnösand, Sweden		Tel. no +46 (0)611 837 80 b2b@edmolift.se	

Supplied by:
Website: Phone:
Reference no.: Serial no.:
Consignee:

Figure 34. Machine label, label 1 and label 2

9.6 User Label

The user label contains product specifications as well as information on operation and safety. This label must be positioned adjacent to the operator's operating position, if local regulations so require. A user label is supplied where this is indicated in the order specification.

10 Technical Data

10.1 Specifications

Technical specifications by product. See also the order specification and the EC declaration.

EZ 1001B

Capacity:	1000 kg
Lifting motion:	600 mm
Lowest height:	300 mm
Platform length:	900 mm
Platform width:	800 mm
Lifting time:	17 s
Battery:	Maintenance-free 12 V / 28 Ah
Charger:	4 A / 230 V Included in delivery.
Power rating:	800 W
Operating voltage:	12 V
Sound pressure:	70 dB(A)
Dead weight:	190 kg

EZD 500B

Capacity:	500 kg
Lifting motion:	1100 mm
Lowest height:	410 mm
Platform length:	900 mm
Platform width:	800 mm
Lifting time:	27 s
Battery:	Maintenance-free 12 V / 28 Ah
Charger:	4 A / 230 V Included in delivery.
Power rating:	800 W
Operating voltage:	12 V
Sound pressure:	70 dB(A)
Dead weight:	260 kg

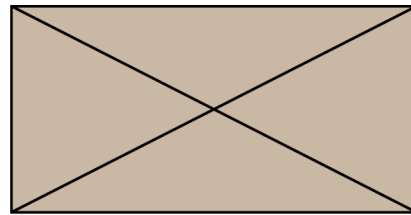
EZL 1000B

Capacity:	1000 kg
Lifting motion:	820 mm
Lowest height:	320 mm
Platform length:	1300 mm
Platform width:	800 mm
Lifting time:	20 s
Battery:	Maintenance-free 12 V / 40 Ah
Charger:	4 A / 230 V Included in delivery.
Power rating:	800 W
Operating voltage:	12 V
Sound pressure:	70 dB(A)
Dead weight:	270 kg

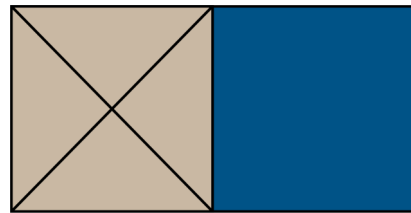
10.2 Permitted Load Distribution

The maximum load indicated in technical specifications refers to an evenly distributed load across the entire platform.

100% of the maximum load, spread across the entire platform



or 50% of the maximum load spread across half the platform longitudinally



or 33% of the maximum load spread across half the platform laterally

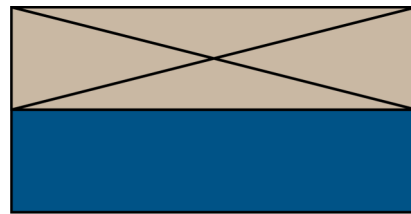


Figure 35. Load distribution

10.3 Maximum Lateral Load

The maximum permissible lateral force is 10% of the rated load, applied to the edge of the platform. The lateral forces arise, for example, by pushing against the platform or the load with hand tools, or by pulling a tool or machine part on the platform. If the lateral force is applied to the load, the tipping torque increases and the load may become unstable or move.

Note:

It is very difficult to check the magnitude of the lateral force in question, which is why it is always necessary to take the utmost care.

In the case of other permitted load distribution, see the load distribution symbol on the long side of the platform and the order specification. Intensive operation under high load, at high speed, in demanding environments or with high lifting frequencies may require HD equipment, i.e. more powerful bearings than those used in the standard version.

