Kraftwerk E eScooter Model: WANDLER K/E

Your eScooter. Designed in Germany.

CHANGES EVERYTHING



Wandler K/E 45km/h and 20 km/h version

www.kraftwerk-e.com

Our electric scooter. Made for you.



Manual Content

| 1. | Foreword | Page | 3 |
|-----|--------------------------------|------|-------|
| 2. | Notes | Page | 3 |
| 3. | Preliminary legal observations | Page | 4 |
| 4. | Safety | Page | 4-5 |
| 5. | Package content | Page | 5 |
| 6. | First | Page | 6-7 |
| 7. | Commissioning | Page | 8-13 |
| 8. | Battery | Page | 14-18 |
| 9. | Tacho | Page | 18-20 |
| 10. | Starting and driving | Page | 21 |
| 11. | Brakes | Page | 21-22 |
| 12. | Tyres and wheels | Page | 22 |
| 13. | Guarantee conditions | Page | 22-23 |
| 14. | Accessories and parts | Page | 23 |
| 15. | Error Search | Page | 24-25 |
| 16. | Instructions for care | Page | 25-26 |
| 17. | Technical data | Page | 26 |
| 18. | Maintenance manual | Page | 27-28 |
| 19. | Service | Page | 28-30 |

1. Preparation

Congratulations

You've acquired one of the most popular e -scooters. The most innovative and thoughtful e -scooter of his generation. In order to enjoy driving for a long time, take your time and read this manual carefully before you start driving.

The manufacturer is constantly working on the further development of its models. Please understand that changes in the scope of delivery in form, equipment and technology are therefore possible at any time. Therefore, no claims can be derived from the information, pictures and descriptions of these instructions.

2. Note

Important

Please read the instructions carefully before using the device.

Symbols used

Important information for your safety is specially marked. Please follow these instructions to avoid injuries and damage to your Wandler K/E.



Warn of health hazards and indicate possible injury hazards.



Indicates possible hazard to Wandler K/E or other objects. Non-compliance may lead to the conclusion of guarantees.



Highlights tips and information for you.

3. Preliminary legal observations

3.1. Road transport (EEC STREET models only)

To operate this vehicle you need a driving licence and an insurance number. An EU Operating Licence (EEC) is attached to the roller.

With this paper you can purchase a license plate at any insurance.

3.2. Driving licence

Model: Wandler K/E / 45 km/h
Persons of 16 -year -old age with moped or car license.

3.3. Helmets

Due to its maximum speed of approximately 45 km/h, the Wandler K/E may only be driven with a helmet.

3.4. EEC Document (European Certificates of Conformity)

For the approval of your Wandler K/E, use the attached DIN A4 sheet (European Certificate of Conformity EEC). This makes the scooter acceptable throughout Europe. EEC approval requires the fixed seat for driving in public transport. The holding in a standing position is not permitted. Wandler K/E may only be driven by one person.

3.5. Walking and cycling paths

The use on public bicycles and pedestrians is not permitted unless this is shown separately.

4. Safety

The improper use can lead to serious injuries. The driver can minimise this risk by using different safety standards, such as: wearing a helmet, goggles, gloves, elbow and knee protectors and appropriate footwear.

Do not use the scooter on smooth, oily or unpasteurised surfaces. Do not drive under the influence of alcohol and /or drugs.

4. Safety

Avoid uneven substrates, impact holes, cracks in the pavement and other obstacles. If wet, note the increased risk of slipping and falling.

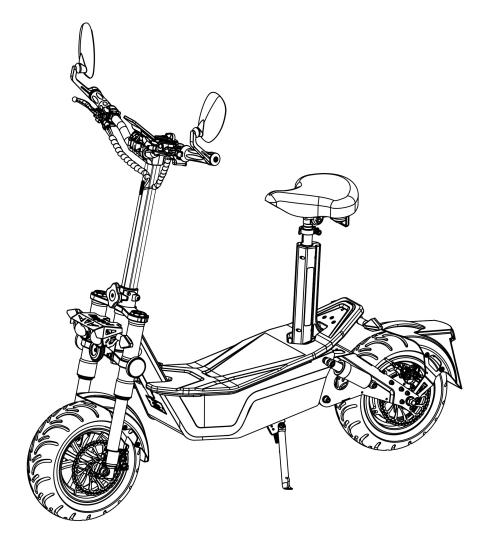
The device should not be used by persons with reduced vision, balance, coordination, reflexes, muscle and bone strength and estimation.

