

# ROBO-WAR

Design a wired/wireless, manually controlled warrior (machine) that is capable of totally overpowering its opponent on the war- front.

**Entry Fees:** Rs 300/- per team

**Participants per team:** 6

**Rules:**

**Dimensions:**

- The maximum dimensions of the machine should be **750mm X 750 mm X 1000 mm** (l x b x h) at the starting point of the war (but can extend once it enters the war zone).
- Any machine component should not be detached (intentionally) during any point of the war.
- The machine should not exceed **40kgs** along with the weight of pneumatic source/tank whether present internally or externally. (**light wt. upto 20kgs , heavy wt. 20-40kgs**)
- In case of wired bots, the wires should remain slack at any instant during the fight. All the wires coming out of the machine should be stacked as a single unit. Also, the wires should be projected 1000 mm above the chassis to avoid entanglement.
- In case of wireless system, it should have a **minimum four frequency remote control** circuit or two dual control circuits so that the frequency interferences with opponent team can be avoided (in the case of any interference in the wireless systems will not be considered for rematch or results)
- Remote controls that are readily available in the market may also be

used.

### **Batteries and Power:**

- The machine can be powered electrically only. **Use of an IC engine in any form is not allowed.** Batteries must be sealed, immobilized–electrolyte types (such as gel cells, lithium, NiCad, NiMH, or dry cells).
- The electrical voltage at any point of time in the machine should not exceed **36 V DC/AC. 3.230V (AC) power** will be provided.
- The external power supply should be most preferably arranged by the participants themselves.
- Use of damaged, non leak proof batteries may lead to disqualification
- Special care should be taken to protect the on–board batteries
- Change of battery will not be allowed during the match

### **Pneumatics:**

- The outlet pressure of the source/tank should not exceed **8 bar**.
- Robots can use pressurized, non–flammable gases to initialize their pneumatic mechanisms.
- The used pressure should be indicated by means of temporarily fitted pressure gauge or there should be a provision to measure the cylinder pressure on the bot.

### **Hydraulics:**

- The outlet pressure of the source/tank should not exceed 8 bar.
- Robots can use pressurized, non–flammable liquids to initialize their hydraulic mechanisms.
- The used pressure should be indicated by means of temporarily fitted pressure gauge or there should be a provision to measure the cylinder pressure on the bot.

### **Weapon System.**

Robots can have any kind of cutters, flippers, saws, lifting devices etc. as weapons, with the **following exceptions.**

- Liquid projectiles
- Any kind of flammable liquid
- Flame-producing weapons
- Any kind of explosive material.
- Nets, glue or any other entanglement devices
- High power magnets or electromagnets
- Radio jammers
- **CUTTING OF WIRES OF THE OPPONENT IS STRICTLY PROHIBITED**
- **Spinning weapons which do not come in contact with the arena at any point of time are allowed.**In any case the arena should not be damaged by any bot

### **CRITERIA FOR VICTORY:**

- The fights will be carried out on a knock- out basis for the final round and a TIME/POINT system for the preliminary rounds.
- A robot is declared immortal/victorious if its opponent becomes totally inactive. A robot will be declared inactive if it cannot display any movement for a time period of 30 seconds.
- In case, both the robots remain active/inactive after the end of the fight then the winner will be decided on maximum destruction criteria.
- Surprise elements (rotating cutters, rotating hammers or ditches) if any would be disclosed at the time of competition.
- The contestant is allowed to touch his/her bot if needed. A penalty of 10 points will be imposed on every touch.

- A maximum of 4 hand-touches are allowed after which the contestant will be disqualified.
- Judges' decision shall be treated as final and binding on all.

**Prize money:**

**Heavy (20-40kgs)**

1<sup>st</sup> Prize: Rs 10000/-

2<sup>nd</sup> Prize: Rs 5000/-

**Light(upto 20kgs)**

1<sup>st</sup> Prize: Rs 5000/-

2<sup>nd</sup> Prize: Rs 3000/-

**Event Head:-**

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