11 Wiring Diagrams

11.1 Battery-powered Hydraulic Unit

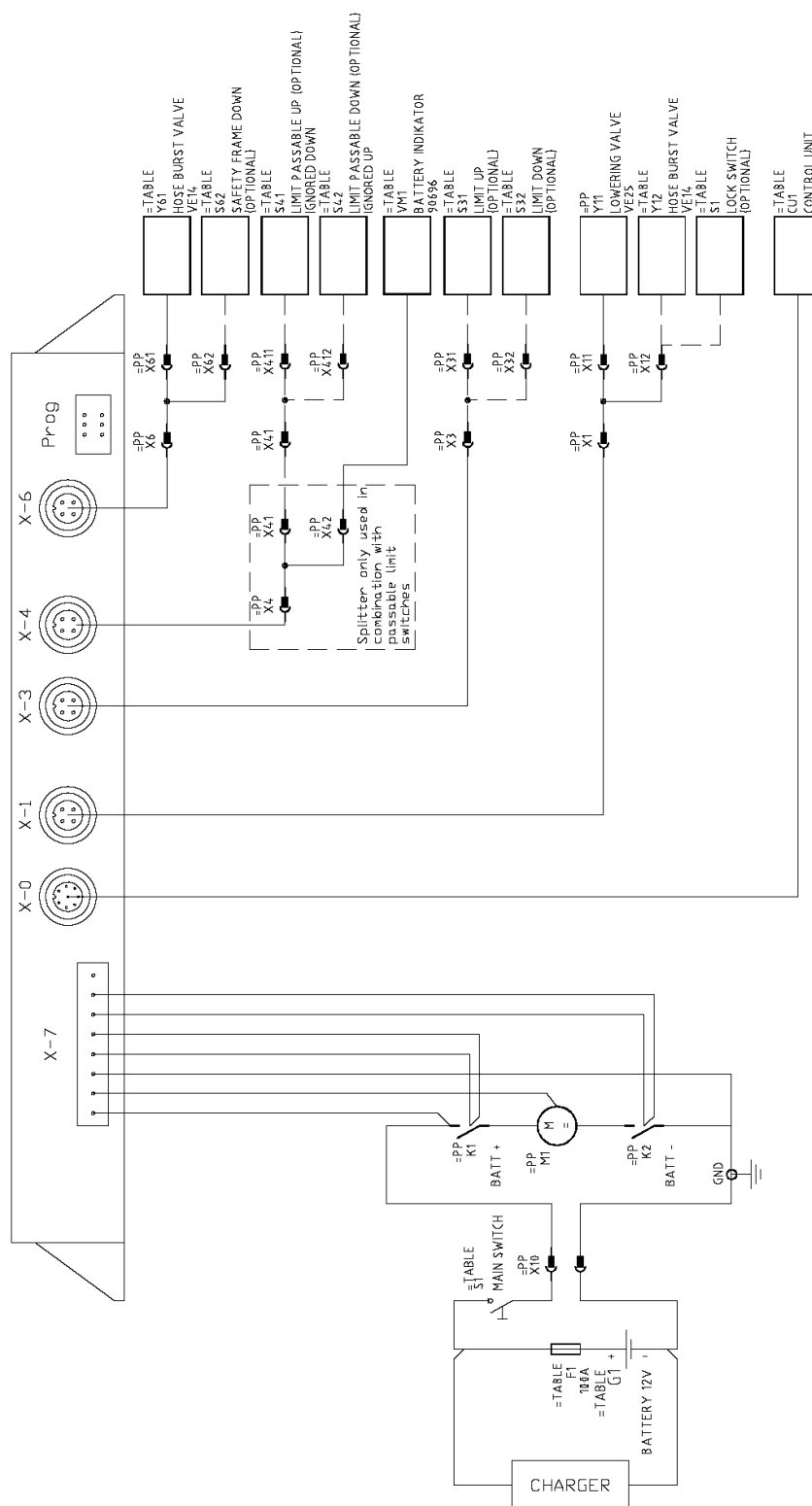


Figure 36. Battery-powered hydraulic unit (39100r2-1)

