

## Design

We have chosen for an aluminum framework because of its solid properties combined with a low weight.

As a drive we opted for a gear ratio of 6. First we tried with a gear ratio of 3 but here the car hadn't enough force to start. The gears are from k'nex and they drive the wheels, also taken from a K'nex device.

We have made the gear box adjustable, everything could be shifted to find the ideal position.

The shafts are also of aluminum and rotate with a minimum of friction due to bearings which are fit in bearing holders we 3D printed in Fablab Leuven to reduce the costs.

For the tappet we have again chosen for aluminum which is made so it could hit the petanqueball in every situation. It is also adjustable in height by a nut.

As a control mechanism, we have chosen not to use remote control as it seemed us very clumsy to drive during the race. We then used four side wheels (1 pair in the front and 1 pair in the rear) which will then automatically adjust our car when it collides the sidewall.

Like we said before, we have put everything together using bolts and nuts, so everything is adjustable for final perfection.