

# USERS MANUAL 410B

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## I. UNPACKING

**Before** using your scooter, make sure your delivery is complete as some components may be individually packaged. If you do not receive a complete delivery, please contact your authorized ChiefRider Provider immediately. Where damage has occurred during transport, either to the packaging or content, please contact the delivery company responsible.

Your mobility scooter is shipped partially disassembled for protection during shipping. After unpacking, please check whether you have received the following main components as our standard specification(**Figure 1**).

- 1. Basket
- 2. Tiller ASM
- 3. Scooter
- 4. Seat
- 5. Arm-rest
- 6. Power Charger





## II. MAJOR ASSEMBLYS

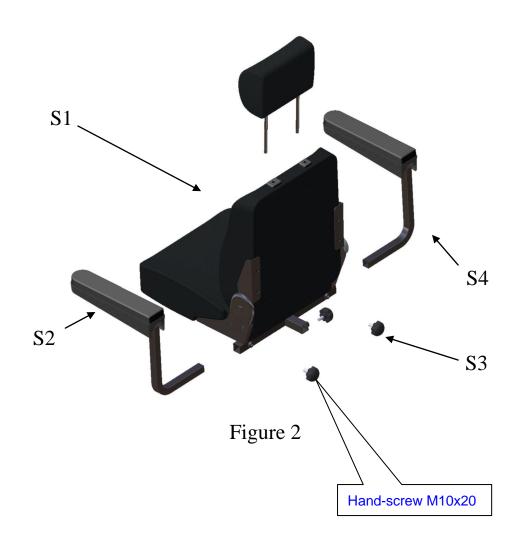
**First** > Assemble your seat Check if your seat is packaged with the following main components(**Figure 2**).

▶ Put the Left Arm-rest(s2) into the Seat(s1) frame and fitting your size.

► Lock the Left Arm-rest into Seat(s1) with one Handle screw(s3).

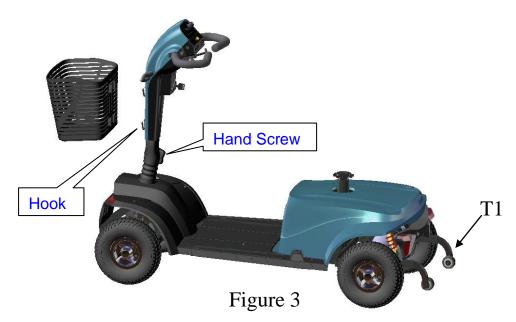
Put the Right Arm-rest(s4) into the Seat(s1) frame and fitting your size.
Lock the Left Arm-rest into Seat(s1) with another Handle screw(s3).

- S1. Seat
- S2. Left Arm-rest
- S3. Handle Screw
- S4. Right Arm-rest



## Second > Adjust your tiller

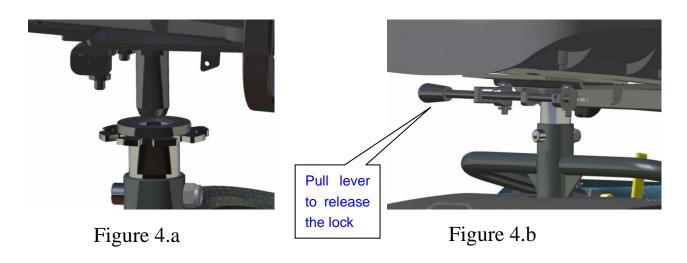
Unpacking your scooter and screw out the handle screw (Figure 3).



- Adjust the tiller to the right position.
- Screw in the handle screw and lock the tiller
- Push your basket into the base on the tiller
- ► Assemble the Mirrors in the tiller.
- ► Assemble the anti-tip wheels(T1) in the rear chassis and screw in the bolts.

## Third

- ► Lift your seat and put the seat base shaft into the seat post(**Figure 4.a**).
- ▶ Pull the adjust lever and turn your seat around to lock the seat automatically(**Figure 4.b**).



## **III. COMFORT ADJUSTMENT**

- A. You can adjust the tiller to fit your comfort position(Figure 3).
- ► Loose the tiller adjustment handle screw.
- ► Get into the seat, pull or push the tiller to the best drive position .
- ► Tighten and lock the handle screw.
- B. Arm-rest
- ► Loose the handle screw(**Figure 2**).
- ▶ Pull or push the arm-rest to the best position fit your size.
- ► Tighten and lock the arm-rest adjustment handle screw.
- C. You can swivel the seat when get on/off your scooter(Figure 6.a).
- ► Pull the rotation lever forward(**Figure 4.b**).
- ► Rotate your seat to your left or right side.
- ▶ Release the rotation lever and let the lever lock into the corresponding notch.

Note: The seat may lock in every 45  $^{\circ}$  position automatically.

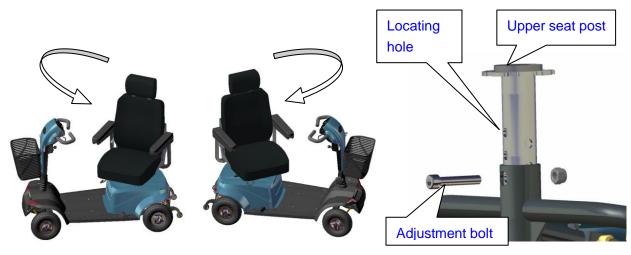


Figure 6.a

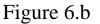


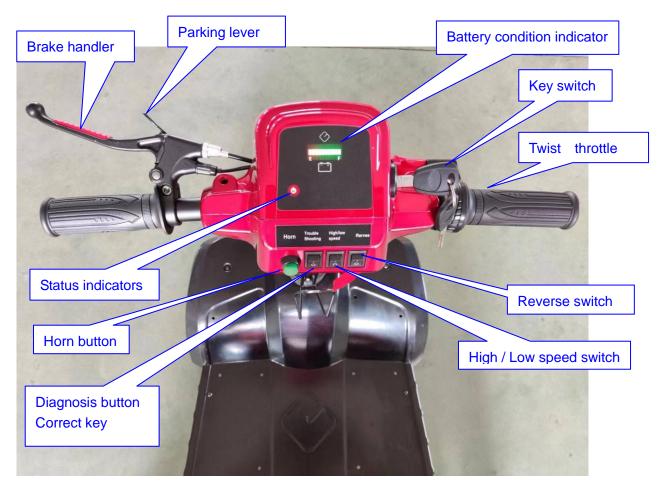
Figure 6.c

- D. Seat height adjustment.(Recommend using the top hole for easy getting on and off)
- ► Remove the seat, and screw out the adjustment bolt(**Figure 6.c**).
- ► Raise or lower the upper seat post to the desired height and match the locating holes.
- ► Reinstall the nut onto the adjustment bolt and tighten.

## **IV. SAFTY OPERATION**

## TILLER

The tiller houses all of the controls needed to drive your scooter. Including the Battery condition LED indicators, Status LED indicators, Direction LED indicators, Horn buttons, Head-light switch, Diagnosis button switch, Key switch, High-low speed switch, Reverse switch, Twist throttle handler ,Brake handler and parking lever(**Figure 7**).





PROHIBITED! Do not expose the tiller console to moisture. In the event that the tiller console does become exposed to moisture, do not attempt to operate your scooter until the tiller console has dried thoroughly.

#### **Key Switch**

► Insert the key into the key switch and turn it clockwise to power up (turn on) your scooter.

► Turn the key counterclockwise to power down (turn off) your scooter.

WARNING! If the key is turned to the "off" position while your scooter is in motion, the electronic brakes will engage and your scooter will come to an abrupt stop!

#### **Battery Condition LED indicators**

When the key is fully inserted and turned clockwise to power up your scooter, this meter indicates the approximate battery voltage strength. For further information on battery

## charging, See 'V. Batteries and Charging'

## Head light

Turn the key switch clock-wise to the third position, the head lights are powered on. Scooter users are required to use their lights when visibility is restricted—day or night.

## **Status LED indicators**

The status LED indicators alerts you to driving operations or electrical problems that may occur with the scooter.

The Code status LED remains constantly lit while your scooter is on. If your scooter develops an electrical problem, the status LED will flash a code.

### **Horn Buttons**

Both buttons activate a warning horn. Your scooter must be powered up for the horn to be operational.

Do not hesitate to use the warning horn when doing so may prevent accident or injury.

Diagnosis button find in page 27 "VII. TROUBLE SHOOTING"

## **High-Low speed Switch**

This switch toggles the scooter's speed between High speed and Low speed.

- ► Toggle the switch up-ward and your scooter's maximum speed is 8 mph (12.8 km/h).
- ► Toggle the switch down-ward and your scooter's maximum speed is 4mph (6 km/h).



## **Reverse Switch**

Press the reverse switch, then twist the throttle slightly, the scooter go backward. Turn off the revers switch, then twist the throttle slightly, the scooter go forward.

## **Twist Throttle handler**

This handler allows you to control the forward speed and the reverse speed of your scooter up to the maximum speed.

To Move Forward, twist the handler down-wards and scooter moving on.

To Move Backward, press the Reverse button and then twist the handler.

Release the throttle and allow your scooter to come to a complete stop before changing direction. Engages your scooter's parking brake before leaving.

## **Off-board Charger Port**

The off-board charger power cord plugs into this port during battery charging. Turn off the key-switch when charging.

NOTE: Keep all electrical areas clean and free of moisture and foreign material.

Charger port



## **FRONT SECTION**

The ChiefRider 'Home' equipes with full of cruising lights(Figure 8).



Figure 8

### Mirror

You can see the traffics behind.

#### Basket

You can carry the quick-release basket with you when needed. Pull up slightly and the basket will come out from the base.

#### Adjustment handle screw

You can adjust the tiller to fit your best driving position(Figure 4).

#### Head-light

Your scooter come with a bright LED light for night driving. Pull or press it for adjusting the lighting angle. Toggle on the switch to operate the head-light when visibility is restricted.

## **REAR SECTION**

The Manual freewheel lever, reflector, break lights, trans-axle, anti-tip wheel and the batteries are located on the rear section of your scooter (**Figure 9**).



Figure 9

#### Reflector

The reflector will be seen with wide angle to secure your safety on coming traffic.

#### Motor/Trans-axle Assembly

The motor/transaxle assembly is an electro-mechanical unit that converts electrical energy from your scooter's batteries into the controlled mechanical energy that drives the scooter's wheels.

#### Anti-tip wheels

The wheels take affect when encountering steepness or loading too much out of the gravity.

#### Brake disc

Check the worn condition of the brake disc regularly.

#### **Batteries**

The batteries store electrical energy that powers your scooter. See **'V. Batteries and Charging'** for information on how to charge your scooter batteries.

## OPERATION

## **BEFORE GETTING ONTO YOUR SCOOTER**

► Have you fully charged the batteries? See 'V. Batteries and Charging'.

► Is the manual freewheel lever and the push switch in the drive position? Never leave the manual freewheel lever pushed forward unless you are manually pushing your scooter.

## **GETTING ONTO YOUR SCOOTER**

1. Make certain that the key is removed from the key switch.



- WARNING! Never attempt to get onto or off of your scooter without first removing the key from the key switch. This will prevent the scooter from moving if accidental thumb throttle contact is made.
- 2. Stand at the side of your scooter.
- 3. Disengage the seat rotation lever and rotate the seat until it is facing you(Figure6.a,6.b).
- 4. Make certain that the seat is fixed securely in position.
- 5. Position yourself comfortably and securely in the seat.
- 6. Disengage the seat rotation lever and rotate the seat until you are facing forward.
- 7. Make certain that the seat is fixed securely in position.
- 8. Make certain that your feet are safely on the floorboard.

## PRE-RIDE ADJUSTMENTS AND CHECKS

- ▶ Is the seat at the proper height? See 'III. Comfort Adjustments'
- ► Is the seat fixed securely in position?
- $\hfill$  Is the tiller at a comfortable setting and locked securely in place? See 'III.Comfort

## Adjustments'

- ► Is the key fully inserted into the key switch and turned clockwise to the "on" position?
- ▶ Is your proposed path clear of people, pets, and obstacles?
- ► Have you planned your route to avoid adverse terrain and as many inclines as possible? OPERATING YOUR SCOOTER

# WARNING! The following can adversely affect steering and stability while operating your scooter, resulting in loss of control, tipping, and/or personal injury:

- ► Holding onto or attaching a leash to walk your pet
- Carrying passengers (including pets)
- ► Hanging any article from the tiller
- Towing or being pushed by another motorize vehicle

WARNING! Higher Rollover Risk! Avoid abrupt maneuvers at excessive speed. It is recommended that you press the throttle lightly until you become familiar with scooter controls and operation.

WARNING! Keep both hands on the tiller and your feet on the floorboard at all times while operating your scooter. This driving position gives you the most control over your vehicle.

- Set the speed adjustment dial to your desired speed.
- ▶ Push or pull the appropriate side of the throttle control lever.

► The electromechanical disc park brake automatically disengages and the scooter accelerates smoothly to the speed you preselected with the speed adjustment dial.

▶ Pull on the left handgrip to steer your scooter to the left.

- ▶ Pull on the right handgrip to steer your scooter to the right.
- ► Move the tiller to the center position to drive straight ahead.

► To stop, slowly release the thumb throttle. The electronic brakes will automatically engage, bringing your scooter to a stop.

NOTE: Your scooter's reverse speed is slower than that of the forward speed you preset with the speed adjustment dial.

### **GETTING OFF OF YOUR SCOOTER**

1. Bring your scooter to a complete stop.

2. Power down your scooter and remove the key from the key switch.

3. Disengage the seat rotation lever and rotate the seat until you are facing toward the side of your scooter.

- 4. Make certain that the seat is fixed securely in position.
- 5. Carefully and safely get out of the seat and stand to the side of your scooter.
- 6. You can leave the seat facing to the side to facilitate boarding your scooter next time.

### POWER DOWN TIMER FEATURE

Your scooter is equipped with an energy saving automatic power down timer feature designed to preserve your scooter's battery life. If you mistakenly leave the key in the key switch and in the "on" position but do not use your scooter for approximately 30 minutes, the scooter's controller shuts down automatically.

Although the controller is shut down, power will still be supplied to the lighting system.

If the power down timer feature takes effect, perform the following steps to resume normal operation:

- 1. Remove the key from the key switch.
- 2. Reinsert the key and power up your scooter.

## SAFETY



# MANDATORY! Do not operate your new scooter for the first time without completely reading and understanding this owner's manual.

Your scooter is a state-of-the-art life-enhancement device designed to increase mobility. ChiefRider provides an extensive variety of products to best fit the individual needs of the scooter user. Please be aware that the final selection and purchasing decision regarding the type of scooter to be used is the responsibility of the scooter user, who is capable of making such a decision, and his/her healthcare professional (i.e., medical doctor, physical therapist, etc.).

The contents of this manual are based on the expectation that a mobility device expert has properly fitted the scooter to the user and has assisted the prescribing healthcare professional and/or the authorized ChiefRider Provider in the instruction process for the use of the product.

There are certain situations, including some medical conditions, where the scooter user will need to practice operating the scooter in the presence of a trained attendant. A trained attendant can be defined as a family member or care professional specially trained in assisting a scooter user in various daily living Activities.

As you begin using your scooter during daily activities, you will probably encounter situations in which you will need some practice. Simply take your time and you will soon be in full and confident control as you maneuver through doorways, on and off elevators, up and down ramps, and over moderate terrain. Below are some precautions, tips, and other safety considerations that will help you become accustomed to operating the scooter safely.

#### MODIFICATIONS

ChiefRider has designed and engineered your scooter to provide maximum mobility and utility. A wide range of accessories is available from ChiefRider to further customize your scooter to better suit your needs and/or preferences. However, under no circumstances should you modify, add, remove, or disable any feature, part, or function of your scooter.



WARNING! Do not modify your scooter in any way not authorized by ChiefRider. Do not use accessories if they have not been tested or approved for ChiefRider products.

#### **REMOVABLE PARTS**



WARNING! Do not attempt to lift or move your scooter by any of its removable parts, including the armrests, seat, or shroud.

#### PRE-RIDE SAFETY CHECK

Get to know the feel of your scooter and its capabilities. ChiefRider recommends that you perform a safety check before each use to make sure your scooter operates smoothly and safely.

#### Perform the following inspections prior to using your scooter:

Check for proper tire inflation. Maintain but do not exceed the psi/bar/kPa air pressure rating indicated on each tire if equipped with pneumatic tires.

- Check all electrical connections. Make sure they are tight and not corroded.
- Check all harness connections. Make sure they are secured properly.
- ► Check the brakes.
- ► Check battery charge.

If you discover a problem, contact your authorized ChiefRider Provider for assistance.

#### TIRE INFLATION

If your scooter is equipped with pneumatic tires, you should check or have the air pressure checked at least once a week. Proper inflation pressures will prolong the life of your tires and help ensure the smooth operation of your scooter.



WARNING! It is critically important that the psi/bar/kPa air pressure rating indicated on the tire be maintained in pneumatic tires at all times. Do not underinflate or overinflate your tires. Low pressure may result in loss of control, and overinflated tires may burst. Failure to maintain the psi/bar/kPa air pressure rating indicated on the pneumatic tires at all times may result in tire and/or wheel failure.

WARNING! Inflate your scooter tires from a regulated air source with an available pressure gauge. Inflating your tires from an unregulated air source could overinflate them, resulting in a burst tire.

NOTE: If the tire on your scooter lists the psi rating only, use the following conversion formulas to find the bar or kPa rating: bar =  $psi \times 0.06895$ ; kPa =  $psi \times 6.89476$ .

#### WEIGHT LIMITATIONS

Your scooter is rated for a maximum weight capacity. Refer to the specifications table for information. Keep in mind that the maximum weight capacity includes the combined weight of the user and any accessories mounted to the scooter.



MANDATORY! Stay within the specified weight capacity for your scooter. Exceeding the weight capacity voids your warranty. ChiefRider will not be held responsible for injuries and/or property damage resulting from failure to observe weight limitations.

WARNING! Do not carry passengers on your scooter. Carrying passengers on your scooter may affect the center of gravity, resulting in a tip or a fall.

#### **INCLINE INFORMATION**

More and more buildings have ramps with specified degrees of inclination, designed for easy and safe access. Some ramps may have turning switchbacks (180-degree turns) that require you to have good cornering skills on your scooter.

▶ Proceed with extreme caution as you approach the downgrade of a ramp or other incline.

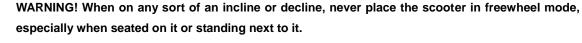
► Take wide swings with your scooter around any tight corners. If you do that, the scooter's rear wheels will follow a wide arc, not cut the corner short, and not bump into or get hung up on any railing corners.

► When driving down a ramp, keep the scooter's speed adjustment set to the slowest speed setting to ensure a safely controlled descent.

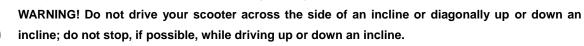
Avoid sudden stops and starts.

When climbing an incline, try to keep your scooter moving. If you must stop, start up again slowly, and then accelerate cautiously. When driving down an incline, do so by press the throttle lever lightly and driving in the forward direction only. If your scooter starts to move down the incline faster than you anticipated or desired, allow it to come to a complete stop by releasing the throttle lever. Then push the throttle lever slightly to ensure a safely controlled descent.





WARNING! When climbing an incline, do not zigzag or drive at an angle up the face of the incline. Drive your scooter straight up the incline. This greatly reduces the possibility of a tip or a fall. Always exercise extreme caution when negotiating an incline.



WARNING! You should not travel up or down a potentially hazardous incline (i.e., areas covered with snow, ice, cut grass, or wet leaves).

WARNING! Even though your scooter is capable of climbing slopes greater than those listed in the product specifications, do not, under any circumstances, exceed the incline guidelines or any other specifications presented in this manual. Doing so could cause instability in your scooter.

Handicap public access ramps are not subject to government regulation in all countries, and therefore do not necessarily share the same standard percent of slope. Other inclines may be natural or, if man-made, not designed specifically for scooters.

These tests were conducted with the scooter's seat in the highest position and adjusted backward on the seat base to its farthest backward position. Use the specification information as a guideline. Your scooter's ability to travel up inclines is affected by your weight, your scooter's speed, your angle of approach to the incline, and your scooter setup.

WARNING! Any attempt to climb or descend a slope steeper than what is listed in the product specifications may put your scooter in an unstable position and cause it to tip.

When you approach an incline, it is best to lean forward (Figure 10.a and 10.b). This shifts the center of gravity of you and your scooter toward the front of the scooter for improved stability.

NOTE: When negotiating ramps, if the throttle lever is released while moving forward, the powered scooter may "roll back" approximately 1 foot (30.48 cm) before the brake engages. If the throttle lever is released while moving in reverse, the powered scooter may "roll back" approximately 2 feet (0.5 meter) before the brake engages.



Figure 10.a Normal Driving Position



Figure 10.b Increased Stability Driving position

#### **CORNERING INFORMATION**

Excessively high cornering speeds can create the possibility of tipping. Factors which affect the possibility of tipping include, but are not limited to, cornering speed, steering angle (how sharply you are turning), uneven road surfaces, inclined road surfaces, riding from an area of low traction to an area of high traction (such as passing from a grassy area to a paved area – especially at high speed while turning), and abrupt directional changes. High cornering speeds are not recommended. If you feel that you may tip over in a corner, reduce your speed and steering angle (i.e., lessen the sharpness of the turn) to prevent your scooter from tipping.

WARNING! When cornering sharply, reduce your speed and maintain a stable center of gravity. When using your scooter at higher speeds, do not corner sharply. This greatly reduces the possibility of a tip or fall.

#### **BRAKING INFORMATION**

Your scooter is equipped with these disc brake systems:

► Mechanical Park Brake: Activates mechanical after braking slows the vehicle to near stop, or when power is removed from the system for any reason.

#### STATIONARY OBSTACLES (STEPS, CURBS, ETC.)

WARNING! Do not drive near raised surfaces, unprotected ledges, and/or drop-offs (curbs, porches, stairs, etc.). WARNING! Do not attempt to have your scooter climb or descend an obstacle that is inordinately high.

WARNING! Do not attempt to have your scooter proceed backward down any step, curb, or other obstacle. This may cause the scooter to tip.

WARNING! Be sure your scooter is traveling perpendicular to any curb you may be required to ascend or descend. (Figures 11.a and 11.b).

WARNING! Even though your scooter may be capable of handling greater obstacles, ChiefRider recommends that you do not attempt to negotiate a curb that has a height greater than 2 in. (5 cm). Doing so could cause instability in your scooter.

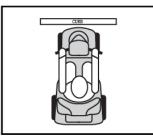




Figure 11.a Correct Curb Approach

Figure 11.b Incorrect Curb Approach

### INCLEMENT WEATHER PRECAUTIONS

Exposure of your scooter to inclement weather conditions should be avoided whenever possible. If suddenly caught up in rain, snow, severe cold, or heat while operating your scooter, proceed to shelter at the earliest opportunity. Thoroughly dry your scooter before storing, charging, or operating your scooter. **PROHIBITED! Operating in rain, snow, salt, mist/spray conditions, and on icy/slippery surfaces can cause damage to the scooter and electrical system. Maintain and store your scooter in a dry and clean condition.** 

WARNING! Prolonged exposure to hot or cold conditions may affect the temperature of upholstered and non-upholstered items on the scooter, possibly resulting in skin irritation. Exercise caution when using your scooter in extremely hot or cold conditions or when exposing your scooter to direct sunlight for prolonged periods of time.

#### STAIRS AND ESCALATORS

Scooters are not designed to travel up or down stairs or escalators. Always use an elevator. WARNING! Do not use your scooter to negotiate steps or escalators.

#### DOORS

- Determine if the door opens toward or away from you.
- ► Use your hand to turn the knob or push the handle or push-bar.
- Drive your scooter gently and slowly forward to push the door open. Or drive your scooter gently and slowly backwards to pull the door open.

#### **ELEVATORS**

Modern elevators have a door safety mechanism that, when pushed, reopens the door(s).

- ▶ If you are in the doorway of an elevator when the door(s) begin to close, push on the rubber door edge or allow the rubber door edge to contact the scooter and the door will reopen.
- ► Use care that pocketbooks, packages, or scooter accessories do not become caught in elevator doors.

NOTE: If your scooter's turning radius is greater than 60 in. (152.4 cm) it may be difficult to maneuver in elevators and building entrances. Use caution when attempting to turn or maneuver your scooter in small spaces, and avoid areas that might pose a problem.

#### LIFT SYSTEMS/ELEVATION PRODUCTS

If you will be transporting your scooter during travel, you may find it necessary to use a vehicle-mounted lift system or elevation product to aid in transportation. ChiefRider recommends that you closely review the warnings, instructions, specifications, and safety information set forth by the manufacturer of the lift/ elevation before using that product.

WARNING! Not all lift systems/elevation products are rated for use with an occupied mobility device. ChiefRider recommends that you do not remain seated in your scooter when it is being used in connection with any type of lift system/elevation product unless:

▶ That product is rated for occupied use by the manufacturer.

You are able to occupy your mobility device in strict conformity with the warnings, instructions, specifications, and safety guidelines set forth by the manufacturer.

WARNING! Always turn off the power to the scooter when you are being transferred via an elevation product. Failure to do so may result in accidental throttle lever contact, resulting in unintended movement and personal injury or product damage.

#### BATTERIES

In addition to following the warnings below, be sure to comply with all other battery handling information.



MANDATORY! Battery posts, terminals, and related accessories contain lead and lead compounds. Wear goggles and gloves when handling batteries and wash hands after handling.



WARNING! Scooter batteries are heavy. See specifications table. If you are unable to lift that much weight, be sure to get help. Use proper lifting techniques and avoid lifting beyond your capacity.

WARNING! Always protect the batteries from freezing and never charge a frozen battery. Charging a frozen battery may result in damage to the battery.



WARNING! Connect the battery harnesses in the proper manner. RED (+) cables must be connected to positive (+) terminals. BLACK (-) cables must be connected to negative (-) terminals. Protective caps should be installed over all battery terminals. REPLACE cables immediately if damaged.

#### BATTERY DISPOSAL AND RECYCLING

If you encounter a damaged or cracked battery, immediately enclose it in a plastic bag. Contact your local waste disposal agency or your authorized ChiefRider Provider for instructions on disposal and battery recycling, which is our recommended course of action.

#### PREVENTING UNINTENDED MOVEMENT



WARNING! If you anticipate being seated in a stationary position for an extended period of time, turn off the power. This will prevent unexpected motion from inadvertent throttle control lever contact.

#### MOTOR VEHICLE TRANSPORT

ChiefRider recommends that you do not remain seated in your scooter while traveling in a motor vehicle. The scooter should be stowed in the trunk of a car or in the back of a truck or van with the batteries removed and properly secured. In addition, all removable scooter parts, including the armrests, seat, and shroud should be removed and/or properly secured during motor vehicle transport.



WARNING! Although your scooter may be equipped with a positioning belt, this belt is not designed to provide proper restraint during motor vehicle transport. Anyone traveling in a motor vehicle should be properly secured in the motor vehicle seat with safety belts fastened securely.

WARNING! Do not sit on your scooter while it is in a moving vehicle.

WARNING! Always be sure your scooter and its batteries are properly secured when it is being transported. Batteries should be secured in an upright position and protective caps should be installed on the battery terminals. Batteries should not be transported with any flammable or combustible items.

#### GETTING ONTO AND OFF OF YOUR SCOOTER

Getting onto and off of your scooter requires a good sense of balance. Please observe the following safety tips when getting onto and off of your scooter:

- ► Remove the key from the key switch.
- ► Ensure that your scooter is not in freewheel mode(Figure 9).
- ► Make certain that the seat is secured into place.
- ▶ Pivot the armrests up to make getting onto and off of the scooter easier.



WARNING! Position yourself as far back as possible in the scooter seat to prevent the scooter from tipping.



WARNING! Avoid putting all of your weight on the scooter armrests and do not use the armrests for weight bearing purposes, such as transfers. Such use may cause the scooter to tip, resulting in a fall from the scooter and personal injury.

WARNING! Avoid putting all of your weight on the floorboard. Such use may cause the scooter to tip.

#### **REACHING AND BENDING**

Avoid reaching or bending while driving your scooter. Bending forward creates the risk of accidental throttle control lever contact. Bending to the side while seated creates the risk of tipping. It is important to maintain a stable center of gravity and keep the scooter from tipping. ChiefRider recommends that the scooter user determine his/her personal limitations and practice bending and reaching in the presence of a qualified attendant.

WARNING! Do not bend, lean, or reach for objects if you have to pick them up from the scooter deck or from either side of the scooter. Movements such as these may change your center of gravity and the weight

#### distribution of the scooter and cause your scooter to tip.

PROHIBITED! Keep your hands away from the tires when driving. Be aware that loose fitting clothing can become caught in drive tires.

#### **POSITIONING BELTS**

Your authorized ChiefRider Provider, therapist(s), and other healthcare professionals are responsible for determining your requirement for a positioning belt in order to operate your scooter safely.

# WARNING! If you require a positioning belt to safely operate your scooter, make sure it is fastened securely.

#### PRESCRIPTION DRUGS/PHYSICAL LIMITATIONS

The scooter user must exercise care and common sense when operating his/her scooter. This includes awareness of safety issues when taking prescribed or over-the-counter drugs or when the user has specific physical limitations.

WARNING! Consult your physician if you are taking prescribed or over-the-counter medication or if you have certain physical limitations. Some medications and limitations may impair your ability to operate your scooter in a safe manner.

#### ALCOHOL/SMOKING

The scooter user must exercise care and common sense when operating his/her scooter. This includes awareness of safety issues while under the influence of alcohol or while smoking.



WARNING! Do not operate your scooter while you are under the influence of alcohol, as this may impair your ability to drive safely.

WARNING! ChiefRider strongly recommends that you do not smoke cigarettes while seated in your scooter, although the scooter has passed the necessary testing requirements for cigarette smoking. You must adhere to the following safety guidelines if you decide to smoke cigarettes while seated in your scooter.

- ► Do not leave lit cigarettes unattended.
- ► Keep ashtrays a safe distance from the seat cushions.
- Always make sure cigarettes are completely extinguished before disposal.

#### **OUTDOOR DRIVING SURFACES**

Your scooter is designed to provide optimum stability under normal driving conditions—dry, level surfaces composed of concrete, blacktop, or asphalt. However, ChiefRider recognizes that there will be times when you will encounter other surface types. For this reason, your scooter is designed to perform admirably on packed soil, grass, and gravel. Feel free to use your scooter safely on lawns and in park areas.

- ► Avoid driving on uneven terrain and/or soft surfaces.
- Avoid tall grass that can become tangled in the running gear.
- Avoid loosely packed gravel and sand.
- ► Do not use your scooter in fresh or salt water.
- ► Do not use your scooter at the edge of a stream, lake, or ocean
- ► If you feel unsure about a driving surface, avoid that surface.

#### PUBLIC STREETS AND ROADWAYS



WARNING! You should not operate your scooter on public streets and roadways. Be aware that it may be difficult for traffic to see you when you are seated on your scooter. Obey all local pedestrian traffic rules. Wait until your path is clear of traffic, and then proceed with extreme caution.

#### ELECTROMAGNETIC AND RADIO FREQUENCY INTERFERENCE (EMI/RFI)



WARNING! Laboratory tests have shown that electromagnetic and radio frequency waves can have an adverse affect on the performance of electrically-powered mobility vehicles.

Electromagnetic and Radio Frequency Interference can come from sources such as cellular phones, mobile two-way radios (such as walkie-talkies), radio stations, TV stations, amateur radio (HAM) transmitters, wireless computer links, microwave signals, paging transmitters, and medium-range mobile transceivers used by emergency vehicles. In some cases, these waves can cause unintended movement or damage to the control system. Every electrically-powered mobility vehicle has an immunity (or resistance) to EMI. The higher the immunity level, the greater the protection against EMI. This product has been tested and has passed at an immunity level of 20 V/M.



WARNING! Be aware that cell phones, two-way radios, laptops, and other types of radio transmitters may cause unintended movement of your electrically-powered mobility vehicle due to EMI. Exercise caution when using any of these items while operating your mobility vehicle and avoid coming into close proximity of radio and TV stations.

WARNING! The addition of accessories or components to the electrically-powered mobility vehicle can increase the susceptibility of the vehicle to EMI. Do not modify your scooter in any way not authorized by ChiefRider.

WARNING! The electrically-powered mobility vehicle itself can disturb the performance of other electrical devices located nearby, such as alarm systems.

NOTE: If unintended motion or brake release occurs, turn your scooter off as soon as it is safe to do so. Contact your authorized ChiefRider Provider to report the incident.

## V. BATTERIES AND CHARGING

## **BATTERIES AND CHARGING**

Your scooter requires 4 long-lasting, 12-volt, deep-cycle batteries that are sealed and maintenance free(**Figure 12.a**).

They are recharged by an off-board charging system(**Figure 12.b**).

► Charge your batteries prior to using it for the first time.

► Deep Charge the batteries every three months to keep your scooter running smoothly.

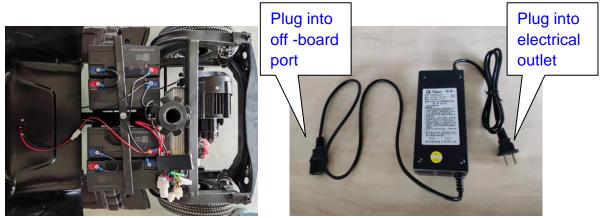
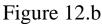


Figure 12.a



## **READING YOUR BATTERY VOLTAGE**

The battery condition indicator LED on the dashboard indicates the approximate strength of your batteries using a color code(**Figure 7**).

From right to left, green indicates fully charged batteries, yellow indicates a draining charge, and red indicates that an immediate recharge is necessary. To ensure the highest accuracy, the battery condition meter should be checked while operating your scooter at full speed on a dry, level surface.

## WARNINGNS

Removal of grounding prong can create electrical hazard. If necessary, properly install an approved 3-pronged adapter to an electrical outlet having 2-pronged plug access.

Never use an extension cord to plug in your battery charger. Plug the charger directly into a properly wired standard electrical outlet.

Do not allow unsupervised children to play near the scooter while the batteries are charging. We recommends that you do not charge the batteries while the scooter is occupied.

Read the battery charging instructions in this manual and in the manual supplied with the battery charger before charging the batteries.

Explosive gases may be generated while charging the batteries. Keep the scooter and battery charger away from sources of ignition such as flames or sparks and provide adequate ventilation when charging the batteries.

You must recharge your batteries with the supplied off-board charger. Do not use an automotive-type battery charger.

Inspect the battery charger, wiring, and connectors for damage before each use. Contact

your authorized ChiefRider Provider if damage is found.

Do not attempt to open the battery charger case. If the battery charger does not appear to be working correctly, contact your authorized ChiefRider Provider.

If the battery charger is equipped with cooling slots, then do not attempt to insert objects through these slots.

If your battery charger has not been tested and approved for outdoor use, then do not expose it to adverse or extreme weather conditions. If the battery charger is exposed to adverse or extreme weather conditions, then it must be allowed to adjust to the difference in environmental conditions before use indoors. Refer to the manual supplied with the battery charger for more information.

#### Follow these easy steps to charge the batteries:

- Position the front of your scooter close to a standard electrical outlet.
- Remove the key from the key switch.
- ► Make sure that the manual freewheel lever is in the drive position.
- ▶ Plug the 3-pin charger mobility cord into the off-board charger port(**Figure 7**).
- Extend the charger and plug it into the electrical outlet.
- ▶ We recommend that you charge the batteries for 8 to 12 hours.

► When the batteries are fully charged, unplug the charger from the electrical outlet and then from the off-board charger port.

► The LED lights on the charger indicate different charger conditions at various times: charger mobility on, charging in progress, and charging complete. Refer to the manual supplied with the charger for a complete explanation of these indicators.

► There is a charger inhibit function on your scooter. The scooter will not run while the batteries are charging.

### FREQUENTLY ASKED QUESTIONS

#### How does the charger work?

When your battery voltage is low, the charger works harder, sending more electrical current to the batteries to bring up their charge. As the batteries approach a full charge, the charger sends less and less electrical current. When the batteries are fully charged, the current sent from the charger is at nearly zero amperage. Therefore, when the charger is plugged in, it maintains the charge on your batteries, but does not overcharge them. Refer to the manual supplied with the battery charger for charging instructions.

#### What if my batteries won't charge?

- Ensure the red (+) and black (-) battery group cables are connected properly to the controller battery terminals.
- Ensure both ends of the charger mobility cord are fully inserted.

#### How often must I charge the batteries?

Two major factors must be considered when deciding how often to charge your batteries:

- ► All day use on a daily basis.
- ► Infrequent or sporadic use.

With these considerations in mind, you can determine how often and for how long you should charge your batteries. We designed the off-board charger so that it will not overcharge your batteries.

However, you may encounter some problems if you do not charge your batteries often enough and if you do not charge them on a regular basis.

# Following the guidelines below will provide safe and reliable battery operation and charging:

If you use your scooter daily, charge its batteries as soon as you finish using it for the day. Your scooter will be ready each morning. We recommend that you charge your batteries for 8 to 12 hours after daily use.

If you use your scooter once a week or less, charge its batteries at least once a week for 12 to 14 hours at a time.

- ► Keep your batteries fully charged.
- ► Avoid deeply discharging your batteries.

#### How can I ensure maximum battery life?

Fully charged deep-cycle batteries provide reliable performance and extended battery life. Keep your batteries fully charged whenever possible. Protect your scooter and batteries from extreme heat or cold. Batteries that are regularly and deeply discharged, infrequently charged, stored in extreme temperatures, or stored without a full charge may be permanently damaged, causing unreliable performance and limited service life.

#### How can I get maximum range or distance per charge?

Rarely will you have ideal driving conditions—smooth, flat, hard driving surfaces with no

wind or curves. Often, you will face hills, pavement cracks, uneven and loosely packed surfaces, curves, and wind, all of which affect the distance or running time per battery charge. Below are a few suggestions for obtaining the maximum range per battery charge.

- Always fully charge your batteries prior to daily use.
- ► Maintain but do not exceed the psi/bar/kPa air pressure rating indicated on each tire.
- ▶ Plan your route ahead to avoid as many hills, cracked, soft surfaces as possible.
- ► Limit your baggage weight to essential items.
- ► Try to maintain an even speed avoid stop-and-go driving.

## What type and size of battery should I use?

We recommend deep-cycle batteries that are sealed and maintenance free. Both AGM and Gel-Cell are deep cycle batteries that are similar in performance. Do not use wet-cell batteries, which have removable caps.

## How do I change a battery in my scooter?

Battery posts, terminals, and related accessories contain lead and lead compounds. Wear goggles and gloves when handling batteries and wash hands after handling.

- Always use two batteries of the exact same type, chemistry, and amp hour(Ah) capacity.
- ► Do not mix old and new batteries. Always replace both batteries at the same time.
- Keep tools and other metal objects away from battery terminals.

Contact your authorized ChiefRider Provider if you have any questions regarding the batteries in your scooter.

To change the batteries in your scooter, you may need:

Phillips screwdriver, Allen key, Metric socket set and ratchet, Adjustable wrench.

1.Remove the seat by lifting it straight up and off of the scooter. If you encounter resistance when removing the seat, disengage the seat rotation lever (**Figure 4.b**)and swivel the seat back and forth while lifting up on the seat.

2. Remove the battery shroud by removing the (4) screws (**Figure 13.a**)that secure it to the base and frame, and then lifting the shroud straight up and off of the scooter.

3. Disconnect the battery cables from the battery terminals by sliding back the terminal boots and unscrewing the nut from the bolt(**Figure 12.a**).

4. Remove the old batteries from the battery wells.

5. Place a new battery in each battery well. Face the battery terminals of each battery away from the seat post(**Figure 12.a**).



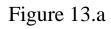




Figure 13.b

- 6. Connect the red battery cable to the positive (+) battery terminals on each battery.
- 7. Connect the black battery cable to the negative (-) battery terminals on each battery.
- 8. Reposition the terminal boots over the battery terminals(Figure 12.a).
- 9. Reinstall the battery shroud.

*NOTE:* If you encounter a damaged or cracked battery, immediately enclose it in a plastic bag. Contact your local waste disposal agency or your authorized ChiefRider Provider for instructions on disposal and battery recycling, which is our recommended course of action.

### Why do my new batteries seem weak?

Deep-cycle batteries employ a different chemical technology than that used in car batteries, nickel-cadmium batteries (nicads), and other common battery types. Deep-cycle batteries are specifically designed to provide mobility, drain down their charge, and then accept a relatively quick recharge.

We work closely with our battery manufacturer to provide batteries that best suit your specific electrical demands. Fresh batteries are shipped fully charged to our customers. During shipping, the batteries may encounter temperature extremes that can influence their initial performance. Heat diminishes the charge on the battery; cold slows the available mobility and extends the time needed to recharge the battery.

It may take a few days for the temperature of your batteries to stabilize and adjust to their new room or ambient temperature. More importantly, it takes a few charging cycles (partial draining followed by full recharging) to establish the critical chemical balance that is essential to a deep-cycle battery's peak performance and long life.

# Follow these steps to properly break in your new batteries for maximum efficiency and service life:

- ► Fully recharge any new battery prior to its initial use. This charging cycle brings the battery up to about 88% of its peak performance level.
- Operate your new scooter in familiar and safe areas. Drive slowly at first, and do not travel too far from your home or familiar surroundings until you have become accustomed to your controls and have properly broken in your batteries.
- ► Fully recharge the batteries. They will be at over 90% of their peak performance level.
- Operate your scooter again.
- ► Fully recharge the batteries again.
- After four or five charging cycles, the batteries are able to receive a charge of 100% of their peak performance level and are able to last for an extended period of time.

## What about public transportation?

If you intend to use public transportation with your scooter, you must contact the transportation provider in advance to determine their specific requirements.

## **VI. CARE AND MAINTENANCE**

Your scooter requires a minimal amount of care and maintenance. If you do not feel confident in your ability to perform the maintenance listed below, you may schedule inspection and maintenance at your authorized ChiefRider Provider. The following areas require periodic inspection and/or care and maintenance.

### TIRE PRESSURE

► If equipped with pneumatic tires, always maintain the psi/bar/kPa air pressure rating indicated on each tire.

► Regularly inspect your scooter's tires for signs of wear.

### **EXTERIOR SURFACES**

Bumpers, tires, and trim can benefit from an occasional application of a rubber or vinyl conditioner.



# WARNING! Do not use a rubber or vinyl conditioner on the scooter's vinyl seat or tire tread, as this may cause them to become dangerously slippery.

## **CLEANING AND DISINFECTION**

► Use a damp cloth and mild, non-abrasive cleanser to clean the plastic and metal parts of your scooter.

Avoid using products that may scratch the surface of your scooter.

► If necessary, clean your product with an approved disinfectant. Make sure the disinfectant is safe for use on your product before application.



WARNING! Follow all safety instructions for the proper use of the disinfectant and/or cleaning agent before applying it to your product. Failure to comply may result in skin irritation or premature deterioration of upholstery and/or scooter finishes.

#### **BATTERY TERMINAL CONNECTIONS**

- ► Make certain that the terminal connections remain tight and un-corroded.
- The batteries must sit flat in the battery wells.

#### WIRING HARNESSES

- ► Regularly check all wiring connections.
- ▶ Regularly check all wiring insulation, including the charger cord, for wear or damage.
- Have your authorized ChiefRider Provider repair or replace any damaged connector, connection, or insulation that you find before using your scooter again.



PROHIBITED! Even though the scooter has passed the necessary testing requirements for ingress of liquids, you should keep electrical connections away from sources of dampness, including direct exposure to water or bodily fluids and incontinence. Check electrical components frequently for signs of corrosion and replace as necessary.



WARNING! Do not pull on electrical harnesses directly to detach them from the scooter. Always grasp the connector itself when disconnecting the

harness to prevent wire damage.

## **ABS PLASTIC SHROUDS**

The tiller shroud, front shroud, front&rear bumpers, lock case and the battery shroud are formed from durable ABS plastic and are coated with an advanced formula urethane paint. A light application of car wax will help the shrouds retain their high gloss.

## AXLE BEARINGS AND THE MOTOR/TRANSAXLE ASSEMBLY

These items are all pre-lubricated, sealed, and require no subsequent lubrication.

## TILLER CONSOLE, CHARGER, AND REAR ELECTRONICS

- ► Keep these areas free of moisture.
- Allow these areas to dry thoroughly if they have been exposed to moisture before operating again.

## FUSE REPLACEMENT

In the event a fuse should cease to work:

- ► Open the tiller shroud and find the fuse box(Figure 14.a).
- ► Remove the fuse by pulling it out of its slot(Figure 14.b).
- Examine the fuse to be sure it is blown.
- ▶ Insert a new fuse of the same rating(5 amp).



WARNING! The replacement fuse must exactly match the rating of the fuse being replaced. Failure to use properly rated fuses may cause damage to the electrical system.

Fuse box

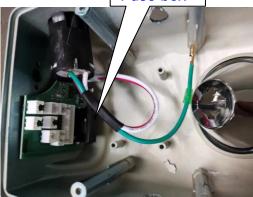




Figure 14.a

Figure 14.b

## NYLON NAIL REPLACEMENT

Any nylon insert lock nail removed during the periodic maintenance, assembly, or disassembly of the scooter must be replaced with a new nail. Nylon insert lock nails should not be reused as it may cause damage to the nylon insert, resulting in a less secure fit. Replacement nylon insert lock nails are available at local hardware stores or through your authorized ChiefRider Provider.

## STORING YOUR SCOOTER

If you plan on not using your scooter for an extended period of time, it is best to:

- ► Fully charge its batteries prior to storage.
- Disconnect the batteries from the scooter.
- ► Store your scooter in a warm, dry environment.
- ► Avoid storing your scooter where it will be exposed to temperature extremes.

Batteries that are regularly and deeply discharged, infrequently charged, stored in extreme temperatures, or stored without a full charge may be permanently damaged, causing unreliable performance and limited service life. It is recommended that you charge the scooter batteries periodically throughout periods of prolonged storage to ensure proper performance.

Environmental conditions may affect the safety and performance of your mobility scooter. Water and extreme temperatures are the main elements that can cause damage and affect performance.

A) Rain, Sleet and Snow

If exposed to water, your mobility scooter is susceptible to damage to electronic or mechanical components. Water can cause electronic malfunction or promote premature corrosion of electrical components and frame.

B) Temperature

Some parts of the mobility scooter are susceptible to change in temperature. The controller can only operate in temperature that ranges between  $-13^{\circ}F(-25^{\circ}C)$  and  $122^{\circ}F$  (50°C).

At extreme low temperatures, the batteries may freeze, and your mobility scooter may not be able to operate. In extreme high temperatures, it may operate at slower speeds due to a safety feature of the controller that prevents damage to the motors and other electrical components.

## **VII. TROUBLE SHOOTING**

#### Diagnostics

When the scooter has problems and stop working, press the trouble shooting button switch. The controller will diagnosis the system and alarm speaker will read out the troubles.

Press again the trouble shooting button, the controller will ignore the fault and drive the motor slowly. This may help you go to home or the nearest service workshop.

However, most of the problems that may arise can usually be solved with a bit of thought and common sense. Many of these problems occur because the batteries are not fully charged or because the batteries are worn down and can no longer hold a charge.

#### What if all the systems on my scooter seem to be dead?

- ► Make certain that the key is in the "on" position.
- Check that the batteries are fully charged.
- ► Make certain that both battery harnesses and the front-to-rear harness are firmly connected.
- ▶ Be sure the power down timer feature has not been activated. See 'IV. SAFETY OPERATION'.
- Be sure the parking lever is off and the brake handler is returned to the neutral position.

#### What if my scooter does not move when I twist the throttle handler?

► When the brake handler lever is pulled backward, the disc brakes are engaged and all power to the motor/transaxle assembly is cut.

# What if the battery condition LED indicator dips way down and the motor surges or hesitates when I engage the throttle lever?

- ► Fully charge your scooter's batteries. See 'V. Batteries and Charging.'
- ► Have your authorized ChiefRider Provider load test each battery.
- ► See the previous troubleshooting question for load testing the batteries yourself.

If you experience any problems with your scooter that you are not able to solve, immediately contact your authorized ChiefRider Provider for information, maintenance, and service.

Model	Chiefrider MS 410B
Overall Dimension **	1380×630×1250mm / 54"×25"×49" inch
Wooden Dimension(With Seat)**	1600×640×610mm / 63"×25"×24" inch
Product Weight (with batteries)**	88 kg / 194 lbs
Tires	10"×3.5-4 pneumatic
Wheel-base	950mm / 37.5"
Max.Load	150 kg / 340 lbs
Max Forward/Reverse Speed	12 kph /8mph / 6kph /4mph
Min.Turning Radius	1535mm / 60"
Max.Gradability	16%
Ground Clearance	125mm / 5"
Max. Kerb Height	100mm / 4"
Braking and Parking	Regenerative & Machnical disc Braking
Controller	48V500W BLDC Controller
Transmission and Motor	Sealed Trans-axle, 48V/500W BLDC Motor
Max.Range per Charge *	50km / 32 miles
Batteries Specification	AGM 12V20Ah ×4pcs
Batteries Weight ***	7.3kg / 16 lbs ×4pcs
Charger	48V/3A Intelligent off-board Charger
Charging time	8~10h,110VAC~250VAC
Seat	Foldable Seat with Arm Rest
Seat Width	460cm / 18"
Seat Depth	480cm / 19"
Seat height from ground	550mm / 22"
Floor-board height	150mm / 6"

The information contained herein is correct at the time of publication; ChiefRider reserve the right to alter specifications without prior notice.

\*Speed & range vary with user weight, driving inhabit, terrain type, charger, battery condition and tire pressure.

This was tested with 75kg / 165 lbs rider on pavement.

\*\*Due to manufacturing tolerances and continued product improvement, this specification is subject to a variance of +/- 3%

\*\*\*Battery weight may vary based on manufacturer.