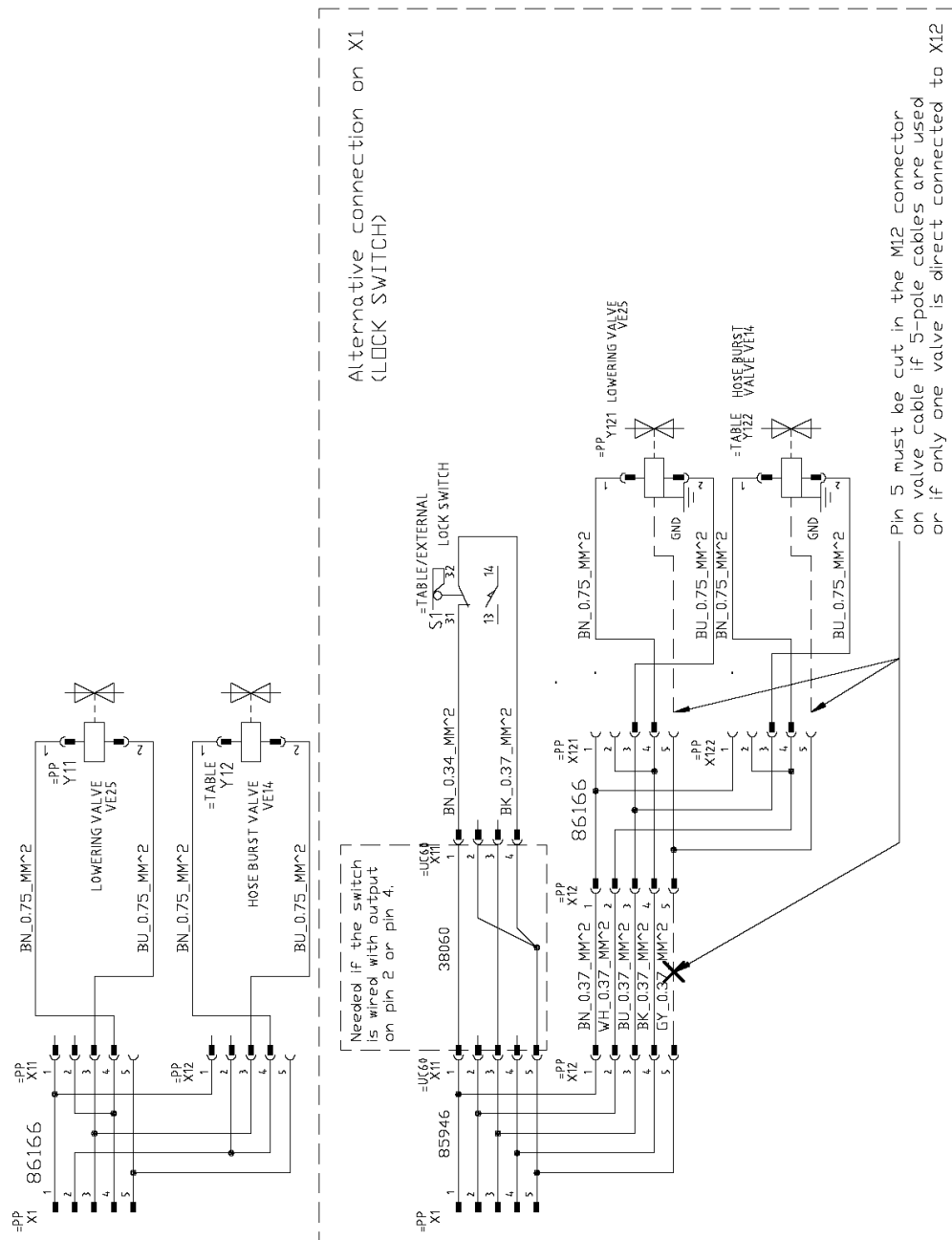


Figure 37. Battery-powered hydraulic unit (39100r2-2)

