

# CHECK-LIST Homologation guide




















Are my robots ready for the approval tests? Check it yourself!

Test these following points (non exhaustive list) before presenting your robots to the approval area.

















## Robot #1

-  ≤ 120 cm: **non deployed perimeter** (in vertical projection)
-  ≤ 130 cm: **fully deployed perimeter** (in vertical projection)
-  ≤ 35 cm: **height** (beacon support and emergency stop button excluded)
-  ≥ 50 cm: cord length (**starting system**)
-  Beacon mast support (optional): convex hull at any altitude, between a 7×7 cm circle & a 10×10 cm square, solid & opaque.
-  Beacon support (optional): min a Ø 7×7 cm circle to max a 10×10 cm square, Velcro rough hook side, stable, height=43 cm, may support 300 g
-  **Obstacle avoidance system**; sufficient coverage around the robot in order to guarantee the detection in all the moves
-  Ø ≥ 2 cm, height ≤ 37.5 cm and red coloured: **emergency stop button**
-  A space of 100 x 70 mm is visible on one side for sticking the participation label.
-  Presence of an **actuator** that can be used for one action (not necessarily to move)
-  ≤ 4 bars at any point of non-commercial compressed air systems
-  **Lasers**: classes 1, 1M authorized; classes 2 accepted if the laser stays inside the playing area; higher classes forbidden. Provide the data-sheets.
-  All the **Lithium** batteries in safety bags (except LiFePO4 & Mindstorm); bring the chargers.
-  No forbidden equipments or **dangerous** for the persons or the goods (playing areas). File the projecting parts.
-  The robot(s) must stand in the starting area.
-  ≤ 205 cm: **sum of the non-deployed perimeters** of the two robots
-  ≤ 220 cm: **sum of the deployed perimeters** of the two robots



## Robot #2

I do not have a second robot (skip the following)

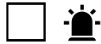
-  ≤ 120 cm: **non deployed perimeter** (in vertical projection)
-  ≤ 130 cm: **fully deployed perimeter** (in vertical projection)
-  ≤ 35 cm: **height** (beacon support and emergency stop button excluded)
-  ≥ 50 cm: cord length (**starting system**)
-  Beacon mast support (optional): convex hull at any altitude, between a 7×7 cm circle & a 10×10 cm square, solid & opaque.
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-  **Obstacle avoidance system**; sufficient coverage around the robot in order to guarantee the detection in all the moves
-  Ø ≥ 2 cm, height ≤ 37.5 cm and red coloured: **emergency stop button**
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-  All the **Lithium** batteries in safety bags (except LiFePO4 & Mindstorm); bring the chargers.
-  No forbidden equipments or **dangerous** for the persons or the goods (playing areas). File the projecting parts.

## Additional constraints

### Basket

- Should be contained in the dedicated platform and with good visibility from the audience.
- **Width**  $\leq 22.2$  cm;
- **Length**  $\leq 45$  cm;
- **Height (not deployed)**  $\leq 30$  cm (and during the match, can be deployed up to 90 cm)

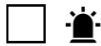


The basket count the cherry inside



$\leq 3$  kg : weight

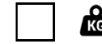


Emergency button (if batteries)  
Fixation: threaded rod of  $\varnothing 8$  mm & butterfly nut.

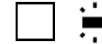
### Embedded beacons



$\leq 10 \times 10 \times 8$  cm, velcro soft loop side/bottom, rough hook side/top.



$\leq 300$  g : weight



Laser & batteries constraints are the same as for robots.

### Fixed beacons



$\leq 10 \times 10 \times 51$  cm



$\leq 1,5$  kg : weight



Fixation: threaded rod of  $\varnothing 8$  mm & butterfly nut.  
Laser & batteries constraints are the same as for robots.



Dimensions (6 cm allowed in any direction around the platform, except towards the opponent side), fixation (threaded rod of  $\varnothing 8$  mm & butterfly nut, and safety cable with a ring), weight ( $\leq 2$  kg)..



The score display is visible and easy to read. It is installed on the robot(s) or on the display cabinet.

### Good to know!

- I anticipate my passage to the approval area. I do not wait until the last minute!
- I do not hesitate to homologate my systems individually when they are ready.
- When a substantial material modification is done, I must re-homologate what is necessary.

