

robotex

International

TALTECH FOLKRACE RULES

COORDINATOR FOR THIS COMPETITION

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1 Introduction

The aim of the competition is to simulate the immersive nature of the rallycross. Up to five robots are allowed to access the track at the same time. An idea of the competition can be seen from this [VIDEO](#).

2 Definition and sub-classes

- One operator and up to four assistants may be registered for each robot (**maximum of five team members in total**). **The team may change the designated operator in accordance with the competition rules.*
- **The competitions take place in one category.**
- **Robotex Folkrace competition takes place** in three age groups:
 - **OPEN** – At the competition day 19 y.o. and older.
 - **U19** - At the competition day up to 18 y.o. (including 18 y.o.) .
 - **U14** - At the competition day up to 13 y.o. (including 13 y.o.) .
- The age group of a team is determined **based on the age of the oldest team member**.
- You must register your team to a correct age category. If during the competition it turns out, that the team is registered to an incorrect age category, the robot of this team will be disqualified from the competition. **NB!** Teams who belong to the younger age group are allowed to compete in the older age group.
- The organizers reserve the right to check the age of the competitors during the competition. In case of violation the robot of the team, who violated the rules will be disqualified.

3 Technical inspection and registration

The robot needs to pass technical inspection before the competition. The robot technical inspection is based on paragraphs "6." and "8.". During the inspection, it is checked whether the robot or the operator who is handling the robot meets the paragraphs requirements. **Only one team member with a robot** (the currently selected robot operator) **can come to the technical inspection**. If necessary, **they can have a translator or team instructor with them**. The purpose of this is to guarantee a smooth course of the competition and technical inspection.

4 Lighting conditions

The lighting in the area needs to be as close to real sunlight as possible (Midday), with consistent color and stability. The field cannot have shadows while the attempt is running. Lighting is allowed to change between attempts, but it needs to be consistent for every field.

5 The Field

1. The color of the field is not determined.
2. The wall at the edge of the field is white and its height is 12 ± 1 cm.
3. There will be a green and red band (width 10 cm) on the floor of the field to help identify the correct direction (correct direction identified with color green). Color codes: (CMYK: 100, 0, 100, 0 – RGB: 0, 255, 0) and red (CMYK: 0, 100, 100, 0 – RGB: 255, 0, 0).
4. The trajectory of the track is curved and closed.
5. The width of the track varies between 100–120 cm.
6. The field may have simple obstacles, such as hills, holes, loose material. Additionally, there may be hindering walls, which are installed in a way that a robot who moves along the edges of the wall is not capable to pass the track.
7. The tracks can be on two levels. This means, that a part of a track may cross another via a bridge, etc.

6 The Robot

1. The robot must be autonomous.
2. In the starting position, the maximum dimensions of the robot are 20 x 15 cm (length x width), an unlimited height and a mass of up to 1 kg.
3. The robot is not allowed:
 - to change its dimensions;
 - to damage the field and endanger the spectators;
 - to emit gases, liquids or dust;
 - to actively ram other robots;
 - to use other robots for movement.
4. The robot must have a start and stop button or a remote control (recommended).

7 The Competition

1. The winner is the robot who earns the most points.
 - Each correct completion of the lap gives one point.
 - A lap is considered completed once the robot crosses the starting line, depending on the movement direction, with the correct direction of movement being determined immediately before the particular race.
 - If a robot completes the lap, but in a wrong way, then there is no deduction of points (minimum points earned is 0).
2. The points can be earned within three minutes.
3. At the beginning of the competition, the robots are placed at the starting line.
4. The starting positions and the sub-group of the robots will be drawn by lots.
5. The start signal will be given once the competitors are ready.
6. The robot is allowed to begin its movement five seconds after the start signal.
7. If the robot starts to move before the appointed time, it will be considered as a false start.
8. The robot who makes a false start, receives a warning, if it happens for the second time, the robot will be disqualified.

