

# Manned drone



Project under development.

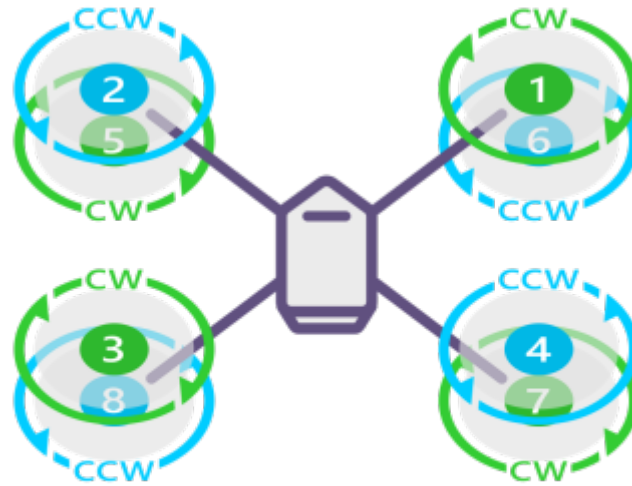
## Project Description

[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:

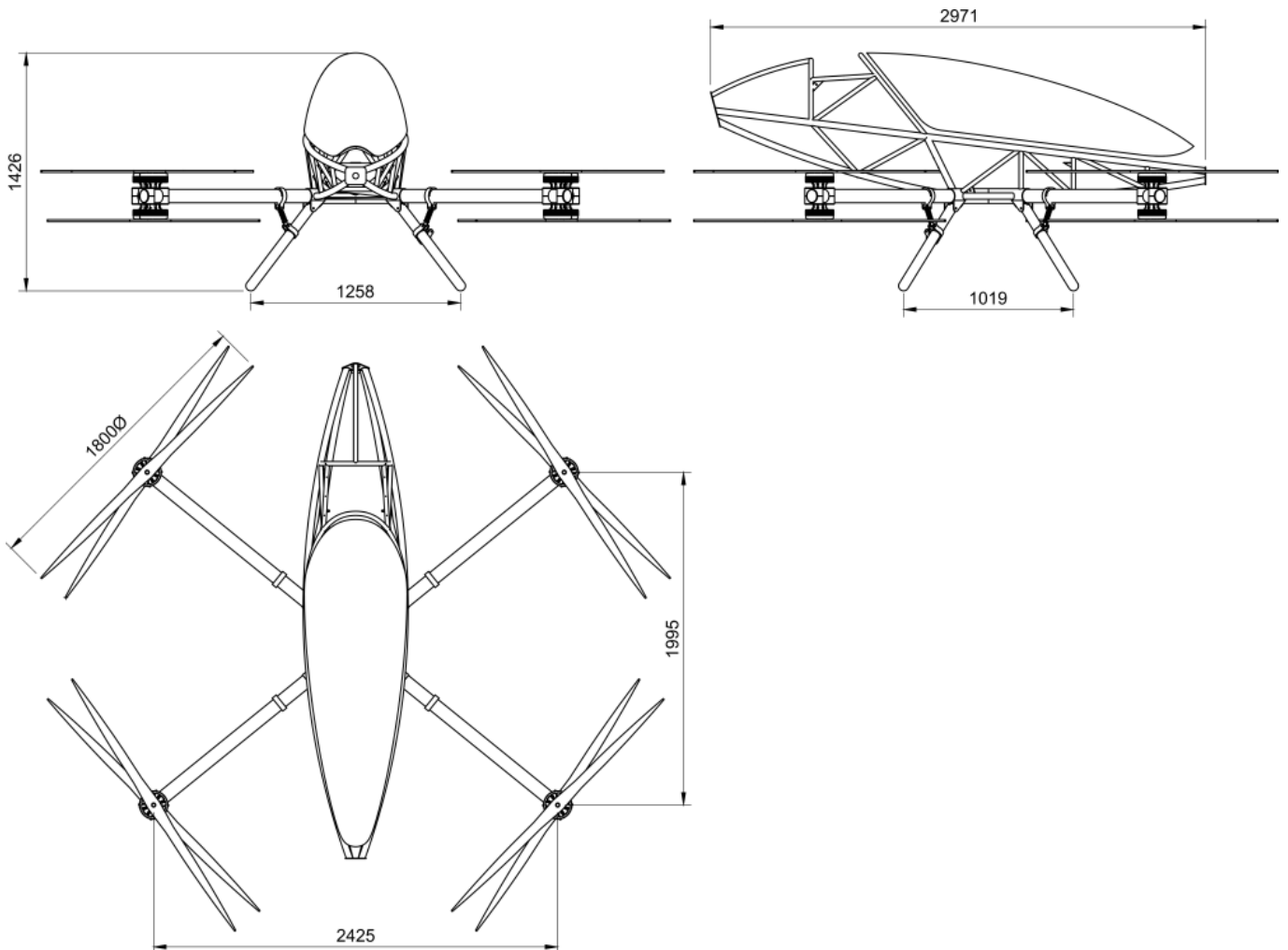


### OCTO QUAD H

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

## Model

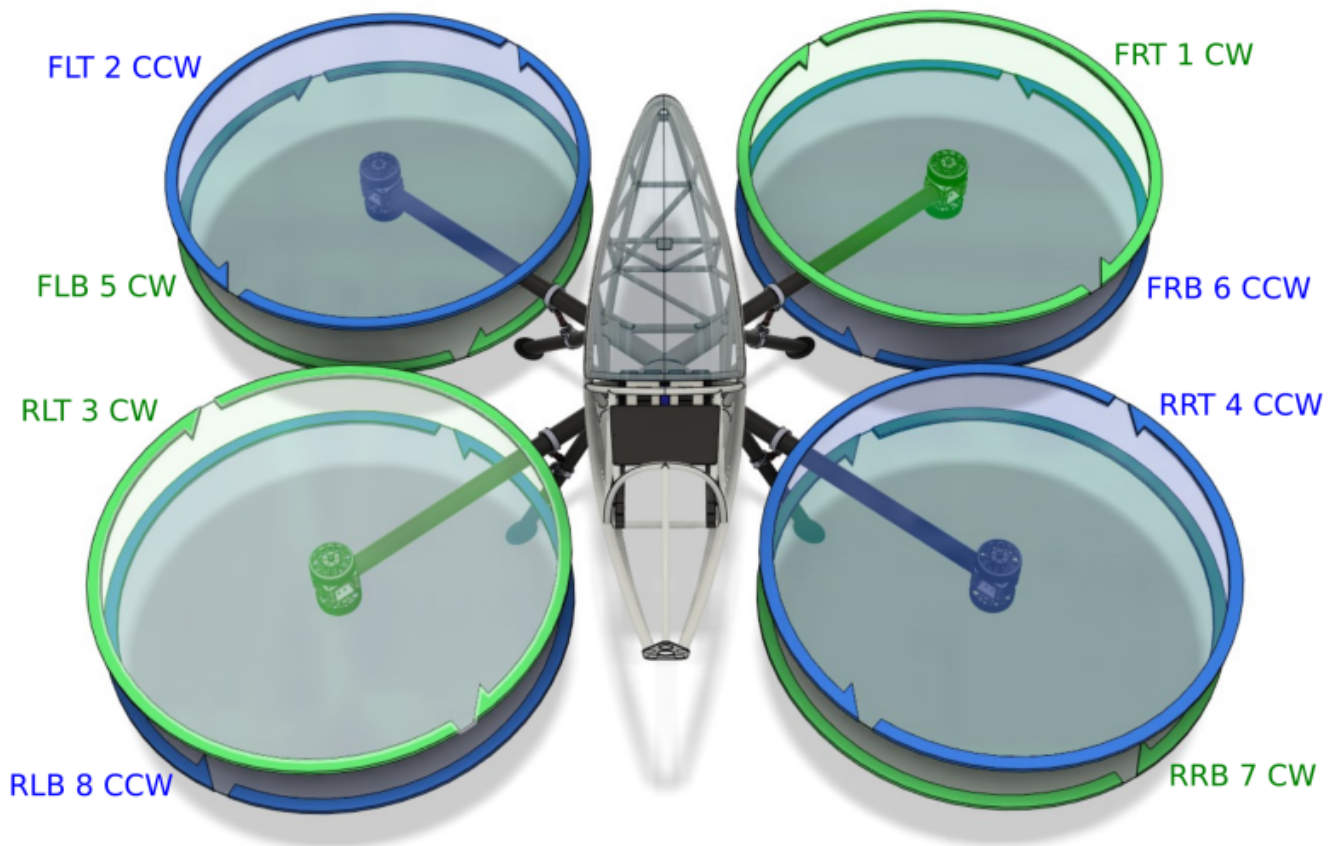
## Dimensions



Note: 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.

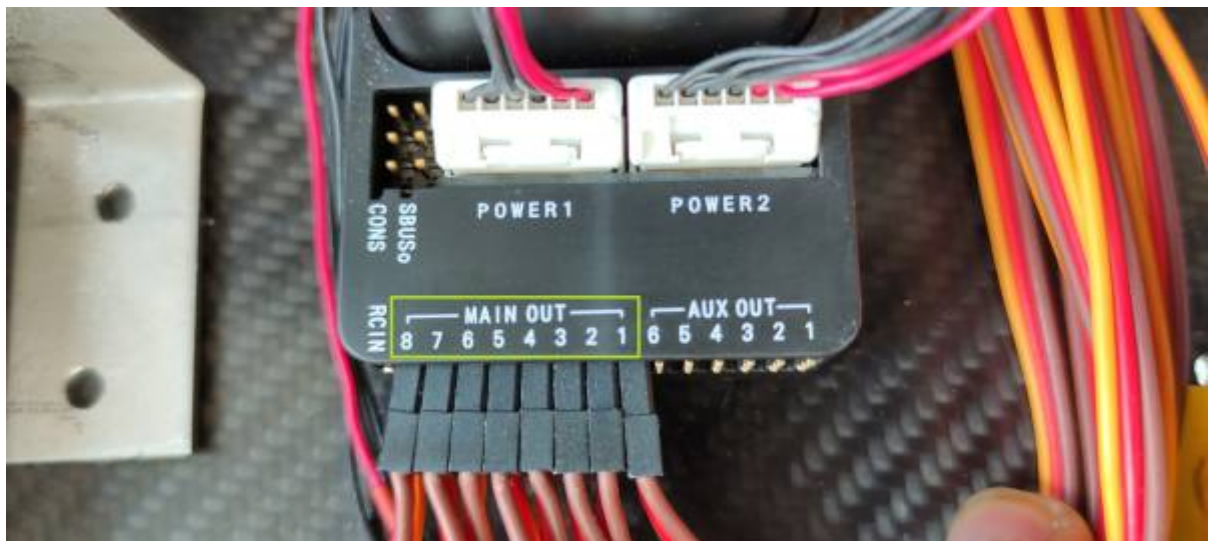


Image: Pixhawk output pins.

- 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](#)

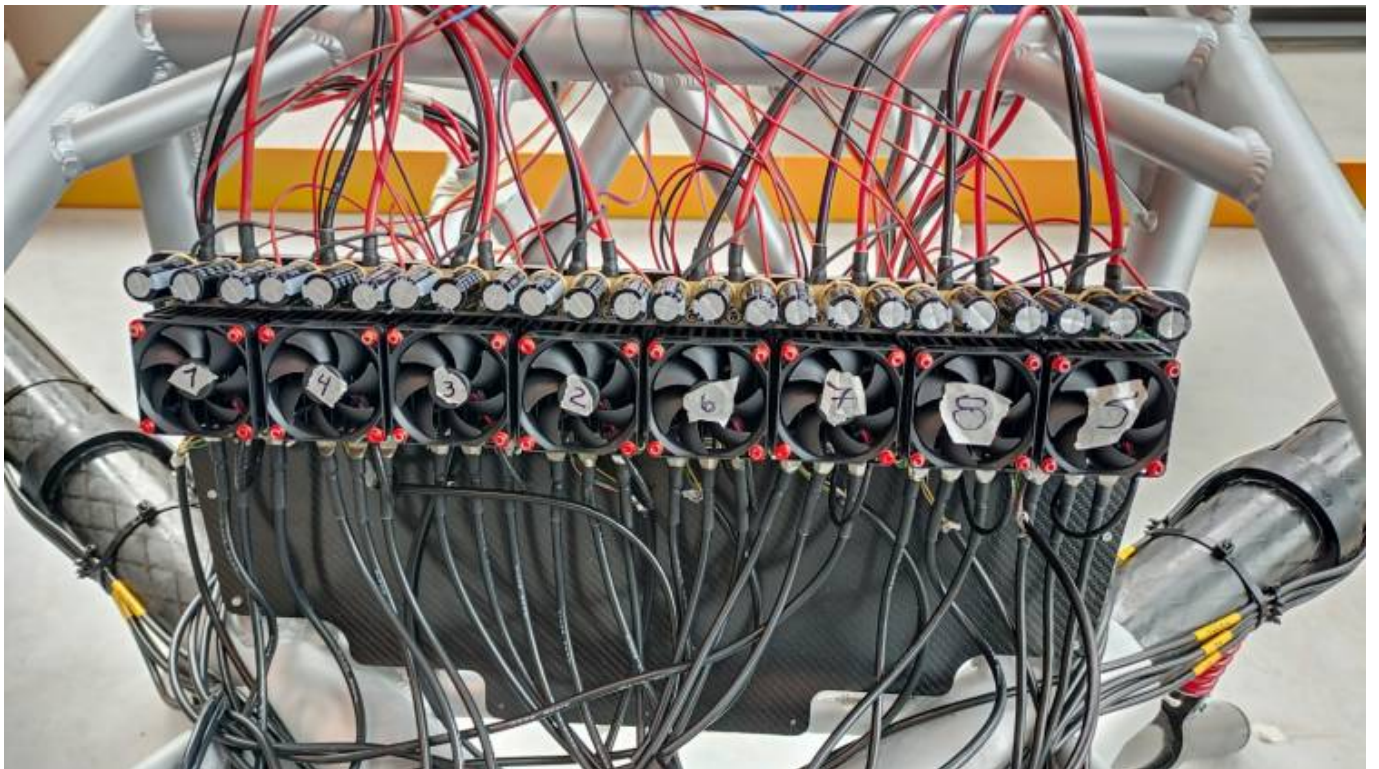
The motors were properly labeled.



## 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

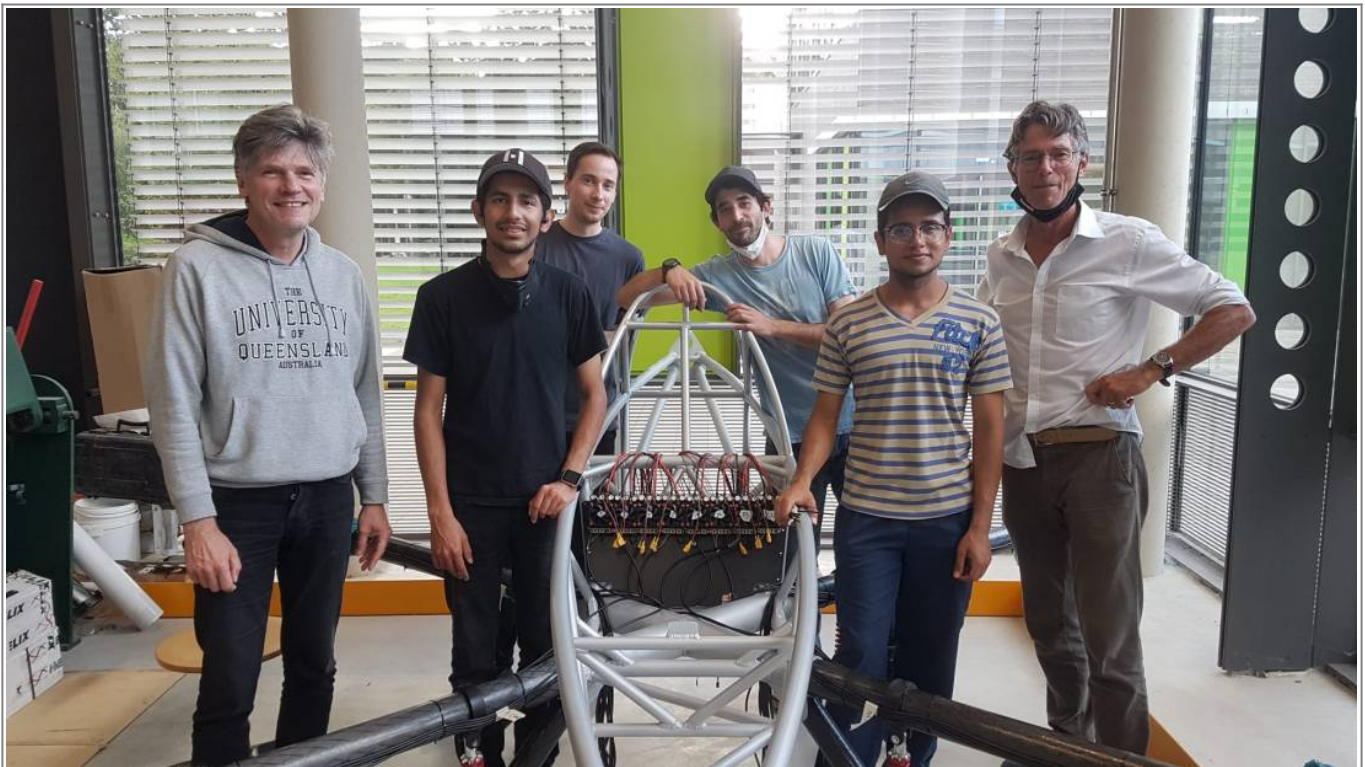
Place: FabLab HSRW Kamp-Lintfort, Germany

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

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