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Originalfassung

**DE BETRIEBSANLEITUNG**

Übersetzung / Translation

**EN USER MANUAL**

**FR MODE D'EMPLOI**

**CZ NÁVOD K POUŽITÍ**

**ELEKTRISCHE SCHUBKARRE**

**ELECTRIC WHEELBARROW**

**BROUETTE ÉLECTRIQUE**

**ELEKTRICKÉ KOLEČKO**



**ZI-EWB350**  
EAN: 9120039234991



**YOUR  
JOB.  
OUR  
TOOLS.**



## 2 SICHERHEITSZEICHEN / SAFETY SIGNS / SYMBOLES DE SECURITE / BEZPEČNOSTNÍ ZNAČKY

DE SICHERHEITSZEICHEN  
BEDEUTUNG DER SYMBOLE

EN SAFETY SIGNS  
DEFINITION OF SYMBOLS

FR SYMBOLES DE SÉCURITÉ  
SIGNIFICATION DES  
SYMBOLES

CZ BEZPEČNOSTNÍ ZNAČKY  
VÝZNAM SYMBOLŮ



DE **CE-KONFORM!** - Dieses Produkt entspricht den EU-Richtlinien.  
EN **CE-Conformal!** - This product complies with the EC-directives.  
FR **CONFORMITÉ CE !** - Ce produit répond aux directives CE.  
CZ **VYHOVUJE CE!** - Tento výrobek vyhovuje směrnici EU.



DE **ANLEITUNG LESEN!** Lesen Sie die Betriebs- und Wartungsanleitung Ihrer Maschine aufmerksam durch und machen Sie sich mit den Bedienelementen der Maschine gut vertraut, um die Maschine ordnungsgemäß zu bedienen und so Schäden an Mensch und Maschine vorzubeugen.

EN **READ THE MANUAL!** Read the user and maintenance manual carefully and get familiar with the controls in order to use the machine correctly and to avoid injuries and machine defects.

FR **LIRE LE MANUEL D'UTILISATION !** Veuillez lire le manuel d'exploitation et de maintenance de votre machine avec assiduité en vous familiarisant bien avec les organes de commande de la machine pour l'utiliser correctement et prévenir ainsi des blessures corporelles et des dégâts sur la machine.

CZ **PŘEČTĚTE SI NÁVOD!** Přečtěte si pozorně návod k použití a údržbě stroje a dobře se seznámte s jeho ovládacími prvky, abyste mohli stroj správně ovládat, čímž zabráníte škodám na zdraví osob i poškození stroje.

DE **WARNUNG!** Beachten Sie die Sicherheitssymbole! Die Nichtbeachtung der Vorschriften und Hinweise zum Einsatz der Maschine kann zu schweren Personenschäden und tödliche Gefahren mit sich bringen.



EN **ATTENTION!** Ignoring the safety signs and warnings applied on the machine as well as ignoring the security and operating instructions can cause serious injuries and even lead to death.

FR **AVERTISSEMENT !** Observer les symboles de sécurité ! Le non-respect des réglementations et des consignes d'utilisation de la machine peut entraîner des blessures corporelles graves et des risques mortels.

CZ **VAROVÁNÍ!** Respektujte bezpečnostní symboly! Nedodržování předpisů a pokynů k použití stroje může způsobit vážné škody na zdraví osob a smrtelná nebezpečí.



DE **Vor Regen, Spritzwasser schützen!**

EN **Protect from rain, splashing!**

FR **Protéger contre la pluie et les projections d'eau !**

CZ **Chraňte před deštěm a stříkající vodou!**



DE **Schutzausrüstung tragen!**

EN **Protective clothing!**

FR **Porter un équipement de protection !**

CZ **Používejte ochranné prostředky!**

DE **Warnschilder und/oder Aufkleber an der Maschine, die unleserlich sind oder die entfernt wurden, sind umgehend zu erneuern!**

EN **Missing or non-readable security stickers have to be replaced immediately!**

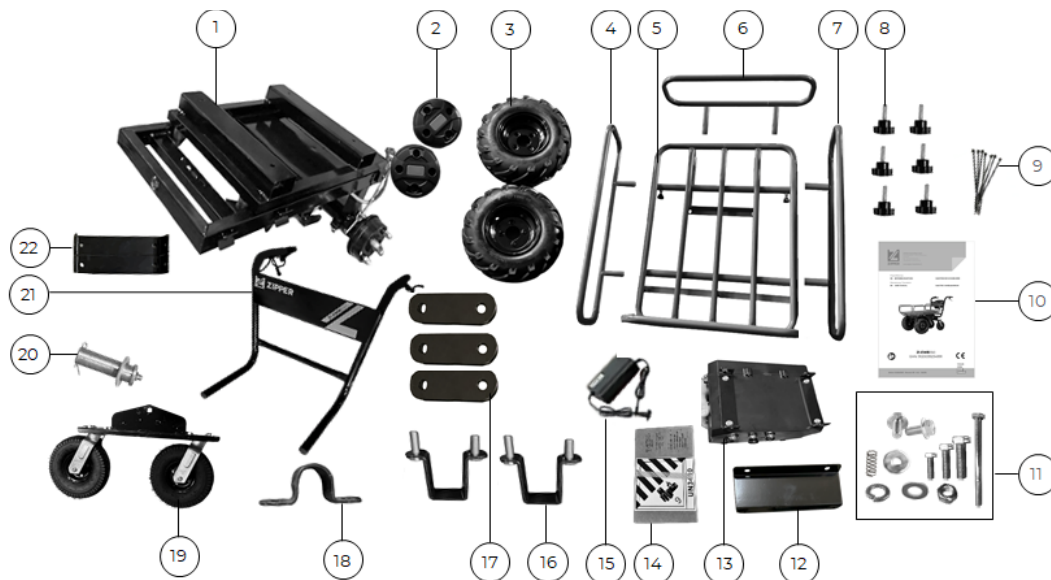
FR **Les panneaux d'avertissement et/ou autocollants d'avertissement illisibles ou retirés sur la machine doivent être remplacés immédiatement !**

