

TCR Robot Sumo Wrestling Rules (The short version)

Robot sumo wrestling is a contest where two or more robot contestants try to push each other out of a circular ring. The first robot to touch the floor outside of the ring loses. The last robot remaining in the ring wins. The TCR competition uses half size robots.

Robot Classes: There are two classes autonomous and tethered. Autonomous robots must operate without human control during a match. Tethered robots are controlled by a human through either RF or wired control.

Weight: The robots must weigh 1.5kg (3.3 lbs) or less.

Size: At the start of a match the robot must fit into a square box of 15cm (6") to a side, with no height limitation. Parts of the robot may extend outside this region after a match has started.

Sumo Ring Details: The sumo ring has a diameter of 75 cm (about 3 feet), and is raised 5cm (about 2 inches) above the floor. The color of the ring is black, with a 5cm wide white edge boundary.

Prohibited Items and Actions: A robot may not spray any material on the ring or on their opponent, or in any way deform the sumo ring. Robots are not allowed to use any flying components or projectiles. Robots may not electromagnetically interfere with the other robot or its sensors. Providing an environment which misleads the opponent's robot is allowed (for example, putting a black flap down over the white ring edge line, hoping the other robot will not detect the edge and fall off). In the tethered class robots may not damage the other robots communications line (for example by cutting the wire or jamming the RF). Robot tethers must have slack in them at all times, a robot may not be controlled by pulling on the tether.

Allowed Items and Actions: A robot may use various forms of detection to locate the other robot (IR, sonar, touch...). It may also incorporate stealth technology to avoid detection by the other robot. Signals may be used to try to confuse the other robot's detectors, such as flooding the area with IR, touching the far side of the robot, or convincing the other robot it is at the edge of the ring. Overt attempts to damage the opponent's robot, over and above the expected ramming and pushing, are not allowed. No rotating blades or flame-throwers!

Match Rules: Each bout will last a maximum of 3 minutes. If after 3 minutes, both robots are still in the ring, the bout is stopped and judgement is made as to a winner or if a rematch of the bout is needed.

Match Start: A referee signals the start of each bout. The operators will indicate to their robots the start of the bout. Each robot should have a 5 second delay after the operator pushes start before the robot starts to move.