



# OMNIA WHEEL

MAKING MOBILITY INTUITIVE

## 180mm



R3



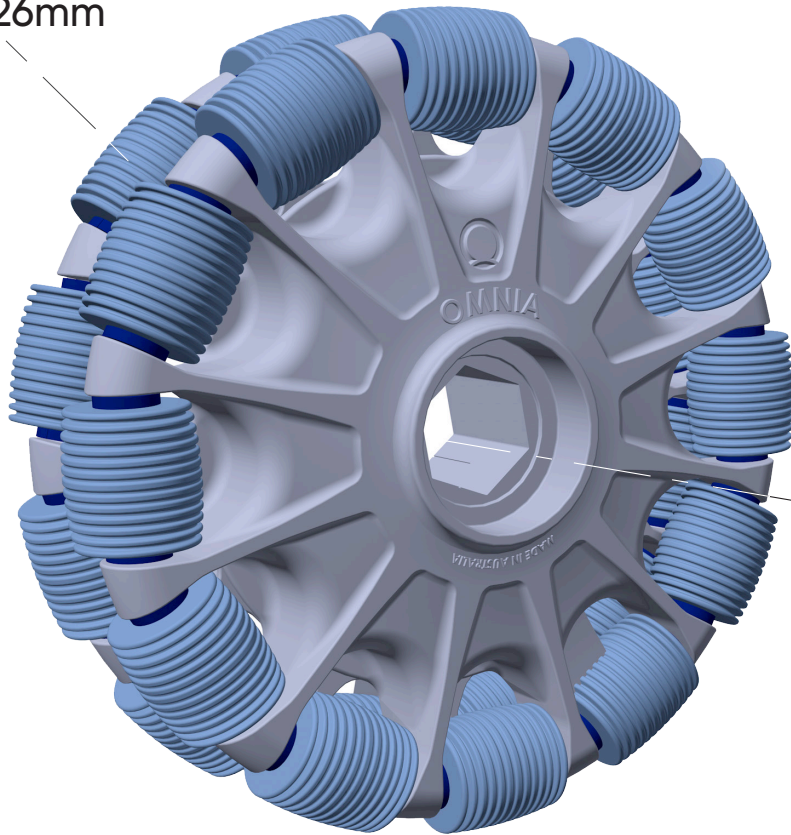
R2

A revolution in **omni wheels**  
**BIGGER. TOUGHER. SMOOTHER**

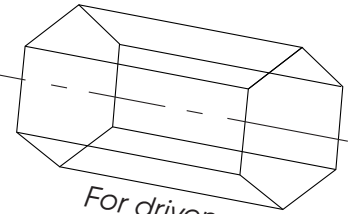


# OMNIA WHEEL

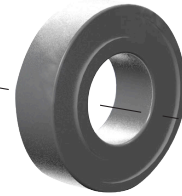
Roller diameter  
26mm



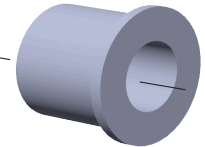
1" Hex  
(25.4mm)



