



*Aligned, nested rollers, creating a closed circular circumference*

*Robust, high precision aluminum parts*

*Low friction, high performance ball bearings*

*High grip and wear-resistant coating*

## Rezero Omniwheel

Omniwheels have the great ability to create truly omnidirectional platforms that can move in any direction and also turn around their vertical axis at any time.

The Rezero Omniwheel is the only commercially available Omniwheel that offers aligned rollers resulting in higher positioning accuracy (and odometry) while effectively reducing vibrations. While other Omniwheels are made from plastics and use friction bearings, the Rezero Omniwheel is made out of solid aluminium enabling high payloads and numerous mounting types. It features 24 low friction, high quality ball bearings, suitable for high performance applications while being maintenance free. The rollers' multi-purpose outer face features an abrasion-resistant, seamless EPDM rubber coating to avoid slippage on most surfaces.

All Omniwheels are shipped fully assembled and are available with different center bore sizes.

Diameter	120 mm
Mass	405 g
Axis mount shape	variable (adaptable center bore and center piece)
Axis mount type	form- and force-fit possible (e.g. clamping set)
Roller surface	High grip, abrasion-resistant EPDM rubber coating
Payload	200 N (20 kg) per wheel
Gap between rollers	< 1 mm
Material	Aluminum center and rollers, steel axes
Bearing	24 high quality ball bearings
Bearing friction coefficient	0,002
Bearing lifetime	> 1000 km (in passive direction)
Max. speed (passive direction)	> 5 m/s
Price per unit	CHF 170.—

[rezero@ethz.ch](mailto:rezero@ethz.ch)

[www.rezero.ethz.ch](http://www.rezero.ethz.ch)

*Rezero Omniwheels are developed and distributed by the Rezero research project at the Autonomous Systems Lab, ETH Zurich, Switzerland.*