9. The robot that has completed the race or made a false start will be removed from the field by the representative of the team by the order of the referee.
10. If the competition is stopped (for example, all robots are still for 15 seconds), the referee has the right to give an order to the representative of the team to remove the robot that is preventing the movement.
11. The robot who prevents movement is installed in the same place after 10 seconds.
12. If the robot stumbles during the competition and does not prevent other robots from moving, then the representative of the team has the right to decide, whether the robot:
 - is left down in the same place;
 - is returned to the starting line.
13. If a robot is stuck, the team representative can place the robot back on the starting line without disrupting other robots or participants.
14. If the robot is placed on the starting line during the race for whatever reason, one point will be subtracted from the points earned so far.
15. Upon violation of the rules, the referee may disqualify and remove the robot from the track.
16. The sub-groups may have up to five teams.
17. There are three races in each sub-group.
18. At the end of the sub-group, the robots will be divided into new sub-groups based on their place.
19. If the number of the points is equal at the end of the races, the ranking will be announced on the basis of an additional race.
20. The winner of the additional race is the robot who first manages to cover one lap in the designated direction. An additional race is only carried out if the robots have earned an equal amount of points. The starting positions of the additional race will be drawn by lots.
21. Only one team member may be closer to the track than two metres and he or she is considered the representative of the team.

8 Obstacles

8.1 Bridge



Figure 1: Bridge

8.2 Hole

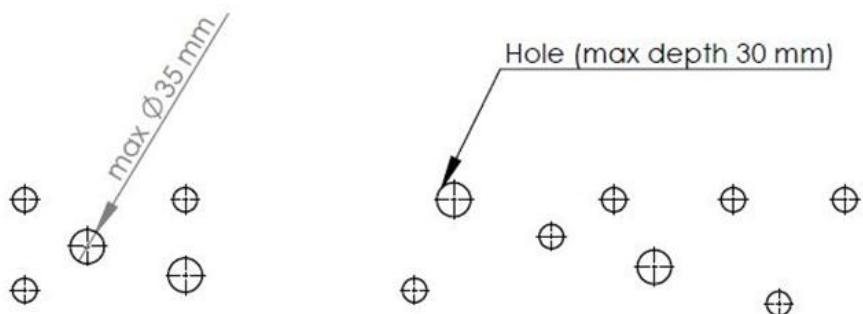


Figure 2: Hole

8.3 Loose material (rubber pieces etc.)

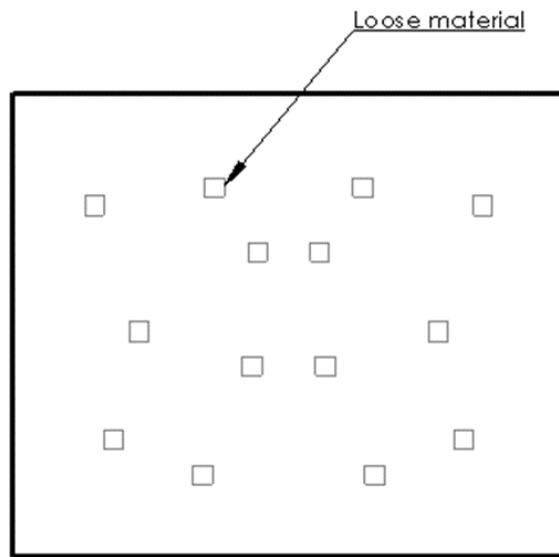


Figure 3: Loose material

8.4 Hindering wall

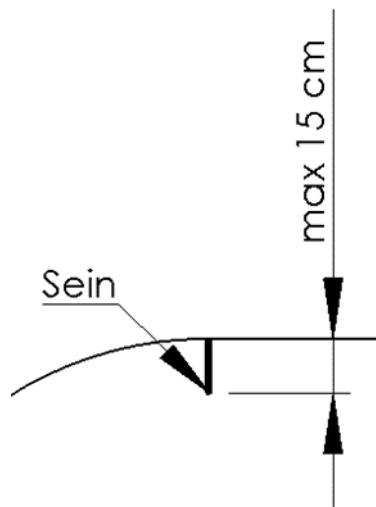


Figure 4: Hindering wall (top view)