It should not be used by people who cannot or do not want to take responsibility for their actions. The driver assumes all risks associated with the use of the vehicle.

5. Package content

Your scooter comes with below accessories:

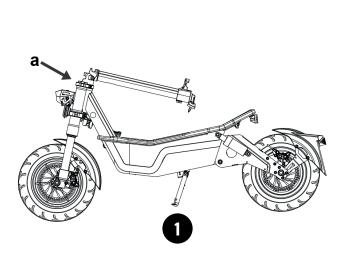
- 1. Instructions
- 2. Tool kits
- 3. Fuse
- 4. Licence plate
- 5. Charger
- 6. COC certificate

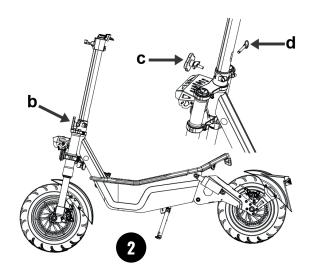


6. First (you can see we add picture/note with logo)

6.1. Instructions for unlocking the scooter

To open the scooter, pull out safe PIN firstly (a is the safe pin in picture 1) then press the the steering post and tighten the nut (see arrow b in picture 2), 2 is the unfolded scooter, please make sure you insert the safe PIN and nut tighten well (c and d in picture 2).





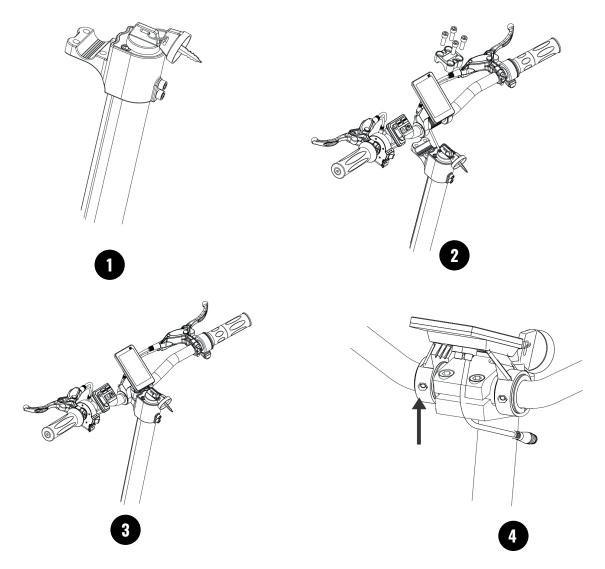


Make sure that nut tighten well and insert safe PIN before using.



6.2. Instructions for mount handlebar

- 1. Picture 1 is the steering post without handle bar, place the handlebar to clamp bottom and attach clamp cap as picture 2, adjust correct angle and tighten all screws M8X25. Picture 3 shows the mounted handlebar.
- 2. Open holder of the display as **picture 4** onto handlebar, adjust correct position and tighten all screws on the holder.



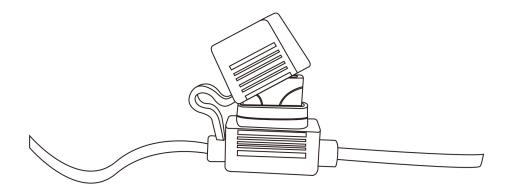
After the handlebar is fixed, the QUICK -CONNECT connectors for accelerator, light /horn switch, brake handles, lamp, ignition and display must be connected.



Note the correct polarity and fit accuracy of the connectors

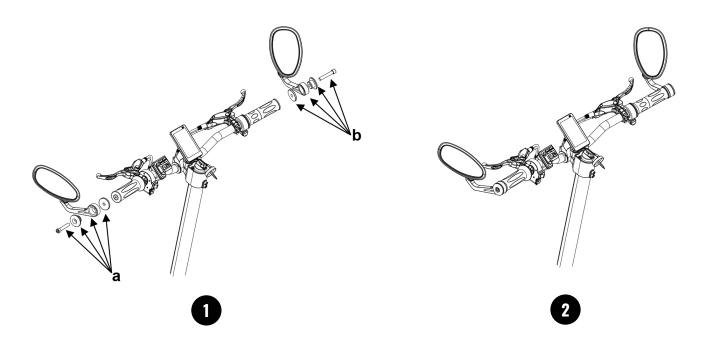
7.1. Connect battery and controller

Now insert the BATTERY PACK into the battery compartment by tapping the tread surface upwards, and connecting the plug XT90 to the controller device. Please disconnect the battery plug while you replace or take out fuse. Please make sure the fuse insert the end of safe valve, or it may cause the broken of fuse and safety valve after short driving.



