

ROBOVANTA – ROBO SUMO RULE BOOK

1. Event Overview

Robo Sumo is a combat-style competition where two robots compete inside a circular arena. The objective is to push, lift, or force the opponent robot outside the arena while staying inside yourself.

The robot that successfully pushes the opponent out of the arena wins the round.

2. Team Structure

- Team Size: **1–4 Members**
 - One robot per team.
 - One operator allowed during the match.
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3. Robot Specifications

Dimensions

- Maximum Size: **400 mm × 400 mm × 400 mm**

Weight

- Maximum Weight: **8 kg**

Power Supply

- Maximum Voltage: **12V DC**

Control

- Wired Robots Allowed
 - Wireless Robots Allowed
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4. Arena Specifications

Arena Shape

- Circular Arena

Arena Diameter

- **1.5 meters**

Boundary

- White circular boundary line.
 - Robot touching or crossing the outer boundary is considered out.
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5. Competition Format

Match Type

- Knockout Format

Match Duration

- Qualification Round: **3 Minutes**
 - Final Match: **5 Minutes**
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6. Match Start Procedure

1. Robots are placed on designated starting marks.
2. Robots must remain stationary until the start signal.
3. Referee announces:
 - Ready
 - Set
 - Start

Match timer begins immediately.

7. Winning Conditions

A robot wins a round if:

- Opponent is pushed completely outside the arena.
 - Opponent flips over and cannot recover within 10 seconds.
 - Opponent becomes non-functional.
 - Opponent receives disqualification.
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8. Point System

Action	Points
Push Opponent Out	1 Point
Flip Opponent	1 Point
Opponent Disqualified	1 Point

The robot with the highest points wins the match.

9. Allowed Mechanisms

Permitted

- Wedges
- Lifters
- Pushers
- Passive Deflectors

Not Permitted

- Fire
 - Liquids
 - Adhesives
 - Nets
 - Electromagnets
 - Suction Systems
 - Explosive Devices
 - Harmful Chemicals
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10. Prohibited Actions

- Intentional damage to arena.
- Deliberate entanglement.
- Human interference during match.
- Attacking referees or arena structure.

11. Penalties

Violation	Penalty
Early Start	Warning
Human Intervention	Round Loss
Unsportsmanlike Conduct	Disqualification
Dangerous Robot Design	Disqualification

12. Timeout

- One technical timeout allowed.
 - Maximum duration: 2 minutes.
 - Only for minor repairs.
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13. Disqualification

Teams may be disqualified for:

- Exceeding robot size limits.
 - Exceeding 8 kg weight.
 - Operating above 12V.
 - Using prohibited mechanisms.
 - Damaging the arena.
 - Unsportsmanlike behavior.
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14. Safety Rules

- All batteries must be securely mounted.
- Wiring must be insulated.
- Sharp exposed blades are prohibited.
- Organizers may reject unsafe robots.

15. General Rules

- Judges' decisions are final.
 - Arena conditions may be modified by organizers.
 - Participants must report 15 minutes before the match.
 - Rule changes, if any, will be announced before the event.
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Event Summary

Parameter	Specification
Event Name	Robo Sumo
Team Size	1–4 Members
Robot Size	400 × 400 × 400 mm
Maximum Weight	8 kg
Maximum Voltage	12V DC
Control	Wired / Wireless
Arena Diameter	2 m
Format	Knockout
Match Time	3 Minutes
Final Time	5 Minutes

Objective

- Push the opponent out of the arena.
- Stay inside the ring.
- Win the match and advance.

"Push Hard, Stay Strong, Be the Last Robot Standing!"