

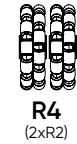
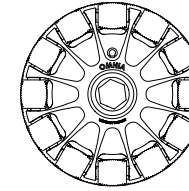
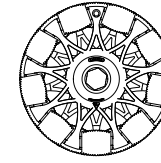
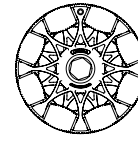
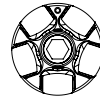
# OMNIA<sup>®</sup>



Introducing The New Omni Wheel Product Range

[omniawheel.com](http://omniawheel.com)

## Our Range



Diameter	35mm		50mm		90mm		127mm			150mm			180mm				
Core part number	R2-0354		R2-0504		R2-0905		R2-1278			R2-1509			R2-1801	R3-1801			
Roller Hardness (Shore A) Colour	57	99	74	74	95	74	74	95	74	85	95	74	85	95			
Load Capacity (Kg)**	2	5	15	25	50	90	60	100	110	70	105	125	R2 75	R3 100	120	135	
Net Wheel Weight (g)	12	13.5	40	40	195	195	335	355	360	490	510	515	R2 760	R3 1190	790	1240	1250
Bearing Seat/Bore	8	8	14		19		19			19	19		25.4				
Bearing Seat	8mm keyed	8mm plain	16x5mm		28x8mm		28x8mm			28x8mm	35x11mm		42x12mm				
Inner Bore			14mm Hex		19mm Hex		19mm Hex			19mm Hex	19mm Hex		25.4mm Hex				
Hub Width (mm)	18.5		27.5		43		51/53*			51/53*	52		57 (R2)				85 (R3)

### Legend:

#### Imperial ID Sizing

05	3/16"
09	3/8"
11	7/16"
13	1/2"
13+	1/2"+
16	5/8"
19	3/4"

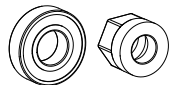
#### Bearing/Bush Material

A	Acetal/ABS
S	Sealed (steel) bearing

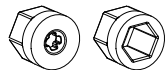
#### Drive Insert Profiles

H	Hex
D	D-Shape
HR	Rotating hex
LX	LEGO
VX	Vex 1/8" square

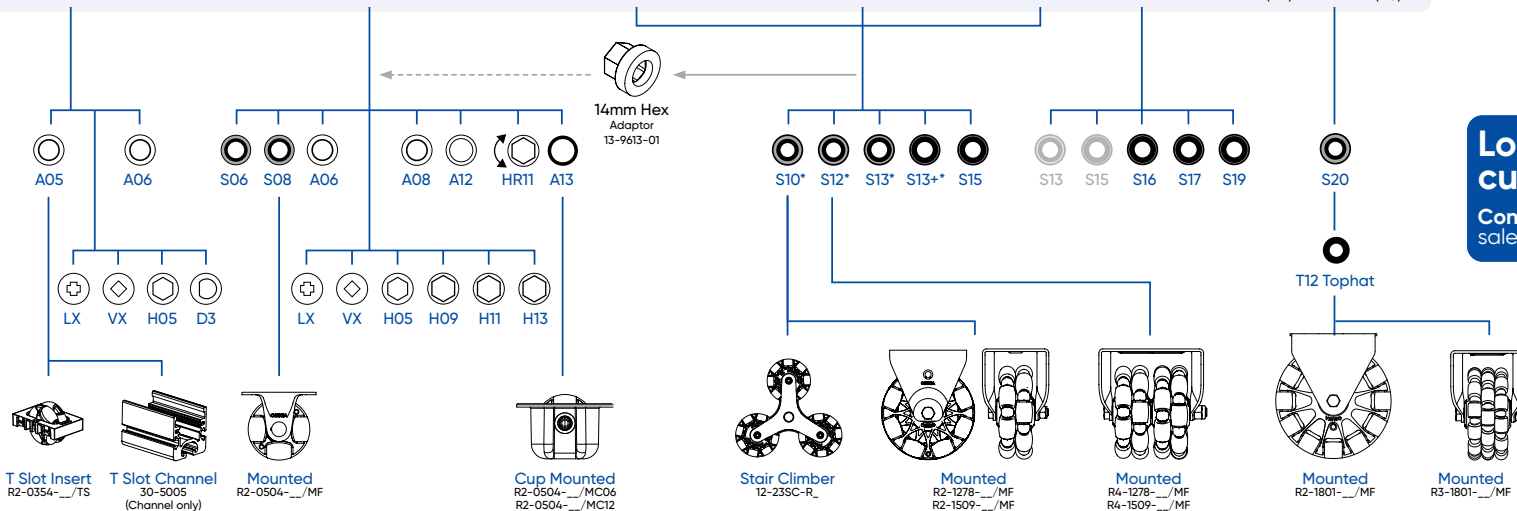
## Bearings/Bushings



## Drive Inserts



## Mounted Options



**Looking for a custom solution?**

Contact our Team  
sales@omniawheel.com

PATENTED: OMNIA<sup>®</sup> and Rotacaster<sup>™</sup> Wheels are patented and/or patent pending. ©2025 Rotacaster Pty Ltd. Version V2 2025-03-18

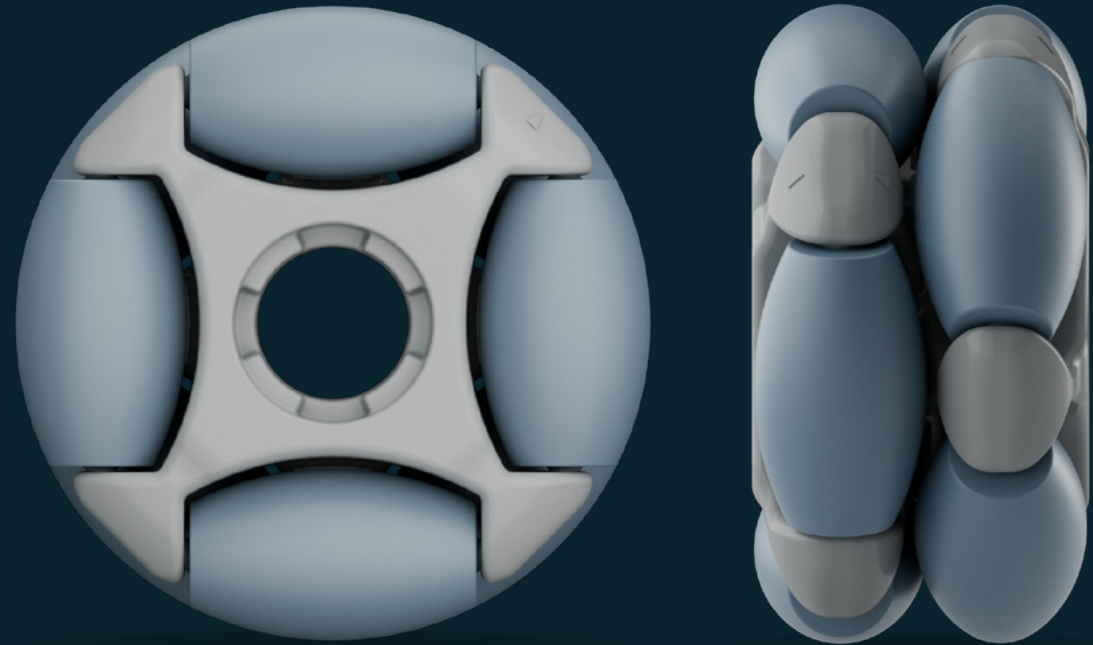
\*With raised inner race Omnia bearing.  
\*\*The (maximum recommended) load capacities apply to manual applications. For powered or constant duty use, please enquire.

