

# Empulse m90

## Compatibility Check for Rigid & Folding Wheelchairs



The Empulse M90 is compatible with rigid and folding wheelchairs with integrated or removable footrests. To ensure the compatibility of the Empulse M90 to your wheelchair, please follow the compatibility check guidance below.

1. **Rear Wheel Size** - The M90 is compatible with wheelchairs with a rear wheel size of:
  - **24" (540) Wheels**
  
2. **Camber** - The M90 is compatible for wheelchairs with a camber of:
  - **0°**
  
3. **Caster** – The M90 is compatible with all caster sizes. However, 5" or larger casters are recommended to improve stability and obstacle deflection at the M90's top speed.
  
4. **Rear Seat Height** – The M90 is compatible with most rear seat heights designed for 24" wheels.
  - For rear seat heights below 16" (406 mm), adjustments to the center of gravity, armrest, and/or side guard may be required to avoid interference with the M90 motor. Sunrise Medical cannot guarantee compatibility for all wheelchair configurations.

Rear Seat Height		
Inches	Millimeters	
< 16	406	Go
17	432	Go
18	457	Go
19	483	Go
20	508	Go

5. **M90 Dual Controller** – 1.2" (30 mm ) of space is needed along the wheelchairs frame to mount the M90 controller. This controller should be mounted so that it is easily accessible to the rider.
  
6. **Handrims** – Only tab mount handrims are compatible with the M90. They must be mounted in a standard or wide position. Narrow positions are not compatible.
  
7. **Tires** – Compatible with all 24" (540) tires. Tire diameter, tread, and width will affect the M90's performance. For optimal performance the Schwalbe Marathon Plus is recommended.

8. **Armrest** – Compatibility with armrest will vary based on the manufacture and armrest. Armrest that attach to the rear of the wheelchairs frame or behind the backrest will have less potential interference with the M90
- Quickie Compatible Armrests
    - Padded swing away Armrest
    - Flip Back Height Adj Classic Armrest
    - Flip Back Back Armrest
  - No Go Armrests
    - Single post height adjustable Armrest
    - Flip Back Height Adj Lite Armrest
9. **General NoGo's** – Please ensure your wheelchair is not equipped with any of the following parts, as they create a NoGo:
- Rear Suspension
  - One-Arm Drive
  - Drum Brakes
  - Carbon Camber Tubes
10. **Recommendations** – The following items do not cause a Go or a No Go, but we recommend following the guidance for optimal device performance without limitations.
- Anti-Tippers – It is recommended to use anti-tips on the wheelchair when using with the Empulse M90.
  - Carbon frames – carbon frames are not recommended.
11. **M90 Spacers** – M90 spacers can be used to move the M90 wheels away from the chairs frame. Spacers are only compatible with some M90 mounting brackets. The M90 spacers are compatible with the following Quickie Chairs Nitrum, QX, Q2 Light, QS5 X, QRI, and 5R in the following combinations.
- 1x 6 mm additional spacer per side possible: Nitrum (NA), QX, Q2 light
  - 1x 4 mm additional spacer per side possible: QS5 X (NA)
  - 1x 6 mm + 1x 4 mm additional spacer per side possible: QRI, Q5R
  - No additional spacer per side possible: IRIS, SR45, Q2, QXi, GP, X'Cape, GS"
- Note: For chair models with a camber tube, when an M90 space is added 24mm of the axle sleeve must still be inserted into the axle sleeve receiver
- Note: For chairs with an axle plate, the axle sleeve screw must come at least to the end of the nut.

**Compatibility** – Only chairs listed on the order form are compatible with the M90. Specific mounting hardware is provide based on the chair selected. For current compatibility see the Empulse M90 order form found on [www.sunrisemedical.com](http://www.sunrisemedical.com)