

Construction Kits

Build the robot fully using a construction kit for any of the Robotic Day competitions

1. Contest description

These rules describe details for those Robotic Day competitions where the "Construction Kit" category is organized. The "Construction Kit" rules shall be considered as addition to the basic rules released for the Robotic Day contests. Their individual rules remain valid as they are. Should there be exceptions, they will be published on the competition web pages.

2. Construction kit selection

The participants may only use one of the approved construction kits (from now on: The Kit). Examples include, but are not limited to: Lego Mindstorms (any version), Fischertechnik, Merkur, Meccano, and m-Bitbeam (this is not exhaustive list; full and up-to-date list of approved Kits is available on the competition website <http://roboticday.org/2023/rules/2023-ConstructionKits>). The Kit used shall not be a single-purpose robot building kit, i.e. there must be nontrivial freedom in building the robot. The organizers have the right to approve/reject a Kit from registration.

3. Parts and modules selection

The main parts of a robot defined for the purposes of this competition are:

- Mechanical structure
- Actuation
- Sensory
- Control

If the producer produces parts or certifies other producers to produce parts from any of the above mentioned categories, everything used from such category must be officially made or certified by that producer. If the producer does not make or certify anything in a part category, the robot builders are in this category free to use whatever else.

The selection of parts for the mechanical structure is determining for describing which Kit is the robot build of.

4. Own and altered parts

It is allowed to use own mechanical parts under the following conditions:

- The part is fully functionally and dimensionally same as an existing kit part.
- The part will be manufactured using the same material as the original one or using replacement material in this way: originally iron part may be made of aluminium or its alloys, of plastic or of wood, aluminium part may be made of plastic or wood and plastic or wooden part of wood or plastic.
- Colour of the new part may be chosen arbitrarily.
- The team will notify the organizers about such part and provide reference to the original one (by email to kits@roboticday.org) well before the competition so that the compatibility can be checked.

If the rules allow using RC servos, it is also possible to use servos altered for continual rotation.

Other alterations of parts are generally not allowed.

5. Exceptions

The "Construction kit" category is held for pupils and students up to secondary schools (ISCED 0-3). There may be also older people such as teachers or parents in the team but such people must not participate on the robot development, they are to supervise the team as "non-playing" or "honorary" captains and mainly care about the young team members in terms of safety and well-being.

It is allowed to participate for the students of the last year of their secondary education even if they have already passed the leaving exams and officially finished their secondary education under the condition they were in a "studying state" earlier this year.

6. Exceptions

The restrictions do not apply to the emergency switch neither to the remote control; these two components are fully defined by the respective competition rules (and therefore they may be built of whichever parts).

The organizers may issue specific exceptions and loosen or more specify the restrictions. Such amendments will be published on the competition web pages.

7. Contests management

If conditions allow, the construction kit robots will play separately from the standard robots. If the number of robots passing the homologations is low, the organizers may merge the construction kit category with the standard one; in such case, the best construction kit robot will be announced in addition to the overall results.