# The 35mm Omni Wheel

Designed for optimal traction, versatility and maximum durability.

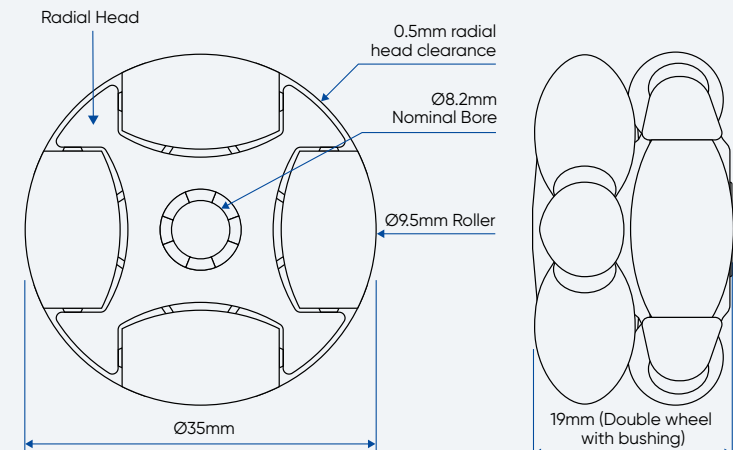
The 35mm R2-0354 is the smallest wheel in the Omnia family, designed for light-duty applications such as conveyor transfer systems, inspection tables, and ball transfer stations, including robotic wheels. Its versatility, with various bushing and drive insert options, makes it an excellent choice for STEM and educational settings.

The softer 57 Roller delivers superior traction, ensuring optimal rollability and longevity. This makes them ideal for a wide range of applications and arrangements that use item profiles and components. The 99 Roller is a perfect choice for conveyor transfer systems.




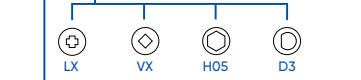

Roller Hardness (Shore A)	57	99
	Maximum traction, ideal for robotic applications	Excellent durability, ideal for floor applications
Wheel Weight	12g	13.5g
Load Capacity	2kg	5kg

**Load Capacity Notes:** The stated load capacity has been determined through a combination of various tests including ISO 22883, static compression, impact, and endurance testing. At these loads our wheels are suitable for manual handling equipment operating at speeds up to 1.1 m/s (4 km/h). For applications involving powered, robotic, continuous use, high duty cycles, or highly dynamic loads, please contact Omnia to assess suitability.



# 35mm Wheel Product Map

Select your 35mm OMNIA® wheel to suit your application based on the following options:

Diameter	35mm	
Core Part Number	R2-0354	
	57	99
Load Capacity (Kg)**	2	5
Net Wheel Weight (g)	12	13.5
Bearing Seat/Bores	8	8
Bearing Seat	8mm Keyed	8mm Plain
Inner Bore		
Hub Width		
Bearings/Bushings		
Drive Inserts		
Mounted Options		

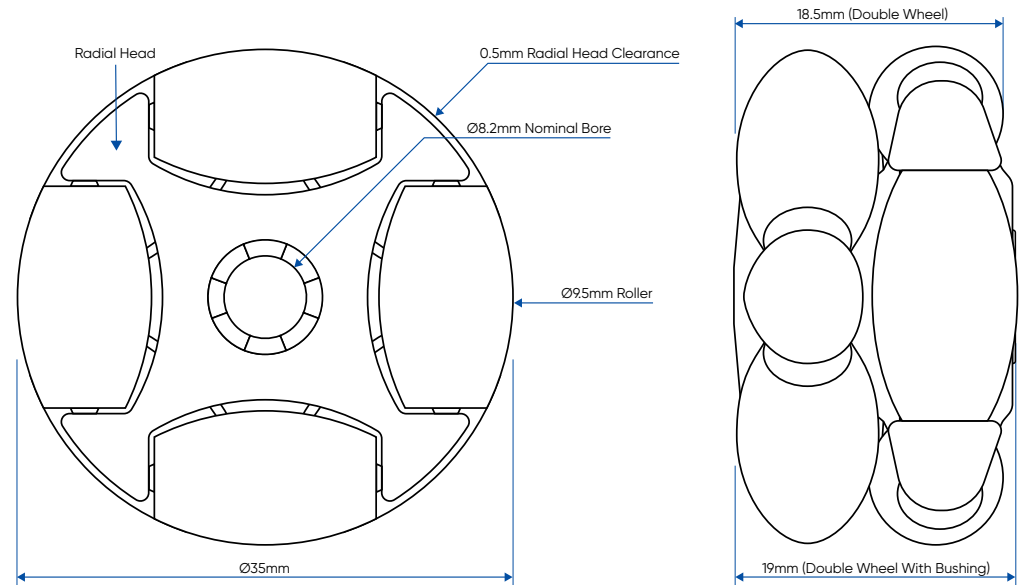
## Mounts

### T-Slot Insert

The T-Slot housing kit easily clips into the 40x40mm item caster rail (#8). They can be positioned adjacent or with spacers to adjust the spacing and control pitch. The T-Slot Insert is designed to work seamlessly with glide strips for smooth operation.



## Dimensions



## Legend:

### Imperial ID Sizing

05 3/16"

### Drive Insert Profiles

H Hex  
 D D-Shape HR Rotating hex  
 LX LEGO VX Vex 1/8" square

### Bearing/Bush Material

A Acetal/ABS  
 S Sealed (steel) bearing

\*With raised inner race Omnia bearing.

