



Empulse®

LET IT DRIVE YOU



red dot winner 2022
best of the best



EYE-CATCHING DESIGN

THAT WON'T DRAW ATTENTION

The sleek, simple, and compact design sits under your chair. It's inconspicuous, intuitive, and maintains your chair's size and turning circle.

REIMAGINE YOUR RIDE

Simple, push-button control and propelling.

When push assist is not needed, the wheel lifts for zero rolling resistance.

V-Lock™ securely and easily attaches.

Easily swap out the removable battery.

Select indoor or outdoor performance profiles or monitor your device with the R90 app.

Fits most rigid or folding wheelchairs.

*Patent-Pending Empulse Technology



CENTER-SPIN

PRECISION TURNING

The R90 drive wheel is positioned under your seat. This means you can maneuver forward, backward, and 360° with minimal drag or hang-up.

No fish-tailing, no rear bounce.
It moves like a part of you.



SLOPE DETECTION

The R90 can detect when you reach a slope or obstacle and provide more or less power to help maintain your speed.

EXCELLENT MANEUVERABILITY

Because the entire R90 is positioned under your chair, the size and turning circle of your chair remain the same. In tight spaces, move as you normally do.

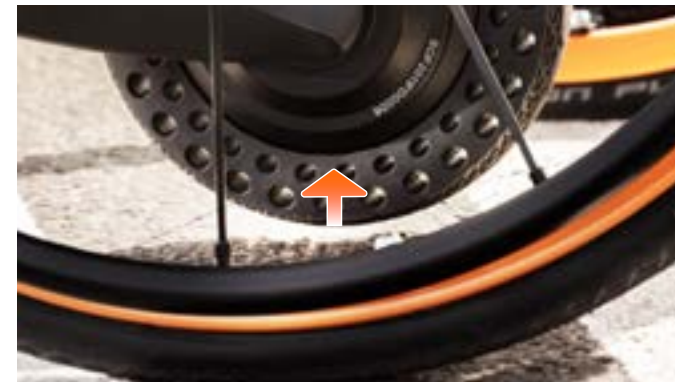
DRIVE WHEEL ALIGNMENT

The R90 wheel closely aligns with your rear wheels, so it pushes over obstacles the same time you do.



PATENT-PENDING WHEEL UP

When the R90 is not needed, raise the wheel for zero rolling resistance. This can be done with a button on the Control Box or from the App. Even though the R90 is easy to remove, just raise the wheel and keep it on your chair all day.



SMOOTH RIDE

The R90 propels you with a patent-pending suspension, reducing bumps and vibration.

The extremely durable, airless rubber tire provides good surface contact and a smooth ride with minimal maintenance.

REMOVABLE BATTERY

Swap out the battery or make it lighter to carry. A second or extended range battery provides extra distance or even more convenience.

Double the battery = double the distance!

- Standard battery = up to 9.8 miles
- Extended range battery = up to 19.5 miles

Range is dependent on the ground surface, the weight of the user, driving behavior, temperature and terrain.

AIR TRAVEL ✈

Both R90 batteries are airline compatible.

- Standard (2.5 Ah) – certification not needed
- Extended range (5 Ah) – certification required

Certificate is available for download at: www.sunrisemedical.com/power-assist/empulse/add-on-devices/r90

Always verify with your airline for current regulations.



SIMPLE, SECURE ATTACHMENT

PATENT-PENDING V-LOCK™

The patent pending V-LOCK™ is a tapered latch that securely docks the R90 to the receiver on the chair. Combined with the ergonomic, easy-grasp handle, upright orientation, and rolling tire, the R90 can be attached easily and securely. For some, this can be done while seated in their chair.

The V-shaped latch helps guide the R90 into its receiver, then locks it in place.



TAKE IT EASY

PUSH-BUTTON PROPEL

Save your shoulders, or just relax. The R90 propels you without the strain on your hands and shoulders. Just push the button.

ONE-HAND SPEED CONTROL

To maintain your speed, go faster or slower, simply push a button on the easy-to-access control box.

CONVENIENT CHARGING

Simply snap the magnetic device charger into your R90. For even more convenience or to keep an extra battery charged up, use the optional docking charger.

GO THE DISTANCE

The standard R90 battery has a range of over 9 miles. Or with the optional extended range battery, you can travel as far as 19.5 miles! Keep an extra battery charged and ensure you're never without power.

Range is dependent on the ground surface, the weight of the user, driving behavior, temperature and terrain.





