

Cargo Drone

Project Description

[To be added]



Frame type

The cargo drone is based on the Octo Quad H frame. The diagram below shows the motor order for this type:



OCTO QUAD H

Source: <https://ardupilot.org/copter/docs/connect-escs-and-motors.html#motor-order-diagrams>

Model

Dimensions

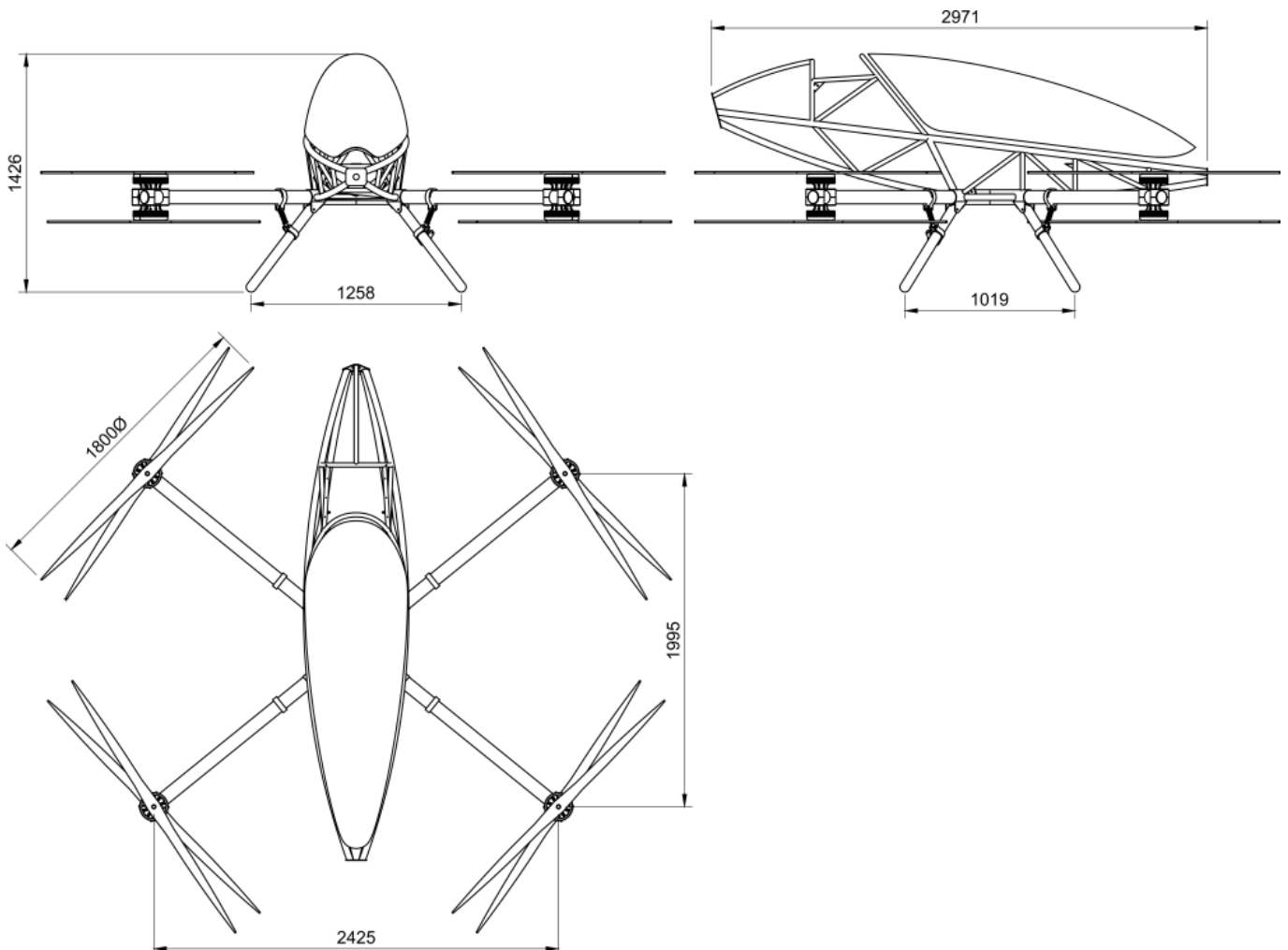
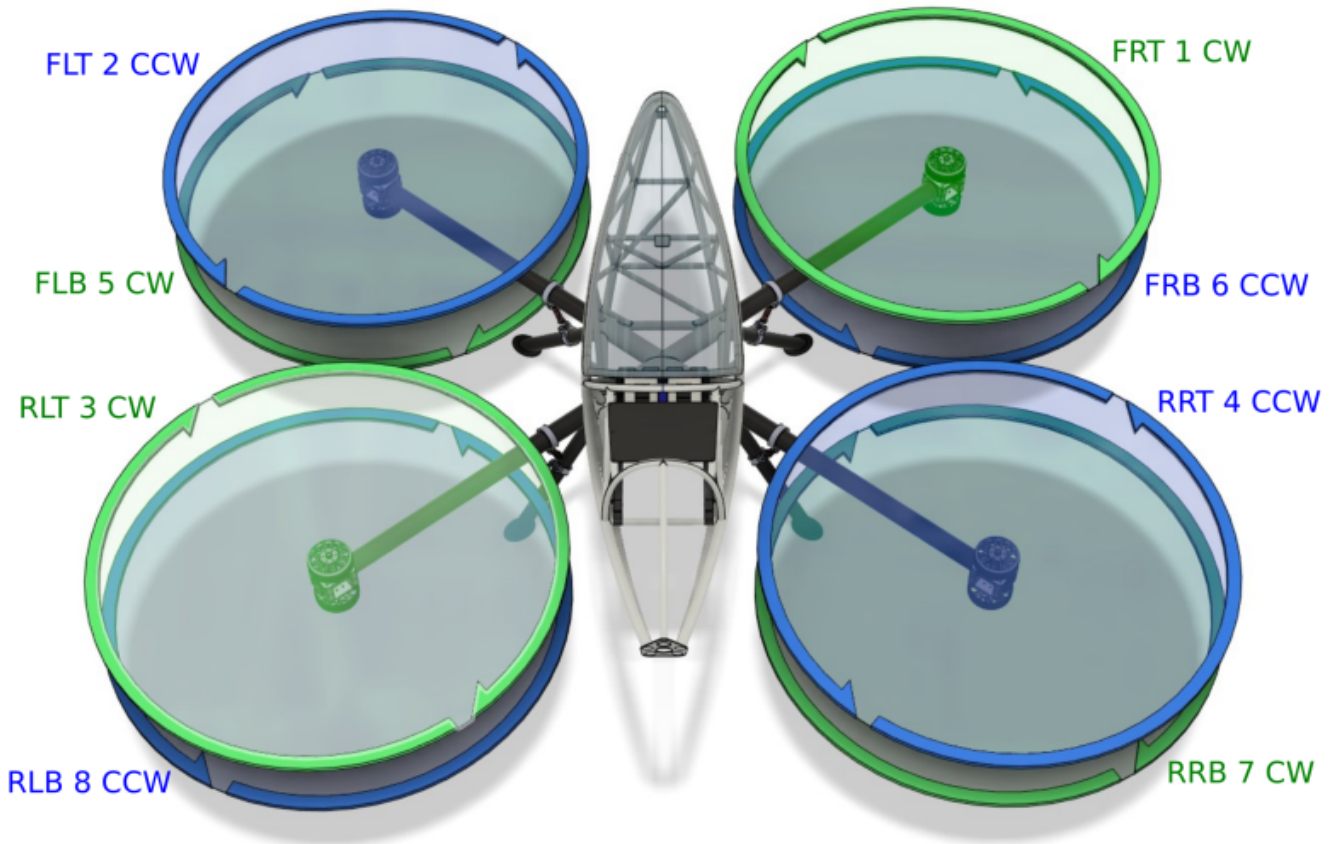