CZ **Výstražné štítky a/nebo nálepky na stroji, které jsou nečitelné či byly odstraněny, je nutné ihned obnovit!**



### 3 TECHNIK / TECHNICS / TECHNIQUE / TECHNIKA

#### 3.1 Lieferumfang / delivery content / Contenu de la livraison / Rozsah dodávky



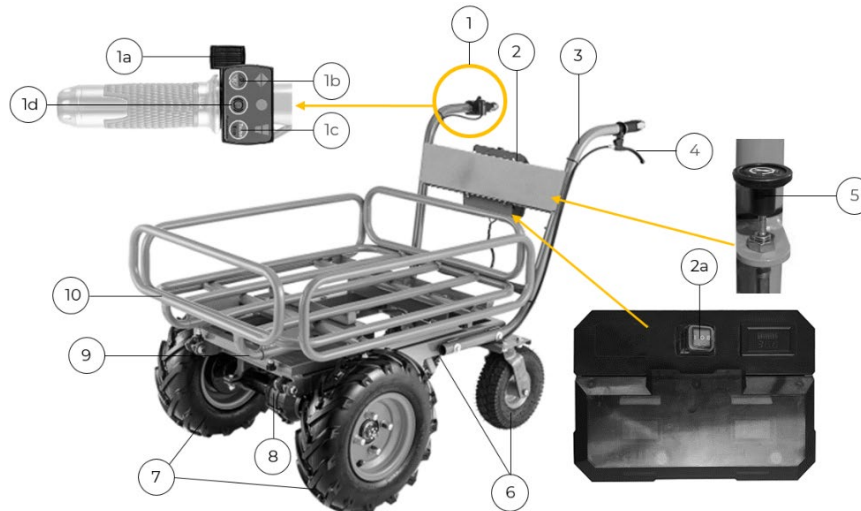
Nr.	Bezeichnung / description	Nr.	Bezeichnung / description
1	Basisrahmen / basic frame / Châssis de base / Základní rám	12	Schutzblech / protector plate / Tôle de protection / Ochranný plech
2	Radkappen / wheel caps / Chapeau de moyeu / Kryty kol	13	Akkubox / battery box system / Boîtier de la batterie / Příhrádka na akumulátor
3	Räder / wheels / Roues / Kola	14	Akku / battery / Batterie / Akumulátor
4	Rahmen links / frame left / Châssis côté gauche / Rám vlevo	15	Ladegerät / charger / Chargeur / Nabíječka
5	Transportrahmen / tubular frame / Châssis de transport / Transportní rám	16	Klammer / clamp / Attache / Svorka*
6	Rahmen vorne / frame front / Châssis avant / Rám vpředu	17	Bügel / hanger / Étrier / Závěs*
7	Rahmen rechts / frame right / Châssis côté droit / Rám vpravo	18	Klammer rund / round clamp / Attache ronde / Oblá svorka*
8	Fixierschrauben / fixing screws / Vis de fixation / Upevňovací šrouby	19	Stützräder mit Halterung / support wheels with bracket / Roues de support avec fixation / Podpěrná kola s držákem
9	Kabelbinder und Klettbinden / cable tie and Velcro straps / Serre-câbles et bandes Velcro / Vázací pásky a pásky se suchým zipem	20	Bolzen / bolt / Boulon / Čep
10	Betriebsanleitung / user manual / Mode d'emploi / Návod k použití	21	Handgriffe / handles / Poignées / Držadla
11	Montagematerial / assembly material / Matériel de montage / Montážní materiál	22	Halterung Akkubox / bracket for battery box system / Fixation du boîtier de la batterie / Držák příhrádky na akumulátor

\*Teile sind für Montage einer Flachwanne notwendig ggf. Nicht im Lieferumfang enthalten. Werden auch nicht für die Montage benötigt.  
Parts are necessary for assembling of tray maybe not included in delivery-content. Not needed for assembling that machine.

Pièces nécessaires pour le montage d'une auge plate, le cas échéant. Non incluse dans la livraison. Elles ne sont pas non plus indispensables pour le montage.

