

## Morphological analysis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| \*\*\* | \*\*\* | Triangle | Circular | Rectangle | Square | Base shape |
| Aluminum | MDF | Iron | Cork | Glass | Plastic | **Metal type** |
| \*\*\* | \*\*\* | Holes | Triangle | Square | Circular | **Holes shape** |
| 8 | 6 | 4 | 3 | 2 | 1 | **Number of wheels** |
| \*\*\* | \*\*\* | \*\*\* | Tracked | Spherical | Normal | **wheel shape** |
| \*\*\* | \*\*\* | Under the base | Inside the base | Spherical | Cubic | **Electronic parts protection box** |
| \*\*\* | \*\*\* | Brushless | Servo | Stepper | DS | **Motors type** |

* **The most appropriate form to choose is Figure 3 .**
* The rectangular shape is best suited for the dimensions .
* Aluminum is a durable and light metal at the same time .
* Holes make the body lighter while maintaining the same Quality .
* The number of four wheels maintains the stability of the body while not excessive in the number .
* The natural wheel shape is more abundant, less expensive and lighter for the motors .
* Choosing the cubic or somewhat rectangular shape of the electronic parts protection box is the most suitable to content the dimensions of the parts .
* Choosing the Brushless motor for its speed, it enables the robot to move quickly to get around the opponent .