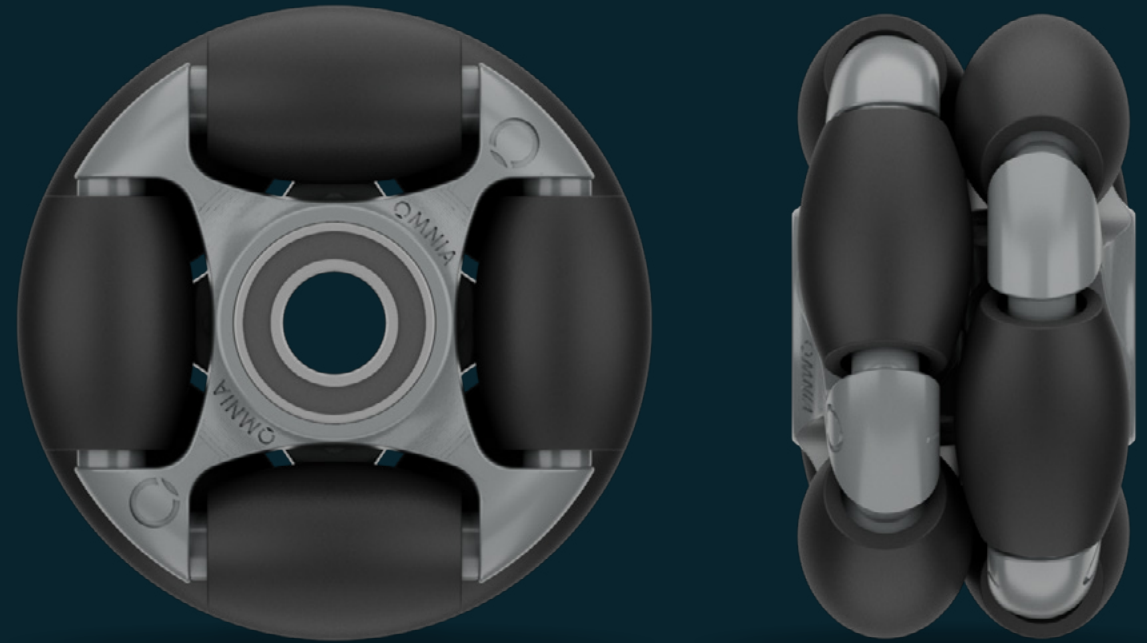
\*\*The (maximum recommended) load capacities apply to manual applications. For powered or constant duty use, please enquire.

PATENTED: OMNIA® and Rotacaster™ Wheels are patented and/or patent pending. ©2024 Rotacaster Pty Ltd. Version V1 2024-07-10

# The 50mm Omni Wheel

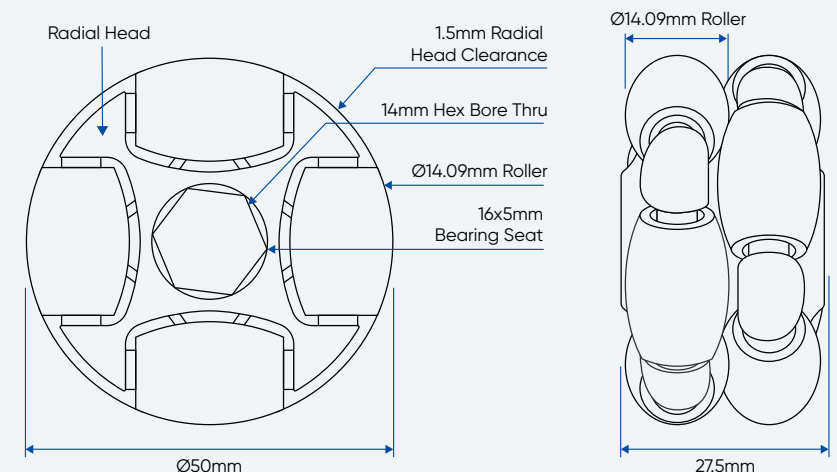
The 50mm wheel is a versatile solution for both manual and powered conveyors, offering a reliable alternative to swivel casters and ball transfers.

Its compact size and durability makes it perfect for lifestyle products and various conveying applications. This wheel is ideal for conveyor transfers, feed tables, flow rails, turntables, furniture casters, and robotic wheels. It can also be used in conjunction with larger wheels for high-density conveying.



Roller Hardness (Shore A)	74	74	95
	Maximum traction, ideal for robotic applications		Outstanding durability, ideal for floor applications
Wheel Weight	40g	40g	40g
Load Capacity	15kg	15kg	25kg

**Load Capacity Notes:** The stated load capacity has been determined through a combination of various tests including ISO 22883, static compression, impact, and endurance testing. At these loads our wheels are suitable for manual handling equipment operating at speeds up to 1.1 m/s (4 km/h). For applications involving powered, robotic, continuous use, high duty cycles, or highly dynamic loads, please contact Omnia to assess suitability.





# 50mm Wheel Product Map

Select your 50mm OMNIA® wheel to suit your application based on the following options:

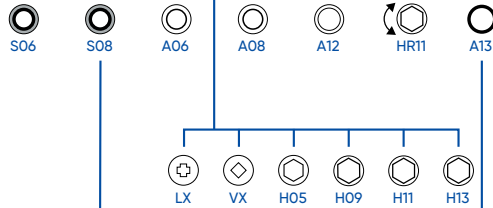
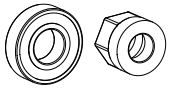
<b>Diameter</b>	<b>50mm</b>	
<b>Core Part Number</b>	<b>R2-0504</b>	
<b>Roller hardness (Shore A) Colour</b>	<b>74</b> <b>74</b>	<b>95</b>
<b>Wheel Part Number</b>	<b>R2-0504-74</b>	<b>R2-0504-95</b>
<b>Load Capacity (Kg)**</b>	<b>15</b>	<b>25</b>
<b>Net Wheel Weight (g)</b>	<b>40</b>	<b>40</b>

## Bearing Seat/Bore

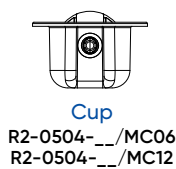
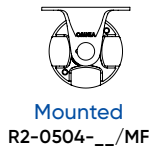
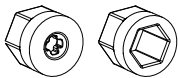
Bearing Seat  
Inner Bore  
Hub Width



## Bearings/Bushings



## Mounted Options



## Legend:

### Imperial ID Sizing

05	3/16"	09	3/8"
11	7/16"	13	1/2"
13+	1/2"+	16	5/8"
19	3/4"		

### Drive Insert Profiles

H	Hex
D	D-Shape HR Rotating hex
LX	LEGO VX Vex 1/8" square

### Bearing/Bush Material

A	Acetal/ABS
S	Sealed (steel) bearing

\* With raised inner race Omnia bearing.

