

Empulse R90

Compatibility Check for Rigid & Folding Wheelchairs

The Empulse R90 is compatible with rigid and folding wheelchairs with integrated or removable footrests. To ensure the compatibility of the Empulse R90 to your wheelchair, please follow the compatibility check guidance below. Please consider that there is an extended check for folding wheelchairs needed.



1 - Back Wheel Size - The R90 is compatible with wheelchairs with a back wheel size of:

- 24"
- 25"
- 26"

*** The R90 is designed for specific wheel sizes, with its performance optimized accordingly. If further clarification is needed, you can measure from the ground to the center of the camber tube and use that distance to determine the appropriate R90 size.

Distance from		R90 size is optimized for the wheelchair wheel size		
Ground to Camber		24" (540 Wheels)	25" (559 Wheels)	26" (590 Wheels)
Inches	Millimeters			
11.0	280	Go		
11.2	285	Go		
11.4	290	Go		
11.6	295	Go	Go	
11.8	300	Go	Go	
12.0	305	Go	Go	
12.2	310		Go	Go
12.4	315		Go	Go
12.6	320		Go	Go
12.8	325			Go
13.00	330			Go

2 - Camber - The R90 is compatible to wheelchairs with a camber of:

- 0°
- 1°
- 2°
- 3°

The R90 is compatible only with rigid chairs that have a straight axle. If the axle is not straight and has a "V" shape the R90 is not compatible.

Compatibility Check

for Rigid & Folding Wheelchairs

3 - Rear Seat Height - Please check your combination of COG and back seat height in the matrix below and double-proof by measuring the distance from the seat sling to the center of the axle.

RSH (Rear Seat Height)		24" Rear Wheel (540 wheel)			25" Rear Wheel (559 wheel)			26" Rear Wheel (590 wheel)		
		Center of Gravity			Center of Gravity			Center of Gravity		
Inches	Millimeters	0-3" (0-76mm)	3.1-4" (77-101mm)	4+ (102mm +)	0-3" (0-76mm)	3.1-4" (77-101mm)	4+ (102mm +)	0-3" (0-76mm)	3.1-4" (77-101mm)	4+ (102mm +)
13 -16	330 - 410									
16.5	420	GO								
17	430	GO	GO		GO					
17	440	GO	GO		GO					
17.5	450	GO	GO		GO	GO				
18	460	GO	GO	GO	GO	GO		GO		
18.5	470	GO	GO	GO	GO	GO	GO	GO	GO	
19	480	GO	GO	GO	GO	GO	GO	GO	GO	
19.5	490	GO	GO	GO	GO	GO	GO	GO	GO	GO
20	500	GO	GO	GO	GO	GO	GO	GO	GO	GO

*Disclaimer: Please note that not all wheel sizes will be available in all regions.

To double check you can also measure the distance from the middle of the axle to the seat sling of your wheelchair. The measured distance must be in the range mentioned below.

- FOR COG less or equal than 3"/76 mm 2.75"/70 mm min. center axle to seat sling gap
- FOR COG greater than 3"/76 mm 4.63"/118 mm min. center axle to seat sling gap

4 - General NoGo's - Please check if your wheelchair is equipped with any of the following parts as they create a NoGo

- Rear Suspension
- 4 Link Suspension
- One Arm Drive
- Please ensure enough space on the front frame of the wheelchair to attach the R90 control box mounting bracket (30 mm)
- Carbon frames and / or camber tubes

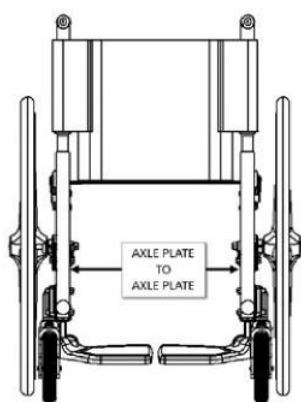
5 - Recommendations - The following items do not cause a Go or a No Go, but we recommend following the guidance for optimal device performance without limitations.

- 5" or larger castors are recommended to improve stability and obstacle deflection at the R90's top speed.
- It is recommended to use anti-tips on the wheelchair combined with the Empulse R90.

