

# R90

## Compatibility Guide



07/2025

## Compatibility Check for Rigid & Folding Wheelchairs

### 7-Step-Compatibility-Check

The Empulse R90 is compatible to 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 - Combination agreement** - Please check, if the combination between the Empulse R90 and your specific wheelchair is approved. The combination overview can be found on [www.sunrisemedical.eu](http://www.sunrisemedical.eu).

**2 - Rear Wheel Size** - The R90 is compatible to wheelchairs with a backwheel size of:

- 24"
- 25"

Please select your backwheel size on the order form. 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 Ground to Camber		R90 size is optimized for the wheelchair	
in	mm	24"	25"
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
12.4	315		Go
12.6	320		Go
12.8	325		
13.0	330		

### 3 - Camber tube clamp size

Required for rigid wheelchair, specify the diameter of the frame/camber tube size  
All rigid wheelchairs from Sunrise Medical & RGK chairs have a camber tube clamp size of 32 mm.

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**4 - 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.

**5 - 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) Inches	RSH (Rear Seat Height) mm	24" Rear Wheel (540 wheel)			25" Rear Wheel (559 wheel)		
		CG			CG		
		0-3"/0-80 mm	3.5"/92 mm	4"/104 mm	0-3"/0-80 mm	3.5"/92 mm	4"/104 mm
14.5"	370 mm	NO GO	NO GO	NO GO	NO GO	NO GO	NO GO
15"	380 mm	NO GO	NO GO	NO GO	NO GO	NO GO	NO GO
15.5"	390-400 mm	NO GO	NO GO	NO GO	NO GO	NO GO	NO GO
16"	410 mm	NO GO	NO GO	NO GO	NO GO	NO GO	NO GO
16.5"	420 mm	GO	NO GO	NO GO	NO GO	NO GO	NO GO
17"	430 mm	GO	GO	NO GO	GO	NO GO	NO GO
17.5"	440 mm	GO	GO	NO GO	GO	NO GO	NO GO
18"	450 mm	GO	GO	NO GO	GO	GO	NO GO
18.5"	460 mm	GO	GO	GO	GO	GO	NO GO
19"	470 mm	GO	GO	GO	GO	GO	GO
19.5"	480 mm	GO	GO	GO	GO	GO	GO
20"	490 mm	GO	GO	GO	GO	GO	GO
20.5"	500 mm	GO	GO	GO	GO	GO	GO

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

To doublecheck 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

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

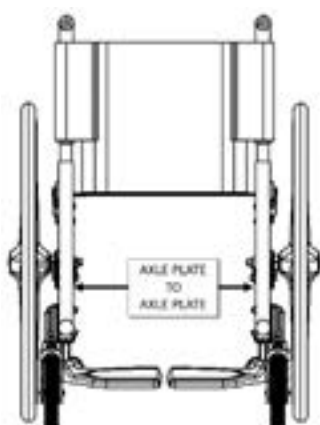
- Carbon axle
- V-axle
- Rear Suspension
- 4 Link Suspension
- One Arm Drive
- Please ensure enough space on the front frame of the wheelchair to attach the R90 control box mounting bracket (30 mm)

**7 - Recommendations** - The following items do not cause a Go or a NoGo, but we recommend to follow the guidance for optimal device performance without limitations.

- 3" & 4" castor wheels should not be combined with the R90
- It is recommended to use anti tips on the wheelchair combined with the Empulse R90

## Extended Compatibility Check only for **Folding** Wheelchairs

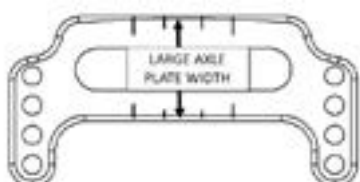
**7a - Folding Axle length** - For Folding Wheelchair frames please measure the distance from **inside axle plate to inside axle plate width** and choose the correct size of folding axle on the order form. If the distance measured does not fit in the min to max measurements mentioned in the table below means that the R90 does not fit this specific wheelchair (NoGo).



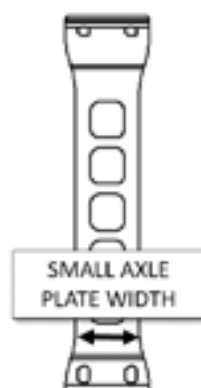
AXLE PLATE TO AXLE PLATE WIDTH (in)	AXLE PLATE TO AXLE PLATE WIDTH (mm)	Folding Axle length			
		X-SMALL	SMALL	MEDIUM	LARGE
12.0 - 13.0	300 - 330	X			
13.1 - 16.0	330 - 400		X		
16.1 - 18.0	400 - 450			X	
18.1 - 21.0	450 - 530				X

Sunrise Wheelchair Model	Formula to calculate folding axle length
Easy 200	axle plate to axle plate length = seat width - 24
Easy 300	axle plate to axle plate length = seat width - 24
Easy Life	axle plate to axle plate length = seat width - 24
Easy Life R	axle plate to axle plate length = seat width - 24
Easy Life RT	axle plate to axle plate length = seat width - 24
Easy Life i	axle plate to axle plate length = seat width - 24
Neon <sup>2</sup>	axle plate to axle plate length = seat width - 74
QS5 X	axle plate to axle plate length = seat width - 29
Xenon <sup>2</sup>	axle plate to axle plate length = seat width - 52

**7b - Folding Wheelchair - Axle plate size** - For Folding Wheelchair frames please measure the axle plate width as shown on the pictures below and choose the correct bracket size on the order form. If the distance measured does not fit in the min to max measurements mentioned in the table below means that the R90 does not fit this specific wheelchair (NoGo).



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



Sunrise Wheelchair Model	Axle Plate Adapter
Easy 200	S
Easy 300	S
Easy Life	S
Easy Life R	S
Easy Life RT	S
Easy Life i	S
Neon <sup>2</sup>	NoGo
QS5 X	Special
Xenon <sup>2</sup>	M