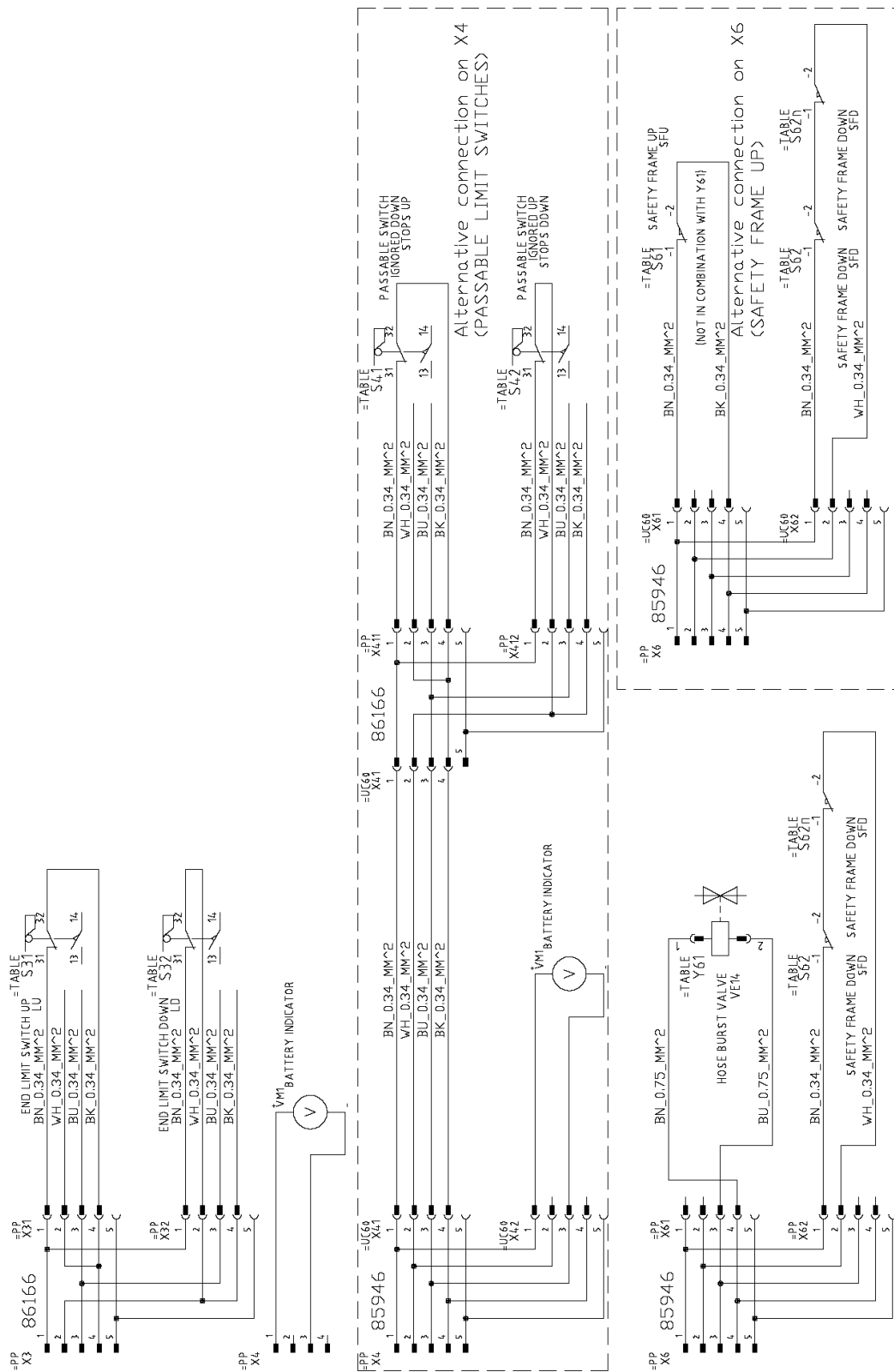


Figure 38. Battery-powered hydraulic unit (39100r2-3)

