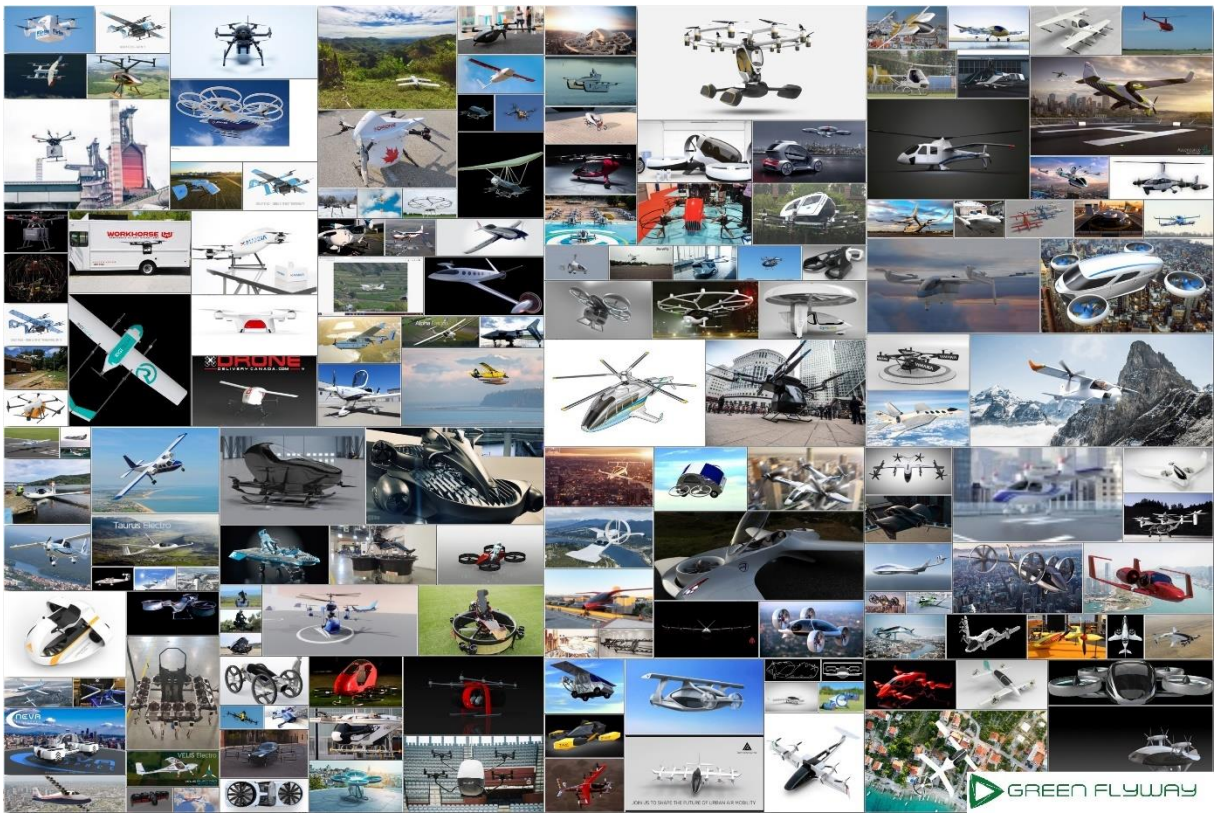
Electrification of Aviation

Catalogue

July 2020



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Preface

This catalogue is made by Wout Desloovere (*wout.desloovere@hotmail.com*) on behalf of Green Flyway. I am a Master of Science with a major in environmental science, attended at Mid Sweden University. My Master thesis “An evaluation of the potential to use drone deliveries as last-mile logistics, in Jämtland”, can be found on Green Flyways homepage *www.greenflyway.com* under documents.

The Green Flyway is a unique test arena for Electric aircraft, UAS, ATS and ground support. It is located in the middle of Sweden and Norway. The test area offers a unique environment with several airports. Manufactures of industrial components, universities, research institutions and the aviation industry are clustered together. Further information about the Green Flyway can be found on the next page and on page 197.

Within Green Flyway, you are able to design your test based upon your wishes and requirements. For further information, visit the website *www.greenflyway.com* or contact one of the project managers (Hans Dunder; *hans.dunder@greenflyway.com* or Anne Sörensson; *anne.sorensson@ostersund.se*)

Green Flyway

The Green Flyway has multiple areas on which it is working. A first work-area is electric aircraft and passenger drones. In the future, electric aircraft will become a much more common sight. Nowadays, small models fly completely on electricity provided from a battery system. Larger aircraft still rely on a second energy source, which can be done with a hybrid system. Green Flyway offers opportunities for test actors to fly point to point. These tests can diversify from technology to business setups.

A second work-field is autonomous UAV (Unmanned Arial Vehicle) or drone systems. The aim is to develop a secure infrastructure, both on land as in the airspace where research, testing, certification, education, marketing, delivery checks etc. of UAV systems can be carried out. These unmanned piloting systems could be used for rescue applications, environmental applications or in a later stage even to fly passengers without an actual pilot on board.

Green Flyway test arena can provide a unique air space for testing. The Green flyway can perform test operations between the airport of Röros (Norway), Sveg Härjedalen Airport (Sweden), Örnsköldsvik Airport (Sweden) and Åre Östersund Airport (Sweden). During these test flights, multiple airspaces could be crossed without restricting access for other aviation in the same airspace. Furthermore, Trondheim (Norway) is a centre of knowledge with several partners such as Rolls Royce, Siemens, Kongsberg Maritime and SINTEF.

Infrastructure is of great importance to the Green Flyway. The development goes further than the testing of aircrafts. The airport infrastructure, charging equipment, hangars and workshops should be optimally designed. Green Flyway already provide renewable electricity for electric aircraft and drones.

Within Green Flyway, you are able to design your test based upon your wishes and requirements. For further information, visit the website *www.greenflyway.com* or contact one of the project managers (Hans Dunder; *hans.dunder@greenflyway.com* or Anne Sörensson; *anne.sorensson@ostersund.se*)

Abbreviations

AED – Automated External Defibrillator

CCS2 – Combined Charging System type 2

CTOL – Conventional Take Off and Landing

HTOL – Horizontal Take Off and Landing

ICE – Internal Combustion Engine

N/A – Not Available

STOL – Short Take Off and Landing

UAV – Unmanned Aerial Vehicle

VTOL – Vertical Take Off and Landing

‘ – Symbol used for minutes (table)

Introduction

This catalogue is made to create an overview of the existing electrified aviation models on the market. These models can have either a battery electric, a hydrogen, or hybrid propulsion system. The focus is laid upon models that have or will have the possibility to transport people and/or cargo. The models are grouped into different types, such as conventional take-off and landing (CTOL) and vertical take-off and landing (VTOL). They are ordered by the stage of development they have reached. Certified or production ready models come first, followed by models preforming test flights. Hereafter we have prototypes, construction of the prototype, and sub-scale prototypes. Last comes the models that are still concepts nowadays or the ones which stage of development is unknown. Almost all Unmanned Aerial Vehicles (UAVs) or aircraft models existing nowadays, can carry some type of cargo. However, this catalogue is focused upon aircraft and UAVs where this is the main function, and where the company plans to use the vehicle for this type of services, in other words it only looks upon aircraft or UAVs specifically designed for transporting people or cargo.

Hybrid and hydrogen aircraft and UAV models are also included, because they commonly work as an electric aircraft with some sort of range extender. This is needed because nowadays battery technology limits the capabilities. With the help of a hybrid system, aircraft can fly longer or carry more passengers or cargo, compared to a battery electric aircraft, while still having lower emissions than conventional propulsion systems. Hydrogen would be a better solution than hybrid options, since hydrogen can be produced sustainably and would have almost no impact or a low impact on the climate, compared to hybrid options. Although the technology is still not fully developed, it shows great potential and will be used in the near future.

The information in this catalogue mainly comes from the websites of the manufactures or companies behind the aircraft/UAV, additional information might come from press releases.

UAVs can be used for multiple functions. The cargo function assessed in this catalogue, includes different services such as healthcare. Where for examples vaccines or medication can be carried by a drone. logistics or package delivery drones can be used for the last-mile or the last step in a logistic process. Cargo drones can also be used for delivering food or in industrial processes for many applications such as delivering parts when needed.

The catalogue does not go into detail about the charging system of electrified aircraft. This has multiple reasons. First off, this information is not publicly available by the manufacturing companies. But more important, there is no standard in the industry. Every manufacturer can decide for themselves which hardware or charging system they are going to use. Furthermore, the software or communication between charge system and the aircraft is different between different companies. The same problem appeared with electric automobiles, where every manufacturer used different systems. Nowadays, there are some general types used such as CCS2 in Europe. However, there are still differences on a global scale. It could be argued that electric aircraft should use the same CCS2 system, but since battery systems get bigger, in

the future different systems might be needed that can charge at even higher power than is possible nowadays with CCS2. If the same type of connecter would be standard, there still needs to be a standard about the communication from the (super)charger to the aircraft, so the same system can be used for different types of aircrafts from different manufacturers. There are new systems being designed for electric semi-trucks which could be for the benefit of electric aviation as well. To avoid situations where airports would need vast amounts of charging systems, standardization is needed sooner rather than later. In general, all electric aircraft will use so called super chargers, which charge directly from DC to DC, because of this, these aircrafts don't need converters, which makes them lighter.

Future work could regard UAV systems or drones with other commercial functions that are not mentioned in this catalogue. The possibilities or opportunities for drones seem to be endless, but the main other commercial fields these systems could be used in are:

- Emergency response including humanitarian aid and disaster relief, delivering automated external defibrillator (AED), helping police, etc.
- Agriculture were UAVs could be used for mapping the field, precision farming, spraying the field with pesticides or fertilizers, monitoring the crops, etc.
- Infrastructure inspections such as inspecting bridges, buildings, windmills, powerlines, etc.
- Media and cinematographic, drones with high end camera systems used for movies, advertisements, etc.
- Environmental or conservation were drones can be used to track groups of animals to study their behaviour or protect the animals, mapping the impact of climate change, etc.

Pictures were taken from the official websites of the companies representing the aircraft models or press releases by these companies.

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CTOL – Conventional take-off and landing

A conventional take-off and landing (CTOL) aircraft also known as a horizontal take-off and landing (HTOL) aircraft is the type of aircraft which is most common today. For taking off and landing it requires a runway. The length of the runway depends on the model and how powerful the engines are, electric engines might reduce the need for long runways.

Velis Electro (Pipistrel)

Technology: Battery electric CTOL
Number of Passengers: 2
Range/Endurance: 50 minutes (with reserves)
Weight (empty): 428 kg
MTOW: 600 kg
Payload: 172 kg
Engine: Pipistrel E-811 EASA type-certified (57,6 kW)
Size: Length 6,47 m; Wingspan 10,71 m; Height 1,9 m
Top speed: 185 km/h
Cruising speed: 166 km/h
Stall speed: 83 km/h
Battery capacity: 24.8 kWh
Intended use: Pilot training, demonstrate safety, prove itself
Stage: EASA certified
Country development: Slovenia
Contact information: +386 5 36 63 873 info@pipistrel-aircraft.com
Website: https://www.pipistrel-aircraft.com/
Link(s) more information: https://www.pipistrel-aircraft.com/aircraft/electric-flight/velis-electro-easa-tc/

Alpha electro (Pipistrel)

Technology: Battery electric CTOL
Number of Passengers: 2
Range/Endurance: 60 minutes + reserve
Weight (empty): 386 kg
MTOW: 472,5 – 550 kg
Payload: 182 kg
Engine: Pipistrel PEM 60MVLC
Size: Length 6,5 m; Wingspan 10,5 m; Height 2,05 m
Top speed: 185 km/h
Cruising speed: 157 km/h
Stall speed: 70 km/h
Battery capacity: N/A
Intended use: Pilot training
Stage: Certified in some countries
Country development: Slovenia
Contact information: +386 5 36 63 873 info@pipistrel-aircraft.com
Website: https://www.pipistrel-aircraft.com/
Link(s) more information: https://www.pipistrel-aircraft.com/aircraft/electric-flight/alpha-electro/#tab-id-1

Taurus Electro (Pipistrel)

Technology: Battery electric CTOL (Glider)
Number of Passengers: 2
Range/Endurance: N/A (glider)
Weight (empty): 306 kg
MTOW: 450 / 472,5 / 550 kg
Payload: N/A pilot weight 90kg minimum or ballas weight than 69 kg minimum
Engine: Electric 40/30 kW
Size: Length 7,3 m; wingspan 15 m; height 2,7 m
Top speed: 225 km/h
Cruising speed: 115 km/h
Battery capacity: 20 Ah/ 4,75 kWh
Intended use: Gliding
Stage: Certified in France, Germany and Slovenia
Country development: Slovenia
Contact information: +386 5 36 63 873 info@pipistrel-aircraft.com
Website: https://www.pipistrel-aircraft.com/
Link(s) more information: https://www.pipistrel-aircraft.com/aircraft/electric-flight/taurus-electro/#tab-id-4

Ampaire Electric EEL (Reconfigured twin-engine Cessna 337 Skymaster)

Technology: Hybrid CTOL
Number of Passengers: 6
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: Front engine conventional, tail engine electric
Size: N/A
Top speed: N/A
Cruising speed: N/A
Stall speed: N/A
Battery capacity: N/A
Intended use: Short distance commuter (regional airports)
Stage: Test flights on commercial routes with Mokulele (Hawaii)
Country development: USA
Contact information: N/A
Website: https://www.ampaire.com/
Link(s) more information: https://www.ampaire.com/
https://edition.cnn.com/travel/article/ampaire-electric-plane/index.html
https://www.ampaire.com/news/press-release-hybrid-strategy-071719

BRM Aero Energic (H55)

Technology: Battery electric CTOL (H55 producent of Electric propulsion systems)
Number of Passengers: 2
Range/Endurance: 90 minutes
Weight (empty): N/A
MTOW: 850 kg
Payload: 200 kg
Engine: Max 90 kW, max continuous power 65 kW
Size: N/A
Top speed: N/A
Cruising speed: N/A
Stall speed: N/A
Battery capacity: 50 kWh
Intended use: Flight trainer (battery system for other uses sold to other manufacturers)
Stage: Test flights, certification planned by end 2021
Country development: Switzerland
Contact information: +41 79 821 19 29 gergory.blatt@h55.ch
Website: https://www.h55.ch/
Link(s) more information: https://www.h55.ch/products

Cassio 330 & 480 & 600 (Voltaero)

Technology: Hybrid CTOL
Number of Passengers: 4 – 6 – 10
Range/Endurance: 0-200 km; 200-600 km; 600-1200 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: Total power of 330 kW; 480 kW and 600 kW
Size: N/A
Top speed: N/A
Cruising speed: 370 km/h
Stall speed: N/A
Battery capacity: N/A
Intended use: Regional commutes
Stage: Cassio 1 aircraft (picture), test flights
Country development: France
Contact information: +33 1 45 78 89 92 info@voltaero.aero
Website: https://www.voltaero.aero/en/
Link(s) more information: https://www.voltaero.aero/en/the-vision/
https://www.voltaero.aero/en/category/press-releases/

eFlyer 2 (Bye Aerospace)

Technology: Battery electric CTOL
Number of Passengers: 2
Range/Endurance: 3 hours (training flights typically 1,1 to 1,3 hours)
Weight (empty): N/A
MTOW: N/A
Payload: 204 kg
Engine: Siemens 90 kW AC
Size: Wing span 11,35 m
Top speed: 250 km/h
Cruising speed: N/A
Stall speed: 100 km/h
Battery capacity: N/A
Intended use: Training flights because of the increased need for pilots and old ages of training planes today
Stage: Test flights, going through certification (plans for eFlyer 4 as well and other concepts)
Country development: USA
Contact information: +303 459 2862 info@byeaerospace.com
Website: https://byeaerospace.com/
Link(s) more information: https://byeaerospace.com/electric-airplane/
https://electricflyer.com/

F2e (Flight Design)

Technology: Battery electric CTOL
Number of Passengers: 2
Range/Endurance: Expected 2 to 3 hours
Weight (empty): N/A
MTOW: Expected 1100 kg
Payload: N/A
Engine: 55 kW electric Siemens drive system
Size: Wingspan 9,2 m
Top speed: 210 km/h
Cruising speed: 170 km/h
Stall speed: N/A
Battery capacity: N/A
Intended use: The project serves to gain knowledge on environmentally friendly flight with innovative propulsion concepts and on the safe integration of energy storage systems within the airframe.
Stage: Prototype + Test flights
Country development: Germany
Contact information: +49 36920 7530 10 info@flightdesign.com
Website: https://flightdesign.com/
Link(s) more information: https://flightdesign.com/flightdesign-f2e-flirst-flight/

HY4 (German Aerospace Center & Pipistrel)