\*\* The (maximum recommended) load capacities apply to manual applications. For powered or constant duty use, please enquire.

## Mounts

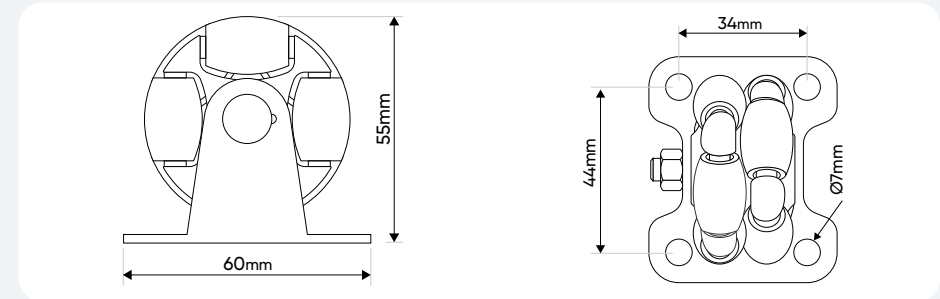
### Fork Mount

No swivel mounts, turns without turning

The 50mm fork mounted omni wheel makes a perfect alternative to conventional swivel casters where accurate movement is required. Better than a swivel caster in a fixed position. Ideal for floor applications when ease of use, ease of setup, mounting versatility and intuitive mobility is important.



## Dimensions



## Mounts

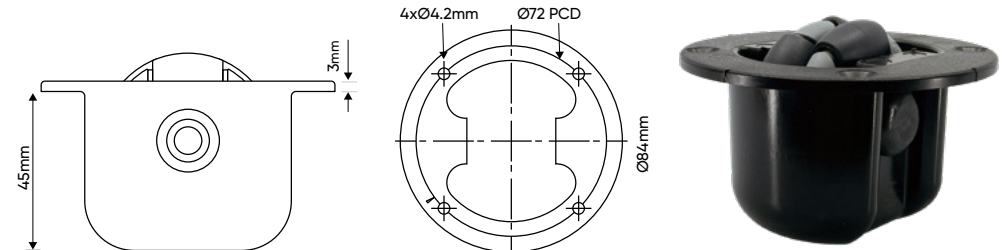
### Cup Mount

For applications requiring low-profile and multidirectional movement.

Designed as a full polymer alternative to conventional ball transfer units, they enable non-marking operation across a variety of surfaces. With no lubrication

required, they offer a maintenance-free solution ideal for continuous work surfaces and environments with non-parallel wheel configurations. Installation is straightforward—simply machine the appropriate cutout and secure the unit in place on the desired surface.

## Dimensions



Cup Mounts can be inverted

PATENTED: OMNIA® and Rotacaster™ Wheels are patented and/or patent pending. ©2024 Rotacaster Pty Ltd. Version V1 2024-07-10

# The 90mm Omni Wheel

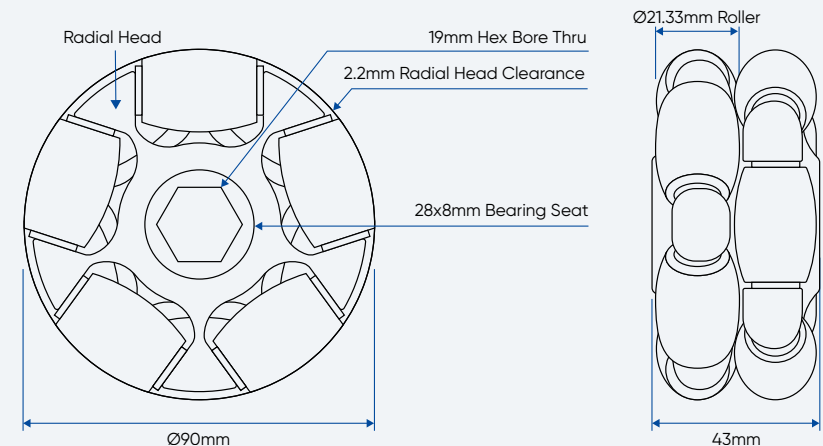
Advanced wheel technology that revolutionises fork-mounted applications and conveyor systems.

The 90mm Omni Wheel is designed for fork-mounted applications and conveyor systems, providing smooth and efficient movement. It can be combined with smaller wheels in driven setups for high-density, omni-directional transfers. To ensure maximum traction across different surfaces, it comes with a choice of two roller hardness options. A mount option is available to support a range of handling needs.



Roller Hardness (Shore A)	74	74	95
	Maximum traction, ideal for robotic applications		Outstanding durability, ideal for floor applications
Wheel Weight	195g	195g	195g
Load Capacity	50kg	50kg	90kg

**Load Capacity Notes:** The stated load capacity has been determined through a combination of various tests including ISO 22883, static compression, impact, and endurance testing. At these loads our wheels are suitable for manual handling equipment operating at speeds up to 1.1 m/s (4 km/h). For applications involving powered, robotic, continuous use, high duty cycles, or highly dynamic loads, please contact Omnia to assess suitability.



# 90mm Wheel Product Map

Select your 90mm OMNIA® wheel to suit your application based on the following options:

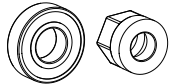
<b>Diameter</b>	<b>90mm</b>	
<b>Core Part Number</b>	<b>R2-0905</b>	
<b>Roller Hardness (Shore A) Colour</b>	<b>74</b> <b>74</b>	<b>95</b>
<b>Wheel Part Number</b>	<b>R2-0905-74</b>	<b>R2-0905-95</b>
<b>Load Capacity (Kg)**</b>	<b>50</b>	<b>90</b>
<b>Net Wheel Weight (g)</b>	<b>195</b>	<b>195</b>

## Bearing Seat/Bore

**Bearing Seat**  
**Inner Bore**  
**Hub Width**



## Bearings/Bushings



## Adaptors



**14mm Hex Adaptor**  
**13-9613-01**

## Legend:

### Imperial ID Sizing

05	3/16"	09	3/8"
11	7/16"	13	1/2"
13+	1/2"+	16	5/8"
19	3/4"		

### Drive Insert Profiles

H	Hex
D	D-Shape HR Rotating hex
LX	LEGO VX Vex 1/8" square

### Bearing/Bush Material

A	Acetal/ABS
S	Sealed (steel) bearing

\* With raised inner race Omnia bearing.

\*\* The (maximum recommended) load capacities apply to manual applications. For powered or constant duty use, please enquire.