Figure: Cargo drone dimensions in mm

Motor distribution

The image below shows the Cargo drone model with the motor order and labels:



- The first three digits in the labels indicate the position of the motor:
 F / R - Front / Rear
 R / L - Right / Left
 T / B - Top / Bottom
- The number indicates which output pin from the flight controller should be connected to each motor ESC.

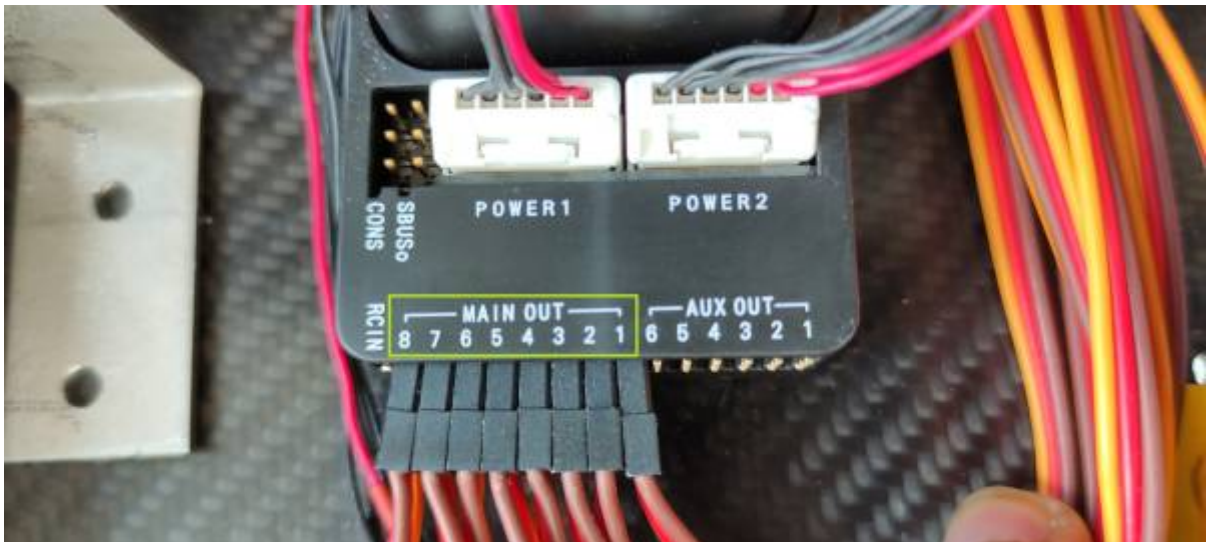


Image: Pixhawk output pins.