Extended Compatibility Check only for Folding Wheelchairs

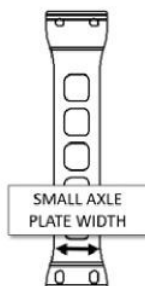
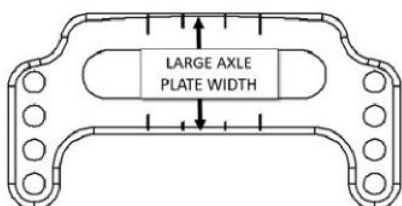
6 - Folding Wheelchair width - For Folding Wheelchair frames please measure the distance from the inside axle plate to the inside axle plate and choose the correct size of folding axle on the order form. If the distance measured does not fit in the min to maximum measurements mentioned in the table below means that the R90 does not fit this specific wheelchair.

*** The R90 folding bracket is optimized for these widths for strength and easy of attachment.



AXLE PLATE TO AXLE PLATE WIDTH (in)	AXLE PLATE TO AXLE PLATE WIDTH (mm)	FOLDING AXLE ASY			
		X-SMALL	SMALL	MEDIUM	LARGE
12.0-13.0	300-330	x			
13.1-16.0	330-400		x		
16.1-18.0	400-450			x	
18.1-21.0	450-530				x

6 - Folding Wheelchair axle plate size - For Folding Wheelchair frames please measure the axle plate width as shown in the pictures below and choose the correct bracket size on the order form. If the distance measured does not fit in the min to maximum measurements mentioned in the table below means that the R90 does not fit this specific wheelchair.



AXLE PLATE SIZE (in.)	AXLE PLATE SIZE (mm.)	AXLE PLATE ADAPTER		
		SMALL	MEDIUM	LARGE
1.0-1.5	25-38	x		
1.5-2.0	38-50		x	
2.0-2.25	50-60			x

Recommended Mounting Hardware By Wheelchair Model



Sunrise Medical is not responsible for the compatibility and alignment with competitor chairs and is not obligated to update compatibility information for competitor products. This guide provides recommendations for the required mounting hardware for specific wheelchairs, but it is essential to evaluate the chair's configuration to ensure full compatibility with the R90.

Rigid Wheelchairs								
Camber Tube Clamp Size	0.87" (22mm)	0.98" (25mm)	1.11" (28mm)	1.18" (30mm)	1.26" (32mm)	1.38" (35mm)	1.50" (38mm)	1.77" (45mm)
Sunrise Medical								
Nitrum					x			
5R					x			
Qri					x			
GP	No-Go							
RGK - For RGK compatibility reach out to your local RGK representative.								
Tiga					x			
Tiga Sub 4			x					
Tiga FX					x			
Ocatane		x						
Ocatane Sub 4		x						
Octane FX		x						
Hilite		x						
Maxlite		x						
*** RGK consideration, the R90 clamp needs a 100mm straight section in the middle of the camber tube to attach. If the axle has a "V" shape that starts in the middle of the camber tube the R90 is not compatible.								
Ti Lite								
CR1					x			
TRA					x			
Aero T					x			
ZR					x			
ZRA					x			
Aero Z					x			
TR					x			
Ki Mobility								
Ethos			x					
Rogue 2			x					
Rogue ALX			x					
Motion Composites								
Apex C					x			
Apex A					x			

Folding Wheelchairs				
Axle Plate Adapter	Small Axle Plate (1.0" - 1.5" or 25mm - 38mm)	Medium Axle Plate (1.6" - 2" or 39mm-50mm)	Large Axle Plate (2.1" - 2.25" or 51mm-60mm)	
Sunrise Medical				
Q2 Lite	x			
QX	x			
Lxi	x			
Q2 HP		x		
Xenon		x		
Q2X		x		
QS5X	*** Special adapter see order form			
LX		No-Go		
M6		No-Go		
Qxi		No-Go		
Ti Lite				
TiLite X	x			
Aero X		No-Go		
2GX		No-Go		
Ki Mobility				
Catalyst 5		x		
Catalyst 5Ti		x		
Catalyst 5Vx		x		
Catalyst 4		x		
Motion Composites				
Veloce		x	*** See mounting instuction on R90 webpage	
Move		No-Go		
Helio		x	*** See mounting instuction on R90 webpage	
KIDS		x	*** See mounting instuction on R90 webpage	
Helio C2		x	*** See mounting instuction on R90 webpage	
Helio A7		x	*** See mounting instuction on R90 webpage	
Helio A6		No-Go		
OrthoFab				
Prima 4		x		
Prima R		x		
Physi Pro				
XL 5		x		
XL RF		x		