7.2. Mount Mirror

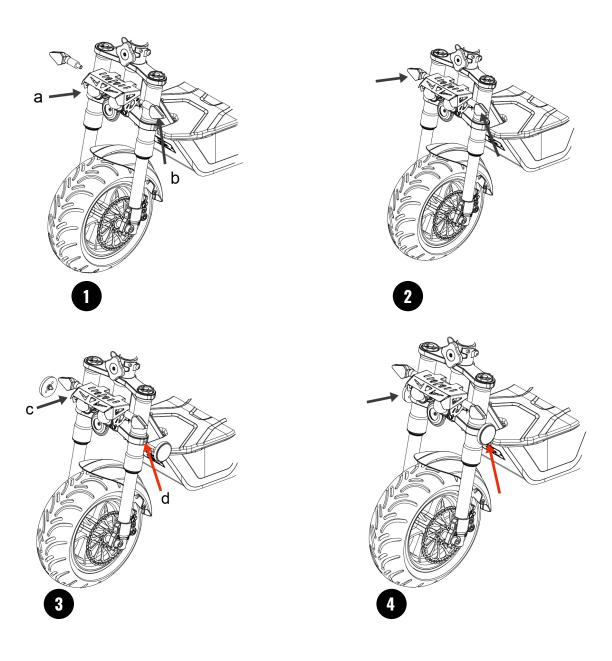
You will find mirror should insert the throttle cover, you should find mirror and disassembled throttle handlebar cover as follow picture 1, then rank the parts as picture shows, fix and tighten all of them, then mirror finished mounting as picture 2.



7.3. Mount turn light and side reflector

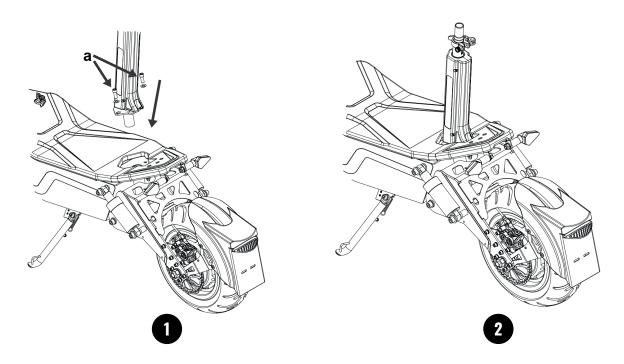
The hole for mounting turn light is on the side of front light cover, arrow a and b in **picture 1**, find the screws for turn light mounting, put the turn light in mount hole then tighten the screws. **Picture 2** shows the turn light mounted.

The hole for mounting side reflector is on the front suspension, **arrow c and d in picture 3**, find the hole and tighten reflector as **picture 4**.



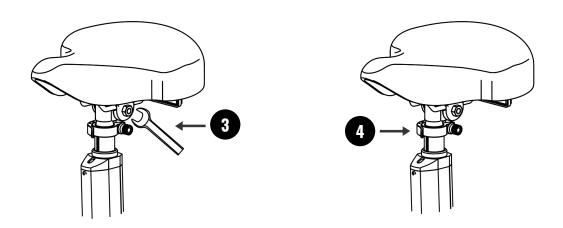
7.4. Mount seat

Find the screws and seat post in package, insert the seat post to bottom tube and tighten screws as 1, seat finished mount as **picture 2**.



Place seat onto upper seat post and tighten screws.

In order to allow comfortable, fatigue -free and thus safe driving, the saddle height should be adjusted to the height of the body. The toes must still be able to touch the ground. Release quick lever, determine saddle height and clamp. The clamping force can be adjusted by adjusting the nut to the quick lever.





An unscrewed quick-release lever can be opened again. This could allow the saddle to slide down during the ride. Heavy falls can be the result.

7.5. Fold

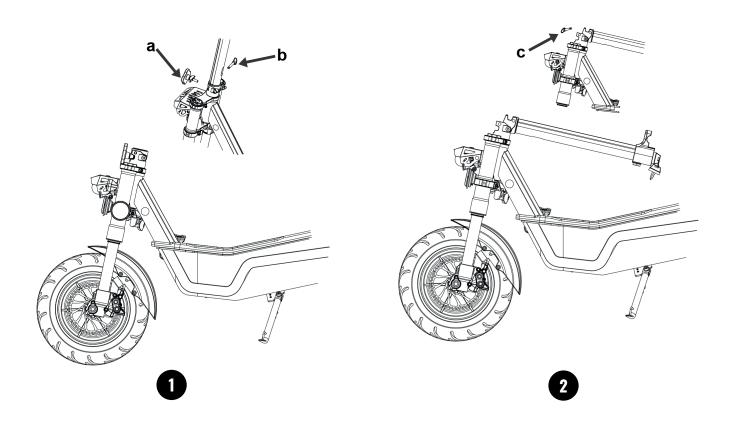
The seat must be removed before folding.