## Mounts

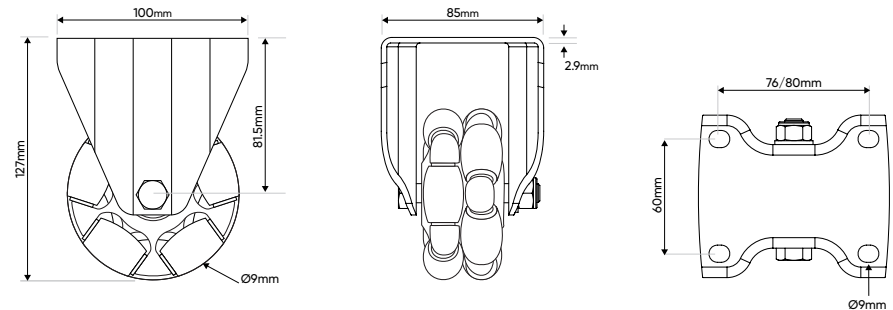
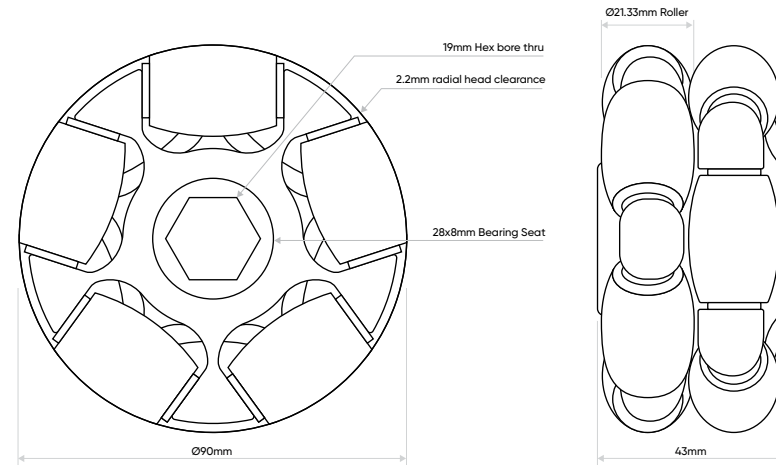
### Fork Mount

No swivel mounts, turns without turning

The 90mm fork mounted omni wheel makes a perfect alternative to conventional swivel casters where accurate movement is required. Better than a swivel caster in a fixed position. Ideal for floor applications when ease of use, ease of setup, mounting versatility and intuitive mobility is important.



## Dimensions



**Load Capacity Notes:** The stated load capacity has been determined through a combination of various tests including ISO 22883, static compression, impact, and endurance testing. At these loads our wheels are suitable for manual handling equipment operating at speeds up to 1.1 m/s (4 km/h). For applications involving powered, robotic, continuous use, high duty cycles, or highly dynamic loads, please contact Omnia to assess suitability.

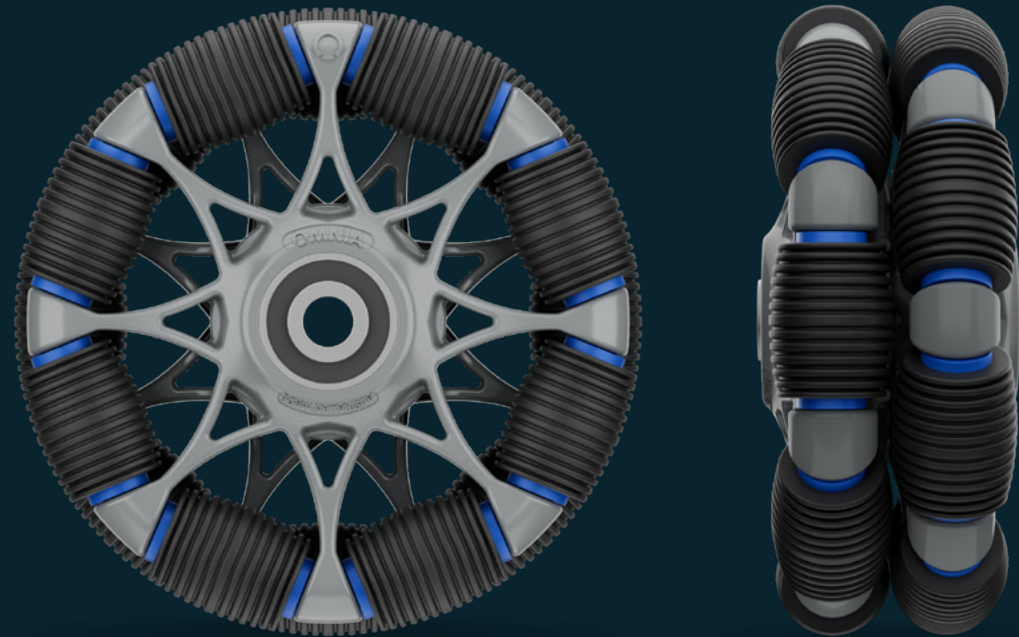
PATENTED: OMNIA® and Rotacaster™ Wheels are patented and/or patent pending. ©2024 Rotacaster Pty Ltd. Version V1 2024-07-10



# The 127mm Omni Wheel

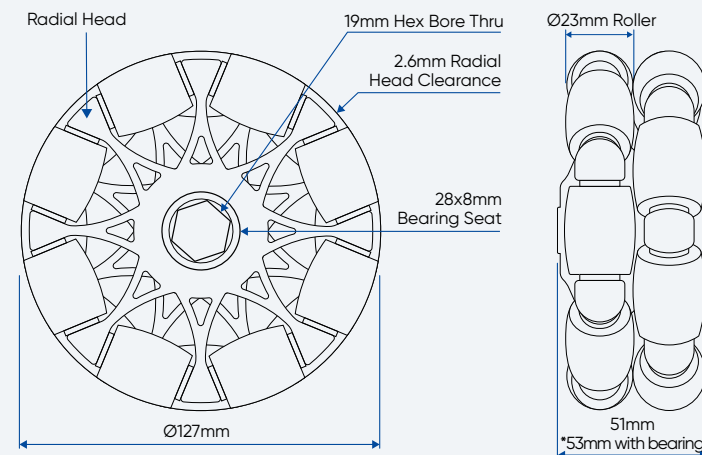
The 127mm (5") omni wheel offers mission-critical reliability with reduced weight and increased impact resistance, minimizing the risk of roller loss during normal operation.

Designed to strike the perfect balance between aesthetics and function and delivers a high load capacity relative to its lightweight construction. Omnia's advanced roller technology enhances ride quality, ensuring smooth and stable performance, while the ribbed rollers provide improved traction along the primary axis of rotation for better grip and control.



