

Mini Sumo

The robot aims to push its opponent out of the ring.

1. Contest description

Two robots compete on a circular ring. When the match is started, they try to push one another out of the ring. If a robot or any part of it touches the ground outside of the ring, the robot loses. This applies also in case any part falls off the robot and is pushed by the opponent out of the ring or falls off the ring by itself.

Before the match, both robots are placed on the ring behind their start lines. For the first play between two robots in a round, a toss is used to decide which should be placed first. In consecutive matches, the winner of previous match is placed first (in case of a match draw, a toss will be used to set the order). After placing the robot, it must not be moved, its configuration (software as well as hardware) must not be changed, and no information is allowed to be passed to the robot.

On a referee command, the match is started. It can be started locally as well as using a remote control. The robots must wait at least 5 seconds before they start moving. During that time all people must leave the area marked around the playing field. Maximum duration of one match is 2 minutes.

During the homologation, following adhesion test will be performed: the robot will be laid on a sheet of paper. It will pass the test, if this paper stays on the ground when the robot is lifted with its adhesion technologies turned on.

As part of the homologation, the robot shall show it wins over a non-moving robot.

2. Robot

The robot is fully autonomous and must not be dangerous or excessively annoying.

Since the start, any intervention is forbidden as well as any kind of connection with external devices until the end of the match. The robots may be started locally as well as remotely; later during the match no connection is allowed.

The robot must always keep contact with the ring. If the robot splits, there must be always at least one part in contact with the ring. The robot may use flying or hovering parts (navigation, camera etc.) but it must be possible for the opponent to perform the winning action (push the robot off the ring).

It is not allowed to use any technology to change the weight of the robot or to attach the robot to the ring.

Robot weight is max 1 kg, size max 15(l)x15(w) cm, the height is not limited. After the start, it may voluntarily deploy and change its size. It may also voluntarily turn and roll and it may split in any number of independent parts.

The robot may be built only from one of the allowed construction sets in accordance with the "Construction Kits" category.

3. Ring

The ring is a flat circular disc with the diameter of 77 cm. It is mat black. Its edge is glossy white (2.5 cm wide edge). In the centre of the ring, there are two brown starting lines, 1 cm wide and 10 cm long. They are 10 cm apart.