- The last digits indicate the direction of rotation of the motor:
 CW - ClockWise

CCW - CounterClockWise

Propellers

Helix H25F 1.80m

[H25F 1.80m R-LES-04-2](#)

[H25F 1.80m L-LES-04-2](#)



Motors

[RET 30](#)

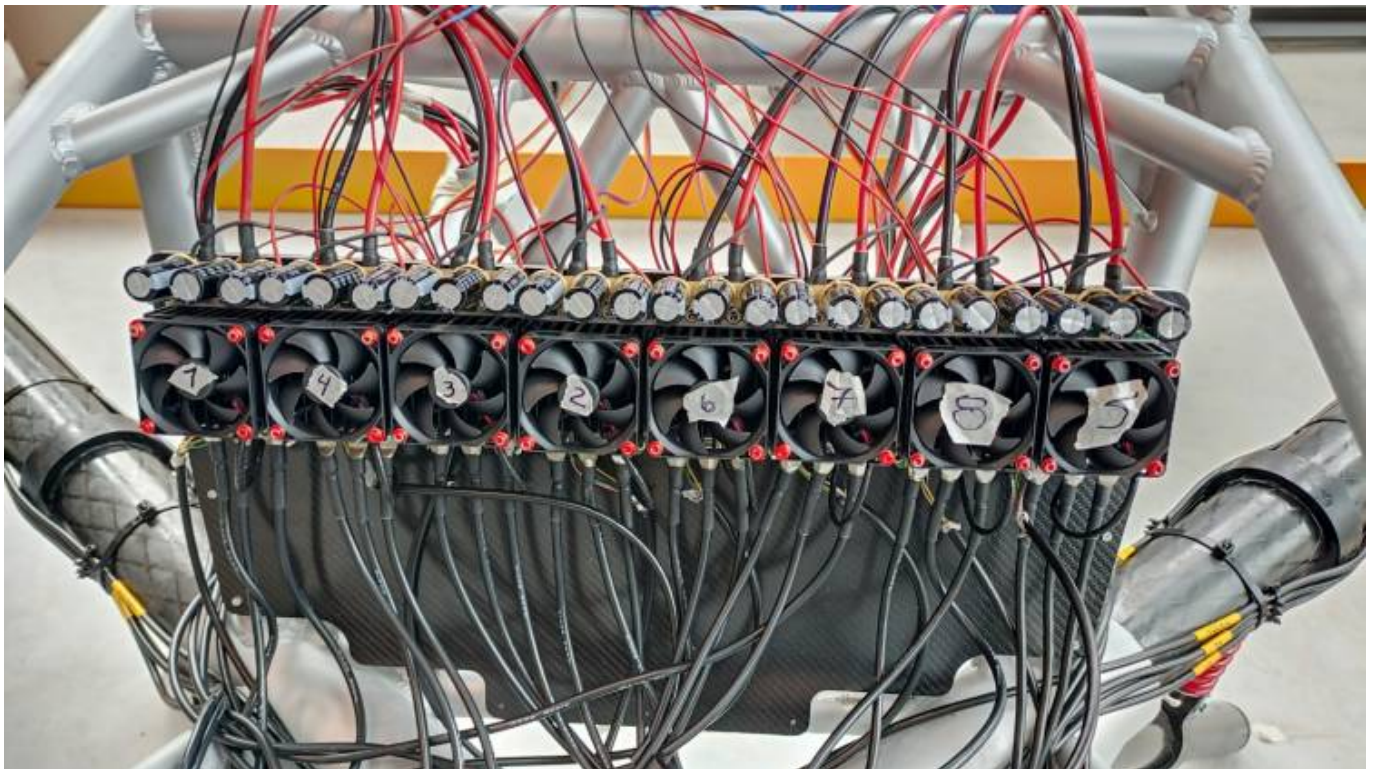
The motors were properly labeled.



Electronic Speed Controller (ESC)

[HBC 18063-3](#)

Labeled with the numbers for the flight controller pin connections.



Flight controller

[Hex Cube Black Flight Controller](#)

Battery, Electronics, and Power Distribution Cables

[To be added]

Tests

Test 1

Date: 09.sept.2021

Place: FabLab HSRW Kamp-Lintfort, Germany

Carried out by: Jefferson Sandoval and Harley Lara

[CargoDrone-Test1](#)

Video: *Testing ESC + motors reaction and direction of rotation*

The Team



From left to right: Rolf Becker, Harley Lara, Henrik Schoofs, Stefan Schmitz, Jefferson Sandoval, Winfried Rijssenbeek (Sept. 2021)

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