Make sure the ignition lock is on AUS.

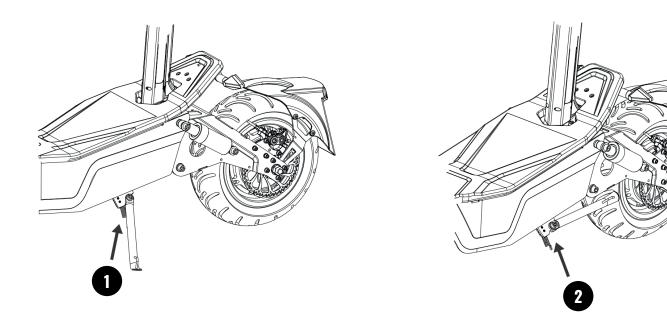
After using the scooter, you can fold it for easier storage or transport. To do this, take out seat post firstly, then pull out safe PIN (safe PIN is on position of arrow b), one hand hold the steering post, another hand loosen the folding fix screw slowly (see arrow a), you will find the steering post is folding when you loosen the fix screw, making sure you do not hurt yourself.

In order to make scooter locked as foldable, make sure insert safe PIN at position arrow c in picture 2.



7.6. Sidebar

Attention in the case of unplugged main stands, the current is completely interrupted by a safety switch (as picture 1) This is for your safety and is mandatory for road traffic authorisation. The roller can therefore only be driven with a high-tilted sidebar.



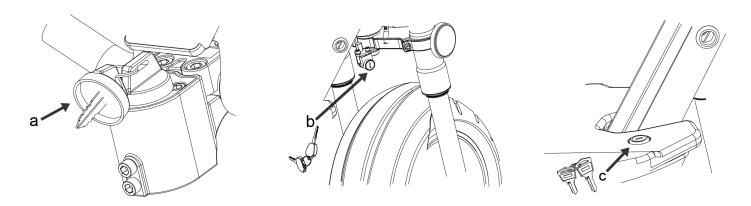


The e-scooter can't drive until the sidebar is up as picture 1. Picture 2 shows the situation of power-off protection when sidebar touch floor.

7.7 Ignition, steering lock keys and deck keys

The delivery includes six keys.(two keys for ignition, two keys for steering lock, two keys for deck lock).

Place the ignition key on position "1" so that the scooter is ready for use. Arrow a shows ignition key, arrow b shows key for steering lock, arrow c shows position of deck lock.





Remember to take out key of steering lock and key of deck lock whether steering lock or deck lock is open or close, otherwise keys will be easy lost.

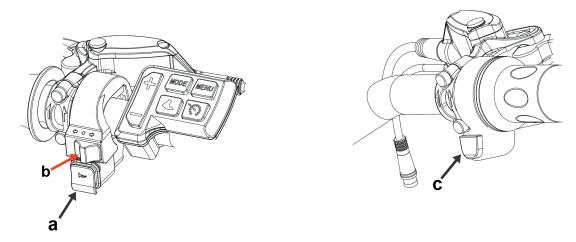
7.8. Horn / Turn light / Ready button

The front and rear lights is power on when open ignition key.

You'll find the Horn button on the left of handle bar (arrow a).

You'll find the Turn light button on the left handle bar (arrow b).

Please rise sidebar as 7.6 and press green ready button on the right handlebar (arrow c on picture), you can speed up your scooter now.





EEC street models without lights button, front and rear light must keep long bright status while ignition key is power on as new EEC transport rules.

7.9. Tire pressure



Tire pressure!

The tires are not fully inflated for transport.

It is recommended to pump the tyres to air pressure of 2.5 in cash (250 kPA). You can do this at any gas station. These are standard car valves.

8. Battery

The EEC STREET models are equiped Lithium batteries with water-proof box.



Important information that you should read before starting operations and which we strongly recommend:

- The batteries are charged to approximately 50% in the new state.
- The battery develops its maximum power after about five charging cycles.
- Turn off power firstly when mount or remove batteries.