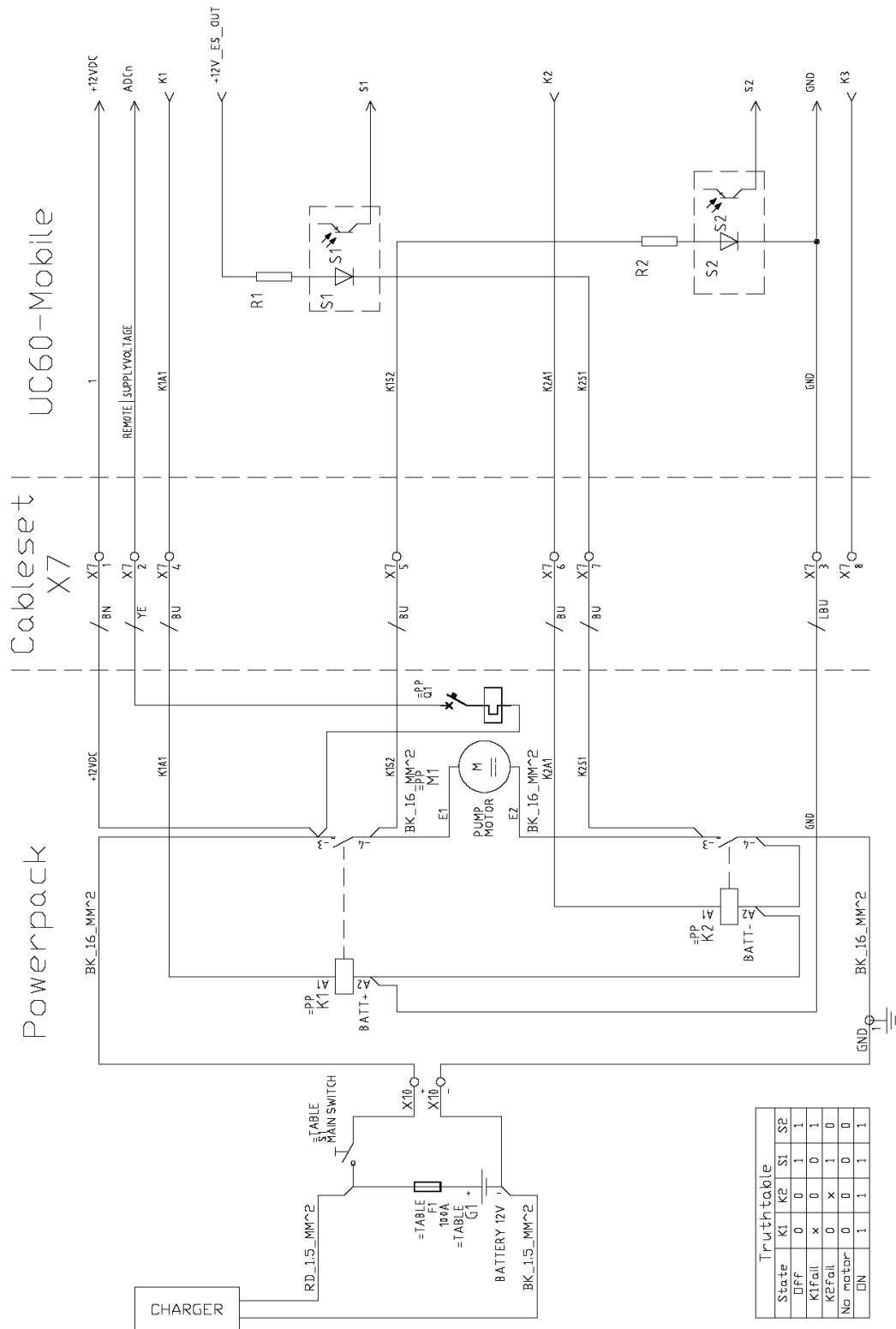


Figure 39. Battery-powered hydraulic unit (39100r2-4)