Roller Hardness (Shore A)	74	85	95
	Maximum traction, ideal for robotic applications	Good traction and durability. All-round performance	Excellent durability, ideal for floor applications
Wheel Weight	335g	355g	360g
Load Capacity	60kg	100kg	110kg

**Load Capacity Notes:** The stated load capacity has been determined through a combination of various tests including ISO 22883, static compression, impact, and endurance testing. At these loads our wheels are suitable for manual handling equipment operating at speeds up to 1.1 m/s (4 km/h). For applications involving powered, robotic, continuous use, high duty cycles, or highly dynamic loads, please contact Omnia to assess suitability.



# 127mm Wheel Product Map

Select your 127mm OMNIA® wheel to suit your application based on the following options:

Diameter	127mm		
Core Part Number	R2-1278		
Roller hardness (Shore A) Colour	74	85	95
Wheel Part Number	R2-1278-74	R2-1278-85	R2-1278-95
Load Capacity (Kg)**	60	100	110
Net Wheel Weight (g)	335	355	360

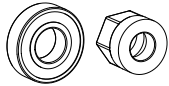
## Bearing Seat/Bore

Bearing Seat  
Inner Bore  
Hub Width

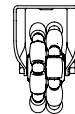


28x8mm  
19mm Hex  
51/53\*

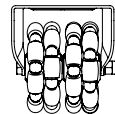
## Bearings/Bushings



Stair Climber  
12-23SC-R\_



Mounted  
R2-1278-\_\_MF



Mounted  
R4-1278-\_\_MF



14mm Hex Adaptor  
13-9613-01

## Mounted Options

## Adaptors

### Legend:

#### Imperial ID Sizing

05	3/16"	09	3/8"
11	7/16"	13	1/2"
13+	1/2"	16	5/8"
19	3/4"		

#### Insert Profiles

H	Hex
D	D-Shape HR Rotating hex
LX	LEGO VX Vex 1/8" square

#### Bearing/Bush Material

A	Acetal/ABS
S	Sealed (steel) bearing

\* With raised inner race Omnia bearing.

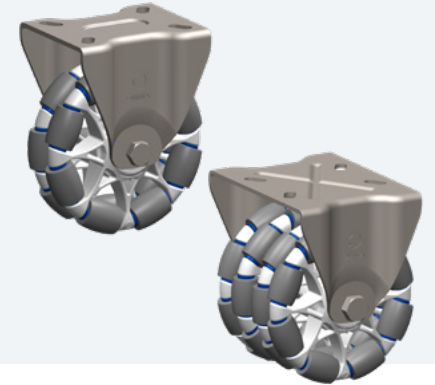
\*\* The (maximum recommended) load capacities apply to manual applications. For powered or constant duty use, please enquire.

## Mounts

### Fork Mount

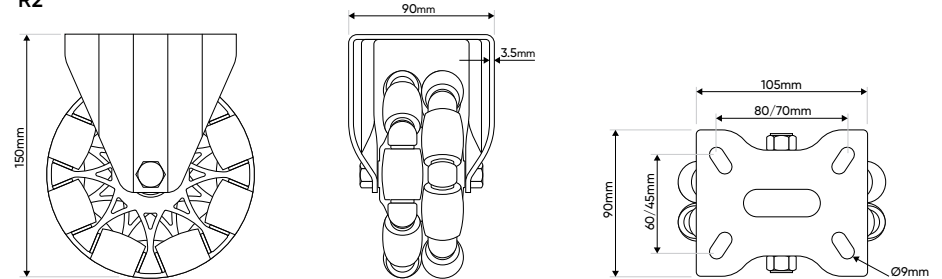
No swivel mounts, turns without turning

The 127mm fork mounted omni wheel makes a perfect alternative to conventional swivel casters where accurate movement is required. Better than a swivel caster in a fixed position. Ideal for floor applications when ease of use, ease of setup, mounting versatility and intuitive mobility is important.

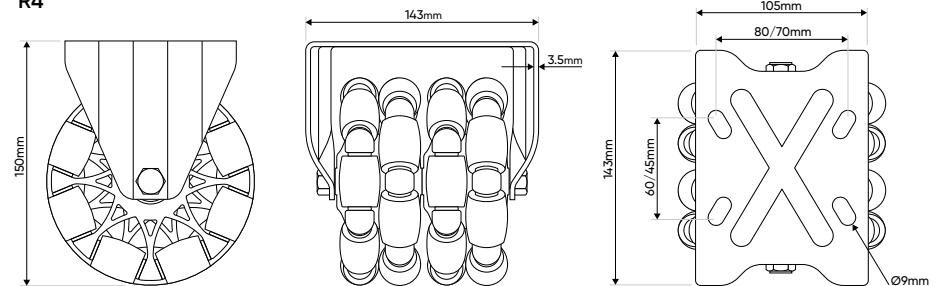


## Dimensions

### R2



### R4



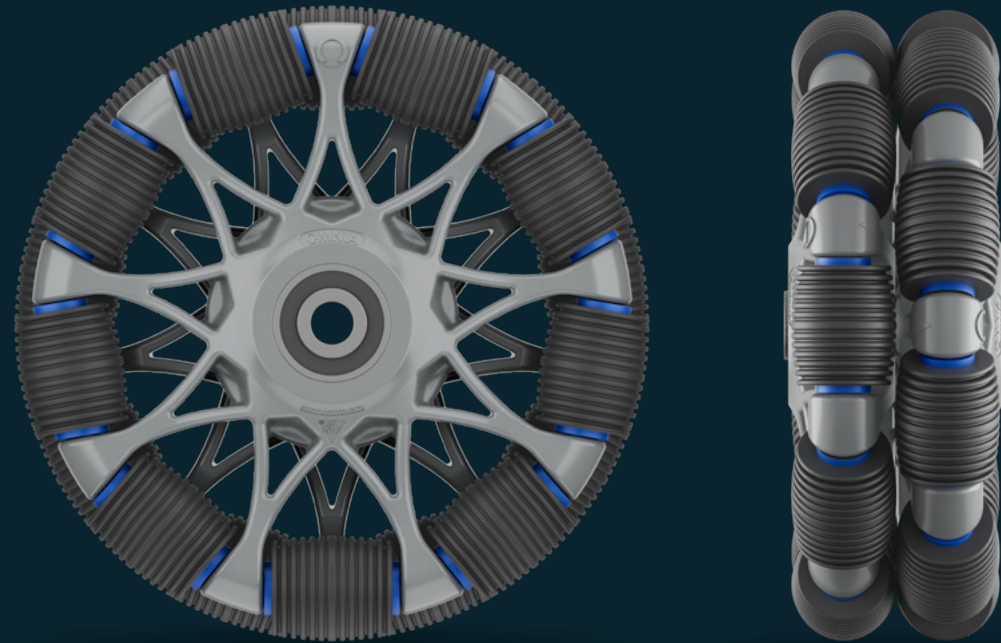
- Same mount used for 127mm and 150mm wheels means fewer sku's to be carried for distributors.
- Common mount hole patterns makes wheel scaling possible when swapping between 127mm and 150mm.