Díly jsou nutné pro montáž ploché vany, popř. nejsou součástí dodávky. Také nejsou nutné pro montáž.

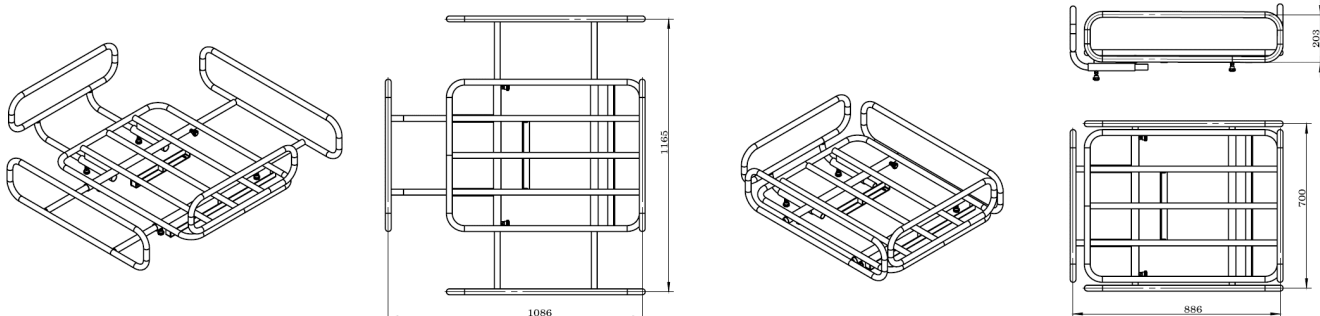
### 3.2 Komponenten / components / Composants / Komponenty



Nr.	Bezeichnung / description	Nr.	Bezeichnung / description
<b>1</b>	Motor-Bedienelement / motor control unit / Élément de commande du moteur / Ovládací prvek motoru	<b>3</b>	Handgriff / handle grip / Poignée / Držadlo
<b>1a</b>	Hebel elektrische Unterstützung / electrical support lever / Levier d'assistance électrique / Páka elektrické podpory	<b>4</b>	Hebel mechanische Bremse / lever mechanic brake / Levier de frein mécanique / Páka mechanické brzdy
<b>1b</b>	Wahlschalter vor-rückwärts / forward-backward selector switch / Sélecteur d'avance et de recul / Volič vpřed-vzad	<b>5</b>	Entriegelung Kippfunktion / unlock tilt function / Déverrouillage de la fonction de basculement / Odblokovací mechanismus funkce naklápění
<b>1c</b>	Wahlschalter Geschwindigkeit / speed selector switch / Sélecteur de la vitesse / Volič rychlosti	<b>6</b>	Stützräder / support wheel / Roues de support / Podpěrná kola
<b>1d</b>	EIN-AUS Schalter Bremse / ON-OFF switch brake / Interrupteur marche-arrêt du frein / Spínač/vypínač brzdy	<b>7-8</b>	Rad mit Motor / motor with wheel / Roue motorisée / Kolo s motorem
<b>2</b>	Akkubox / battery box system / Boîtier de la batterie / Příhrádka na akumulátor	<b>9</b>	Basisrahmen / basic frame / Châssis de base / Základní rám
<b>2a</b>	EIN-AUS-Schalter / ON-OFF switch / Interrupteur MARCHE-ARRÊT / Spínač/vypínač	<b>10</b>	Transportrahmen / tubular frame / Châssis de trans / Transportní rám