12 Hydraulic Diagrams

12.1 Battery-powered Hydraulic Unit

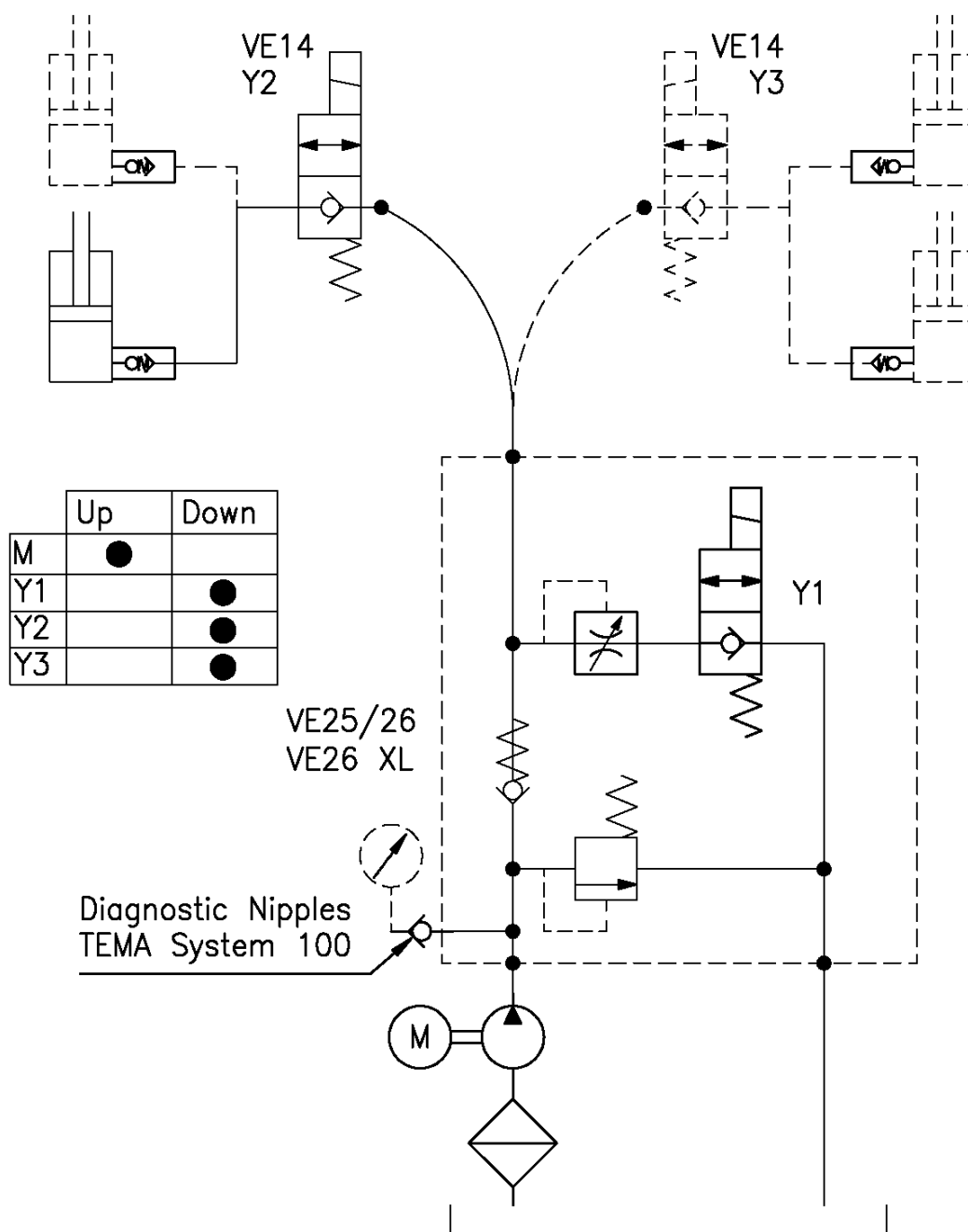


Figure 40. Battery-powered hydraulic unit (Art. No. 45276)

13 Declaration of Conformity

EdmoLift usually issues an EC declaration of conformity to the Machinery Directive, known as a 2A declaration, for the products, on the basis of EN 1570-1.

In some cases, additions with accessories or assembly to a system will be carried out by a party other than EdmoLift, such as a machine plant or lift builder, or by the customer himself. In such cases, EdmoLift issues what is termed a 2B declaration, *Declaration for the incorporation of partially completed machinery*, in which case the person or company responsible for completion must issue a 2A declaration, *Declaration of Conformity*.

The document issued by EdmoLift is included in the delivery of the product.

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About EdmoLift

EdmoLift is one of the world's largest manufacturers of scissor lift trolleys, pallet handling products and tools for material handling. We have been supplying lift trolleys and material handling solutions successfully for more than 60 years.

Our largest customer category comprises industrial companies, although our lifting solutions can also be found within distribution, healthcare, service and retail.

Our business concept focuses on being the most affordable supplier on the market. EdmoLift will also supply added value and high quality, to ensure that our products will meet various demands, provide the best functionality, and last over time. Our products are mainly sold through dealers and subsidiaries in more than 60 countries around the world.

EdmoLift was established in 1964 by Torbjörn Edmo. The company is based in the beautiful municipality of Härnösand in Sweden's High Coast area, where we have modern premises for production, development, sales and service. Our experienced and knowledgeable staff can provide rapid responses and a high level of service.

Our goal is to offer the best, most ergonomic and cost-effective solution for your lifting and handling needs.

World class from Sweden!

EdmoLift AB
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