- The battery and charger of Wandler K/E are matched. Therefore, never charge the batteries with a charger other than the supplied charger.
- The maximum battery life is achieved by charging them at ambient temperature between +10 degrees and max. +30 degrees.
- The batteries can warm up when they are under heavy pressure. Please note room temperature before loading.



As a consumer, you are legally obliged to return used batteries and batteries to designated collection points. You can drop your spent batteries and batteries at the public collection points in your municipality or anywhere where batteries and batteries of that type are sold. Batteries and batteries don't belong in the trash.

8. Battery

8.1. Fuse

The battery system is protected by a plug -in fuse. Replacement fuses can be found in the supplied toolbox if required. On the fuse you will find the specification printed.

8.2. Battery Capacity / Type

Wandler K/E: 52V 26Ah Lithium Batterie

Use only the high quality original batteries of the same quality. If you need replacement batteries, please contact your dealer.

8.3. Use of batteries

New batteries must always be fully charged the first five times. The more you charge your batteries, the better. They save batteries if they are not discharged below 20% residual capacity. Never charge batteries at minus degrees -let the batteries at minus degrees warm up to room temperature before charging them. This considerably prolongs the service life.

8.4. Charging device



In order to prevent risks of injury, you must only charge the supplied and installed battery with the charger.

Other batteries could explode if charged. The use of accessories or batteries that are not sold or recommended by us may lead to fire risk, electric shock or other serious injuries.

In any case, avoid operating the charger in a humid or wet environment. Avoid any water entering the device. If there is any liquid, disconnect the charger immediately from the mains and have it checked by the specialist.

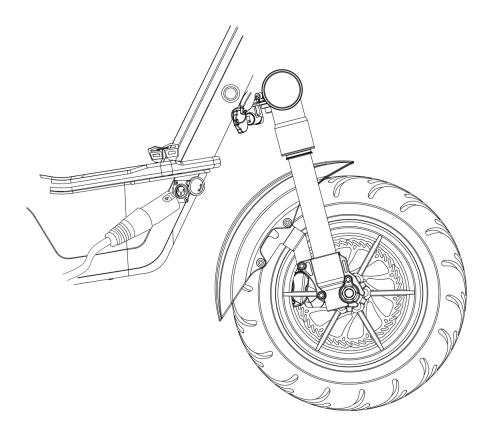
The device should be safe and level. Always disconnect the device from the mains if not in use. Never pull on the cable, as this avoids cable damage and the risk of electrocution.

Never operate the charger with damaged cable or plug or with damage to the plastic housing. Do not dismantle or open the charger yourself under any circumstances. Any manipulation or incorrect assembly may result in an electric shock or fire.

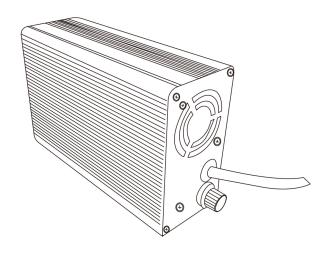
8.5. Charging

1. Charge battery in vehicle:

Make sure the E-Scooter's turned off. Take the charger and attach it to a socket. The red light on the charger should now turn on to show that it has power. Insert the 3-pole charger on the right front bottom of the vehicle.



If you switch the display to green, you can remove the charger from the scooter. You can use the scooter now.



8. Battery



Don't recommend to charge the batteries all over of nights.

Don't recommend to charge the batteries over 12 hours.

Recommend to disconnect the charger when you go out in a long time.

Recommend to keep batteries charged in scooter.

8.6. Maintenance and instructions for charging the batteries

Failure to comply with the instructions may result in the battery being discharged.

No warranty can be accepted for low -charged batteries. Therefore, in order to achieve the longest possible life of the battery, it is imperative that the following information be taken into account:

- The charger shall not be activated in a battery temperature range below +10 and over +60 degrees. Therefore, bring the battery to room temperature before each charge.
- Choose a storage place where the Wandler K/E is stored as far as possible at room temperature.
- Reload the battery after use, irrespective of the previous route or the energy taken.
- The charger is an intelligent system with monitoring and control functions.
- After the charging process is completed, the charger must be disconnected from the battery and must not be left at the disconnected charger.
- Battery in case of prolonged non -use by no means permanently on the charger leave connected. Keep the vehicle in a dry room at room temperature when it is closed (e.g. in winter).
- Always recharge your battery every three months at the latest.
- When the vehicle is restarted after a longer service life (e.g. after a winter break), the battery should be connected to the charger for a complete charging .
- Duration of charge: The battery is fully charged with the supplied charger with 2.0 A charging power in approximately eight hours.
- The battery should be fully charged before first use.
- Never let the batteries completely discharge.