**3.3 Technische Daten / technical data / Données techniques / Technické údaje**

<b>ZI-EWB350</b>	
Akkuspannung / rated voltage / Tension de la batterie / Akumulátorové napětí	40 V DC
Akkukapazität / battery capacity / Capacité de la batterie / Kapacita akumulátoru	6 Ah
Akkulaufzeit [Std] / battery worktime [h] / Durée de fonctionnement de la batterie [heures] / Doba provozu baterie [hod.]	5 h
Motorleistung / motorpower / Puissance du moteur / Výkon motoru	400 W
Geschwindigkeit vorwärts / speed forward / Vitesse d'avance / Rychlost vpřed	max. 6 km/h
Geschwindigkeit rückwärts / speed reverse / Vitesse d'arrière / Rychlost vzad	max. 2 km/h
Reifendimension / wheel dimension / Dimensions des pneus / Rozměr pneumatiky	2 x (16 x 5.00-8) / 2 x (3,5-4.0)
max. Ladekapazität / max. load capacity / Capacité de charge maximale / max. kapacita nabití	300 kg
Transportrahmendimension (L x B) / transport frame dimension (L x W) / Dimensions du châssis de transport (L x l) / Rozměr transportního rámu (d x š)	(700-1165) x (886-1086) mm
Transportrahmenhöhe / transport frame height / Hauteur du châssis de transport / Výška transportního rámu	~ 200 mm
Gewicht netto / weight net / Poids net / Hmotnost netto	79 kg
Gewicht brutto / weight gross / Poids brute / Hmotnost brutto	91 kg
Maschinenmaße / dimension / Dimensions de la machine / Rozměry stroje	1460 x 750 x 915 mm
Verpackungsmaße (LxBxH) / packaging dimensions (LxWxH) / Dimensions d'emballage (LxIxH) / Rozměry obalu (dxšxv)	1000 x 710 x 555 mm
Stromüberwachung max-Wert / over current protection value of controller / Surveillance de la valeur maximale du courant / Max. hodnota nadproudové ochrany	16 A
<b>Ladegerät / charger / Chargeur / Nabíječka:</b>	
Eingangsspannung / input voltage / Tension d'entrée / Vstupní napětí	220-240 V / 50-60 Hz / AC
Leistung / power / Puissance / Výkon	97 W
Ausgang / output / Sortie / Výstup	42 V
Ladezeit / charge time / Temps de charge / Doba nabíjení	3 h
Schutzklasse II / protection class II / Classe de protection II / Třída ochrany II	II
Gewicht Ladegerät / weight charger / Poids du chargeur / Hmotnost nabíječky	0.36 kg
Maschinenmaße / dimension / Dimension / Dimensions de la machine / Rozměry stroje	160 x 75 x 46 mm
<b>Akku / battery / Batterie / Akumulátor:</b>	
Akkuspannung / rated voltage / Tension de la batterie / Akumulátorové napětí	40 V
Akkukapazität / battery capacity / Capacité de la batterie / Kapacita akumulátoru	6 Ah
Akkuenergie / battery power / Énergie de la batterie / Energie akumulátoru	240 Wh
Gewicht AKKU / weight battery / Poids de la batterie / Hmotnost akumulátoru	1,827 kg
Dimension / dimension / Dimensions / Rozměr	180 x 106,5 x 76 mm

**Transportrahmen / transport frame / Châssis de transport**



## 10 PREFACE (EN)

### Dear Customer!

This manual contains information and important notes for safe commissioning and handling of the ZIPPER electric wheelbarrow ZI-EWB350, hereinafter referred to as “machine” in this document.



This manual is part of the machine and must not be removed. Save it for later reference and if you let other people use the machine, add this manual to the machine.

#### **Please read and note the safety instructions!**

Before first use read this manual carefully. It eases the correct use of the machine and prevents misunderstanding and damages of machine.

Due to constant advancements in product design, construction, illustrations and contents may deviate slightly. If you notice any errors, please inform us.

We reserve the right to make technical changes!

**Check the goods immediately after receipt and note any complaints on the consignment note when taking over the goods from the deliverer!**

**Transport damage must be reported to us separately to us within 24 hours.**

**ZIPPER MASCHINEN GmbH cannot accept any liability for transport damage that has not been reported.**

### Copyright

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The place of jurisdiction is the regional court Linz or the court responsible for 4707 Schlüsslberg is valid.

### Customer service contact

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## 11 SAFETY

This section contains information and important notes on the safe commissioning and handling of the machine.



For your safety, read this manual carefully before commissioning. This will enable you to handle the machine safely and thus prevent misunderstandings as well as personal injury and damage to property. Pay special attention to the symbols and pictograms used on the machine as well as the safety information and danger warnings!

### 11.1 Intended use of the machine

The machine is designed exclusively for the following activities: *Transportation of goods within the maximum permissible load capacity.*

#### NOTE



ZIPPER MASCHINEN GmbH assumes no responsibility or warranty for any other use or use beyond this and for any resulting damage to property or injury.

#### 11.1.1 Technical Restrictions

The machine is designed for the work under the following conditions:

Relative humidity:	max. 65 %
Temperature (for operation)	+5° C to +40° C

The machine, especially the battery; may not be exposed to a temperature of about 80 °C. Do not store in the blazing sun or a long time in the trunk of a car.

#### 11.1.2 Prohibited applications / Dangerous misuse

- Operating the machine without adequate physical and mental fitness.
- Operating the machine without knowledge of the manual.
- Modifying the machine design.
- Operating the machine in wet and rainy conditions.
- Operating the machine outside the technical limits specified in this manual.
- Removing of the safety markings attached to the machine.
- Modifying, circumventing or disabling the safety devices of the machine.

The non-intended use or the disregard of the explanations and instructions described in this manual will result in the expiration of all warranty claims and compensation claims for damages against ZIPPER MASCHINEN GmbH.

### 11.2 User Requirements

The machine is designed for operation by one person. The prerequisites for operating the machine are physical and mental fitness as well as knowledge and understanding of the operating instructions. Persons who, due to their physical, sensory or mental capabilities, inexperience or lack of knowledge, are unable to operate the machine safely must not use the machine without supervision or instruction by a responsible person.

Basic knowledge of metalworking especially the correlation of material, tool, feed and speeds.

**Please note that local laws and regulations may determine the minimum age of the operator and restrict the use of this machine!**

Put on your personal protective equipment before working on the machine.

