

Product Tree

ProductTree_0104.png

Figure 1: Product tree of Cydonia for the ERC 2026

The product tree (see Figure 1) outlines the majority of the electrical and mechanical components used in each subsystem. The main providers are the following:

- [Bossard](#) (shelf in the workshop) for screws, bolts, nuts and washers. Around December, Bossard asks for a list of components from all subteams to make a grouped order. In December 2025, Roboteam did not ask for anything specific because the team did not have a clear idea of the system at that point. For the next order, we advise the team to look into M2, M2.5 and a larger variety of M3 bolts as these are very useful for compact robotic systems, such as sensor mountings, the gripper and the turning system.
- [RS](#) was the main source of screws that were not in the Bossard order, but also extrusions, shafts, t-nuts, belt, pulleys, wormgears, and electrical components. We started the year with a budget of (5k) from RS to spend on their online shop. This budget did not fully cover our expenses but RS offered fast and reliable delivery.
- Once the RS budget was fully used, [Amazon](#) and [Aliexpress](#) became great suppliers for screws and electrical components such as force sensors, weight sensors, the pump, flow sensors, etc.
- [ST](#) provided the STMs and the technical knowledge that our team was missing
- From [CubeMars](#), the team bought motors that were missing due to logistical issues and that were needed urgently. CubeMars offered fast and reliable delivery, as well as easy communication. The company was also available to advise our technical team on issues related to CAN despite being located in China.
- [Maxon](#) provided the two motors in the [gripper](#). Due to challenging communication, all other Maxon motors in the drive system and the wrist were replaced.
- [MCB direct](#) was our supplier for aluminium sheets (advised by the CUBE team at the UT). Note that the delivery must be at the central mailroom of the university. The Central Mailroom is located in the “[Garage](#)” building (building number 5) on campus, address: Dienstweg 1, 7522 ND Enschede.
- [123-3D](#) became our main supplier of FDM filament. We were also able to buy extra components for the 3D printers and a stepper motor from this supplier.
- [Polymaker](#) used to provide 20 kg of sponsored filament per year to generations before the 10th. Due to communication issues with the company, we were able to use only the remaining filament from the academic year 2024-2025. The filament ordered from 123-3D was generally Polymaker filament.
- [Nanotec](#) provided a few crucial motors (e.g. Robotic arm, turning system) as well as brakes, encoders and drivers. They offered reliable and quick delivery.

- [Arducam](#) provided the smallest cameras in the system.
 - [Rubix](#) was also used for certain belts.
 - [Mouser Electronics](#) was used for electrical components, such as drivers and encoders.
 - [XSens](#) provided the IMUs.
 - [EuroCircuit](#): This company's services were not used in the academic year 2025-2026, but by previous generations. Eurocircuits prints PCB's based on the PCB layout files produced by the electrical engineers of Roboteam Twente.
 - [Würth Group](#)
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