8. Battery

Use only original Wandler K/E approved batteries to prevent damage to the controller. The use of unauthorised batteries results in the loss of the warranty.

The maximum achievable range with a charge of the battery depends on a number of factors. These include the battery and charging condition, temperature conditions, route profile and driver weight as well as the corresponding driving mode (e.g. stop -go, full load, mountain valley, etc.).



In case of disturbances check:

- Is the power cable properly connected?
- Are the contacts of the charger and the battery clean, not damaged or bent?
- Is the battery damaged or defective?
- Is the charger plug stuck in the battery box?

If a proper charge of the battery is not possible, please have the battery and charger checked by a specialist workshop.

9. Tacho

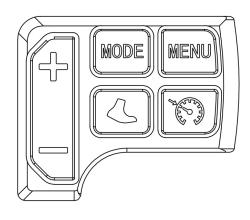
1. Installation

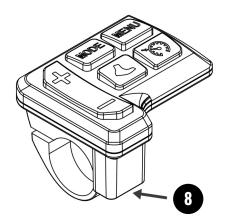
Place the display in middle of handle bar and adjust to correct position. Tighten the screw on holder of display. Connect 6PIN plug on display to other plug from harness wire.





Please turn off power before connect the display.
The display as a standard accessories on Wandler K/E EEC
Street models





2. Main function display

- 1) Power capacity
- 2) Speed KM/H-Mph
- 3) Mode(Sport, Comfort, Eco)
- 4) ODO/TRIP
- 5) Speed level (Level 1, 2, 3, 4, 5)
- 6) Time
- 7) Cruise
- 8) USB charging
- 9) Error

3. Error code

Error 1: controller failure

Error 2: Throttle failure

Error 3: Motor failure

Error 4: Speed sensor failure

Error 5: Brake failure

Error 6: Battery under voltage

Error 7: Controller temperature protection

Error 8: Communication sending failure

Error 9: Communication acceptance failure

4. Mode / Speed level / Walk / Cruise

Mode:

"SPORT" at max current 35A "COMFORT" at normal current 25A "ECO" at economic current 15A

Speed level:

switch "+" or "-" to change speed level L1 at 10km/h, L2 at 20km/h, L3 at 30km/h, L4 at 40km/h, L5 at 45km/h Max speed 35km/h under "ECO"

Walk:

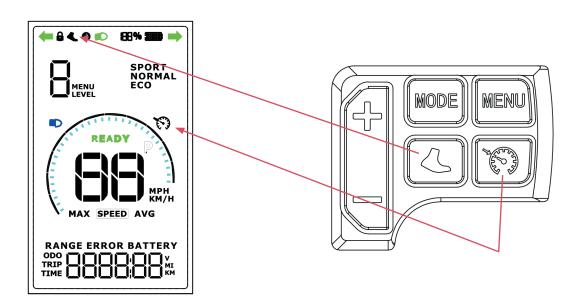
press the symbol \bigcirc start walk mode, speed around 6km/h.

Cruise:

press button under any speed you want, shows on screen and your scooter starts cruise mode.



Manufacturer already setted all functions and data, please DO NOT change anything, uncorrect setting could lead to serious error, if happened, please contact with your dealer. Wrong operation could results in the loss of the warranty.



10. Starting and driving



WARNING - Risk of falling!

Please note the following points to minimise the risk of falling:

- 1. Before you go, always open the sidebar.
- 2. Hold the steering wheel straight.
- 3. When turning, starting in a curve or when driving in a narrow curve the brake

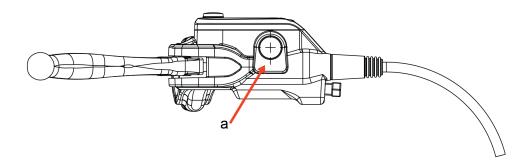
Easy to operate. This interrupts the electric drive force and safe driving without driving influences.

During the trip:

If there are any unusual noises or problems, stop the journey and inform the manufacturer. Service addresses can be found in the operating manual.

11. Brakes

The electric scooter is equipped with front and rear hydraulic brakes, which are operated by the hand brake handle on the handlebar. The scooter is equipped with a regulator which interrupts the power supply to the motor in the short term when the brake lever is pressed.