**Work on electrical components or equipment may only be carried out by a qualified electrician or under the instruction and supervision of a qualified electrician.**

### 11.3 General safety instructions

To avoid malfunctions, damage and health impairments when working with the machine, the following points must be observed in addition to the general rules for safe working:

- Check the machine for completeness and function before starting. Only use the machine if the separating and other non-separating protective devices required for machining have are fitted.
- Ensure sufficient lighting conditions at the workplace to ensure safe handling of the machine.
- Remove tool keys and other setting tools before switching on the machine.



- Check the machine's connections for strength before each use.
- Never leave the running machine unattended. Switch off the machine before leaving the working area and secure it against unintentional or unauthorized restarting.
- The machine may only be operated, maintained or repaired by persons who are familiar and who have been informed about the dangers arising from this work.
- Ensure that unauthorized persons keep a safety distance from the machine and keep children away from the machine.
- Wear suitable work clothing and footwear.
- Always work with care and the necessary caution and never use excessive force.
- Shut down the machine and disconnect it from the power supply, before adjustment, changeover, cleaning, maintenance or repair work, etc. Before starting work on the machine, wait until all tools or machine parts have come to a complete standstill and secure the machine against unintentional restart.
- Do not work on the machine if you are tired, not concentrated or under the influence of medication, alcohol or drugs!

#### 11.4 Special safety instructions for this machine

- Caution in slippery conditions - slip hazard - risk of injury. When working, robust and non-slip footwear. Slides / stumble / traps are a major cause of serious injury or death.
- Never use the machine when it is raining or in damp, wet areas.
- Always use both hands to hold the machine when in use.
- Before start, after failure or shock, be sure to check the machine and make sure that it is in good condition.
- Take special care when work near swimming pools or garden ponds.
- Unplug battery before all maintenance and settings!

##### CHARGER:

- The charger is designed exclusively to charge the battery of this machine. Charging other batteries is not permitted.
- Never use the charger in a damp or wet environment.
- Disconnect cable connections only by pulling the plug. Pulling on the cable could damage the cable and plug and electrical safety would no longer be guaranteed.
- Never use the charger if the cable, plug or the machine itself are damaged by external influences. Then take the charger to the nearest specialist workshop.
- Do not operate the machine in close proximity to heat sources.
- Do not use an extension cord to plug in the charging station's power supply.
- Do not place any metal objects in the area of the charging contacts of the charger.
- Do not open the charger. In case of failure, contact a specialist workshop.
- Only use the original charger to charge the battery. If other chargers are used, defects may occur or a fire might be caused.

##### BATTERY:

- Vapours may be emitted during improper use or when using damaged batteries. These vapours can irritate the respiratory tract. Inhale fresh air and consult a physician if you experience any discomfort.
- EXPLOSION HAZARD! Protect the battery from heat and fire.
- Only use the battery in an ambient temperature between 0° C and +45° C.
- HAZARD OF SHORT-CIRCUIT! For disposal, transport or storage, the battery must be packed (plastic bag, box) or the contacts must be taped.
- Never open the battery.

#### 11.5 Hazard warnings

Due to the structure and construction of the machine, hazardous situations may occur which are identified in this manual as follows:

### DANGER



A safety instruction designed in this way indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

### WARNING



Such a safety instruction indicates a potentially hazardous situation which, if not avoided, may result in serious injury or even death.



**CAUTION**

A safety instruction designed in this way indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

**NOTE**

A safety note designed in this way indicates a potentially dangerous situation which, if not avoided, may result in property damage.

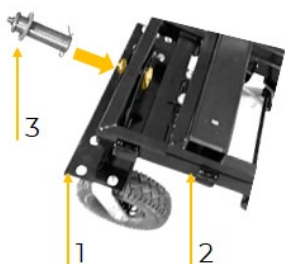
Regardless of all safety regulations, your common sense and your appropriate technical aptitude/training are and remain the most important safety factor in the error-free operation of the machine. **Safe working depends on you!**

**12 ASSEMBLY****12.1 Checking delivery content**

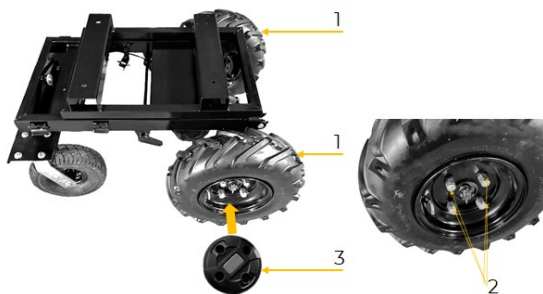
Check the delivery immediately for transport damage and missing parts. Report any damage or missing parts to your dealer or the shipping company immediately. Visible transport damage must also be noted immediately on the delivery note in accordance with the provisions of the warranty, otherwise the goods are deemed to have been properly accepted.

**12.2 Assembly-steps****NOTE**

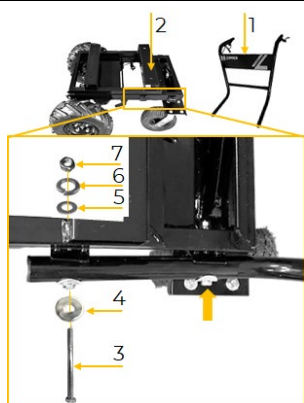
Do not fully tighten all screws until assembly is complete.

**1. Step**

Assemble the support wheel bracket (1) on the basic frame (2) using a bolt (3). Fix the bolt with washer and cotter-pin.

**2. Step**

Assemble the wheels (1) on the axle by means of 4 wheel nut (2). Then attach the wheel caps (3).

**3. Step**

Fix the handles (1) to the basic frame (2) at four positions using a screw (3), curved spring washer (4), washer (5), spring washer (6) and a nut (7).



	<p><b>4. Step</b></p> <p>Assembly unlock tilt function: Remove the unlock knob (1) and the nut (2). Insert the wire into the bracket (nut 3 below the bracket). Fasten the nut (2) and the unlock knob (3).</p>
	<p><b>5. Step</b></p> <p>Hook the brake cable (2) onto the brake lever (1). The brake lever can then be fixed in position with screw (3). Make the connection to the brake on both wheels: To do this, mount the bolt (4) on the right and left brake linkage (6) in the device as shown and secure using a split pin and washer (5).</p>
	<p><b>6. Step</b></p> <p>Install fixing screws (1), each with a compression spring (2) and a washer (3), at six positions onto the tubular frame.</p>
	<p><b>7. Step</b></p> <p>Slide the frame left (1), right (2) and front (3) into the tubular frame and fix in the desired position with fixing screws.</p>
	<p><b>8. Step</b></p> <p>Position the tubular frame on the basic frame. The boreholes (1) must be positioned one above the other. Secure the tubular frame to each borehole with a screw (2), washers (3), spring washer (4) and a nut (5).</p>



	<p><b>9. Step</b></p> <p>Assemble the brackets (1) to the rear of the battery box system using screws with serrated flange screws (2).</p> <p>Then fix the battery box system (3) and the protector plate (4) to the bore holes (5).</p> <p>For each borehole (5), a screw (6), spring washer (7), washers (8) and a nut (9) are required.</p>
	<p><b>10. Step</b></p> <p>Insert the plug of the motor control unit (1) into the socket on the underside of the battery box and secure it with the lock nut.</p>
	<p><b>11. Step</b></p> <p>Insert the plugs of the drive unit (1, 2) into the respective matching socket on the underside of the battery box and secure with lock nuts.</p>
	<p><b>12. Step</b></p> <p>Fix the cable of the drive unit on two positions to the basic frame using a clamp (1), bracket (3), screws (2), washers (4) and nuts (5).</p>
	<p><b>13. Step</b></p> <p>Secure the orange cable of the drive unit to the protector plate with a cable tie (1) and to the cross strut with a Velcro strap (2).</p> <p>Secure the cable of the motor control unit with a Velcro strap (3).</p> <p>Secure the brake cable with a cable tie (4).</p>

**14. Machine assembling completed****13 OPERATION**

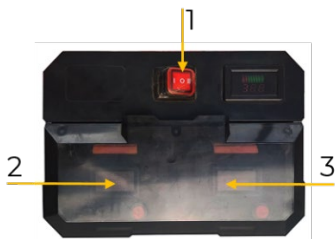
Only operate the machine when it is in a perfect condition. Before each operation, a visual inspection of the machine must be carried out. Safety devices and operating elements must be checked carefully. Check in particular the safety equipment, electrical controls, electric cables and screwed connection for damage and if tightened properly. Replace any damaged parts before operating the machine.

**13.1 Operation instructions****WARNING**

Unplug battery before all maintenance and settings!

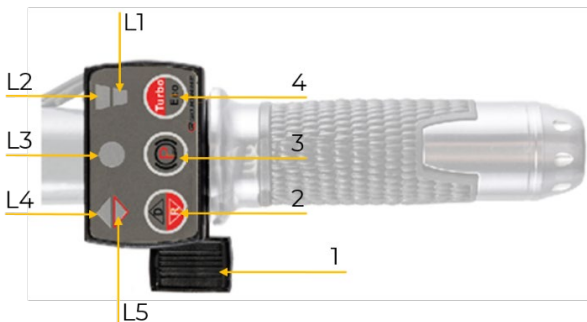
**NOTE**

- Never remove the battery while the machine is running.
- In case of longer standstill, press the shut-down button.
- Use the electric motor only with sufficient battery charge.

**13.2 Operation****13.2.1 Start electrical support**

1. Turn ON-Off-Switch (1) to Position „I“: the left battery cartridge (2) ist activated.
2. Turn ON-Off-Switch (1) to Position „II“: the right battery cartridge (3) ist activated.