For driven applications



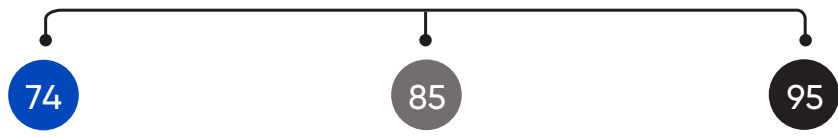
M20 Bearing



M12 Reducer#

#Adds 6mm to hub width  
Larger range of inserts available on request

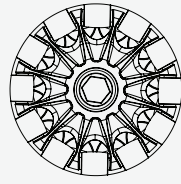
## Wheel specifications



Roller Hardness (PU)	MED		FIRM		HARD	
	Omnia Blue	Omnia Blue	Mid Grey	Mid Grey	Dark Grey	Dark Grey
Standard Colour	Omnia Blue	Omnia Blue	Mid Grey	Mid Grey	Dark Grey	Dark Grey
Configuration	R2	R3	R2	R3	R2	R3
Load Capacity (kg)	150	175	150	225	200	300
Weight (kg)	0.8	1.25	0.8	1.25	0.8	1.25
<b>PART NUMBER (base wheel)</b>	<a href="#">R2-1801-74</a>	<a href="#">R3-1801-74</a>	<a href="#">R2-1801-85</a>	<a href="#">R3-1801-85</a>	<a href="#">R2-1801-95</a>	<a href="#">R3-1801-95</a>
M20 6004 2RS bearing (+0.13 kg)	<a href="#">R2-1801-74/S20</a>	<a href="#">R3-1801-74/S20</a>	<a href="#">R2-1801-85/S20</a>	<a href="#">R3-1801-85/S20</a>	<a href="#">R2-1801-95/S20</a>	<a href="#">R3-1801-95/S20</a>
M20 Bearing+M12 Reducer (+0.23kg)#	<a href="#">R2-1801-74/T12</a>	<a href="#">R3-1801-74/T12</a>	<a href="#">R2-1801-85/T12</a>	<a href="#">R3-1801-85/T12</a>	<a href="#">R2-1801-95/T12</a>	<a href="#">R3-1801-95/T12</a>
R2 Wheel+Mount (+1.1kg)	<a href="#">R2-1801-74/MF</a>	<a href="#">R3-1801-74/MF</a>	<a href="#">R2-1801-85/MF</a>	N/A	<a href="#">R2-1801-95/MF</a>	N/A

# 180mm omni wheel

Diameter



180mm

Configuration

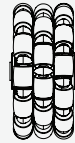
Hub Width (mm)

Core Part Number



57

R2-1810



85

R3-1810

Roller Hardness  
(Shore A) Colour

74

85

95

Load Capacity (Kg)

R2 R3  
150 175

R2 R3  
150 225

R2 R3  
200 300

Wheel Weight (g)

792 1243

792 1243

796 1250

Bearing Seat/Bore

Diameter & Bore Type (mm)



25.4mm hex

Bearing Seat (mm)

42x12mm seat

Bearings/Bushings



S20

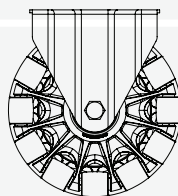
Tophat insert

T12

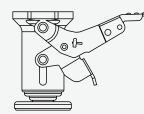
Drive Inserts

Mounts

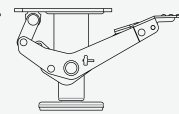
PATENTED: OMNIA™ & Rotacaster™ Wheels are patented and/or patent pending. Issue: Nov 2023. ©2023 Rotacaster Pty Ltd



Mount  
R2-1801-\_\_/\_/MF



11-9003



11-9002

## Legend:

### Roller Material

57	TPE
74	PU
85	PU
95	PU
99	PBT SOLID

### Bearing/Bush Type

A	ABS
D	Acetal
H	Hex
HR	Rotating hex
LX	LEGO
N	Nylon
S	Sealed bearing
VX	Vex
Z	Shielded bearing

### Insert ID Sizing

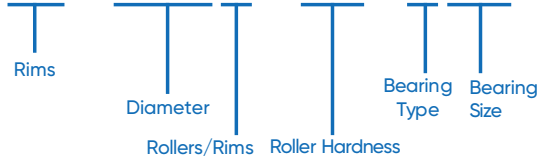
05	3 /16"	12	12mm
06	6mm	13	1/2"
07	1/4"	13+	1/2"+
08	8mm	14	14mm
09	3/8"	15	15mm
10	10mm	18	18mm
11	7/16"	19	3/4"
		20	20mm