# The 150mm Omni Wheel

The 150mm (6") omni wheel offers mission-critical reliability with reduced weight and increased impact resistance, minimizing the risk of roller loss during normal operation.

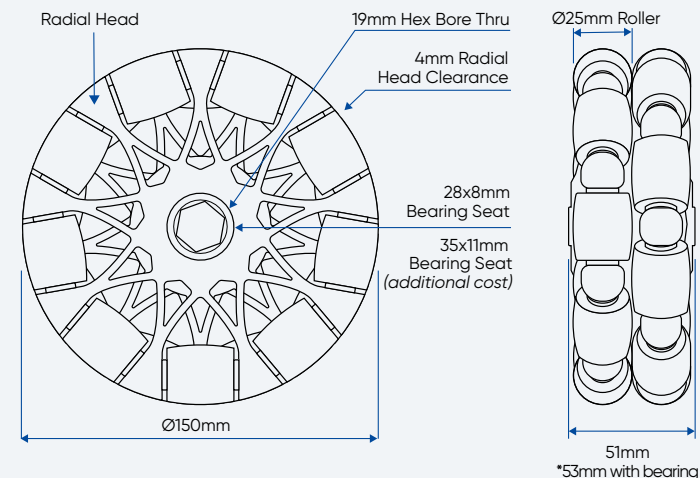
Designed to strike the perfect balance between aesthetics and function and delivers a high load capacity relative to its lightweight construction. Omnia's advanced roller technology enhances ride quality, ensuring smooth and stable performance, while the ribbed rollers provide improved traction along the primary axis of rotation for better grip and control.

With scalable production capabilities and rigorous quality control, the wheel is competitively priced and offers exceptional value without compromising on performance or durability.



Roller Hardness (Shore A)	74	85	95
	Maximum traction, ideal for robotic applications	Good traction and durability. All-round performance	Excellent durability, ideal for floor applications
Wheel Weight	490g	510g	515g
Load Capacity	70kg	105kg	125kg

**Load Capacity Notes:** The stated load capacity has been determined through a combination of various tests including ISO 22883, static compression, impact, and endurance testing. At these loads our wheels are suitable for manual handling equipment operating at speeds up to 1.1 m/s (4 km/h). For applications involving powered, robotic, continuous use, high duty cycles, or highly dynamic loads, please contact Omnia to assess suitability.



# 150mm Wheel Product Map



Select your 150mm OMNIA® wheel to suit your application based on the following options:

Diameter	150mm		
Core Part Number	R2-1509		
Roller Hardness (Shore A) Colour	74	85	95
Wheel Part Number	R2-1509-74	R2-1509-85	R2-1509-95
Load Capacity (Kg)**	70	105	125
Net Wheel Weight (g)	490	510	515

Bearing Seat/Bore	19	19
Bearing Seat	28x8mm	35x11mm
Inner Bore	19mm Hex	19mm Hex
Hub Width	51/53*	52

Bearings/Bushings	S10* S12* S13* S13+* S15	S13 S15 S16 S17 S19
		

Mounted Options	Mounted R2-1509-__ /MF	Mounted R4-1509-__ /MF
		

Adaptors	14mm Hex Adaptor 13-9613-01
	

**Legend:**

Imperial ID Sizing		Drive Insert Profiles		Bearing/Bush Material	
05	3/16"	09	3/8"	A	Acetal/ABS
11	7/16"	13	1/2"	S	Sealed (steel) bearing
13+	1/2"+	16	5/8"		
19	3/4"				

\*With raised inner race Omnia bearing.  
 \*\*The (maximum recommended) load capacities apply to manual applications. For powered or constant duty use, please enquire.

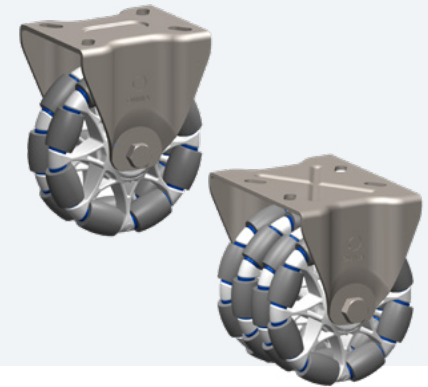
PATENTED: OMNIA® and Rotacaster™ Wheels are patented and/or patent pending. ©2024 Rotacaster Pty Ltd. Version V1 2024-07-10

## Mounts

### Fork Mount

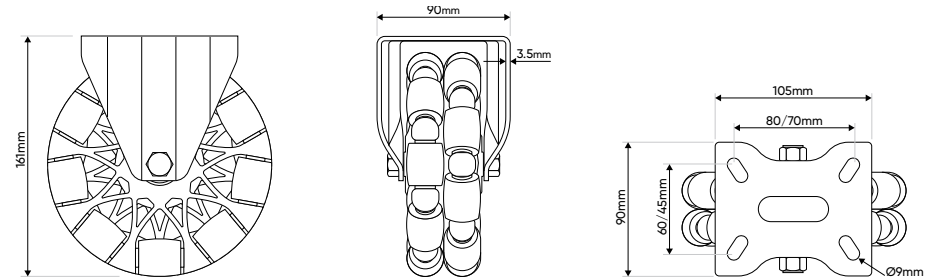
No swivel mounts, turns without turning

The 150mm fork mounted omni wheel makes a perfect alternative to conventional swivel casters where accurate movement is required. Better than a swivel caster in a fixed position. Ideal for floor applications when ease of use, ease of setup, mounting versatility and intuitive mobility is important.