R90 TECHNOLOGY

SIMPLE CONTROL BOX

Drive your chair easily without a strong grasp or dexterity. Start and control your speed with the push of a button. Free up your hands to steer and stop, push a cart, or hold the hand of a loved one.

- The wireless Control Box can be mounted on your frame tube anywhere convenient to you.
- Raise or lower the wheel any time.
- Dial in your speed for any situation – nice-and-easy in a crowded store or keeping up with your dog. You have a max speed of 5.5 mph (9kph)!
- To get moving, simply press the plus button, or you can propel to the speed you want and press the plus button to maintain it (like cruise control).

No “convincing” it what to do, just faster, slower, wheel up, or GO!

BLUETOOTH

No cords to get in your way. The Control Box connects to the R90 via Bluetooth® and reliably stays connected regardless of location or travelling about.

The wireless Control Box can be easily removed to help with transfers or to avoid damage in air travel.

SUNRISE INTELLIGENCE APP

CHOOSE A DRIVE PROFILE

Use the app to select either the indoor or outdoor performance profile best suited for your environment. The preset profiles are tailored for speed, torque, and slope thresholds for indoor or outdoor driving situations.

MONITOR YOUR R90

Check your battery so you always know when you need to recharge. You can also see if the wheel is up or down and tell the R90 to raise or lower it.

CONFIGURE R90 TO YOU

Use the app for initial set-up, calibrating the R90 to your weight for optimal performance.

METRICS DASHBOARD

Historical data is shown in a dashboard so you can see your use patterns, max speed and distance.

Compatible with Android™ and Apple® iOS.



COMPATIBILITY

The Empulse R90 is compatible with most rigid or folding wheelchairs. The receiver brackets do not interfere with chair components and still allow your folding chair to fold.

FOR RIGID CHAIRS, the receiver bracket mounts directly to the camber tube and can remain in place whether the R90 is on or off your chair.

FOR FOLDING CHAIRS, the assembly has a sturdy crossbar that is spring-loaded for quick install or removal. See specifications for exact measurements.

THE CONTROL BOX can be ordered for either right or left-hand use and can be mounted anywhere on your frame tube.



Rigid Chair Receiver Bracket



Folding Chair Receiver Bracket and Removable Axle Assembly

COMPONENTS

WHAT'S IN THE BOX?

- R90 Push Assist
- Standard, Removable Battery
- Control Box (with short & tall mounting plates)
- Device Charger
- Receiver Assembly*
- Travel Bag

Packages

- R90 – 2.5 Ah battery, 9.8 mi (15.7 km) range
- R90 Range – 5 Ah battery, 19.5 mi (31.4 km) range

Optional Extras

- Extended Range Battery
- Extra Standard Battery
- Docking Charger (Compatible with standard or extended range battery)



TECHNICAL DATA

Weight Capacity	275 lbs (125 kg)
Battery Range*	
Standard (2.5 Ah)	9.8 miles (15.7 km)
Extended (5 Ah)	19.5 miles (31.4 km)
Max Slope	6 Degrees
Weight (without battery)	13.0 lbs (5.9 kg)
Standard Battery	1.5 lbs (0.7 kg)
Extended Battery	2.6 lbs (1.2 kg)
Frame Compatibility	
Camber Tube Diameter	22 mm to 45 mm
Axle Height	283 mm to 336 mm
Width (Folding wheelchairs only. Between axle plates.)	300 mm to 530 mm
Adjustable Max Speed	5.5 mph (9 kph)
Electronics	Bluetooth / Wireless
Battery	Lithium-Ion 36V 2.5Ah / 5Ah
Battery Charging Time	1 Hour (for 2.5Ah) 2 Hours (for 5Ah)
Motor	250 W / 22 Nm
Motor Brake	None

R90 Web Page

R90 Order Form

⚠ WARNING

Using a power assist device can change your center-of-gravity or the way your chair rides. To reduce any risk of tip-over or fall, consult your healthcare provider about proper wheelchair configuration, including use of anti-tips and any other necessary adjustments.

SUNRISE MEDICAL CARES ABOUT YOUR SAFETY. Please read your owner's manual for safe operating instructions and maintenance guidelines.

See order form as specifications may vary based upon configuration.

** Range is dependent on the ground surface, the weight of the user, driving behavior, temperature and terrain.*

EMPOWER YOUR LIFE

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For further information on the full specification, options, and accessories, please refer to the order form. All information is subject to change without notification. Please consult Sunrise Medical with any queries you may have.



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