### Mount Type

MF	Formed
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Part Numbering

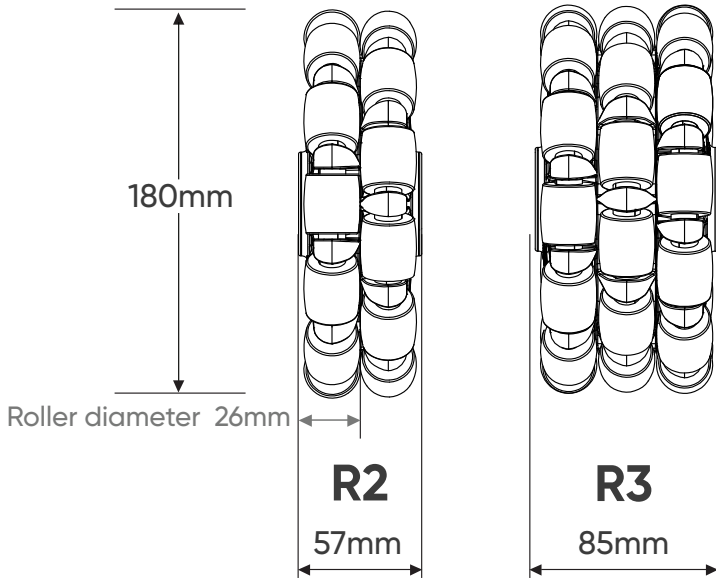
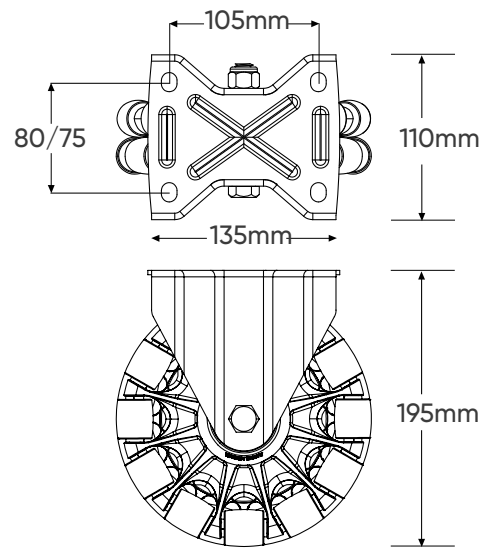
**R2-1801-95/S20**



## Wheel Configurations

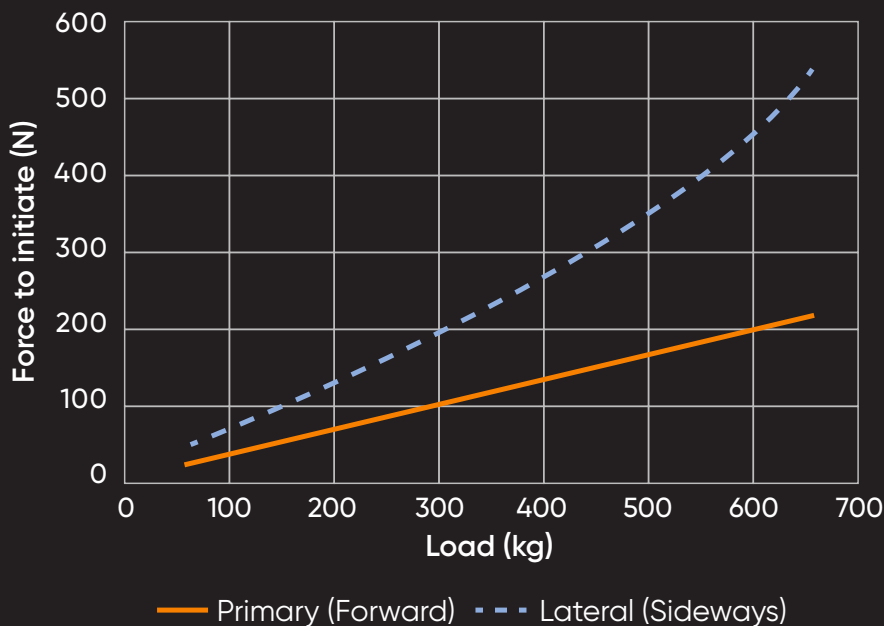


### Fork Mount R2-1801-\_\_ / MF



### Static Rolling Resistance

Based on a 4x R2-hard (95A) wheel unit



The toughest and smoothest ride in our range

*Ideal for:*

**Robotic mobility**  
(AMR/AGV)

**Ergonomic**  
material handling

**Conveyor** transfers

# OMNIA WHEEL

## THE WORLD'S LEADING OMNI WHEEL



## When **intuitive mobility** and reliability matters

### SIZES

OMNIA omni wheels are available in a range of sizes: 35mm, 50mm, 90mm, 125mm, 150mm (coming soon) and 180mm.