Technology: hydrogen electric CTOL
Number of Passengers: 4
Range/Endurance: 750-1500 km
Weight (empty): N/A
MTOW: 1500 kg
Payload: N/A
Engine: 80 kW
Size: N/A
Top speed: 200 km/h
Cruising speed: 145 km/h
Stall speed: N/A
Battery capacity: N/A
Intended use: Development towards electric air taxi
Stage: Flight in 2016
Country development: Germany & Slovenia
Contact information: +49 (0) 179 2027670 info@h2fly.de
Website: http://hy4.org/
Link(s) more information: http://hy4.org/hy4-technology http://hy4.org/zero-emission-air-transport-first-flight-of-four-seat-passenger-aircraft-hy4

Magnix Aero

Technology: Producer of electric propulsion systems
Number of Passengers: +/-4
Range/Endurance: +/- 160 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: N/A
Stall speed: N/A
Battery capacity: N/A
Intended use: N/A
Stage: Used in eBeaver and eCaravan test flights (Converted conventional aircrafts)
Country development: USA
Contact information: media@magnix.aero
Website: https://www.magnix.aero/
Link(s) more information: https://www.magnix.aero/our-story
https://www.engadget.com/2019-12-11-commercial-electric-airplane-test-flight-harbour-air.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAALQn0jPTK0samTVBH-HH2VC6alk5i2kw_dt_N8sFbhuYJJ_BStkuvdZayAd-Jdt1ObRK_2RVJFHu0Dc7JBN7sYYAusWvBouXfKFGRVGq_-SxTAG5k9qpxg6S4Z3qteCX5ta5H0soMzVhTYBd7ThIc3sfJTyzk6_x2-HEFLg-PHFF
https://www.aviationtoday.com/2020/05/29/historic-flight-of-magnixs-ecaravan-showcases-maturity-of-electric-aviation/

P2 Xcursion (EQP2, Equator)

Technology: Battery electric CTOL (amphibious) (hybrid version upcoming as well)
Number of Passengers: 1 pilot + 1 passenger
Range/Endurance: Battery electric 200 km; Range extender/hybrid 1000 km
Weight (empty): 530 kg
MTOW: 750 kg
Payload: 220 kg
Engine: 97 kW electric engine, Range extender WST KKM 352 (57kW) + 100 l fuel
Size: Length 6,8 m; Wing span 9,8 m; Height 3,8 m
Top speed: 240 km/h
Cruising speed: 203 km/h
Stall speed: 96 km/h
Battery capacity: N/A
Intended use: Amphibious light aircraft for personal use
Stage: Prototype + Test flights
Country development: Norway
Contact information: +47 970 39 469 mail@equatoraircraft.com
Website: https://equatoraircraft.com/index.html
Link(s) more information: https://equatoraircraft.com/Prototype.html

Phinix/ϕnix (Pure flight)

Technology: Battery electric CTOL
Number of Passengers: 2
Range/Endurance: 2,5 hours
Weight (empty): N/A
MTOW: 600 kg
Payload: N/A
Engine: 60 kW electric engine (Cruise eco fly <10 kW)
Size: Wingspan 11 m or 15 m; Length 6,5 m
Top speed: 260 km/h
Cruising speed: 160 – 200 km/h
Stall speed: 65 km/h
Battery capacity: 35 kWh
Intended use: Showing capabilities of electric flight
Stage: Test flying, certified under ELSA
Country development: Czech republic
Contact information: info@pure-flight.cz
Website: https://www.pure-flight.eu/index.html
Link(s) more information: https://www.pure-flight.eu/Pure-Plane.html

Renewable Hydrogen Aviation (ZeroAvia)

Technology: Drivetrain for planes on hydrogen
Number of Passengers: 10-20 (current test flights with 2013 PIPER AIRCRAFT INC PA46R-350T / 6 places)
Range/Endurance: 480-800 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Zero emission aviation between smaller airports / Commuter
Stage: Test flights
Country development: USA
Contact information: info@zeroavia.com
Website: https://www.zeroavia.com/
Link(s) more information: https://www.youtube.com/channel/UCx5S9hMbvMydX-WiSP_8VxQ/videos https://www.zeroavia.com/

X-57 Maxwell (NASA)

Technology: Battery electric CTOL (based upon Tecnam P2006T)
Number of Passengers: N/A
Range/Endurance: N/A
Weight (empty): +/- 1360 kg
MTOW: N/A
Payload: N/A
Engine: 2x60kW & 12x10,5 kW
Size: N/A
Top speed: N/A
Cruising speed: 277 km/h
Battery capacity: 69,1 kWh (47 usable)
Intended use: The primary goal of the X-57 project is to share the aircraft's electric-propulsion-focused design and airworthiness process with regulators, which will advance certification approaches for distributed electric propulsion in emerging electric aircraft markets.
Stage: Ground testing and being further developed
Country development: USA
Contact information: +202 358 0001
Website: https://www.nasa.gov/
Link(s) more information:
https://www.nasa.gov/centers/armstrong/programs_projects/electric_propulsion/index.html
https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-109.html

Alice (eviation)

Technology: Battery electric CTOL
Number of Passengers: 2 pilots + 9
Range/Endurance: 1000 km + 45 min reserve
Weight (empty): N/A
MTOW: 6350 kg
Payload: 1134 kg
Engine: 3 propellers total of 900 kW peak power and 260 kW cruise
Size: Length 13,2 m; Wingspan 16,12 m; height 4,2 m
Top speed: N/A
Cruising speed: 444 km/h
Battery capacity: 920 kWh
Intended use: Regional commutes
Stage: First prototype was built, no test flights (prototype burned down electrical fire)
Country development: Israel
Contact information: info@eviation.co
Website: https://www.eviation.co/
Link(s) more information: https://www.eviation.co/aircraft/
https://www.flightglobal.com/eviation-alice-prototype-damaged-by-electric-fire-in-arizona/136327.article

ACCEL (Rolls Royce)

Technology: Battery electric CTOL
Number of Passengers: 1
Range/Endurance: 321 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: Three 750R lightweight electric motors will be used (YASA)
Size: N/A
Top speed: +482 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Brake the record for fastest all-electric plane in history and accelerating the electrification of flight
Stage: Under development
Country development: United Kingdom
Contact information: N/A
Website: https://www.rolls-royce.com/
Link(s) more information: https://www.rolls-royce.com/media/our-stories/innovation/2018/introducing-accel.aspx https://www.rolls-royce.com/media/press-releases/2018/16-07-2018-rr-welc-uk-govt-funding-for-proj-to-push-the-boundaries-of-all-electric-flight-research.aspx

Panthera (Pipistrel)

Technology: ICE or hybrid or electric CTOL
Number of Passengers: 4
Range/Endurance: N/A
Weight (empty): N/A
MTOW: 1360 – 1315 kg – 1315 kg
Payload: 500 kg – 415 kg – N/A
Engine: Lycoming IO-540V – Hybrid 200 kW (150kW continuous) – electric 200 kW (150 kW continuous)
Size: Length 8,07 m; Wingspan 10,86 m; Height 2,19 m
Top speed: 355 km/h
Cruising speed: 327 km/h
Stall speed: 111 km/h
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Conventional version for sale, hybrid and electric version are under development
Country development: Slovenia
Contact information: +386 536 63873 info@pipistrel-aircraft.com
Website: https://www.pipistrel-aircraft.com/
Link(s) more information: https://www.pipistrel-aircraft.com/aircraft/cruising/panthera/#tab-id-8

HEAVEN (Pipistrel, H2FLY, German aerospace center, Elringklinger and Air liquid advanced technologies)

Technology: High power density FC system for aerial passenger vehicle fuelled by liquid hydrogen
Number of Passengers: 2-4
Range/Endurance: 5 to 8 hours
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 2 high power PEM fuel cell systems of 45 kW
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Main goal of HEAVEN project is to design, develop and integrate a powertrain based on high power fuel cell and cryogenic technology into an existing 2-4 seats aircraft for testing in flight operation.
Stage: Ongoing project
Country development: European Union
Contact information: N/A
Website: https://cordis.europa.eu/project/id/826247
Link(s) more information: https://cordis.europa.eu/project/id/826247

Project Fresson

Technology: Hybrid CTOL (based upon Britten-Norman airplane)
Number of Passengers: 9
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Develop innovative technology for a sustainable all-electric air transport solution
Stage: Project just started (announcement 18/11/2019)
Country development: United Kingdom
Contact information: +44 01234 754 046 enquiries@cranfieldaerospace.com
Website: https://www.cranfieldaerospace.com/
Link(s) more information: https://www.cranfieldaerospace.com/2019/cranfield-aerospace-solutions-caes-announces-9m-uk-government-grant-for-the-development-of-electric-flight/

Unifier19 (Pipistrel, Politecnico Milano, University Delft)

Technology: Near zero emission aircraft (probably hybrid)
Number of Passengers: 19
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Community friendly miniliner, European project
Stage: Project just started
Country development: European union
Contact information: N/A
Website: https://www.unifier19.eu/
Link(s) more information: https://www.unifier19.eu/?page_id=35
https://www.unifier19.eu/?page_id=62

BEHA M1H & M1AT & E1 (Faradair)

Technology: Hybrid, later full-electric battery
Number of Passengers: 18
Range/Endurance: +1800 km (15 minutes electric propulsion, full-electric version 4+ hours in the future)
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 1600 hp Turboprop (JetA or biofuel capable) hyrbird with 500+kW electric motor
Size: Wingspan 17m
Top speed: N/A
Cruising speed: 370 km/h
Battery capacity: N/A
Intended use: Passenger transport or cargo (heavy payload capability)
Stage: Concept, plans to have demonstrator by 2022, certified by 2025 (hybrid)
Country development: United Kingdom
Contact information: +44 1285 700811 info@faradair.com
Website: http://faradair.com/fwp/
Link(s) more information: http://faradair.com/fwp/beha-bio_electric_hybrid_aircraft/

ES-19 (Heart Aerospace)

Technology: Battery electric CTOL
Number of Passengers: 19
Range/Endurance: 400 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Commuter transport
Stage: Concept
Country development: Sweden
Contact information: info@heartaerospace.com
Website: https://heartaerospace.com/
Link(s) more information: https://heartaerospace.com/about/

Smartflyer

Technology: Hybrid CTOL (future maybe battery electric)
Number of Passengers: 4
Range/Endurance: 750 km or 4 hours
Weight (empty): 1000 kg
MTOW: 1400 kg
Payload: 400 kg
Engine: Rotax 914 with yasa generator for electric driven motor and propeller
Size: Length 8,25 m; Width 12 m; height 3,5 m
Top speed: N/A
Cruising speed: 222 km/h
Battery capacity: N/A
Intended use: Proof-of concept
Stage: Concept, first flight scheduled 2022
Country development: Switzerland
Contact information: +41 32 558 72 73 info@smartflyer.ch
Website: https://www.smartflyer.ch/
Link(s) more information: https://www.smartflyer.ch/aircraft/

Wright 1 (Wright)

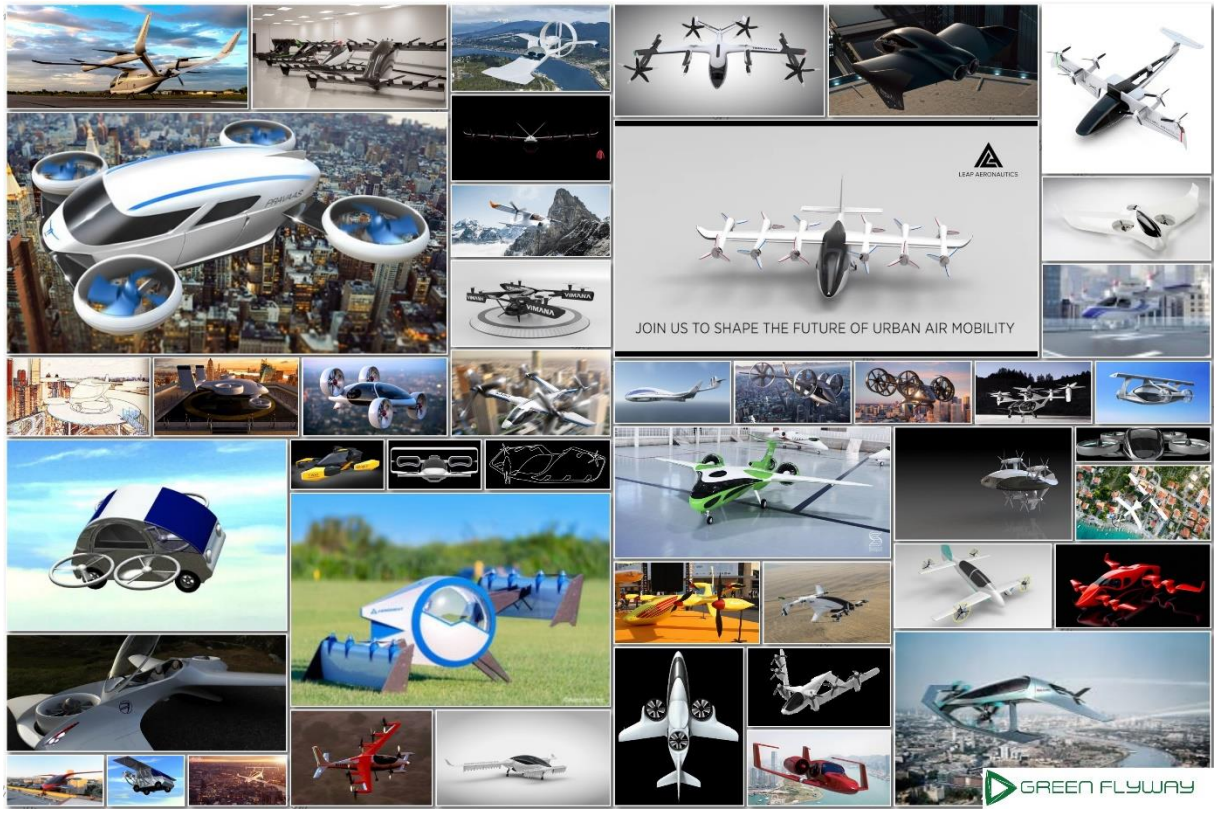
Technology: Electric jet engine CTOL
Number of Passengers: 186
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: Electric jet engine system
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Short haul flights
Stage: Motor testing planned 2021, flight testing 2023, into service planned for 2030
Country development: USA
Contact information: contact@weflywright.com
Website: https://weflywright.com/
Link(s) more information: https://weflywright.com/

Zunum aero

Technology: Hybrid CTOL (as batteries improve full electric)
Number of Passengers: 12
Range/Endurance: 1127 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 2x500 kW
Size: Length 12,8 m; Width 15,85 m; Height 5,5 m
Top speed: 547 km/h
Cruising speed: N/A
Stall speed: 135 km/h
Battery capacity: N/A
Intended use: Commuter jet
Stage: Concept
Country development: USA
Contact information: info@zunum.aero
Website: https://zunum.aero/
Link(s) more information: https://zunum.aero/aircraft/

VTOL – Vertical take-off and landing – vectored trust

Vertical take-off and landing is a term for aircraft designs that can take off vertically and land vertically while flying as a more traditional aircraft while in the air. Vectored trust means that the same propellers are both used to lift the aircraft and provide trust while cruising. To do this in most cases the propellers or propeller and engine or the entire wing can be tilted.



aEro 2 (Dufour Aerospace)

Technology: Hybrid-electric VTOL, tilt-wing design
Number of Passengers: 2 (pilot included)
Range/Endurance: 800 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 2 propeller hybrid system
Size: N/A
Top speed: N/A
Cruising speed: 320 km/h
Battery capacity: N/A
Intended use: Replace urban and rural transport
Stage: Testing
Country development: Switzerland
Contact information: info@defour.aero
Website: https://dufour.aero/
Link(s) more information: https://dufour.aero/aero-2-design-philosophy/
https://evtol.news/aircraft/dufour-aero2/

ALIA (Beta technologies)

Technology: Battery electric VTOL lift+cruise
Number of Passengers: 6
Range/Endurance: N/A
Weight (empty): N/A
MTOW: 2722 kg
Payload: N/A
Engine: N/A
Size: 15m wingspan
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Short flights
Stage: Test flights, new design being developed
Country development: USA
Contact information: info@beta.team +802 281 3623
Website: https://www.beta.team/
Link(s) more information: https://www.beta.team/beta-home/aircraft/
https://evtol.news/aircraft/beta-technologies-prototype/

Blackfly

Technology: Battery electric VTOL, 8 propellers (Autonomous or piloted)
Number of Passengers: 1
Range/Endurance: 64 km (many characteristics limited in USA to fall in FAA part 103 ultralight standards)
Weight (empty): 142 kg
MTOW: 255 kg
Payload: 113,4 kg
Engine: 8 propellers
Size: Length 4.08 m; Width 4,1 m; Height 1,52 m
Top speed: N/A
Cruising speed: 128 km/h
Battery capacity: 12 kWh
Intended use: Personal vehicle
Stage: Testing, pre-production phase flown over 50 000 km in over 3200 flights
Country development: USA
Contact information: info@opener.aero
Website: https://www.opener.aero/
Link(s) more information: https://www.opener.aero/ https://evtol.news/aircraft/opener-blackfly/

Heaviside (Kitty Hawk)

Technology: Battery electric VTOL, 8 propellers (piloted or autonomous)
Number of Passengers: 1
Range/Endurance: 160 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 8 propellers which tilt downwards for vertical lift
Size: N/A
Top speed: N/A
Cruising speed: 354 km/h
Battery capacity: N/A
Intended use: Personal vehicle or air taxi
Stage: Testing
Country development: USA
Contact information: media@kittyhawk.aero
Website: https://kittyhawk.aero/
Link(s) more information: https://evtol.news/aircraft/kitty-hawk-heaviside/
https://kittyhawk.aero/heaviside/

JET (Lilium)

Technology: Battery electric VTOL, 36 ducted propellers/fans
Number of Passengers: 5
Range/Endurance: 300 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 36 ducted propellers or fans with 36 electric motors
Size: N/A
Top speed: N/A
Cruising speed: 300 km/h
Battery capacity: N/A
Intended use: Air taxi, on demand air transportation
Stage: Testing, want to be fully operational in various cities by 2025
Country development: Germany
Contact information: N/A
Website: https://lilium.com/
Link(s) more information: https://lilium.com/the-jet https://evtol.news/aircraft/lilium/

S4 (Joby Aviation)

Technology: Battery electric VTOL, 6 propellers (piloted)
Number of Passengers: 1 pilot + 4 passengers
Range/Endurance: 241 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 6 tiltrotors, 4 propellers tilt vertical including the entire motor nacelle, 2 propellers tilt vertically with a linkage mechanism
Size: Length 7,3 m; Wingspan 10,7 m
Top speed: N/A
Cruising speed: 322 km/h
Battery capacity: N/A
Intended use: Air taxi, commercial partnership with Uber
Stage: Currently testing production prototypes, planned certification 2022, committed timetable to deploy air taxi services by 2023 (Uber Elevate)
Country development: USA
Contact information: info@joby.aero
Website: https://www.jobyaviation.com/#
Link(s) more information: https://www.jobyaviation.com/# https://evtol.news/aircraft/joby-aviation/

Vahana (A³ Acubed – Airbus)

Technology: Battery-powered VTOL, 8-prop tilt-wing prototype (self-piloting)
Number of Passengers: 1
Range/endurance: 60 km
Weight (empty): 475 kg
MTOW: 815 kg
Payload: 200 kg
Engine: 8x45kW
Size: Fuselage length 5,7m; Overall height 2,81m; Wingspan 6,25m
Top speed: N/A
Cruising speed: 200 km/h
Battery capacity: N/A
Intended use: Demonstrating the viability of a self-piloted, electric urban air mobility vehicle
Stage: Finished project which did 138 test flights, flying about 900 km, and over 13 hours of flight time.
Country development: USA, Silicon Valley
Contact information: 601 West California Ave, Sunnyvale, CA 94086: hello@airbus-sv.com
Website: https://acubed.airbus.com/
link(s) more information: https://acubed.airbus.com/projects/vahana/
https://evtol.news/aircraft/a3-by-airbus/

Y6S (Autonomous flights)

Technology: Battery powered VTOL, tilt-propeller (autonomous)
Number of Passengers: 2
Range/Endurance: 130 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 3 propellers electrical driven
Size: N/A
Top speed: 113 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Air taxi for short distances
Stage: Test flights with prototype
Country development: United Kingdom
Contact information: info@atonomousflight.com; +44 (0) 2075 662191
Website: https://autonomousflight.com/
Link(s) more information: https://autonomousflight.com/
https://evtol.news/aircraft/autonomous-flight/

Nexus 4EX (Bell)

Technology: Battery electric or hybrid-electric VTOL, 4 ducted propellers
Number of Passengers: 1 pilot + 4 passengers
Range/Endurance: battery electric 97 km; hybrid-electric 241 km
Weight (empty): N/A
MTOW: 3175 kg
Payload: N/A
Engine: 4 ducted propellers
Size: 12,2 m by 12,2 m
Top speed: N/A
Cruising speed: 241km/h
Battery capacity: N/A
Intended use: Urban Air Mobility / Air taxi
Stage: Prototype
Country development: USA
Contact information: +1 817 280-2011
Website: https://www.bellflight.com/
Link(s) more information: https://www.bellflight.com/products/bell-nexus
https://evtol.news/aircraft/bell-nexus-4ex/

Nexus 6HX (Bell)

Technology: Hybrid-electric VTOL, 6 ducted propellers
Number of Passengers: 1 pilot + 4 passengers
Range/Endurance: 241 km
Weight (empty): N/A
MTOW: 2720 kg
Payload: N/A
Engine: 6 ducted propellers
Size: 12,2 m by 12,2 m
Top speed: 288 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Urban Air Mobility / Air taxi
Stage: Prototype
Country development: USA
Contact information: +1 817 280-2011
Website: https://www.bellflight.com/
Link(s) more information: https://www.bellflight.com/products/bell-nexus
https://evtol.news/aircraft/bell-air-taxi/

Skycar M200 & M400 (Moller)

Technology: Electric-hybrid VTOL, ethanol
Number of Passengers: 2 and 4
Range/Endurance: 700 km and 1295 km
Weight (empty): 417 kg and 765 kg
MTOW: 598 kg and 1090 kg
Payload: 181,4 kg and 325 kg
Engine: Ethanol fuel Rotapower engine, producing energy for electric motors, and 2 or 4 ducted propellers
Size: Length 4,27 m; Width 2,59 m; height 1,82 m and Length 6,5 m; Width 2,5 m; Height 2,25 m
Top speed: 389,5 km/h and N/A
Cruising speed: 330 km/h and 496 km/h
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Prototype (has been developing over 15 years)
Country development: USA
Contact information: +5307565086 dr.moller@moller.com
Website: https://www.moller.com/index.html
Link(s) more information: https://www.moller.com/moller_skycar200.html https://www.moller.com/moller_skycar400.html https://evtol.news/aircraft/moller-skycar-m200/ https://evtol.news/aircraft/moller-skycar-m400/

Archer (Archer)

Technology: Battery powered VTOL, 12 propellers (piloted, later autonomous capability)
Number of Passengers: 4
Range/Endurance: 100 km
Weight (empty): N/A
MTOW: 3175 kg
Payload: N/A
Engine: 12 propellers
Size: N/A
Top speed: N/A
Cruising speed: 241 km/h
Battery capacity: 187 kWh (143 kWh usable)
Intended use: Fix the traffic problem within cities and move to a fully renewable transportation solution
Stage: Developing prototypes
Country development: USA
Contact information: N/A
Website: https://www.flyarcher.com/
Link(s) more information: https://www.flyarcher.com/ https://evtol.news/aircraft/archer/

MOBi-ONE (Airspace Experience Technologies)

Technology: Tilt-wing aircraft (VTOL) hybrid or electric (piloted on board, plans for autonomous later)
Number of Passengers: 5
Range/Endurance: 140 km electric; 416 km hybrid
Weight (empty): N/A
MTOW: N/A
Payload: 453 kg
Engine: 6 propellers either powered electrical or hybrid
Size: Length 9 m; height 3 m; width 12 m
Top speed: N/A
Cruising speed: 240 km/h
Battery capacity: N/A
Intended use: Airtaxi, making private air mobility accessible to everyone
Stage: Prototype in the making
Country development: USA
Contact information: N/A
Website: https://www.iflyasx.com/
Link(s) more information: https://www.iflyasx.com/mobi-one
https://evtol.news/aircraft/airspacex/

VRCO

Technology: Battery electric VTOL, 4 propellers
Number of Passengers: 2
Range/Endurance: 60 minutes
Weight (empty): N/A
MTOW: 450 kg
Payload: 180 kg
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: 300 km/h
Battery capacity: N/A
Intended use: Luxury personal vehicle
Stage: Building prototype
Country development: United Kingdom
Contact information: +44 1332 742 838 info@vrco.co.uk
Website: http://vrco.co.uk/
Link(s) more information: http://vrco.co.uk/the-project https://evtol.news/aircraft/vrco-neoxcraft/

AeroHans 2S and 4S (PDRL)

Technology: Battery electric VTOL, 8 propellers
Number of Passengers: 2 and 4
Range/Endurance: 40 km
Weight (empty): N/A
MTOW: N/A
Payload: 450 kg and 850 kg
Engine: 8 contra rotating propellers
Size: N/A
Top speed: 100 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Air taxi
Stage: 1/4 scale prototype
Country development: India
Contact information: +91 89836 09581 info@pdrl.in
Website: https://pdrl.in/
Link(s) more information: https://pdrl.in/aerohans-air-taxi/ https://evtol.news/aircraft/pdrl-aerohans-4s/ https://evtol.news/aircraft/pdrl-aerohans-2s/

Bartini

Technology: Battery powered VTOL, 8 rotors (Future possibly hydrogen)
Number of Passengers: 2-4
Range/Endurance: 150 km (550 km with hydrogen)
Weight (empty): 700
MTOW: 1100
Payload: 400
Engine: 8x40 kW
Size: Length 5,2 m; height 1,7 m; width 4,5 m
Top speed: N/A
Cruising speed: 300 km/h
Battery capacity: 64 kWh
Intended use: Providing an air taxi service
Stage: Prototype 1/2 scale
Country development: Russia
Contact information: info@bartini.aero
Website: https://www.bartini.aero/
Link(s) more information: https://www.bartini.aero/ https://evtol.news/aircraft/bartini/

DR-7 (Delorean Aerospace)

Technology: VTOL
Number of Passengers: 2
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: high end flying car for commuting and personal travel
Stage: 1/3 scale prototype made, more of a concept
Country development: USA
Contact information: N/A
Website: http://www.deloreanaerospace.com/
Link(s) more information: http://www.deloreanaerospace.com/
https://evtol.news/aircraft/delorean-aerospace/

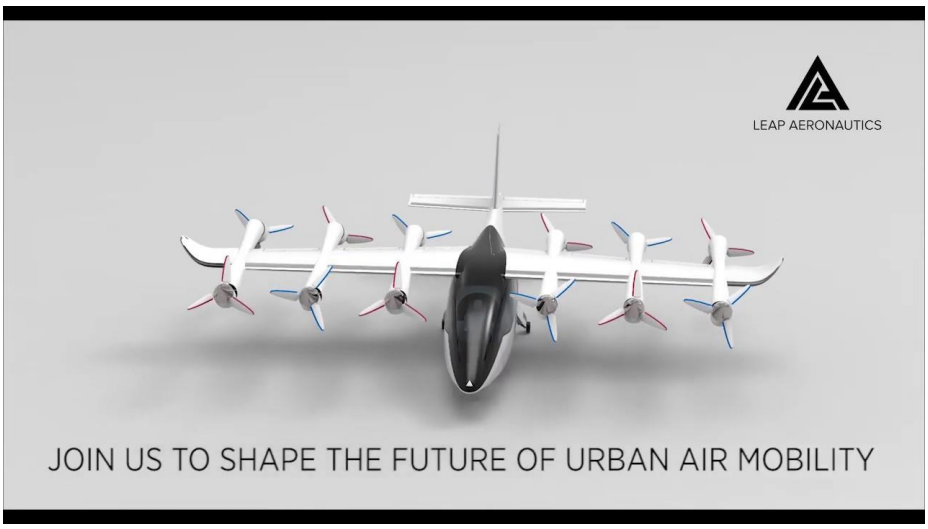
eOpter (Neoptera)

Technology: Battery powered or hybrid VTOL
Number of Passengers: 2 to 5
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: Either fully electric or hybrid version, 8 propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Urban transport or hybrid for public services, military, logistic missions
Stage: Sub-scale prototype
Country development: United kingdom, Germany and France
Contact information: N/A
Website: https://www.neoptera.aero/
Link(s) more information: https://www.neoptera.aero/ https://evtol.news/aircraft/neoptera/

Katla Aero

Technology: Battery electric VTOL
Number of Passengers: 2
Range/Endurance: N/A
Weight (empty): 500 kg
MTOW: N/A
Payload: 200 kg
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Cargo, Agriculture, farming, forestry, personal transport
Stage: Sub-scale prototypes (cargo-drone for 10 kg of payload)
Country development: Sweden
Contact information: N/A
Website: http://katla.aero/
Link(s) more information: http://katla.aero/

Leap aeronautics



Technology: Battery electric VTOL, 12 propellers (piloted)
Number of Passengers: 5
Range/Endurance: 125-200 km
Weight (empty): N/A
MTOW: 2180 kg
Payload: 500 kg
Engine: 12 propellers presumably tilting
Size: N/A
Top speed: N/A
Cruising speed: 250 km/h
Battery capacity: N/A
Intended use: Air taxi, logistics, air ambulance, …
Stage: Sub-scale prototypes
Country development: India
Contact information: N/A
Website: https://www.leapaero.com/
Link(s) more information: https://www.leapaero.com/ https://evtol.news/aircraft/leap-aeronautics/

Starling jet (Samad Aerospace)

Technology: Battery electric or hybrid electric-diesel VTOL (working towards autonomous)
Number of Passengers: Electric 7 max, hybrid 10 max
Range/Endurance: Electric 644 km, hybrid 1500 to 2400 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: Either electric or hybrid
Size: N/A
Top speed: N/A
Cruising speed: Electric 482 km/h, hybrid 740 km/h
Battery capacity: N/A
Intended use: Business, leisure domestic travels
Stage: 1/10 scale model
Country development: United kingdom
Contact information: +44 01234758078 info@starling-jet.com
Website: http://www.samadaerospace.com/
Link(s) more information: http://www.samadaerospace.com/starling-jet
https://evtol.news/aircraft/starling-jet/

Transwing (Pterodynamics)

Technology: Battery electric VTOL, unique folding and rotating wing (company want to patent and sell the wing system to other companies)
Number of Passengers: 2
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Prove the working of their wing system
Stage: Sub-scale prototypes
Country development: USA
Contact information: +1 875 576 2188 info@PetroDynamics.com
Website: https://www.pterodynamics.com/
Link(s) more information: https://www.pterodynamics.com/transwing
https://evtol.news/aircraft/pterodynamics-transwing/

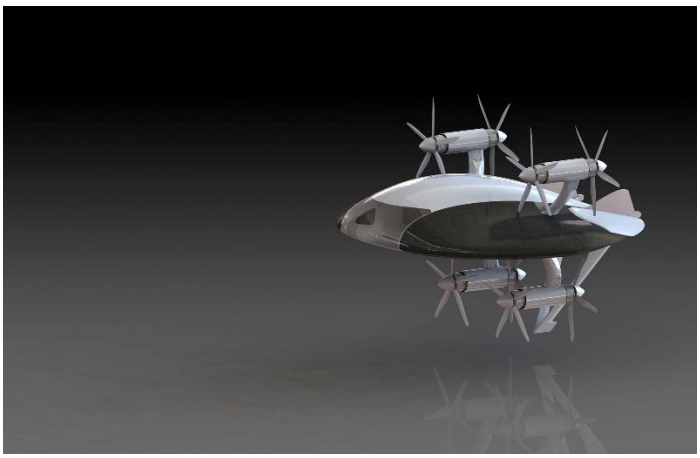
Trifan 600 (XTI Aircraft)

Technology: Hybrid VTOL, 3 propellers
Number of Passengers: 1 pilot + 6 passengers
Range/Endurance: 1060-1240 km
Weight (empty): 1588 kg
MTOW: 2404 kg
Payload: 816 kg
Engine: Hybrid 6 propellers
Size: Length 11,8 m; wing span 11,5 m
Top speed: N/A
Cruising speed: 555 km/h
Battery capacity: N/A
Intended use: Luxury personal vehicle
Stage: 65% scale prototype
Country development: USA
Contact information: +1 571 216 1594 Rlabelle@xtiaircraft.com
Website: http://www.xtiaircraft.com/home/
Link(s) more information: http://www.xtiaircraft.com/trifan-600/
https://evtol.news/aircraft/xti-aircraft/

Venturi (HopFlyt)

Technology: Battery electric VTOL, uses variable incidence wing & canards with channels
Number of Passengers: 4
Range/Endurance: 185 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 8 propellers
Size: Length 7 m; wingspan 8 m
Top speed: N/A
Cruising speed: 220 km/h
Battery capacity: N/A
Intended use: Aerial mobility under 200 miles (320 km)
Stage: Sub-scale prototype
Country development: USA
Contact information: N/A
Website: http://hopflyt.com/
Link(s) more information: http://hopflyt.com/venturiold/ https://evtol.news/aircraft/hopflyt/

Zero (Zeva)



Technology: Battery electric VTOL, 8 propellers
Number of Passengers: 1
Range/Endurance: 80 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 8 propellers
Size: N/A
Top speed: N/A
Cruising speed: 258 km/h
Battery capacity: N/A
Intended use: Air taxi
Stage: Sub-scale prototype
Country development: USA
Contact information: info@zevaaero.com
Website: https://www.zevaaero.com/
Link(s) more information: https://www.zevaaero.com/zero/ https://evtol.news/aircraft/zeva-zero/

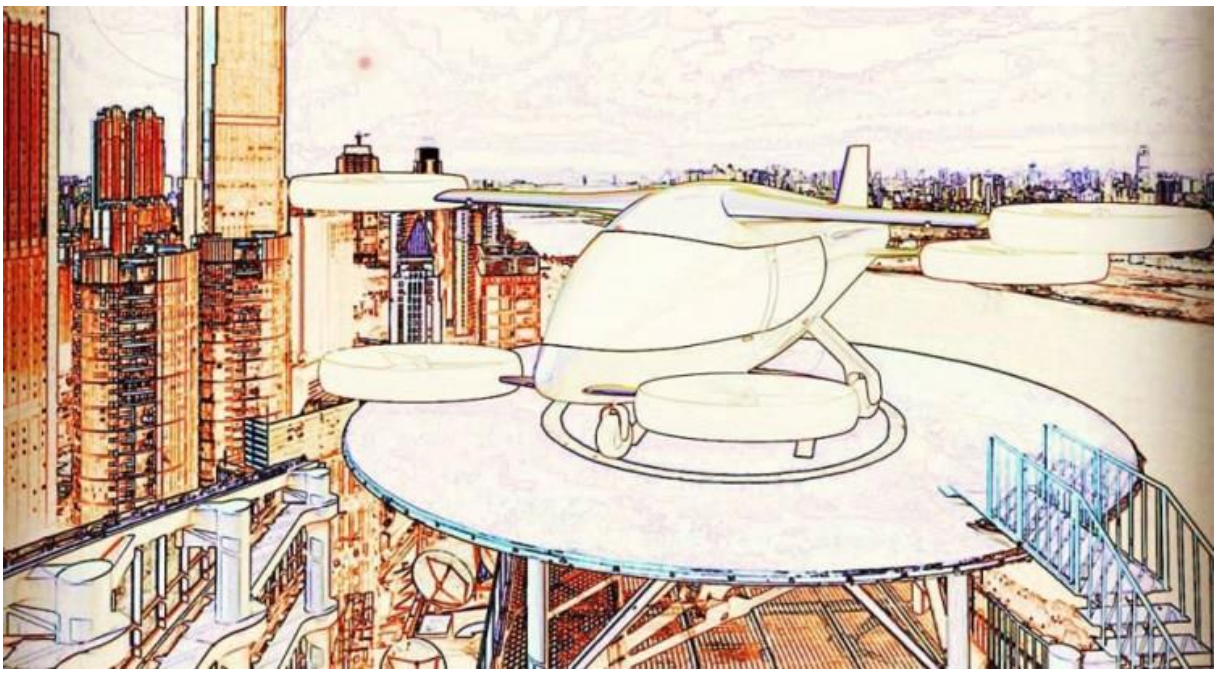
AG-4 Liberty (AeroG Aviation LLC)

Technology: Electric or hybrid-electric VTOL aircraft with ducted fans
Number of Passengers: 2 pilots + 10 passengers
Range/Endurance: N/A
Weight (empty): 4681 kg
MTOW: 5670 kg
Payload: 907 kg
Engine: 4 electric motors, each motor is a 3 phase AC induction motor rated at 1200 kW
Size: Length 12,53 m; Height 5,35 m; Wingspan 14,8 m
Top speed: N/A
Cruising speed: 519 km/h
Battery capacity: N/A
Intended use: The goal was to create and aircraft that can serve aviation customers and cargo deliveries who need vertical take-off and landing and want the high-end performance of a small jet or turboprop aircraft.
Stage: Concept, looking for partnership with existing aviation manufacturers to bring their aircraft to the market
Country development: USA
Contact information: N/A
Website: https://aerogaviation.com/
Link(s) more information: https://aerogaviation.com/ag-4-liberty-evtol
https://evtol.news/aircraft/aerog-aviation-ag-4/

APV-1 VTOL aircraft (Aliptera)

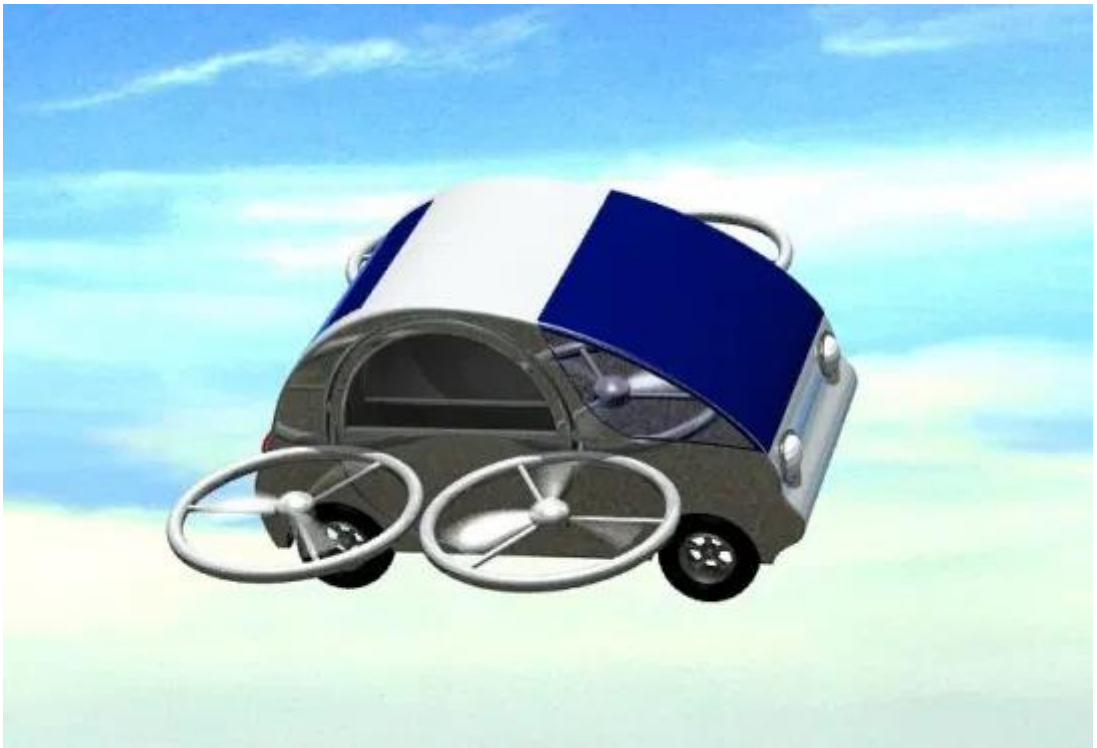
Technology: Lip wing VTOL aircraft
Number of Passengers: 2
Range/Endurance: 772 km
Weight (empty): N/A
MTOW: N/A
Payload: 635 kg
Engine: N/A
Size: N/A
Top speed: 389 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: N/A
Stage: Concept
Country development: Canada
Contact information: N/A
Website: http://aliptera.com/index.html#Home
Link(s) more information: http://aliptera.com/index.html#Home https://evtol.news/aliptera-apv-1/

Baaz (Baaz)



Technology: Battery powered VTOL, 6 ducted propellers
Number of Passengers: 4
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 6 ducted propellers and 6 electric motors
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Help people travel quickly and safely in urban areas
Stage: Concept
Country development: Germany
Contact information: contact@baaz-flight.com
Website: https://www.baaz-flight.com/
Link(s) more information: https://www.baaz-flight.com/ https://evtol.news/aircraft/baaz/

Fipsi BX4 (Flying Innovative Personal Space Icong)



Technology: Combined road vehicle and VTOL aircraft
Number of Passengers: 2
Range/Endurance: 48 km (flight)
Weight (empty): 449 kg
MTOW: 630 kg
Payload: 181 kg
Engine: 4 propellers
Size: N/A
Top speed: 89 km/h
Cruising speed: 72 km/h
Battery capacity: N/A
Intended use: Personal use, emergency use
Stage: Concept
Country development: USA
Contact information: +1 248 885 2579; office@fipsi.org
Website: http://fipsi.org/
Link(s) more information: https://evtol.news/aircraft/advanced-system-engineering-bx4/
http://fipsi.org/design

Fipsi WX4 (Flying Innovative Personal Space Icong)

Technology: Combined road vehicle and VTOL aircraft
Number of Passengers: 2
Range/Endurance: N/A
Weight (empty): 449 kg
MTOW: 630 kg
Payload: 181 kg
Engine: 4 propellers
Size: N/A
Top speed: 89 km/h
Cruising speed: 72 km/h
Battery capacity: N/A
Intended use: Personal use, emergency use
Stage: Concept
Country development: USA
Contact information: +1 248 885 2579; office@fipsi.org
Website: http://fipsi.org/
Link(s) more information: https://evtol.news/aircraft/advanced-system-engineering-wx4/
http://fipsi.org/design

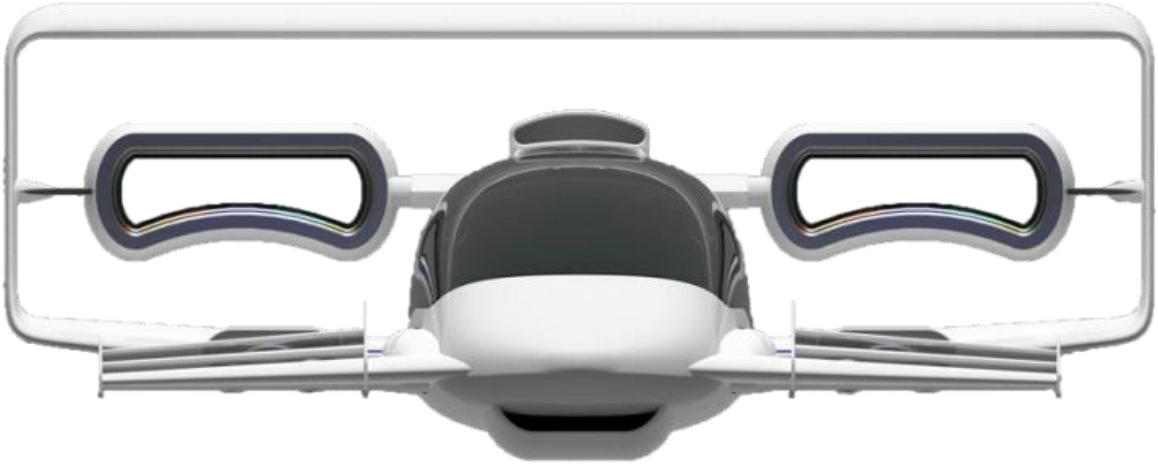
Flying Gondola (Aeronext)

Technology: VTOL hybrid drone (Autonomous)
Number of Passengers: 1
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 8 propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: N/A
Stage: Concept (1/3 size prototype)
Country development: Japan
Contact information: N/A
Website: https://aeronext.com/
Link(s) more information: https://aeronext.com/service/next-mobility/
https://evtol.news/aircraft/aeronext-flying-gondola/

Formula (Hoversurf)

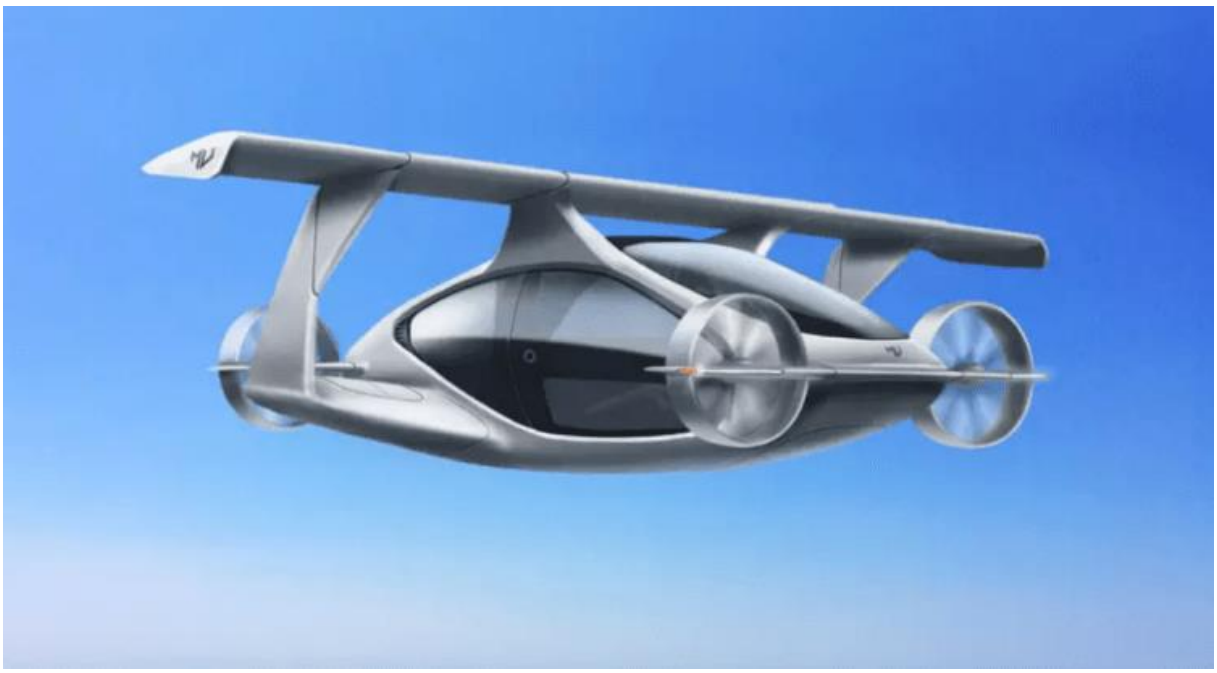
Technology: Battery electric drone
Number of Passengers: 2 or 4
Range/Endurance: 300 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: Multiple propellers for hovering and 2 propellers for forwards flight
Size: N/A
Top speed: 250 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Flying taxi
Stage: Concept
Country development: Russia & USA
Contact information: N/A
Website: https://www.hoversurf.com/
Link(s) more information: https://www.hoversurf.com/formula
https://evtol.news/aircraft/hoversurf-formula-no-wing/

J2000 (Jetoptera)



Technology: Gas VTOL, in the future possibly battery powered if technology improves
Number of Passengers: N/A
Range/Endurance: 322 km
Weight (empty): N/A
MTOW: 907 kg
Payload: 181 kg
Engine: Jetoptera propulsion system
Size: N/A
Top speed: N/A
Cruising speed: 322 km/h
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Concept
Country development: USA
Contact information: info@jetoptera.com +1 (425) 412 3293
Website: http://www.jetoptera.com/
Link(s) more information: http://www.jetoptera.com/products/
https://evtol.news/aircraft/jetoptera-j2000/

Macchina Volantis



Technology: Electric-hybrid VTOL, diesel
Number of Passengers: 4-5
Range/Endurance: 1600 km
Weight (empty): 1080 kg
MTOW: 1650 kg
Payload: 570 kg
Engine: 6 propellers, diesel engine to produce energy for electric flying/driving
Size: N/A
Top speed: N/A
Cruising speed: 278 km/h
Stall speed: 121 km/h
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Concept
Country development: Australia
Contact information: info@macchinavolantis.com (Stephen)
Website: http://www.macchinavolantis.com/#
Link(s) more information: http://www.macchinavolantis.com/#specs https://evtol.news/aircraft/macchine-volantis-flying-car/ https://newatlas.com/macchina-volantis-flying-car/58659/

MX 18 Silhouette S & M & X (Deep Blue Aviation)

Technology: Battery electric VTOL same concept for three models S – M - X
Number of Passengers: 0 – 2 – 9
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 3 rotors and electric motors
Size: Wingspan of 4,5 m; 10,5 m; 17 m
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Transportation of people and goods
Stage: Concept
Country development: Austria
Contact information: office@deepblueaviation.com +43 5372 71872
Website: http://www.deepblueaviation.com/index.html
Link(s) more information: http://www.deepblueaviation.com/whatwedo-e.html
https://evtol.news/aircraft/deep-blue-aviation-mx-18-silhouette-5/

OPPAV Optionally Piloted Personal Air Vehicle (KARI)

Technology: Battery electric VTOL
Number of Passengers: 1
Range/Endurance: 50 km
Weight (empty): 550 kg
MTOW: 650 kg
Payload: 100 kg
Engine: N/A
Size: Length 6,15 m
Top speed: N/A
Cruising speed: 200 km/h
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Concept
Country development: South Korea
Contact information: +82 42 860 2114
Website: https://www.kari.re.kr/eng.do
Link(s) more information: https://www.kari.re.kr/eng/sub03_01_01.do#link
https://www.kari.re.kr/eng/sub03_01.do

Porsche (& Boeing)

Technology: Battery electric VTOL
Number of Passengers: 2
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Luxury personal vehicle
Stage: Concept
Country development: Germany
Contact information: N/A
Website: https://investors.boeing.com/investors/investor-news/press-release-details/2019/Porsche-and-Boeing-to-Partner-on-Premium-Urban-Air-Mobility-Market/default.aspx
Link(s) more information: https://investors.boeing.com/investors/investor-news/press-release-details/2019/Porsche-and-Boeing-to-Partner-on-Premium-Urban-Air-Mobility-Market/default.aspx https://evtol.news/aircraft/porsche-unnamed/

Ray VTOL Aircraft (Ray Research AG)

Technology: Electric-hybrid VTOL
Number of Passengers: 1 pilot + 4 passengers
Range/Endurance: 1800 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: Two Prat & Whitney PW210 turboshaft engines of 600kw provide power for six electric motors to drive the propellers
Size: N/A
Top speed: N/A
Cruising speed: 360 km/h
Battery capacity: N/A
Intended use: N/A
Stage: Concept
Country development: Switzerland
Contact information: info@rayAircraft.com
Website: http://www.rayaircraft.com/v3/concept.html
Link(s) more information: http://www.rayaircraft.com/v3/concept.html
https://evtol.news/aircraft/ray-vtol-aircraft/

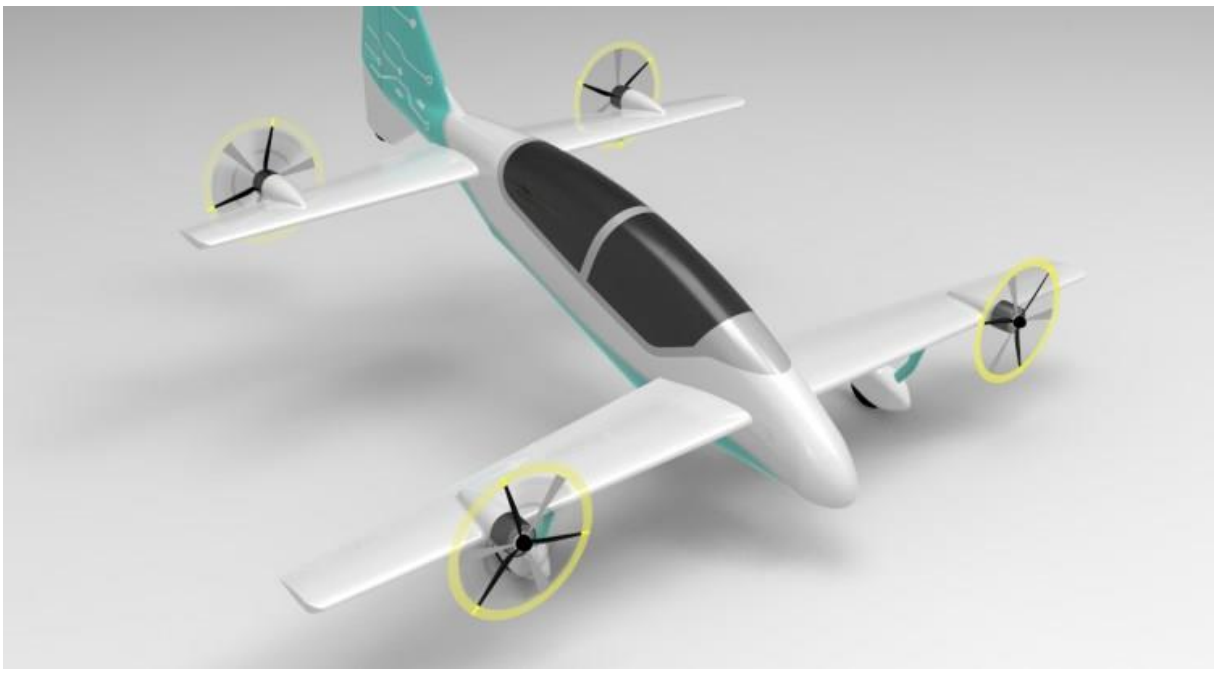
S-A1 (Hyundai)

Technology: Battery electric VTOL, 8 propellers (piloted, later autonomous)
Number of Passengers: 1 pilot + 4 passengers
Range/Endurance: 97 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 8 propellers (all used for vertical lift, 4 used for forward flight)
Size: N/A
Top speed: N/A
Cruising speed: 290 km/h
Battery capacity: N/A
Intended use: Together with Uber Elevate, make an aerial ridesharing service
Stage: Concept
Country development: South Korea
Contact information: +8220587114
Website: https://www.hyundai.com/worldwide/en
Link(s) more information: https://www.hyundai.com/worldwide/en/brand/time-to-stop-wasting-time https://www.uber.com/us/en/elevate/ https://evtol.news/aircraft/hyundai-s-a1/

VOLANTE VISION CONCEPT (Aston Martin)

Technology: Hybrid-electric VTOL, 6 propellers (autonomous)
Number of Passengers: 3
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: Hybrid-electric
Size: N/A
Top speed: N/AA
Cruising speed: 460 km/h
Battery capacity: N/A
Intended use: Luxury vehicle
Stage: Vision concept
Country development: United Kingdom
Contact information: N/A
Website: https://www.astonmartin.com/en-us
Link(s) more information: https://www.astonmartin.com/en-us/models/future-models/the-aston-martin-volante-vision-concept-usa https://evtol.news/aircraft/aston-martin-volante/

Z-300 EVTOL (ACS-aviation)



Technology: Battery powered VTOL, tandem tapered wing configuration with 4 rotors (semi-autonomous)
Number of Passengers: 2
Range/Endurance: Up to 300 km, 1 hour and half fly time
Weight (empty): N/A
MTOW: 1000 kg
Payload: N/A
Engine: 4x35 kW
Size: N/A
Top speed: N/A
Cruising speed: 222 km/h
Battery capacity: N/A
Intended use: N/A
Stage: Concept
Country development: Brazil
Contact information: +55 1239448297; Alexandre.zaramella@acs-solutions.com.br
Website: https://www.acs-solutions.com.br/
Link(s) more information: https://www.acs-solutions.com.br/index.php/produtos
https://evtol.news/aircraft/acs-aviation-z-300/

AAV (Vimana)

Technology: Hybrid VTOL, 8 propellers
Number of Passengers: 4
Range/Endurance: 900 km
Weight (empty): N/A
MTOW: 1250 kg
Payload: 400 kg
Engine: 200 kW hybrid powerplant and 8x60 kW electric engine propellers
Size: Wingspan 10 m
Top speed: N/A
Cruising speed: 244 km/h
Battery capacity: N/A
Intended use: Urban air mobility, agriculture, surveying platform
Stage: Unknown
Country development: USA
Contact information: info@vimana.global
Website: https://vimana.global/
Link(s) more information: https://vimana.global/vtolaav https://evtol.news/aircraft/vimana/

Butterfly (Overair / Karem)

Technology: Battery electric VTOL, 4 propellers
Number of Passengers: 1 pilot + 4 passengers
Range/Endurance: 161 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 4 propellers, large slow turning
Size: N/A
Top speed: N/A
Cruising speed: 240-322 km/h
Battery capacity: N/A
Intended use: Air taxi, partnership with Uber
Stage: Unknown
Country development: USA
Contact information: info@overair.com
Website: https://www.overair.com/
Link(s) more information: https://evtol.news/aircraft/karem-butterfly/

E-VOTO (Voyzon Aerospace)

Technology: Battery electric VTOL, 8 propellers (autonomous or semi-autonomous)
Number of Passengers: 2
Range/Endurance: 30 minutes
Weight (empty): 500 kg
MTOW: N/A
Payload: N/A
Engine: 8 propellers
Size: Length 4 m; width 8 m
Top speed: N/A
Cruising speed: 250 km/h
Battery capacity: N/A
Intended use: Air taxi, emergency services, surveillance
Stage: Unknown
Country development: India
Contact information: info@evoto.in
Website: http://www.evoto.in/
Link(s) more information: http://www.evoto.in/ https://evtol.news/aircraft/voyzon-aerospace-e-voto/

UAD M470 (DGWorld)

Technology: Battery electric VTOL, Six tilt propellers
Number of Passengers: 0 or 2 depending on design
Range/Endurance: 500 km
Weight (empty): 293 kg
MTOW: 472,5 kg
Payload: 177 kg
Engine: 6x58 kW
Size: Length 6,8 m; Width 8,7 m
Top speed: 215 km/h
Cruising speed: 175 km/h
Battery capacity: N/A
Intended use: Air taxi; civil defence; emergency relief; cargo
Stage: Unknown
Country development: United Arab Emirates
Contact information: info@dgworld.com +971 44 249 400
Website: https://www.dgworld.com/Home
Link(s) more information: https://www.dgworld.com/Drone-_-UAD-M470/25
https://evtol.news/aircraft/digi-robotics-drofire/

VTOL – vertical take-off and landing – Lift + cruise

Vertical take-off and landing is a term for aircraft designs that can take off vertically and land vertically while flying as a more traditional aircraft while in the air. With lift + cruise is meant models that have independent thrusters or propellers to lift themselves and for forward flight.

Cora (Wisk)

Technology: Battery electric lift+cruise
Number of Passengers: 2
Range/Endurance: 40 km + reserve
Weight (empty): N/A
MTOW: N/A
Payload: 181 kg
Engine: 12 propellers for vertical lift and 1 propeller for forward flight (all electric driven)
Size: N/A
Top speed: N/A
Cruising speed: 180 km/h
Battery capacity: N/A
Intended use: Air taxi
Stage: Testing (made over 1000 flights)
Country development: USA (test flights mostly in New Zealand)
Contact information: N/A
Website: https://wisk.aero/
Link(s) more information: https://wisk.aero/cora/ https://evtol.news/aircraft/kitty-hawk-cora/

PAV Passenger Air Vehicle (Aurora Flight Sciences, a Boeing Company)

Technology: Battery electric lift+cruise
Number of Passengers: 2
Range/Endurance: 80 km
Weight (empty): 565 kg
MTOW: 800 kg
Payload: 225 kg
Engine: 8 propellers for vertical lift and 1 tail mounted five bladed pusher propeller for forward flight all electric
Size: Length 9,14 m; Wingspan 8,53 m
Top speed: N/A
Cruising speed: 180 km/h
Battery capacity: N/A
Intended use: Air taxi (partner of Uber)
Stage: Test flights with prototype
Country development: USA
Contact information: +703 369 3633 info@aurora.aero
Website: https://www.aurora.aero/
Link(s) more information: https://www.aurora.aero/pav-evtol-passenger-air-vehicle/ https://evtol.news/aircraft/aurora/

V600 & V880 (AutoFlightX)

Technology: Battery electric lift+cruise
Number of Passengers: 2 & 0
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A & 1000 kg
Payload: N/A
Engine: 8 propellers for vertical flight and 1 propeller for forward flight
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Autonomous air taxis, regular piloted sports aircraft, unmanned autonomous cargo drones
Stage: V600 prototype build, tests starting 2020
Country development: Germany
Contact information: +49 8105 7989755
Website: https://autoflightx.com/
Link(s) more information: https://autoflightx.com/ https://evtol.news/aircraft/autoflightx-v880/ https://evtol.news/aircraft/autoflightx-v600/

Zuri

Technology: Hybrid-electric lift+cruise
Number of Passengers: 4
Range/Endurance: 500-700 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 8 electric motors for vertical lift and 1 propeller (engine turboprop) for forward flight
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Travel between cities
Stage: Building first prototype/demonstrator (seeking funding)
Country development: Czech republic
Contact information: michal@zuri.com
Website: https://zuri.com/
Link(s) more information: https://zuri.com/technology

Vertical Business Jet (Pegasus)

Technology: ICE lift+cruise (maybe hybrid)
Number of Passengers: 7
Range/Endurance: VTOL 2124 km, conventional runways 4400 km
Weight (empty): 3040 kg
MTOW: 5700 kg
Payload: 2660 kg
Engine: Turboshaft, 4 fans for vertical lift, and 2 fans for forwards flight
Size: Length 15 m; Wingspan 14,38 m; height 3,6 m
Top speed: 796 km/h
Cruising speed: 759 km/h
Stall speed: 130 km/h
Battery capacity: N/A
Intended use: Business jet
Stage: Subscale prototypes
Country development: South Africa
Contact information: +27 11 483 0881 info@pegasusua.com
Website: https://pegasusua.com/
Link(s) more information: https://pegasusua.com/pegasus-vertical-business-jet-2/
https://evtol.news/aircraft/pegasus-universal-aerospace-vertical-business-jet/

801 (Pipistrel)

Technology: Hybrid or battery electric VTOL
Number of Passengers: 4
Range/Endurance: 97 km electric or 300 km hybrid
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 8 propellers for vertical lift, 1 propeller for forward flight
Size: N/A
Top speed: 282 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Air taxi (electric), cargo VTOL (hyrbrid)
Stage: Concept
Country development: Slovenia
Contact information: +386 536 63873 info@pipistrel-aircraft.com
Website: https://www.pipistrel-aircraft.com/
Link(s) more information: https://evtol.news/aircraft/pipistrel-801-evtol/ https://evtol.news/aircraft/pipistrel-cargo-drone/ https://www.uber.com/us/en/elevate/partners/

Atea (Ascendance flight technologies)

Technology: Hybrid lift+cruise
Number of Passengers: 1 pilot + 3 passengers
Range/Endurance: 150 km
Weight (empty): N/A
MTOW: 2000 kg
Payload: 450 kg
Engine: 3 lift fans powered by 3 electric motors for vertical flight and 1 nose-mounted propeller for forward flight
Size: N/A
Top speed: N/A
Cruising speed: 200 km/h
Battery capacity: N/A
Intended use: Air taxi
Stage: Concept
Country development: France
Contact information: contact@ascendance-ft.com
Website: https://www.ascendance-ft.com/#home
Link(s) more information: https://www.ascendance-ft.com/#home
https://evtol.news/aircraft/atea/

EmbraerX

Technology: Battery electric lift+cruise
Number of Passengers: 1 pilot + 4
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 8 electric propellers for vertical flight, 1 or 2 ducted propellers for forward flight
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Air taxi
Stage: Concept
Country development: USA
Contact information: +954 359 3800
Website: https://embraerx.embraer.com/global/en
Link(s) more information: https://journalofwonder.embraer.com/global/en/163-flying-for-everyone https://evtol.news/aircraft/embraer/

PAC VTOL 420-120 (Flyter)

Technology: Hybrid-electric or battery electric lift+cruise
Number of Passengers: 1
Range/Endurance: Hybrid 900 km, battery electric 160 km
Weight (empty): N/A
MTOW: 420 kg
Payload: N/A
Engine: Polini Thor 250 Dual spark 4 Helix VTOL propellers or batteries depending on model 1 propeller for forward flight
Size: Length 5,45 m; width 5,8 m; Height 2,15m
Top speed: 260 km/h
Cruising speed: 240 km/h
Battery capacity: N/A
Intended use: First cargo, later manned aircraft with VTOL after air taxi
Stage: Concept
Country development: Russia
Contact information: +7 978 832 25 66 Solodovnikov.technoart@yandex.ru
Website: https://flyter.aero/en
Link(s) more information: https://flyter.aero/en/products https://evtol.news/aircraft/flyter-pak-vtol-420-120/

PAC VTOL 720-200 (Flyter)

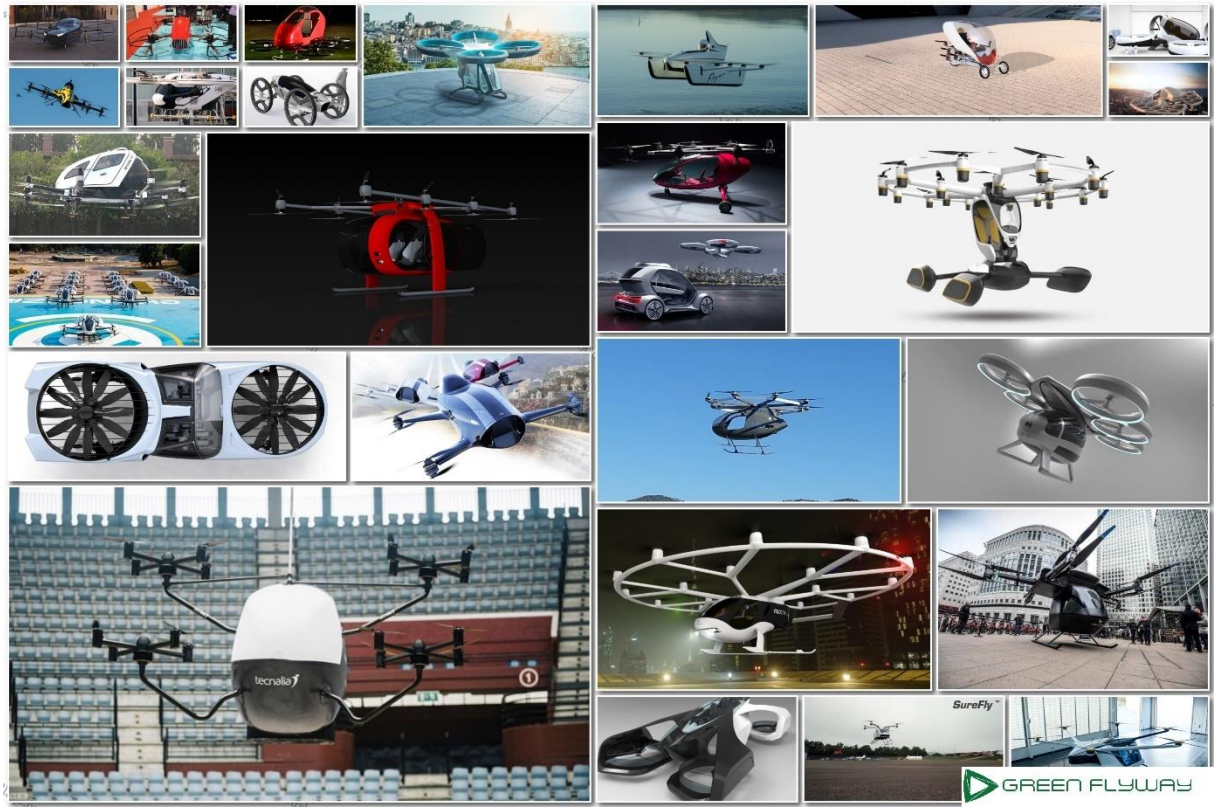
Technology: ICE, hybrid electric or battery electric lift+Cruise
Number of Passengers: 2 or cargo
Range/Endurance: ICE 900 km, hybrid 900 km, battery electric 150 km
Weight (empty): N/A
MTOW: 720 kg
Payload: 200 kg
Engine: 8 Helix propellers for vertical flight, 1 woodcomp propeller for forward flight. Depending on model ICE (Rotax 912 iS), hybrid or batteries
Size: Length 6,25 m; Width 7 m; Height 2,65 m
Top speed: 300 km/h
Cruising speed: 250 km/h
Battery capacity: N/A
Intended use: Cargo or Air taxi
Stage: Concept
Country development: Russia
Contact information: +7 978 832 25 66 Solodovnikov.technoart@yandex.ru
Website: https://flyter.aero/en
Link(s) more information: https://flyter.aero/en/products https://evtol.news/aircraft/flyter-pac-vtol-720-200/

TF-2 air vehicle (Terrafugia)

Technology: Hybrid-electric lift+cruise (future fully electric)
Number of Passengers: 1 pilot + 4
Range/Endurance: 300 km (30 minutes reserve power)
Weight (empty): N/A
MTOW: N/A
Payload: 544 kg
Engine: 6 propellers for vertical lift and 2 propellers for forward flight
Size: N/A
Top speed: 230 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Air vehicle and road vehicle on demand
Stage: Concept
Country development: USA
Contact information: + 1 781 491 0812 info@terrafugia.com
Website: https://terrafugia.com/
Link(s) more information: https://terrafugia.com/tf-2/#about-section
https://evtol.news/aircraft/terrafugia-tf-2/

Multicopter

A multicopter is in theory a rotorcraft with multiple lift-generating rotors. It is the design we see most in small drones, where lift is created with multiple rotors and forward flight is made by the same rotors without tilting them, but basically tilting the whole aircraft. In small drones we can see them as quadcopters, hexacopters or even octocopters. For larger multicopters the same concepts can be used or more unique designs are also possible.



Ehang 116

Technology: Battery electric multicopter
Number of Passengers: 1
Range/Endurance: 31 km / 19 minutes
Weight (empty): N/A
MTOW: N/A
Payload: 140 kg
Engine: 16 electric motors and propellers
Size: N/A
Top speed: 130 km/h
Cruising speed: 100 km/h
Battery capacity: N/A
Intended use: Air taxi
Stage: Production ready, testing in multiple countries, flight permits in some countries
Country development: China
Contact information: +86 020 29 02 88 99 eruope@ehang.com
Website: https://www.ehang.com/index/
Link(s) more information: https://www.ehang.com/ehangaav
https://evtol.news/aircraft/ehang-116/

Ehang 216

Technology: Battery electric multicopter
Number of Passengers: 2
Range/Endurance: 35 km or 21 minutes
Weight (empty): N/A
MTOW: N/A
Payload: 220 kg
Engine: 16 electric motors and propellers
Size: N/A
Top speed: 130 km/h
Cruising speed: 100 km/h
Battery capacity: N/A
Intended use: Air taxi
Stage: Production ready, testing in multiple countries, flight permits in some countries
Country development: China
Contact information: +86 020 29 02 88 99 eruope@ehang.com
Website: https://www.ehang.com/index/
Link(s) more information: https://www.ehang.com/ehangaav
https://evtol.news/aircraft/ehang-216/

Airspeeder (Aluada)

Technology: Battery electric multicopter
Number of Passengers: 1
Range/Endurance: 12 minutes
Weight (empty): 120 kg
MTOW: N/A
Payload: N/A
Engine: 8 x 45 kW motors/propellers
Size: N/A
Top speed: 200 km/h
Cruising speed: 130 km/h
Battery capacity: 5-12 kWh
Intended use: Racing
Stage: Test flights with prototype
Country development: Australia
Contact information: info@airspeeder.com
Website: https://airspeeder.com/
Link(s) more information: https://airspeeder.com/speeders
https://evtol.news/aircraft/alauda-airspeeder/

Big drone (Drone champions)

Technology: Battery electric multicopter
Number of Passengers: 1
Range/Endurance: N/A
Weight (empty): 98 kg
MTOW: 165 kg
Payload: 67 kg
Engine: 12 motors and propellers
Size: N/A
Top speed: 140 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Racing / aerobatics / recreational
Stage: Test flights
Country development: Liechtenstein
Contact information: office@dronechampions.org
Website: https://dcl.aero/
Link(s) more information: https://dcl.aero/drone-champions-ag-unveils-worlds-first-manned-aerobatic-drone/ https://dcl.aero/explore/big-drone/ https://evtol.news/aircraft/drone-champions-big-drone/

CityAirbus (Airbus & Rolls Royce)

Technology: Battery electric multicopter
Number of Passengers: 4
Range/Endurance: 15 minutes
Weight (empty): N/A
MTOW: 2200 kg
Payload: N/A
Engine: 8 x 100 kW electric motors
Size: 8 m by 8 m
Top speed: N/A
Cruising speed: 120 km/h
Battery capacity: 110 kWh
Intended use: Air taxi
Stage: Testing (over 100 test flights)
Country development: France
Contact information: +33 442 85 85 85 customersupport.helicopters@airbus.com
Website: https://www.airbus.com/
Link(s) more information: https://www.airbus.com/innovation/zero-emission/urban-air-mobility/cityairbus.html#specifications https://www.rolls-royce.com/innovation/propulsion/air-taxis.aspx

Crimson S8 & S8-SR(Neo Aeronautics)

Technology: Hybrid-electric multicopter
Number of Passengers: 1
Range/Endurance: 20 minutes on battery up to 100 minutes hybrid
Weight (empty): 115 kg
MTOW: 215 kg
Payload: 100 kg
Engine: 8 propellers
Size: Length 2,8 m; width 2,75 m; height 1,6 m
Top speed: 100 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Membership fee, sharing urban transport system
Stage: Indoor test flight
Country development: Singapore (market USA)
Contact information: enquiry@NEO-aeronautics.com
Website: https://www.neo-aeronautics.com/
Link(s) more information: https://www.neo-aeronautics.com/crimson-s8 https://evtol.news/aircraft/neo-aeronautics-crimson-s8/ https://evtol.news/aircraft/neo-aeronautics-crimson-s8-sr/

Elroy (Astro)

Technology: Battery electric multicopter
Number of Passengers: 2
Range/Endurance: 20 to 25 minutes
Weight (empty): 240 kg
MTOW: 360 kg
Payload: 120 kg
Engine: N/A
Size: Length 4,2 m; Width 2,3 m; Height 1,8 m
Top speed: 70 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Test flight in 2018, improved after
Country development: USA
Contact information: +833 359 8685 info@flyastro.com
Website: https://flyastro.com/
Link(s) more information: https://flyastro.com/features/
https://evtol.news/aircraft/passenger-drone/

FLUTR (Flutr motors)

Technology: Bio-diesel hybrid, later hydrogen and battery electric model
Number of Passengers: 2
Range/Endurance: 200 km
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: Bio-diesel engine (also normal diesel works) with 4 electric motors, and 4 ducted tilting propellers
Size: N/A
Top speed: N/A
Cruising speed: 250 km/h
Battery capacity: N/A
Intended use: Air taxi and personal vehicle
Stage: Claims to have a full scale full weight full power prototype testing, but no footage of this
Country development: Germany
Contact information: N/A
Website: https://www.flutrmotors.com/
Link(s) more information: https://www.flutrmotors.com/tech https://evtol.news/aircraft/flutr-motors-flutr/

Flyer (Kitty hawk)

Technology: Battery electric multicopter
Number of Passengers: 1
Range/Endurance: 12 to 20 minutes
Weight (empty): 113 kg
MTOW: N/A
Payload: N/A
Engine: 10 propellers
Size: N/A
Top speed: 32 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Easy flyable over water low altitude
Stage: Working model (not for sale) (Part 103 ultralight regulation)
Country development: USA
Contact information: media@kittyhawk.aero
Website: https://flyer.aero/
Link(s) more information: https://flyer.aero/#product https://evtol.news/aircraft/kitty-hawk-flyer/

Hexa (Lift aircraft)

Technology: Battery electric multicopter
Number of Passengers: 1
Range/Endurance: 15 minutes (25% reserve)
Weight (empty): 196 kg
MTOW: N/A
Payload: 113 kg
Engine: 18 propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Experiential entertainment business (fly on scenic locations for 250 dollars)
Stage: Part 103 Ultralight regulations, preformed manned test flights
Country development: USA
Contact information: N/A
Website: https://www.liftaircraft.com/
Link(s) more information: https://www.liftaircraft.com/aircraft https://evtol.news/aircraft/lift-hexa/

SD-XX (SkyDrive)

Technology: Battery electric multicopter
Number of Passengers: 2
Range/Endurance: 20 km
Weight (empty): N/A
MTOW: 500 kg
Payload: N/A
Engine: 8 propellers
Size: Length 4 m; Width 3,5 m; Height 1,5 m
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Drive and flight prototype
Stage: Prototype (test flights)
Country development: Japan
Contact information: N/A
Website: https://en.skydrive2020.com/
Link(s) more information: https://en.skydrive2020.com/air-mobility/
https://evtol.news/aircraft/skydrive-sd-xx/

Seraph (Vertical Aerospace)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: 250 kg
Engine: 12 propellers and electric motors
Size: Length 8 m; width 6 m; height 3 m
Top speed: 80 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Test new technologies for upcoming passenger model
Stage: Full-scale prototype making free unmanned flights
Country development: United Kingdom
Contact information: hello@vertical-aerospace.com
Website: https://www.vertical-aerospace.com/
Link(s) more information: https://www.vertical-aerospace.com/seraph/
https://evtol.news/aircraft/vertical-aerospace-seraph/

Surefly (Moog)

Technology: Hybrid multicopter
Number of Passengers: 2
Range/Endurance: 112 km
Weight (empty): 500 kg
MTOW: 680 kg
Payload: 180 kg
Engine: Gasoline piston Engine making electricity for propeller motors 8 propellers and motors
Size: N/A
Top speed: 113 km/h
Cruising speed: N/A
Battery capacity: 2x 7,5 kWh (one as backup system for emergency landing)
Intended use: Personal vehicle, military
Stage: Manned test flights
Country development: USA
Contact information: N/A
Website: https://www.moog.com/
Link(s) more information: https://www.moog.com/innovation/aircraft/SureFly.html
https://evtol.news/aircraft/workhorse/

Volocity (Volocopter)

Technology: Battery electric multicopter
Number of Passengers: 1 pilot (future 2 passengers autonomous)
Range/Endurance: 35 km
Weight (empty): 700 kg
MTOW: 900 kg
Payload: 200 kg
Engine: 18 brushless DC electric motors and 18 fixed-pitch rotors
Size: Diameter rotor 11,3 m
Top speed: 110 km/h
Cruising speed: 100 km/h
Battery capacity: N/A
Intended use: Air taxi
Stage: Previous models such as 2X, VC1/VC200 made over 1000 test flights, this is newest model in development
Country development: Germany
Contact information: info@volocopter.com
Website: https://www.volocopter.com/en/
Link(s) more information: https://www.volocopter.com/en/product/
https://evtol.news/aircraft/volocopter-volocity/

Whisper (Electric Aircraft Concept)

Technology: Battery electric multicopter
Number of Passengers: 2
Range/Endurance: 30 minutes
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 8 motors and propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Private vehicle
Stage: Unmanned test flight
Country development: France
Contact information: +33 6 03 48 28 37 info@eac-whisper.com
Website: http://www.eac-whisper.com/
Link(s) more information: http://www.eac-whisper.com/ https://evtol.news/aircraft/eac-whisper/

Zero G (Davinci)

Technology: Hybrid electric multicopter (later battery)
Number of Passengers: 1
Range/Endurance: N/A
Weight (empty): 90 kg
MTOW: N/A
Payload: 150 kg
Engine: N/A
Size: Diagonal 2,5 m
Top speed: 70 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Flying taxi
Stage: Manned prototype flight in 2017
Country development: Vietnam
Contact information: N/A
Website: https://www.da-vinci.us/
Link(s) more information: https://www.da-vinci.us/home-da-vinci
https://evtol.news/aircraft/davinci-zerog/

Air taxi (Tecnalia)

Technology: Battery electric multicopter
Number of Passengers: 1 (scalable to 4)
Range/Endurance: 15 km or 15 minutes
Weight (empty): N/A
MTOW: N/A
Payload: 150 kg
Engine: 16 electric motors and 16 propellers in 4 groups
Size: N/A
Top speed: 190 km/h (future)
Cruising speed: 90 km/h
Battery capacity: N/A
Intended use: Air taxi
Stage: Full-scale prototype
Country development: Spain
Contact information: +902 760 000 Antonio.bardasco@tecnalia.com
Website: https://www.tecnalia.com/en/
Link(s) more information: https://www.tecnalia.com/en/industry-and-transport/press-releases/tecnalia-develops-the-first-air-taxi-for-pilot-less-city-transport.htm
https://evtol.news/aircraft/tecnalia/

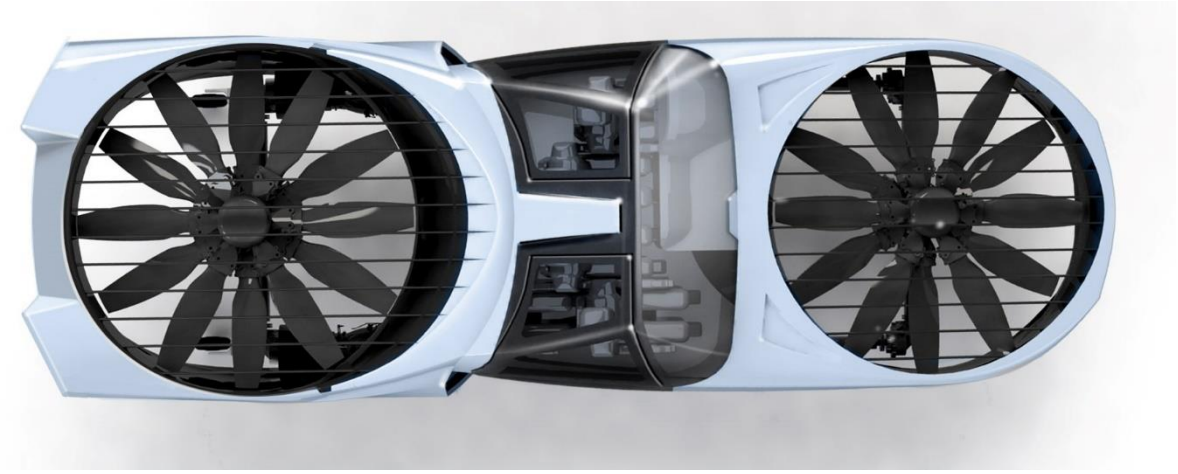
Cezeri Flying Car (Baykar)

Technology: Battery electric multicopter
Number of Passengers: 1
Range/Endurance: 70-80 km
Weight (empty): N/A
MTOW: 241 kg
Payload: 80-100 kg
Engine: 8 electric motors and propellers (brushless DC)
Size: Length 4,07 m; Width 3,73 m; Height 1,87 m
Top speed: N/A
Cruising speed: 100 km/h
Battery capacity: N/A
Intended use: Critical packages, medicines, remote areas, military
Stage: Prototype build
Country development: Turkey
Contact information: +90 212 867 09 00 info@baykarmakina.com
Website: https://baykardefence.com/index.php
Link(s) more information: https://baykardefence.com/page-Flying-Car.html
https://evtol.news/aircraft/baykar-cezeri/

Flyka

Technology: Battery electric multicopter
Number of Passengers: 2
Range/Endurance: 30 minutes without payload, 20 minutes with max payload (same km's)
Weight (empty): N/A
MTOW: N/A
Payload: 165 kg
Engine: 22 electric motors and propellers
Size: Length 3,3 m; Width 2,7 m; Height 1,6 m
Top speed: N/A
Cruising speed: 110 km/h
Battery capacity: Lilon 590 Ah or LiPo 440 Ah
Intended use: Air taxi
Stage: Building full scale prototype
Country development: Russia
Contact information: hi@flyka.aero
Website: https://flyka.aero/
Link(s) more information: https://flyka.aero/ https://evtol.news/aircraft/avianovations-hepard/

Cityhawk (metro-skyways)



Technology: ICE, later hydrogen VTOL
Number of Passengers: 1 pilot + 4 passengers
Range/Endurance: 150 km
Weight (empty): 1170 kg
MTOW: 1930 kg
Payload: 760 kg
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: 270 km/h
Battery capacity: N/A
Intended use: Air taxi, emergency response, executive transportation, private vehicle
Stage: Earlier prototypes, new concept
Country development: Israel
Contact information: +972 8 9433640 info@metro-skyways.com
Website: http://metro-skyways.com/index.html
Link(s) more information: http://metro-skyways.com/cityhawk.html

Beccarii

Technology: Hybrid gas-electricity multicopter
Number of Passengers: 1
Range/Endurance: flight 150 km drive 400 km
Weight (empty): 360 kg
MTOW: 500 kg
Payload: 140 kg
Engine: Light 50 kg 250 BHP gas turbine + electric generator
Size: Length 3,5m, width 2m
Top speed: 120 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Emergency response, military, off road vehicle
Stage: Sub-scale prototypes
Country development: Poland
Contact information: +48 505 698 600 ceo@beccarii.com
Website: https://beccarii.com/
Link(s) more information: https://beccarii.com/ https://evtol.news/aircraft/b-technology-beccarii/

AirCar (Aircarcorp)

Technology: Battery electric multicopter
Number of Passengers: 2
Range/Endurance: 72 km
Weight (empty): N/A
MTOW: N/A
Payload: 500 kg
Engine: 8 electric propellers
Size: N/A
Top speed: 120 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Autonomous vehicle
Stage: Concept
Country development: USA
Contact information: info@aircarcorp.com
Website: http://www.aircarcorp.com/
Link(s) more information: http://www.aircarcorp.com/ https://evtol.news/aircraft/aircar/

Alta (Astro)

Technology: Battery electric multicopter
Number of Passengers: 2 or 4 or non (interchangeable pod concept)
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 16 propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Emergency response, cargo, personal transport (foldable design, interchangeable pod)
Stage: Concept
Country development: USA
Contact information: +833 359 8685 info@flyastro.com
Website: https://flyastro.com/
Link(s) more information: https://flyastro.com/alta/ https://evtol.news/aircraft/astro-aerospace-alta/

KiiRA (Garudeus Aviation)

Technology: Hybrid multicopter
Number of Passengers: 1
Range/Endurance: 96 km (operator 95 kg)
Weight (empty): N/A
MTOW: N/A
Payload: Max 113 kg
Engine: Hybrid with 6 electric propellers
Size: Length 2,6 m; Width 2,6 m; Height 1,62
Top speed: N/A
Cruising speed: 100 km/h
Battery capacity: 8,8 kWh (Gasoline 20,8 l)
Intended use: Personal vehicle
Stage: Concept
Country development: Nepal
Contact information: info@garudeus.com
Website: https://garudeus.com/
Link(s) more information: https://garudeus.com/#technology
https://evtol.news/aircraft/garudeus-aviation-kiira/

Pop.up next (Italdesign, Airbus, Audi)

Technology: Battery electric vehicle car + multicopter
Number of Passengers: 1 – 2
Range/Endurance: 50 km
Weight (empty): N/A
MTOW: Expected 2000 kg
Payload: N/A
Engine: 60 kWx8 motors and propellers
Size: Length 4,4 m; Height 0,84 m; Width 5 m
Top speed: 120 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Combined car and aircraft system for urban transport
Stage: Concept
Country development: Italy
Contact information: N/A
Website: https://www.italdesign.it/
Link(s) more information: https://www.italdesign.it/project/pop-up-next/
https://evtol.news/aircraft/pop-up-next/

Skai (Alaka'I Technologies)

Technology: Hydrogen fuel cell multicopter
Number of Passengers: 1 pilot + 4 passengers
Range/Endurance: About 300 km
Weight (empty): N/A
MTOW: N/A
Payload: 454 kg
Engine: 6 propellers driven by electricity from hydrogen fuel cell
Size: N/A
Top speed: N/A
Cruising speed: 190 km/h
Battery capacity: N/A
Intended use: Air taxi
Stage: Non-flying prototype / concept
Country development: USA
Contact information: N/A
Website: https://www.skai.co/
Link(s) more information: https://www.skai.co/vehicle https://evtol.news/aircraft/alakai-technologies-skai/

Rotorcraft

A rotorcraft uses the same principles as a helicopter, some of these models actually use helicopter designs with new propulsion systems while other designs use new concepts.

Volta (Aquinea)

Technology: Battery electric rotorcraft
Number of Passengers: 1
Range/Endurance: 15 minutes (future 30)
Weight (empty): 420 kg
MTOW: 520 kg
Payload: 100 kg
Engine: 90 kW
Size: Length 7,5 m; height 2,35 m; rotor blade span 7 m
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Show the possibilities
Stage: Made certified flight in 2016, first electrified helicopter
Country development: France
Contact information: +534 66 00 00 contact@aquinea.fr
Website: https://aquinea.fr/
Link(s) more information: https://aquinea.fr/helicoptere-electrique-volta/
https://evtol.news/aircraft/aquinea-volta/

Robinson R44 (Tier 1)

Technology: Modified Robinson R44 to battery electric
Number of Passengers: N/A
Range/Endurance: Now 20 minutes, desired 150 minutes
Weight (empty): 1134 kg (+500 kg batteries)
MTOW: N/A
Payload: Desired 272 kg
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: 148 km/h
Battery capacity: N/A
Intended use: Organ delivery
Stage: World record farthest distance travelled by an electric helicopter (55 km 148 km/h) testflights
Country development: USA
Contact information: +949 574 4130
Website: http://www.tier1engineering.com/
Link(s) more information: http://www.tier1engineering.com/news/guinness-world-record-farthest-distance-traveled-electric-helicopter https://evtol.news/aircraft/tier-1-robinson-r44/

Tensor 600x (Fraundorfer)

Technology: Rotorcraft, designed for multiple engines (STOL)
Number of Passengers: 2 (future version up to 6)
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: ICE, Biofuel, Hydrogen, Battery electric the design is made so that the engine is interchangeable to what is desired
Size: N/A
Top speed: N/A
Cruising speed: 213 km/h
Stall speed: 41 km/h
Battery capacity: N/A
Intended use: Personal transport, Aerial observations, air taxi, cargo
Stage: Testflights with prototype
Country development: Germany
Contact information: +49 906 977 592 40 office@fraundorfer.aero
Website: https://www.fraundorfer.aero/
Link(s) more information: https://www.fraundorfer.aero/
https://evtol.news/aircraft/fraundorfer-aeronautics-tensor/
https://evtol.news/aircraft/fraundorfer-aeronautics-tensor-600x/

eCavalon (AutoGyro)

Technology: Battery electric Rotorcraft (STOL)
Number of Passengers: 2
Range/Endurance: 30 minutes
Weight (empty): 300 kg
MTOW: N/A
Payload: 200 kg
Engine: 80 kW siemens electric motor
Size: Length 4,7 m; width 1,8 m; Height 2,8 m; Rotor 8,4 m
Top speed: 160 km/h
Cruising speed: 145 km/h
Battery capacity: N/A
Intended use: Prototype of ICE model
Stage: Prototype (2015)
Country development: Germany
Contact information: +49 5121 880 56 00 info@auto-gyro.com
Website: https://www.auto-gyro.com/en/
Link(s) more information: https://evtol.news/aircraft/autogyro-ecavalon/

Jaunt aircraft (Jaunt Air Mobility)

Technology: Battery electric rotorcraft (Slow Rotor Compound tech from Jay Carter) (STOL)
Number of Passengers: 1 pilot + 4 passengers
Range/Endurance: N/A
Weight (empty): 2000 kg
MTOW: 2500 kg
Payload: 500 kg
Engine: N/A
Size: Length 12 m; Wing span 12,8 m; rotor diameter 13,7 m
Top speed: 281 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Air taxi
Stage: Carter aviation technology made test flights with same concept aircraft but conventional propulsion, Jaunt Air Mobility bought technology and is working on electrified prototype, demonstrator flight planed 2022
Country development: USA
Contact information: N/A
Website: https://www.jauntairmobility.com/
Link(s) more information: https://www.jauntairmobility.com/aircraft/
https://evtol.news/aircraft/carter/

Auto-copter (Horizon autocopters)

Technology: hybrid rotorcraft
Number of Passengers: 4-5-6-8 (depending on model)
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 3 micro gas turbines that could work on jet fuel, diesel, biofuel, synthetic jet fuel, to charge batteries to drive the rotor and forward propeller
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Personal transport, air taxi, corporate, …
Stage: Concept seeking investors
Country development: United Kingdom
Contact information: info@horizonhelicopters.co.uk
Website: https://www.horizonhelicopters.co.uk/index.html
Link(s) more information: https://www.horizonhelicopters.co.uk/auto-copter.html
https://evtol.news/aircraft/horizon-autocopters-auto-copter/

Gyrobike (Prades)

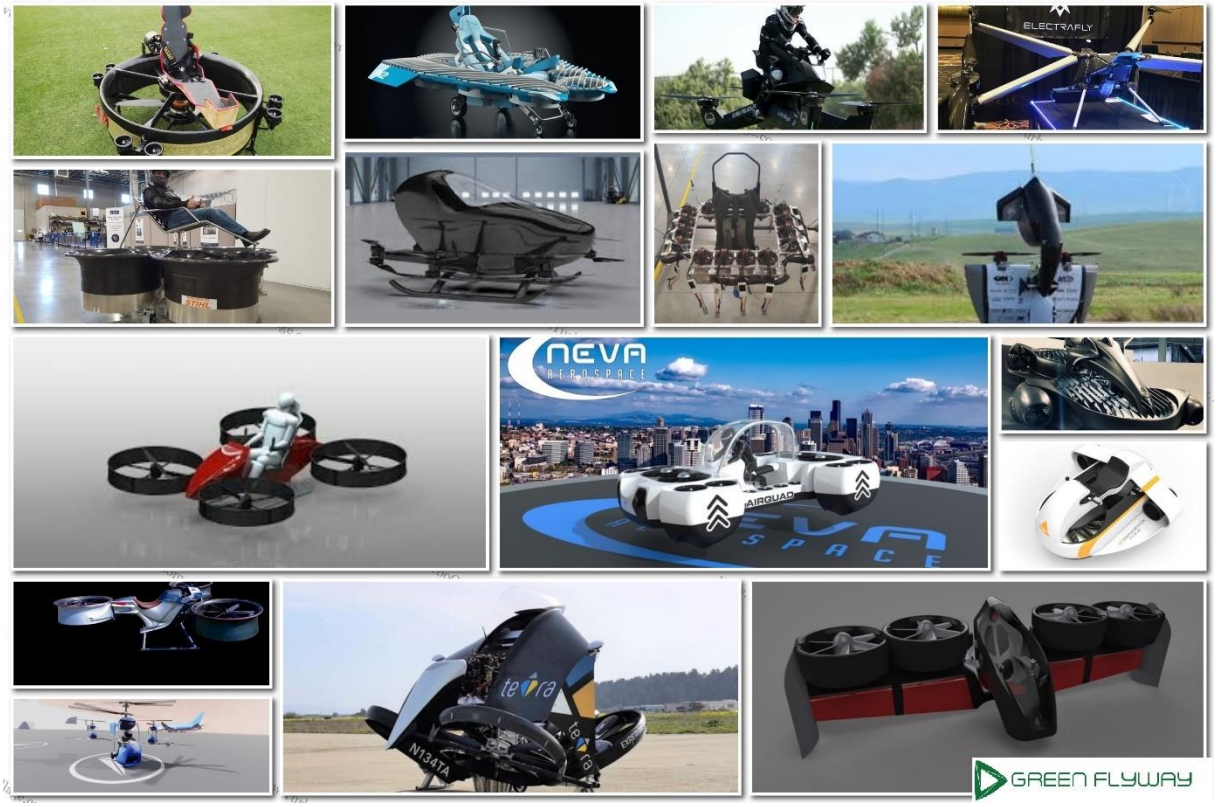
Technology: Battery electric rotorcraft
Number of Passengers: 1
Range/Endurance: 2u
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: N/A
Size: N/A
Top speed: 80 km/h
Cruising speed: N/A
Stall speed: 30 km/h
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Concept
Country development: Spain
Contact information: +34691247846 info@prades.eu
Website: https://www.gyrobiketurismodeaventura.com/
Link(s) more information: https://www.gyrobiketurismodeaventura.com/gyrobike/
https://evtol.news/aircraft/gyrobike/

PA-890 EVTOL Slowed rotor winged compound (Piasecki)

Technology: Battery powered rotorcraft
Number of Passengers: 5
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: N/A
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Emergency medical services, delivery of high value on demand logistics, air taxi
Stage: Concept seeking funding
Country development: USA
Contact information: N/A
Website: https://www.piasecki.com/
Link(s) more information: https://www.piasecki.com/pa890/ https://www.piasecki.com/wp-content/uploads/2019/05/890-fnl.pdf https://evtol.news/aircraft/piasecki-pa-890/

Hoverbike

Hoverbikes or personal flying devices are multicopters but with the difference that the pilot is not in a cabin, these designs have the pilot sitting on a saddle or standing. They can be seen as motorbikes for in the air.