8.5 Sponge and unevenness

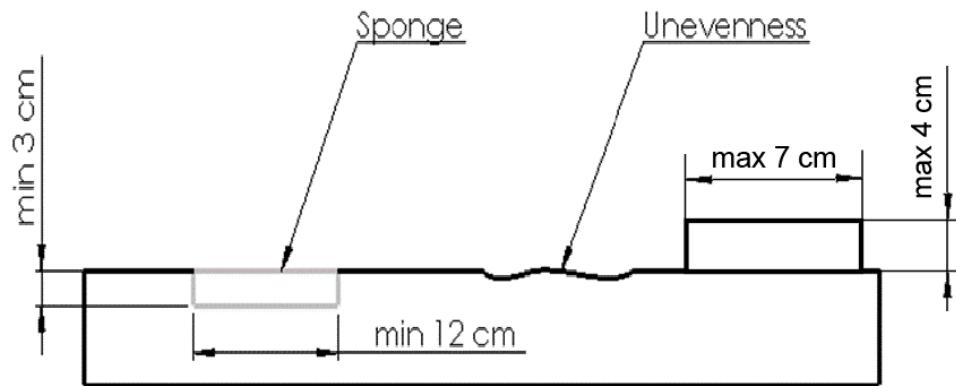


Figure 5: Sponge and unevenness

8.6 Post

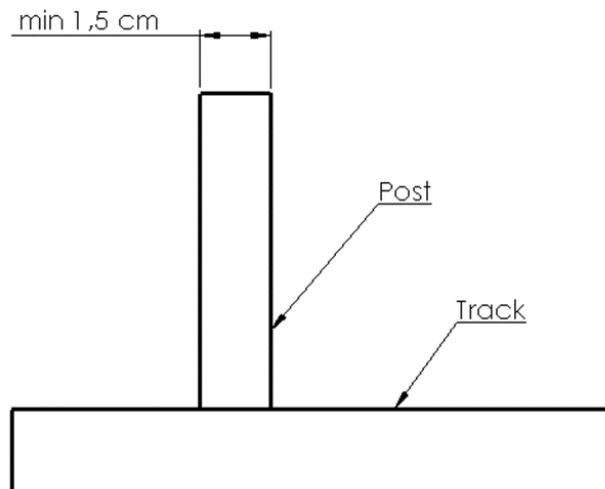


Figure 6: Post (side view)

9 Organizing

1. The robot must be registered before the competition. The registration process includes technical inspection of the robot, marking the robot with a number sticker, and the order number will be drawn.
2. Technical inspection must be completed by the time that is specified by the organisers.
3. For the better counting of laps, every team is given a coloured flag that has to be attached to the robot in a visible way.
4. All questions and problems arising during the competition are solved by the referee.
5. Protests can be submitted by the team member who was first registered.
6. The decisions of the referees are not subject to appeals. Complaints must be submitted during or immediately after the match. If no settlement is reached with the referee, claims must be submitted immediately to the Robotex Head referee. Any later complaints will not be accepted. In case of any conflicts or disputes, the final word will be said by the referees and/or the organisers. **NB! Rude behaviour is not tolerated and the team who does not respect the referees / head referees decisions can be disqualified by the head referee and/or event organisers.**

9.1 Lighting and infrared noise

The arena has at parts uneven lighting and infrared noise, which may disrupt the work of sensors during the competition. For this reason, the organizers recommend using covers or blinds for sensors, testing the sensors under intense lighting conditions or even under direct sunlight to imitate the lighting conditions of the competition arena.

9.2 Winners one-year break

Winners of 1st place cannot compete in the same category next year- they must take a one-year break from that category. At least 50% of the team must consist of non-winners. If the winners' team has three members, next year they should have at least one new member who was not previously on this team to compete in the same category again instead of taking a year off from it. This rule is aimed at bringing new people, giving everyone a fair chance and encouraging recurring winners to try new competitions they usually do not participate in and to educate and engage new beginners in the field of robotics. *

*** The rule complies only with Robotex International standards and is used for Robotex International competition.**

10 Revision history

- 14.07.21 Paragraph 2 clause 1. Removed field color specifications.
- 14.07.21 Paragraph 4 clause 1. Updated specification about categories.
- 14.07.21 Paragraph 4 clause 2. Added a new clause.
- 06.09.23 Removed rule „Each incorrect completion of the lap gives a minus point.”
- 06.09.23 Paragraph 2 clause 3. Added green and red band to identify correct direction.
- 29.09.25 Paragraph 4 clause 1. Changes in the age groups.
- 29.09.25 Paragraph 4 clause 4. Specification added about the deduction of points and minimum points earned.
- 29.09.25 Paragraph 6 clause 8. Added winners one-year break rule.
- 08.02.2026 Removed previous rule change history before 2021.
- 08.02.2026 Added new paragraphs 2. , 3. , 4. , 7. , 7.1. , 9. , 9.2. , 9.1.