### APPLICATIONS

Each wheel can be customised for manual and driven applications with a wide range of bearings, hub inserts and hexes.

### SURFACE SUITABILITY

Durometer (degree of hardness) influences the suitability of a wheel to different floor surfaces and applications. To ensure maximum performance and capability, OMNIA omni wheel are available in a range of durometers, from soft to solid.

## THE OMNIA DIFFERENCE

OMNIA omni wheels respond immediately to the pressure applied to provide highly intuitive directional control, in any 360° horizontal vector. Highly stable, reliable and durable, there is no better omni wheel in the world.

### BUILT TO LAST

- *Innovative, patented omni wheel manufacturing process*
- *The most robust, impact and wear resistant omni wheels in the world*
- *Features heavy duty glass-filled polymer rollers across the main wheel (steel-free construction)*
- *Non-corrosive and requires no lubricant*
- *Designed not to break or lose omni directional rollers*
- *Rigorously load capacity tested and backed by manufacturer's 12 month warranty*
- *Performs even in the harshest of industrial and weather conditions*
- *Proudly Australian designed and made*

### HIGHLY ADAPTABLE

- *Endless applications with the reliability needed for mission critical use*
- *Compatible with multiple shaft sizes*
- *Suitable for use with steel bearings and accommodates a wide range of bearing sizes*
- *Suitable for driven and manual/rolling applications*
- *Suitable for use on all kinds of hard floors, without marking or scratching*
- *Can traverse gaps, grout lines, drains and uneven hard surfaces while continuing to provide a stable, smooth move for your application*
- *Ideal for use in confined spaces and where the ultimate in precise manoeuvrability is required*



Intuitive robotic capability



Superior ride quality

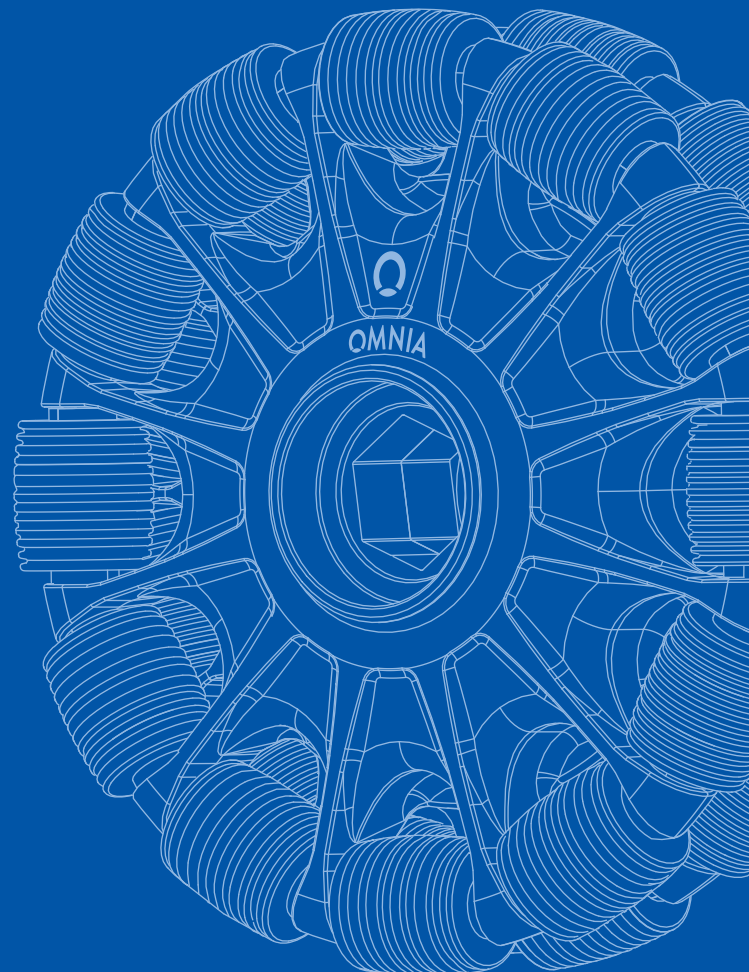


Confined space mobility



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MAKING MOBILITY INTUITIVE



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