Wandler K/E use hydraulic brake, you have to check the oil lever after half a year or one year common using.

If the oil lever reach 1/3 of whole oil box.(arrow a in picture is the oil box of brake). Always check brake situation before using, please change new brake caliper if you found brake caliper leaks oil.

11. Brakes



The front brake can react very directly.

Practice braking on a flat and dry surface to familiarize yourself with the braking system. The brake path depends on the driver's weight, weather and surface.

A quiet of the brakes is nothing to worry about. The brake lining should then be applied slightly. In the case of hard -quality brake linings, a Qietsch can occur frequently. For soft coatings less rare, but therefore increased wear.

12. Tyres and wheels



The scooter has identical front and rear tyres.

Only tyres approved by the manufacturer may be used when changing tyres. Other tyres lead to a loss of road clearance. In case of disregard, the operating licence expires.

The tires are not fully inflated for transport.

It is recommended to pump the tyres to air pressure of 2.5 in cash (250 kPA). You can do this at any gas station. These are standard car valves.

13. Guarantee

The E-scooter is guaranteed according to the current legal deadlines.

The warranty excludes wear parts such as batteries, tires, hoses, rims, brake parts, wheel bearings, steering head bearings.

Also excluded are damages due to improper use, in particular jumping, descending steps, sidewalks, stairs and the like, running on muddy ground, sand or gravel, and overloading due to excessive weight.

Gross pollution causes higher wear and is therefore not covered.

13. Guarantee

1. The battery is guaranteed for six months. The manufacturer may make the required repair or refuse to exchange the defective part if this is possible only at disproportionate cost. In this case, the manufacturer may remedy the deficiency by means of any other means of subsequent compliance. Where both types of after-completion are possible only at disproportionate cost, the manufacturer may refuse the full after-completion. The customer then has legal claims.

Replaced parts shall be transferred to the ownership of the manufacturer.

- 2. By installing spare parts in the context of a warranty case, the warranty period running from delivery of the vehicle to the customer shall not be extended.
- 3. The warranty shall be without prejudice to wear and tear arising from normal use, as well as wear and tear resulting from improper handling and use. Oxidation and corrosion are caused by environmental influences and do not constitute a deficiency under the guarantee law.
- 4. The buyer loses his warranty when manipulating the vehicle, such as modifications to the cable, the battery pack, the sensor, the braking system, as well as when installing accessories and spare parts that have not been released by the manufacturer.

The loss of warranty entitlement results in all improper interventions, such as by an unskilled workshop, as well as non-compliance with maintenance intervals in a specialised workshop.

5. In case of a warranty case, the buyer shall provide the seller with the duly completed service booklet including proof of payment.

14. Accessories Parts

Only use original Kraftwerk E accessories and parts.

The use of non-specified accessories may lead to accidents and also to the cancellation of the warranty. www.kraftwerk-e.com

15. Errors

The following table will help you identify and correct common problems that can occur with an E-scooter.

| Symptoms | Possible reasons | Solutions |
|---|--|--|
| No function at all. | The fuse was not used or defective. The battery pack is not or is not properly connected. The stand didn't go up. | Put the fuse on.+ Connect the shopping bag according to instructions. Knock on the stand. |
| The device does not move, although the gas lever was pressed. | The stand didn't go up. The gas handle is faulty or not correctly connected. The batteries can't be recharged anymore. The batteries have reached the end of their life. Brake levers are engaged. The brake handle breaker is defective. | Knock on the stand. Check the gas handle, wiring and replace it if necessary. The connectors may have been switched when commissioned. Watch out for the right countersign. Replace the batteries or the charger. Replace the batteries. Release the brake. Replace the brake handle. |
| The device only runs periodically or very slowly. | The batteries are not fully charged or have a polarity problem. The engine or control unit is overheated. The connectors have a wavelength contact. The brake arches are not correctly adjusted and release the brake contact. The engine ran hot. | Reload the batteries or replace them. Wait about 15 -minute cooling time. Do not use full throttle for a while. Check all connections to the correct seat. Set the bow line precisely. Let the engine cool down. Avoid extreme climbs when the speed decreases vehemently and only reaches step speed. |

15. Errors

| Symptoms | Possible reasons | Solutions |
|--|--|--|
| The device fails abruptly while driving. | The controller is defective. The fuse on the battery pack is defective (if LED is off). | Please contact your dealer. Replace the fuse. |
| The batteries can no longer be charged or will not last much longer. | Batteries have reached the end of their life or poor polarity among themselves. These should be replaced by a new battery pack. The charger is no longer functioning properly. The connection cable from the charging box to the control unit is no longer properly connected. | Replace the batteries. Replace the charger. Check the connection of the charger and cable in the battery compartment, as well as the fuse. |
| The light on the charger switches to green immediately. | The batteries are already charged. Some models are delivered fully loaded. The charger's broken. | However, charge the battery for another four hours before using the scooter for the first time. Replace the charger. |

16. Instructions



Regular and properly implemented care measures serve to maintain the value of X7 and are important prerequisites for the recognition of warranty claims.