**NOTE:** Only one batteray cartridge can be activated



3. Select the direction of motor rotation and thus the forward or backward movement of the machine by pressing button (2). The selected direction is indicated by the arrows L4/L5.
4. By pushing the button (3) the BAS activated / EBS deactivated.  
L3 lights red: EBS activated  
L3 lights green: EBS deactivated  
BAS = Brake assistance if no electronic support is requested  
EBS = Electronic Brake: Machine is braked and braking effect is maintained as long as
  - until battery empty
  - until EBS is deactivated again
5. By pushing the lever (1), the strength of the electrical support is adjusted; the further the lever is turned away from its initial position, the stronger the support.  
**NOTE:** no activation on electrical support means BAS active (braking effect noticeable)
6. **NOTE:** If EBS is activated, no electric drive assistance in forward or reverse direction.



- The Eco or Turbo mode can be selected by pressing the button (4):  
Eco mode: L1 lights up, low battery consumption.  
Turbo mode: L1 and L2 light up,  
higher power = higher battery consumption.

### 13.2.2 Machine stopping / parking

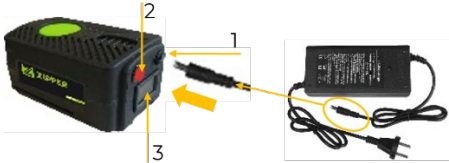
- Select active battery cartridge
- EBS deactivated / BAS activated  
Brake support by motor but the machine must be braked manually by manpower and pushing the lever mechanic brake when used on slopes. If the machine is to remain in position for a longer period of time, first bring it onto level ground and secure it against rolling away (chock under the wheels)
- EBS activated
- The machine brakes until it comes to a complete stand still and the braking effect remains active as long as EBS is activated. Also holds the machine in position on slopes up to 20%. If the machine is to remain in position for a longer period of time, first bring it onto level ground and secure it against rolling away (chock under the wheels).

#### NOTE:

Braking function EBS requires battery energy, designed for short times only (max. 15 minutes)

### 13.3 Charger

#### Charging the battery:

	<ol style="list-style-type: none"><li>remove battery from battery box</li><li>connect the charger to the power supply (socket) 230 V / 50 Hz and the charging socket (1)..</li><li>battery charging</li><li>When the battery is fully charged (display on the charger), disconnect the charger again.</li><li>charging status is indicated by pressing button (2) on the display (3).</li></ol>
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#### Voltage display on battery box system indicates the status of the battery:

Voltage display shows 40 V	Battery capacity 100%
Voltage display shows 35 V	Battery capacity ~50%
Voltage display shows < 32 V	Please charge the battery (too less capacity left)

#### NOTE:

- Avoid overheating when charging the battery. Ensure sufficient air supply so that no heat can accumulate.
- Only charge the battery in an ambient temperature between 0° C and +40° C.
- Allow the battery to cool down after intensive use before recharging it.
- Always charge the battery in a well-ventilated area.
- FIRE HAZARD! Never charge batteries near acids and flammable materials.
- Do not smoke when charging the battery. Keep the battery away from open flames and sparks.
- Allow the battery to cool down immediately after charging.

## 14 CLEANING, MAINTENANCE, STORAGE, DISPOSAL

### 14.1 Cleaning

#### NOTE



**The usage of certain solutions containing ingredients damaging metal surfaces as well as the use of scrubbing agents will damage the machine surface!**

Clean the machine surface with a wet cloth soaked in a mild solution

**Never use running water or a high pressure cleaner to clean the machine.**

- Clean the outer parts with a damp sponge.
- Never clean the electronic parts with water!
- Check the machine and remove the deposits and / or residues with a brush.





## 14.2 Maintenance

### CAUTION



Unplug battery before all maintenance and settings!  
Serious injury due to unintentional or automatic activation of the machine!

The machine does not require extensive maintenance. If malfunctions and defects occur, let it be serviced by trained persons only.

### NOTE



Clean your machine regularly after every usage – it prolongs the machines lifespan and is a pre-requisite for a safe working environment.

**Repair jobs shall be performed by respectively trained professionals only!**

- Check regularly the condition of the security stickers. Replace them if required.
- Check regularly the condition of the machine.
- Store the machine in a closed, dry location.

### 14.2.1 Maintenance plan

#### After each workshift:

- Check the cables (tight fit, damage)

#### Monthly:

- Charge the battery (for longer period of storage): Monthly check of the charge level.

## 14.3 Storage

- Clean thoroughly all components before storage.
- Store all components separately in a dry area at not less than 0 ° C.

### Important notes on storing the battery to avoid possible damage:

If the machine will not be used for a longer period of time, the battery should be disconnected and disassembled from the machine. Before storage, the battery should be charged again. An exception to this rule are batteries permanently installed in the machine, which should not be disassembled and simply charged with the charger supplied. Batteries should be stored at room temperature (approx. 20° C) in a dry and frost-proof place. Avoid large temperature fluctuations (e.g. do not expose battery to direct sunlight or store near heating systems). Higher temperatures can lead to accelerated ageing and premature loss of function of the battery. If the battery is not used for a longer period of time, check the charge level regularly (monthly, max. every 3 months). If necessary, recharge the battery.

## 14.4 Disposal



Observe the national waste disposal regulations. Never dispose of the machine, machine components or operating equipment in the residual waste. If necessary, contact your local authorities for information regarding available disposal options.

If you purchase a new machine or equivalent equipment from your specialist dealer, he is obliged in certain countries to dispose of your old machine properly.

# 15 TROUBLESHOOTING

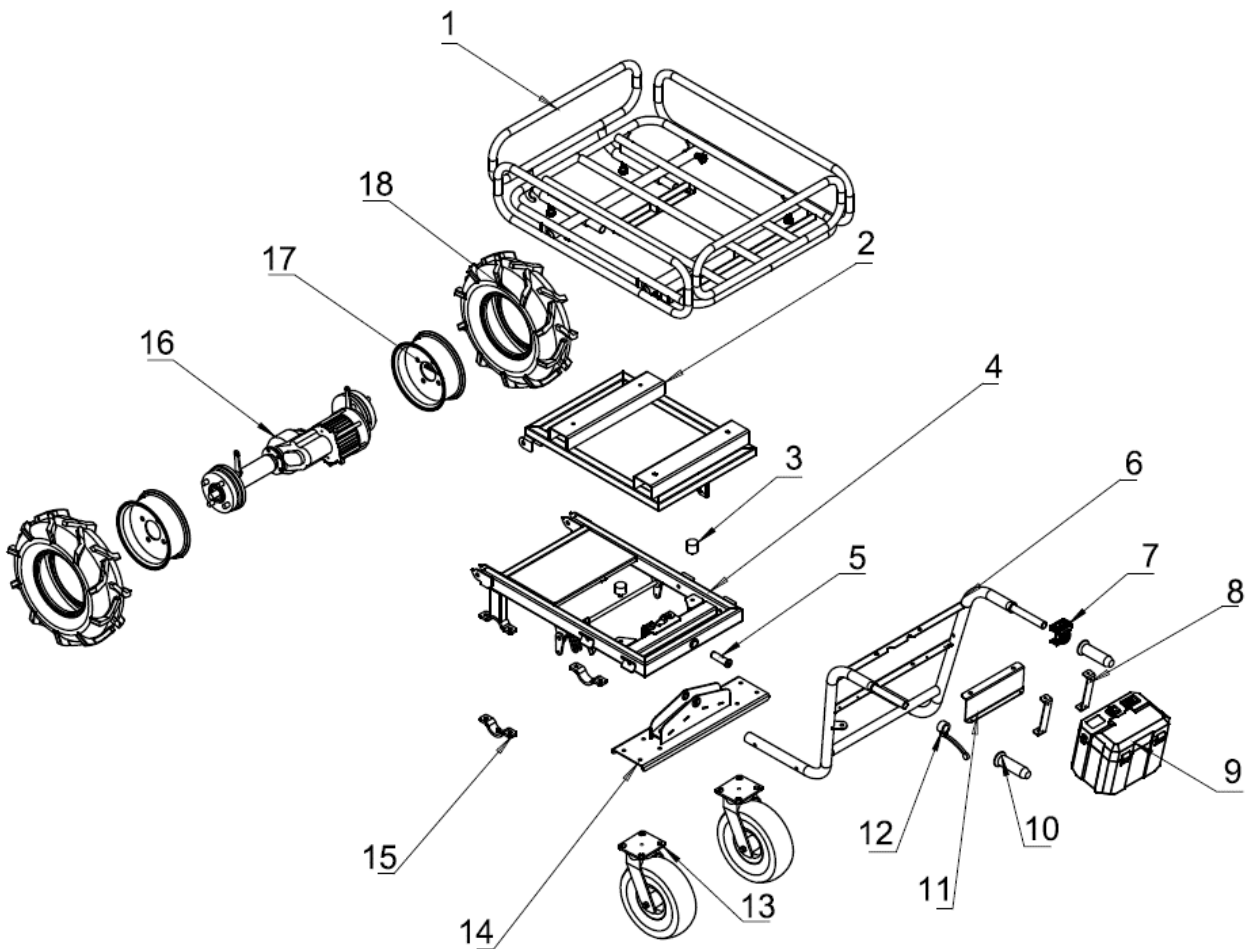
## BEFORE YOU START WORKING FOR THE ELIMINATION OF DEFECTS, UNPLUG THE BATTERY.

Trouble	Possible cause	Solution
No electrical support	• Battery is not charged	• Recharge battery
	• Motor stuck	• Check motor
	• Power switch is damaged	• Check switch
	• Broken or loose cables	• Check cables
No charging of battery	• Loosen cable	• Check cable connection





28.2 Explosionszeichnung / Exploded view / Vue éclatée / Výkres v rozloženém stavu



Pos	Parts name	Qty	Pos	Parts name	Qty
1	tubular frame	1	10	handle grip	1
2	square frame support	1	11	protector plate for plug	1
3	shock absorber	2	12	brake handle	1
4	main frame	1	13	swing wheel support	1
5	shaft for swing wheel support	1	14	universal wheels	2
6	handle	1	15	drive motor clamp	2
7	speed control lever	1	16	drive motor assy	1
8	connect plate for battery box	2	17	rim	2
9	battery box	1	18	tyre	2