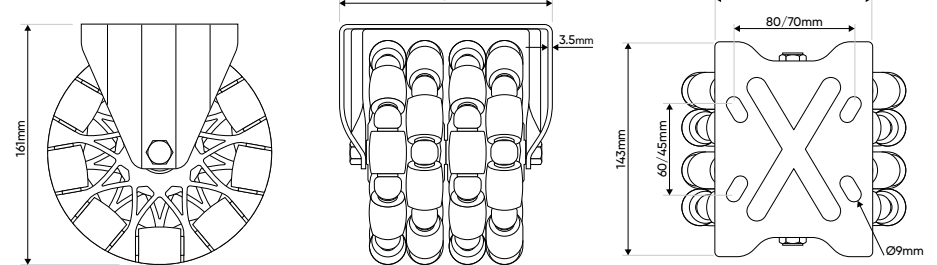


## Dimensions

### R2



### R4



- Same mount used for 127mm and 150mm wheels means fewer sku's to be carried for distributors.
- Common mount hole patterns makes wheel scaling possible when swapping between 127mm and 150mm.



# The 180mm Omni Wheel

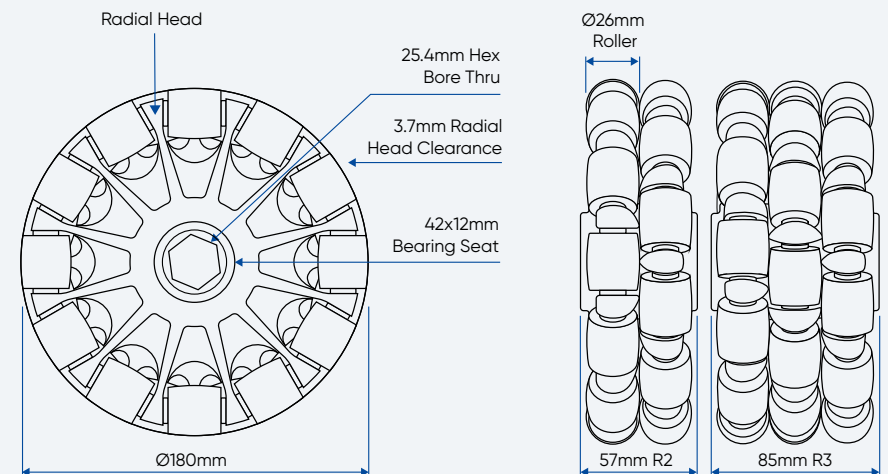
The 180mm (7") omni wheel delivers essential reliability with a lightweight design and enhanced impact resistance, reducing the risk of roller loss during operation.

As the largest wheel we offer, this design is engineered to tackle the most demanding and rugged terrains. Perfect for floor applications with obstacles and steps, it delivers a higher load capacity while occupying less space than an equivalent caster. Ideal for robotic mobility, material handling, and conveyor transfers, this wheel delivers exceptional performance in challenging environments.



Roller Hardness (Shore A)	74		85		95	
Configuration	R2	R3	R2	R3	R2	R3
	Maximum traction, ideal for robotic applications		Good traction and durability.		Outstanding durability, ideal for floor applications	
Wheel Weight	760g	1190g	790g	1240g	795g	1250g
Load Capacity	75kg	100kg	120kg	145kg	135kg	160kg

**Load Capacity Notes:** The stated load capacity has been determined through a combination of various tests including ISO 22883, static compression, impact, and endurance testing. At these loads our wheels are suitable for manual handling equipment operating at speeds up to 1.1 m/s (4 km/h). For applications involving powered, robotic, continuous use, high duty cycles, or highly dynamic loads, please contact Omnia to assess suitability.





# 180mm Wheel Product Map

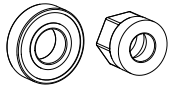
Select your 180mm OMNIA® wheel to suit your application based on the following options:

Diameter	180mm			
Core Part Number	R2-1801		R3-1801	
Roller hardness (Shore A) Colour	74	85	95	
Load Capacity (Kg)*	R2	75	120	135
	R3	100	145	160
Net Wheel Weight (g)	R2	760	790	795
	R3	1190	1240	1250

## Bearing Seat/Bore

Bearing Seat	42x12mm 25.2mm Hex	
Inner Bore	57 (R2)	85 (R3)
Hub Width		

## Bearings/Bushings



42x12mm  
25.2mm Hex

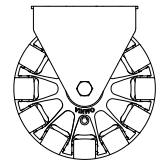


S20



T12 Tophat

## Mounted Options



Mounted  
R2-1801-\_\_ / MF

### Legend:

#### Imperial ID Sizing

05	3/16"	09	3/8"
11	7/16"	13	1/2"
13+	1/2"+	16	5/8"
19	3/4"		

#### Bearing/Bush Profile

H	Hex
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#### Bearing/Bush Material

A	Acetal/ABS
S	Sealed (steel) bearing

\* With raised inner race Omnia bearing.

\*\* The (maximum recommended) load capacities apply to manual applications. For powered or constant duty use, please enquire.

## Mounts

### Fork Mount

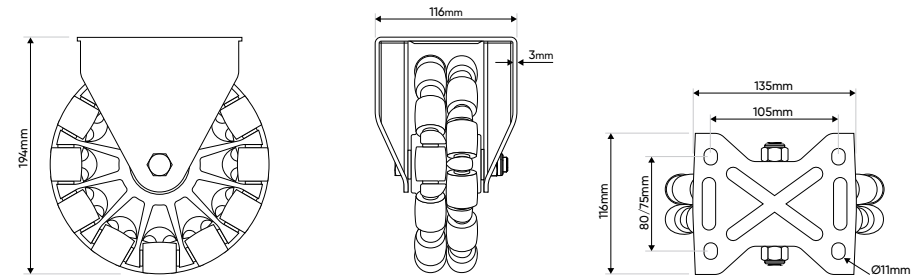
No swivel mounts, turns without turning

The 180mm fork mounted omni wheel makes a perfect alternative to conventional swivel casters where accurate movement is required. Better than a swivel caster in a fixed position. Ideal for floor applications when ease of use, ease of setup, mounting versatility and intuitive mobility is important.

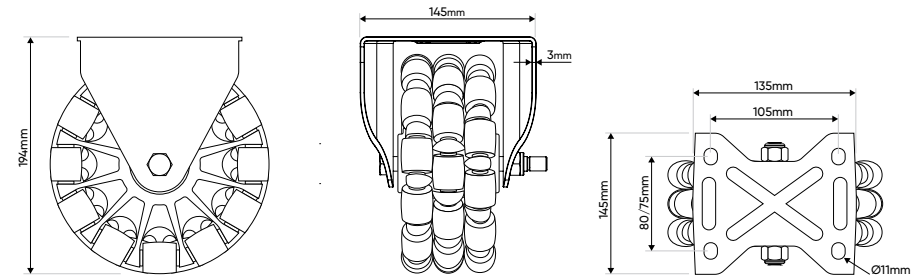


## Dimensions

### R2



### R3





Changing The Way The World Moves