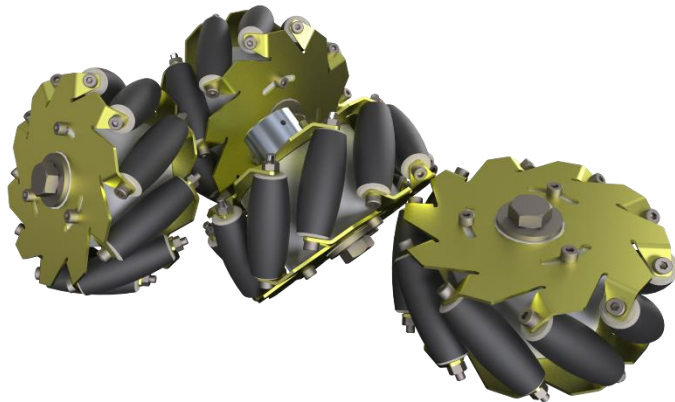


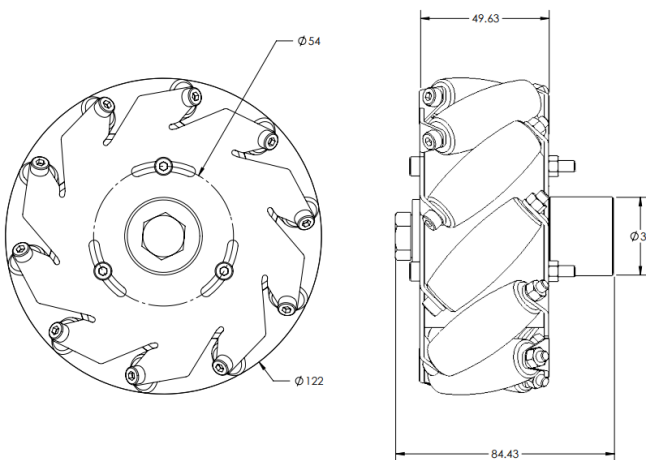
P/N: MC.123P



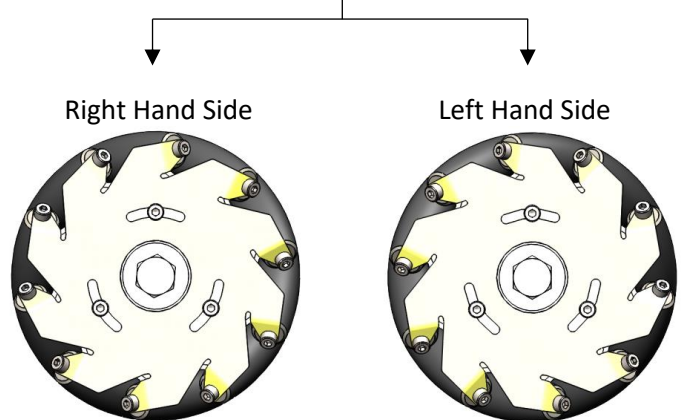
Specification

Outer Diameter	: 123 mm
Width	: 50 mm
Chassis Material	: Galvanized Steel-[St.37]
Overall Weight	: 650 grams
Number Of Rollers	: 10/wheel
Roller Material	: Nylon-Rubber Coated
Safe Working Load	: 20 Kg.f
Hub Diameter	: 20 mm
Coupler Material	: N/A
Motor Shaft Size	: N/A

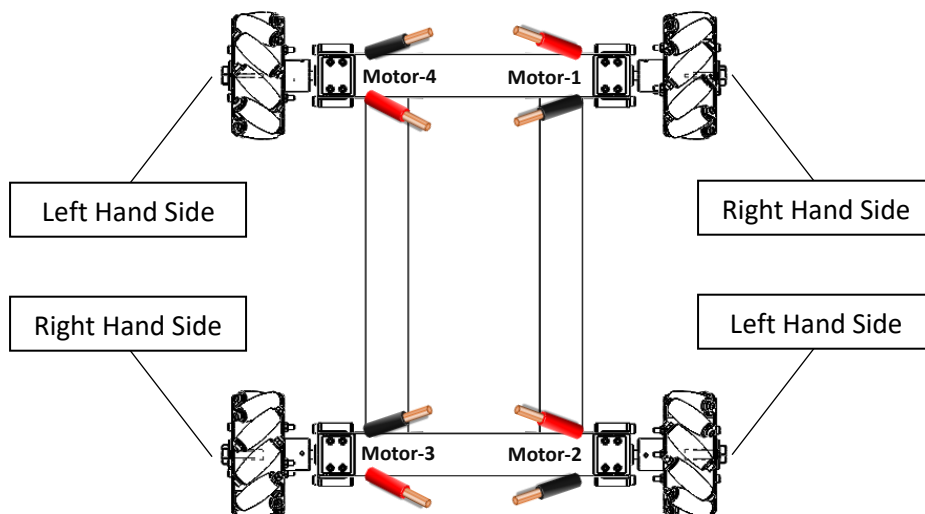
Overall Dimensions



Mecanum Wheel Classification



Mecanum Wheel Installation



Standard Movement

- Forward
- Backward
- Rotate Right
- Rotate Left
- Diagonal Right Up
- Diagonal Left Up
- Diagonal Right Down
- Diagonal Left Down
- Side Right
- Side Left

Control the Mecanum Wheel Robot 4WD with Standard Movements

	Motor-1		Motor-2		Motor-3		Motor-4	
	RED Wire	BLACK Wire	RED Wire	BLACK Wire	RED Wire	BLACK Wire	RED Wire	BLACK Wire
Forward	1	0	1	0	0	1	0	1
Backward	0	1	0	1	1	0	1	0
Rotate Right	0	1	0	1	0	1	0	1
Rotate Left	1	0	1	0	1	0	1	0
Diagonal Right Forward	0	0	1	0	0	0	0	1
Diagonal Left Forward	1	0	0	0	0	1	0	0
Diagonal Right Backward	0	1	0	0	1	0	0	0
Diagonal Left Backward	0	0	0	1	0	0	1	0
Side Right	0	1	1	0	1	0	0	1
Side Left	1	0	0	1	0	1	1	0

** Use this table for the DC motors power signals in order to control the direction of each motor.

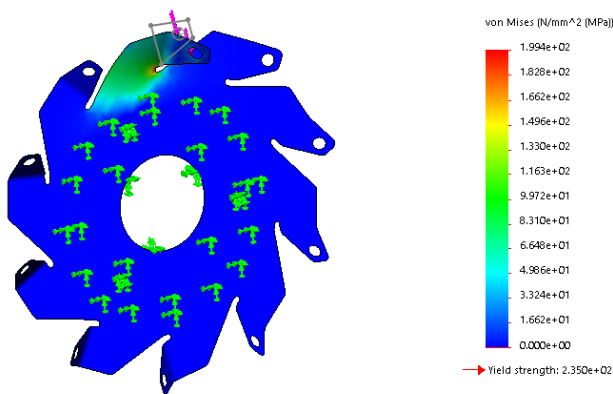
** Speed control system gives you more ability of movements with Mecanum Wheels.

Finite Element Analysis

Assumptions

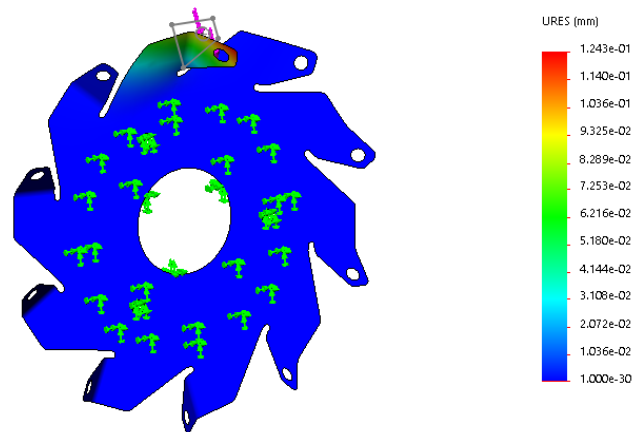
- The test considers the full payload applies on a single steel cover as a safety factor.
- Payload 20Kg.F
- Fixture on the spacer holes, and the contact area of spacer.
- The payload applies on the roller hole as the roller touches the ground.

Stress



The maximum Stress 199.4 MPa
Yield Strength 235 MPa

Displacement



At the maximum payload the cover displacement
0.12mm

** the study done on a single cover for safety and the load will be distributed on 2 Covers