Corrosion due to lack of care or winter operation is not guaranteed!!!

- Paint, rubber and plastic parts shall not be treated with aggressive or penetrating cleaning or solvents. This can lead to damage.
- Do not use a pressure jet for cleaning!
- The high water pressure can cause severe damage to electronics, tires, warehouses, seals.
- Use a soft, moist cloth to wash.
- Do not wipe dirt with dry cloth, as otherwise scratches in the paint arise.

16. Instructions

Care

The electric scooter should be maintained regularly and if necessary with commercial, pH -neutral and non -aggressive preservatives and care. Treat parts at risk of corrosion regularly with preservatives and care products, but especially in winter.

17. Technical data

| W II W/F4F1 // (W II W/F001 //) |
|--|
| Wandler K/ E 45 km/h (Wandler K/E 20 km/h) |
| 1500W rear motor (500W rear motor) |
| 52V 26 Ah Lithium battery |
| 10-12 hours |
| 65 km |
| 45km/h (20 km/h) |
| Hight-tensile steel for battery box,Alloy for front and rear arm-swing |
| 1360 x 650 x 1130mm |
| 54.5/58.8 KGS |
| 120 KGS |
| 14inch e-mark approval |
| LED 12V e-mark approval |
| LED 12V e-mark approval |
| LED 12V e-mark approval |
| 12V e-mark approval |
| e-mark approval |
| LCD digital display |
| Hydraulic shock / spring shock (F/R) |
| Hydraulic disc brake (F/R) |
| |

18. Maintenance

| Work to be done | Before departure | 14-day | Monthly | if needed |
|---|------------------|--------|---------|-----------|
| All screws and clamps and Check couplings on a fixed seat and if necessary. Adjust | | | × | × |
| Check chain tension, if applicable. Adjust; clean the chain and use chain oil. Point 4 | | × | | × |
| Check steering head bearings for correct seat, if applicable. adjusting and greasing. Point 2 | | | × | × |
| Check and tighten buffer bearings. Point 3. | | | X | × |
| Check and adjust cable trains | | | X | X |
| Brake system functional test, if applicable. Adjust, check brake linings, see paragraph 1. | × | × | | × |
| Check tyre air pressure and correct | X | | X | X |
| Load battery with the supplied charger | | | | × |
| Test drive after maintenance, control of operational safety | | | | × |

18.1 Setting Brake System Front and rear wheel disc brake

The optimum braking performance is achieved by adjusting the brake pads regularly. To do this, release the brake saddle from the bracket by releasing the two bus screws.

The two brake linings should then be in the visible area. The distance between the two layers should correspond to the strength of the brake pad (approx. 2.5mm).

To adjust the inner brake lining, use the bus key and turn the bus screw clockwise until the lining has reached the appropriate position.

To align the brake pedal in the middle around the brake disc, you can loosen the two black screws slightly and then move along the long hole to adjust the position exactly.

After the two mountings have been adjusted accordingly, the brake saddle can be mounted back on the bracket with the two inlet screws.

19. Service

If you have any questions or need spare parts and accessories, please contact your dealer or our online store at the following :

Dealer-Stamp:

Producer-Website: www.kraftwerk-e.com

19. Dealer maintenance of your vehicle

This is your maintenance area, which should be filled out and stamped by your dealer.

We recommend a maintenance interval of 1000 km (initial check), from 2500 km (follow-up checks) in a 2000 km interval. You should visit your dealer if you discover a defect in the vehicle. Doing your own repairs can void the warranty.

Now we wish you a lot of fun and always a safe trip with your converter K/E.



18. Maintenance

Dealers enter the work carried out here, please do not forget the date and stamp!

| The following work was carried out | Check | Repair | Change | Interval |
|------------------------------------|-------|--------|--------|----------|
| | | | | |
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Handelsfabrik Sachsen GmbH

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All other informations you find here www.kraftwerk-e.com

Dealer-Stamp:

