



# twion®

The electric drive for active wheelchairs

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MADE IN GERMANY ■■■



# Energize your wheelchair.





## Product advantages

The fastest, lightest power assist; modern design, smartphone-compatible. The twion active drive opens up new worlds for users, who will experience entirely new levels of independence. The compact and silent wheel hub drives with their built-in lithium-ion batteries ensure greater propulsion force in the standard version of up to 6 km/h (4 mph) or optionally 10 km/h (6 mph)<sup>1)</sup>. Thanks to our insistence on using only top-quality materials and keeping weight to a minimum, the wheels - at just 6.25 kg / 14 lbs including batteries - are true lightweightes.

### The most important product advantages at a glance:

- Dynamic propulsion assistance up to a speed of 6 km/h, 4 mph (optionally 10 km/h, 6 mph)<sup>1)</sup>
- Easy to transport and load since each drive wheel weighs a mere 6.25 kg / 14 lbs <sup>2)</sup>
- Lithium-ion battery technology - lightweight and with a long service life <sup>3)</sup>
- Highly efficient digital electronic direct drive featuring energy recovery to achieve a greater range
- The EasyConnex magnetic charging connector automatically finds the correct position for insertion
- Optional smartphone connection to display all important travel information and choice of two travel programmes
- Optional: intelligent additional functions such as cruise mode function and remote control of the unoccupied wheelchair
- Optional: recording of tour data via GPS
- Many features for individualization

<sup>1)</sup> Option to increase max. speed to 10 km/h, 6 mph with the Mobility Plus package

<sup>2)</sup> Weight varies according to the options and accessories





## Wheelchair mounting

- Active wheelchairs
- Lightweight wheelchairs

Some small brackets are only attached to the wheelchair, without changing its characteristics. The manual wheels can continue to be used.

If you have questions regarding a specific wheelchair model or special requests for mounting, our Customer Service team would be delighted to advise you.

### Our quality promise – Your safety

Seal of approval and testing institute		TÜV Süd, Hanover
CE conformity		Complies with the EU Medical Devices Directive 93/42/EWG
Approved and tested according to application class	<input type="checkbox"/> Class A (Indoors) <input checked="" type="checkbox"/> Class B (Indoors and outdoors) <input type="checkbox"/> Class C (outdoors)	
Awards	 Focus Open 2014 Gold	 German Design Award SPECIAL MENTION

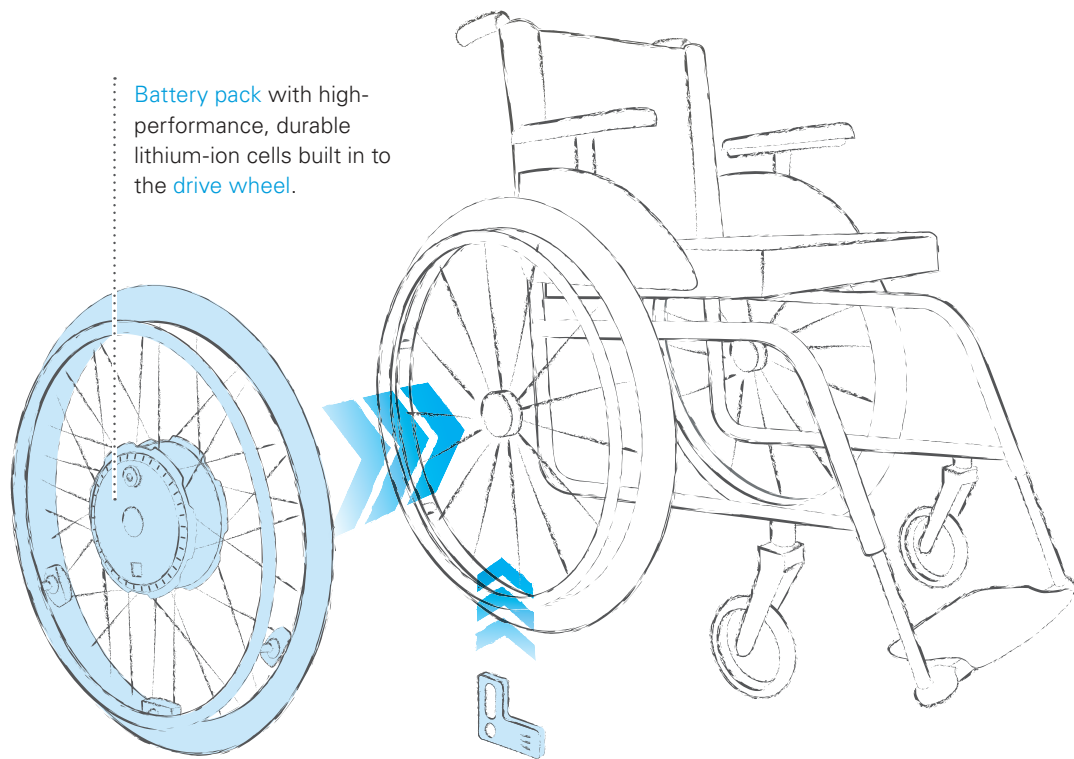
## Functionality:



The charger socket on the wheel ...

...serves as an on/off switch at the same time.

The wheel can be removed by pressing the button on the quick-release axle and pulling the wheel off – a perfect example of built-in multifunctionality.



Battery pack with high-performance, durable lithium-ion cells built in to the drive wheel.

Silent and highly efficient: state-of-the-art digital motor technology with energy recovery.

Bracket to attach the wheels.



### Drive wheel

- 24 x 1" wheels with Schwalbe Marathon Plus Evolution tyres with unrivalled puncture protection as standard
- Stub axle 123 mm long, diameter 1/2"
- Max. user weight 120 kg / 260 lbs
- Motor, electronics and battery pack integrated in the wheel hub
- White cover
- Black outer ring
- Stainless steel button on stub axle
- Push rim black aluminium/matt powder-coated
- Weight of standard model: 6.25 kg / 14 lbs per wheel



### Battery charger

- Handy, compact charger for the use on the way and at home
- Weight: 450 g / 1 lbs
- Charges both batteries at the same time with automatic charging and cut-off circuits
- Charging time approx. 4.5 hours
- Input voltage 100 V – 240 V
- Charging temperature 0°– 40 °C / 32°F - 104°F
- Charge status is indicated by the LEDs on the wheel and charger



### twion Mobility App

- For smartphones running on the Android or iOS operating system and internet access
- Download free of charge from the Google Playstore or App Store



### Functions

- Quickstart guide, brief operating instructions
- List of specialist dealers worldwide
- Troubleshooting with solution management
- Contact a specialist dealer or Alber Service Center directly
- Practical tips on all aspects of the twion

### twion Mobility App



twion

Enjoy additional features with the optional Mobility Plus package (see Accessories).





#### Black cover

- Black outer ring
- Black button on stub axle



#### Stainless steel push-rim

- Stainless steel, brushed
- Less susceptible to scratches, provides good grip
- Additional weight per wheel: 400 g / + 0.88 lbs



#### Carbolife "Curve L" push rim

- Power-saving, controlled handling thanks innovative patented profile shape
- Stabilizes the wrist
- Noticeably easier and more precise handling and braking
- Better power transmission and less fatigue of the hand muscles
- Powder-coated black, 160 g / 0.35 lbs more weight compared to standard



#### Stub axle for transport

- Safe transport and loading, protects push rim and sensor during transport in the car or on a plane
- Prevents the wheel from switching on/off by accident



#### Ergonomic stub axle

- Facilitates unlocking and removing the twion wheels from the wheelchair
- Can be easily employed without tools instead of the serial stub axle

## Overview of the twion Mobility Plus Package and its functions

ASSISTANCE  
UP TO 10 KM/H



### Mobility Plus Package

- Having both hands empty while driving a wheelchair, knowing precisely how far and how quickly one has travelled, how long the battery lasts, or a little extra speed when desired?
- All this is made possible by the Mobility Plus package! With a license code, a large number of smart additional functions can be activated in the twion App to get even more benefits out of twion – whether the option of remote controlling the unoccupied twion via mobile phone, recording tours via GPS, or comfortably travelling longer distances without permanent pushing. Let us surprise you!
- The twion Mobility Plus package contains an outer ring with an exclusive design, a booklet with operating instructions and the license code for activating additional functions. All that is required is an Internet-enabled smartphone.

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### An overview of the functions



#### Cockpit with driving information.

- Readout of running parameters including battery status, average speed, maximum speed, current speed, altimeter, travelled kilometres
  - Simple switchover between ECO (less motor assistance for greater range) and SPORT (more dynamic ride characteristics with longer run-on) modes
  - Increase assist up to 10 km/h / 6 mph
- i** county-specific traffic must be observed).



#### Remote control.

- Remote control of the unoccupied wheelchair using a smartphone
- You can choose whether to control it with the built-in inclination sensor (by gently tilting the smartphone) or with a virtual joystick



#### Tour mode.

- Recording and display of journeys using a GPS signal
- Detailed display of tour data such as distance covered, time, altimeter and number of calories burned
- Tour data is stored in chronological order



#### Cruise mode function.

- Functions similar to the cruise control of a passenger car
- It is activated by a drive movement above 1km/h, 0.62 mph and maintains this speed without additional pushing.
- The speed can be increased at any time by additional drive movements on the push ring
- Ideally suited for longer walks along level ground, pushing a shopping cart or luggage trolleys



#### Bracket

- Small lightweight mount
- Torque receiver not compatible with e-motion wheels
- Wheel can be mounted in any position
- Compatible with almost all active wheelchairs and light-weight wheelchairs



#### Anti-tippers with swivelling and jack-up function

- Removable via quick-release mechanism
- Adjustable height and length
- With automatic swivelling function for crossing curbs and thresholds
- Jack-up function for easy removal of the wheels
- Anti-tippers must be mounted in pairs





Drive wheel

Size	24"
Speed	Assist from 0–6 km/h, 0 - 4 mph (optionally up to 10 km/h), 6 mph*
Motor power rating	2 x 60 W
Operating voltage	37 V
Operating temperature	from -25° C to +50° C / -13°F to 122°F
Torque	2 x 20 Nm
Protection class	IPX4
Climbing and braking capability	<b>i</b> The limit values of the wheelchair manufacturer are to be observed. * with Mobility Plus package

Battery pack

Battery cells	Lithium-ion battery, rechargeable, leakproof and maintenance-free
Nominal battery capacity	2 x 2.25 Ah
Nominal battery power	2 x 83.25 Wh = 166.5 Wh
Charging temperature	from 0° C to 40° C / 32°F to 104°F
Range	12–20 km / 8-12 miles <b>i</b> The range will vary according to the terrain as well as the prevailing running conditions. The stated range can be achieved with optimal running conditions (even terrain, freshly charged batteries, ambient temperature of 20 °C / 68°F, optimal tyre pressure, steady driving, etc.).

Transportation by air

All Alber products are suitable for transportation by air. On [www.alber.de](http://www.alber.de) you can find all the current certificates for presenting to the airline companies.  
→ Alber Service  
→ Travelling with Alber products

Battery charger

Input voltage	100–240 V (AC), 50–60 Hz; automatic adaptation to the mains voltage, automatic electronic charging and switch-off mechanism
Output voltage	2 x 45 V (DC)
Charging current	2 x 0.5 A
Charging time	approx. 4.5 h
Protection class	IP 41

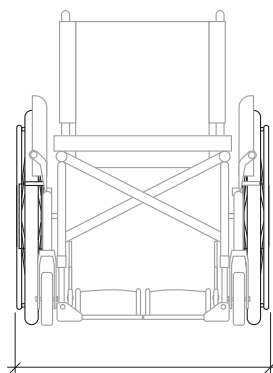
Weight

Total weight per wheel	6.25 kg / 14 lbs incl. battery (Weight varies according to the options and accessories) <b>i</b> Max. permissible weight of person: 120 kg / 260lbs Permissible total weight: 145 kg / 320 lbs (person, drive unit, wheelchair)
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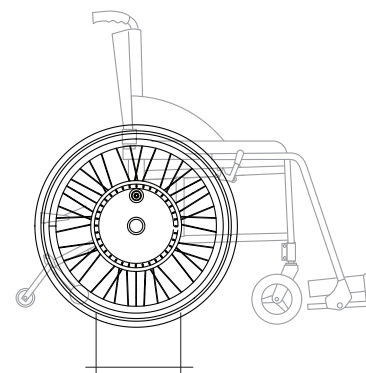


**CE** CE compliant in accordance with Medical Products Directive 93/42/EWG

Maximum twion wheel camber  
up to 40 kg / 88 lbs - 9°  
40 – 60 kg / 88- 132 lbs - 6°  
61 – 100 kg / 132 - 220 lbs - 3°  
over 100 kg / 220 lbs - 1°



(wheelchair width + 2 - 4 cm / 0.8 - 1.6 inch)



Wheel hub diameter 18 cm / 7 inch