Red hummingbird hoverbike (Flyt Aerospace)

Technology: Battery electric multicopter, hover bike
Number of Passengers: 1
Range/Endurance: 19 minutes
Weight (empty): 115 kg
MTOW: N/A
Payload: N/A
Engine: 8 propellers
Size: N/A
Top speed: 100 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Recreational
Stage: Protype production vehicle, conducting test flights
Country development: USA
Contact information: info@flytaero.com
Website: http://flytaerospace.com/
Link(s) more information: http://flytaerospace.com/red-hummingbird

Scorpion Hoverbike (Hoversurf)

Technology: Battery electric multicopter hover bike
Number of Passengers: 1 (also cargo version)
Range/Endurance: 10 to 25 minutes depending on weight and weather conditions
Weight (empty): 115 kg
MTOW: N/A
Payload: N/A
Engine: 4x33kW propellers
Size: N/A
Top speed: 96 km/h
Cruising speed: N/A
Battery capacity: 12,3 kWh
Intended use: Personal vehicle (tested by police Dubai)
Stage: Testing and approved FAA AC 103-7 (over 200 manned flight hours)
Country development: Russia
Contact information: N/A
Website: https://www.hoversurf.com/
Link(s) more information: https://www.hoversurf.com/orderyours
https://evtol.news/aircraft/hoversurf-scorpion/

Verticycle (Electric jet Aircraft)

Technology: Hybrid or battery electric multirotor hover bike
Number of Passengers: 1
Range/Endurance: 40 km or 31 minutes
Weight (empty): 200 kg
MTOW: N/A
Payload: 90 kg (pilot)
Engine: 4x25kW electric motors
Size: 2,23 m by 2,23 m
Top speed: 80 km/h
Cruising speed: N/A
Battery capacity: 40 kWh
Intended use: Recreational
Stage: Unmanned tests
Country development: USA
Contact information: +765 623 9815 info@electricjetaircraft.com
Website: https://electricjetaircraft.com/
Link(s) more information: https://electricjetaircraft.com/ https://evtol.news/aircraft/electric-jet-aircraft-verticycle/

A2 avenger (Assen Aerospace)

Technology: Hybrid or battery electric multicopter hoverbike
Number of Passengers: 1
Range/Endurance: Battery 20 minutes, gasoline 55 minutes
Weight (empty): 113 kg
MTOW: N/A
Payload: 100 kg
Engine: 57kW, either battery driven or hybrid with gasoline engine
Size: Length 3 m; Width 2,7 m
Top speed: 100 km/h
Cruising speed: N/A
Battery capacity: 12,8 kWh
Intended use: Leisure and extreme sport
Stage: Prototype (A1)
Country development: USA
Contact information: N/A
Website: http://assen.aero/
Link(s) more information: http://assen.aero/ https://evtol.news/aircraft/assen-aerospace-a2-avenger/

Catapult one (AirTransTech)

Technology: Battery powered multicopter, 4 lifting fans and 2 cruising fans (hoverbike)
Number of Passengers: 1
Range/Endurence: 30 minutes
Weight (empty): 338 kg
MTOW: 429 kg
Payload: 91 kg
Engine: Lift fan power: 4 x 25 kW; Cruise fan power: 2x 10 kW
Size: Length 2,59 m; Wingspan 2,5 m; height 1,1 m
Top speed: 74 km/h
Cruising speed: 56 km/h
Battery capacity: 32 kWh
Intended use: Personal aerial sports vehicle / personal aerial transportation
Stage: Applying for certification, plans to deliver first production vehicle by April 2021, prototype
Country development: USA
Contact information: N/A
Website: http://www.airtranstech.com/
Link(s) more information: http://www.airtranstech.com/ https://evtol.news/aircraft/air-transportation-technology-catapult-one/

Electrafly

Technology: Hybrid (jet-engine-electric) multicopter hover bike
Number of Passengers: 1
Range/Endurance: Possibly 32 km
Weight (empty): 34 kg
MTOW: N/A
Payload: 1 person
Engine: Small jet engine + 4 propellers for vertical lift
Size: N/A
Top speed: N/A
Cruising speed: Goal 161 km/h
Battery capacity: N/A
Intended use: Air taxi, recreational
Stage: Prototype
Country development: USA
Contact information: N/A
Website: http://electrafly.co/
Link(s) more information: http://electrafly.co/ https://evtol.news/aircraft/electrafly-electraflyer/

Hermes II (Talaria, Delft university)

Technology: Battery electric multicopter, hover bike
Number of Passengers: 1
Range/Endurance: 30 minutes
Weight (empty): N/A
MTOW: N/A
Payload: 100 kg
Engine: 2 large propellers
Size: N/A
Top speed: +80 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Unsure
Stage: Prototype
Country development: Netherlands
Contact information: +31 15 36 46 196 info@talaria.aero
Website: https://talaria.aero/
Link(s) more information: https://talaria.aero/design/ https://evtol.news/aircraft/aerodelft-hermes-i/

S1 (silverwing) (Delft university)

Technology: Battery electric multicopter, hover bike
Number of Passengers: 1
Range/Endurance: 30 minutes or 60 km
Weight (empty): N/A
MTOW: N/A
Payload: 90 kg
Engine: 2 propellers
Size: N/A
Top speed: 140 km/h
Cruising speed: 140 km/h
Battery capacity: N/A
Intended use: Air taxi
Stage: Full-scale prototype
Country development: Netherlands
Contact information: contact@flysilverwing.com
Website: https://www.flysilverwing.com/
Link(s) more information: https://www.flysilverwing.com/s1 https://evtol.news/hover-bikes/silverwing-s1/

Tetra 3 (Tetra aviation)

Technology: Hybrid multicopter, hover bike
Number of Passengers: 1
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 4 propellers
Size: Length 2 m; Width 2,2 m; height 1,65 m
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Prototype
Country development: Japan
Contact information: N/A
Website: https://www.tetra-gofly.com/
Link(s) more information: https://evtol.news/aircraft/tetra-3/

X-Craft (X-Aero)

Technology: Battery electric multicopter, hover bike
Number of Passengers: 1
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 1 large propeller and 8 ducted small propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Prototypes
Country development: Australia
Contact information: info.xaero@gmail.com
Website: https://www.x-aero.com.au/
Link(s) more information: https://www.x-aero.com.au/design

Xturismo (Ali Technologies)

Technology: Hybrid multicopter hoverbike, first edition hybrid, later battery electric
Number of Passengers: 1
Range/Endurance: 3 hours
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 2 engines, with 2 propellers for lift and 4 electric propellers for forward flight
Size: N/A
Top speed: 200 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Prototype
Country development: Japan
Contact information: N/A
Website: https://ali.jp/en/
Link(s) more information: https://ali.jp/en/business/en-cate1/ https://www.xturismo.com/ https://evtol.news/aircraft/ali-technologies-xturismo/

Atlas (Watfly)

Technology: Battery electric multicopter, hover bike
Number of Passengers: 1
Range/Endurance: 1 hour cruising, 15 minutes hovering
Weight (empty): 130 kg
MTOW: N/A
Payload: 90 kg
Engine: 2 brushless DC motors 150 kW, 4 ducted fans
Size: Length 1,3 m; width 3,8 m; height 2,5 m
Top speed: 102 km/h
Cruising speed: N/A
Battery capacity: 12 kWh
Intended use: Recreational
Stage: Sub-scale prototypes
Country development: Canada
Contact information: hello@watfly.ca
Website: https://www.watfly.ca/
Link(s) more information: https://www.watfly.ca/ https://evtol.news/aircraft/watfly-atlas/

Helium (Ryerson University)

Technology: Battery electric multicopter, hover bike
Number of Passengers: 1
Range/Endurance: 20 minutes
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 12 propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Personal vehicle
Stage: Sub-scale prototypes, working on full scale prototype
Country development: Canada
Contact information: hello@ryersonhelium.com
Website: http://ryersonhelium.com/index.html
Link(s) more information: http://ryersonhelium.com/index.html
https://evtol.news/aircraft/ryerson-helium/

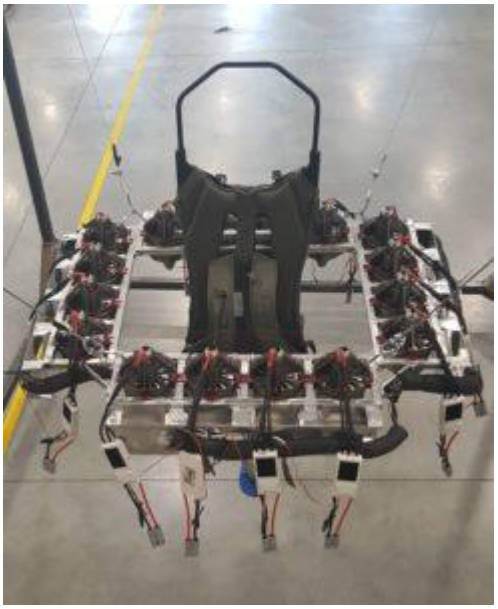
AirQuadOne (Neva Aerospace)

Technology: Battery electric multicopter, hover bike
Number of Passengers: 1
Range/Endurance: 30 minutes
Weight (empty): N/A
MTOW: N/A
Payload: 100 to 500 kg
Engine: 4 Large ducted propellers, 8 medium ducted propellers and 8 small ducted propellers
Size: N/A
Top speed: 60 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Cargo, air-ambulance, air taxi, precision air racing
Stage: Concept
Country development: United Kingdom
Contact information: +44 1273 70 47 88 sales@neva-aero.com
Website: https://www.neva-aero.com/index.html
Link(s) more information: https://www.neva-aero.com/index.html
https://evtol.news/aircraft/airquadone/

FlyKart 2 (Trekaero)

Technology: Battery electric multicopter, hover bike
Number of Passengers: 1
Range/Endurance: 30 minutes
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 10 ducted propellers
Size: Length 1,95 m; Width 2 m; Height 1,2 m
Top speed: 102 km/h
Cruising speed: 83 km/h
Battery capacity: 9,6 kWh
Intended use: Personal vehicle
Stage: Concept/prototype
Country development: USA
Contact information: info@trekaero.com
Website: https://www.trekaero.com/
Link(s) more information: https://www.trekaero.com/ https://evtol.news/hover-bikes/trek-aerospace-flykart-2/

EJ-1 electric jetpack (Electric jet Aircraft)



Technology: Battery electric multicopter hover bike
Number of Passengers: 1
Range/Endurance: Minutes
Weight (empty): 45 kg
MTOW: N/A
Payload: 90 kg
Engine: 16 electric motors, clustered in 4 groups
Size: N/A
Top speed: 72 km/h
Cruising speed: N/A
Battery capacity: N/A
Intended use: Recreational
Stage: Engine groups sold for 10000 dollar, total price 40 000 dollar
Country development: USA
Contact information: +765 623 9815 info@electricjetaircraft.com
Website: https://electricjetaircraft.com/
Link(s) more information: https://electricjetaircraft.com/ https://evtol.news/aircraft/electric-jet-ej-1/

Cargo

Most off the previous discussed aviation models have a function for personal transport, this does not exclude them from use for cargo transport. However, there are some models designed only for cargo, these will be presented here. No differentiation is made in the type of vehicle, this can go from small drones up to bigger concepts. Only aircrafts specifically designed for logistic purposes will be included.

Kookaburra (Swoop Aero)

Technology: Battery electric VTOL
Number of Passengers: 0
Range/Endurance: 120 km
Weight (empty): N/A
MTOW: N/A
Payload: 2,5 kg
Engine: 4 propellers for vertical lift 2 propellers for forward flight
Size: N/A
Top speed: N/A
Cruising speed: 100 km/h
Battery capacity: N/A
Intended use: Cargo drone, healthcare
Stage: Ongoing operations
Country development: Australia
Contact information: +61 3 9646 7761 contact@swoop.aero
Website: https://swoop.aero/
Link(s) more information: https://swoop.aero/what-we-do/#how-it-works

M2 (Matternet)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: 20 km
Weight (empty): N/A
MTOW: 13,2 kg
Payload: 2 kg
Engine: 4 electric propellers
Size: Length 1,28 m; Width 1,28 m; Height 0,26 m
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Cargo drone, healthcare & E-commerce
Stage: Ongoing operations
Country development: USA
Contact information: +1 650 260 2727 contact@matternet.us
Website: https://mttr.net/
Link(s) more information: https://mttr.net/

Zipline

Technology: Battery electric fixed wing drone
Number of Passengers: 0
Range/Endurance: 160 km
Weight (empty): 19 kg
MTOW: 21 kg
Payload: 1,77 kg
Engine: 2 propellers
Size: Length 1,8 m; Width 3,3 m
Top speed: N/A
Cruising speed: 101 km/h
Battery capacity: N/A
Intended use: Cargo drone, healthcare
Stage: Ongoing operations
Country development: USA
Contact information: us@flyzipline.com Globalhealth@flyzipline.com
Website: https://flyzipline.com/
Link(s) more information: https://flyzipline.com/how-it-works/

178 Heavy lift (Wingcopter)

Technology: Battery electric VTOL
Number of Passengers: 0
Range/Endurance: 120 km
Weight (empty): 10 kg
MTOW: 16 kg
Payload: 6 kg
Engine: 4 tilting propellers
Size: Length 1,78 m; Width 1,32 m; Height 0,52 m
Top speed: 240 km/h
Cruising speed: 100 km/h
Battery capacity: N/A
Intended use: Cargo drone, healthcare, e-commerce
Stage: Pilot projects
Country development: Germany
Contact information: +49 176 2685 2060 info@wingcopter.com
Website: https://wingcopter.com/
Link(s) more information: https://wingcopter.com/technology

Mule (Flytrex)

Technology: Battery electric multicopter (DJI M600 Pro platform)
Number of Passengers: 0
Range/Endurance: 11 km
Weight (empty): 10 kg
MTOW: 15,5 kg
Payload: N/A
Engine: 6 electric rotors
Size: N/A
Top speed: N/A
Cruising speed: 51,5 km/h
Battery capacity: 5700 mAh or 129,96 Wh
Intended use: Cargo drone, food delivery
Stage: Pilot project
Country development: USA
Contact information: N/A
Website: https://flytrex.com/
Link(s) more information: https://www.dji.com/se/matrice600-pro

Robin XL (Drone Delivery Canada)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: 60 km
Weight (empty): 22,7 kg
MTOW: 34 kg
Payload: 11,3 kg
Engine: 8 electric rotors
Size: N/A
Top speed: 85 km/h
Cruising speed: 65 km/h
Battery capacity: N/A
Intended use: Cargo drone, connecting remote communities in Canada
Stage: Pilot project
Country development: Canada
Contact information: N/A
Website: https://dronedeliverycanada.com/
Link(s) more information: https://dronedeliverycanada.com/technology/

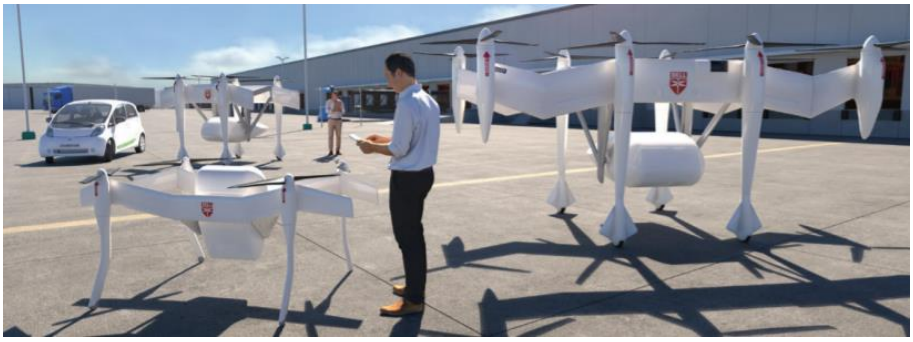
Sparrow X1000 (Drone Delivery Canada)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: 30 km
Weight (empty): 20,5 kg
MTOW: 25 kg
Payload: 4,5 kg
Engine: 8 electric propellers
Size: N/A
Top speed: 80 km/h
C**ruising speed:** 65 km/h
Battery capacity: N/A
Intended use: Cargo drone, connecting remote communities in Canada
Stage: Pilot project
Country development: Canada
Contact information: N/A
Website: https://dronedeliverycanada.com/
Link(s) more information: https://dronedeliverycanada.com/technology/

Wing

Technology: Battery electric VTOL lift + cruise
Number of Passengers: 0
Range/Endurance: 19,3 km
Weight (empty): 4,8 kg
MTOW: N/A
Payload: 1,5 kg
Engine: Multiple electric propellers for lift 2 propellers for forward flight
Size: Length 1,3 m; Width 1 m
Top speed: N/A
Cruising speed: 113 km/h
Battery capacity: N/A
Intended use: Cargo drone, food delivery, packages
Stage: Pilot projects
Country development: USA
Contact information: N/A
Website: https://wing.com/sv_se/
Link(s) more information: https://wing.com/how-it-works/

Bell Autonomous Pod Transport (APT) (Bell) APT-20 & APT-70



Technology: Battery powered VTOL for cargo (Autonomous)
Number of Passengers: 0
Range/Endurance: 29 km - 56 km
Weight (empty): N/A
MTOW: 25 kg - 136 kg
Payload: N/A – 31 kg
Engine: 4 propellers
Size: Width 1,5 m; Height 1 m – Width 2,75 m; height 1,83 m
Top speed: 161 km/h
Cruising speed: 121 km/h
Battery capacity: N/A
Intended use: Good delivery & military
Stage: Test flights
Country development: USA
Contact information: +1 817 280-2011
Website: https://www.bellflight.com/
Link(s) more information: https://www.bellflight.com/products/bell-apt
https://evtol.news/vectored-thrust/bellapt/

CAV Cargo Air Vehicle (Boeing)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: N/A
Weight (empty): N/A
MTOW: 500 kg
Payload: 227 kg
Engine: Six dual-rotors with 12 propellers
Size: Length 5,33 m; width 6,1 m, Height 1,52
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Cargo
Stage: Prototype testflight, further development now
Country development: USA
Contact information: N/A
Website: https://www.boeing.com/
Link(s) more information: https://www.boeing.com/features/2019/05/cav-first-flight-05-19.page https://evtol.news/aircraft/boeing-cav/

Chapparral (Elroy Air)

Technology: Hybrid-electric lift+cruise (autonomous)
Number of Passengers: 0
Range/Endurance: 500 km
Weight (empty): N/A
MTOW: N/A
Payload: 100-225 kg
Engine: 6 electric propellers for vertical flight, 1 pusher propeller for forward flight
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Cargo delivery to remote areas, for logistic companies, humanitarian purposes
Stage: Test flights
Country development: USA
Contact information: inquiries@elroyair.com
Website: http://www.elroyair.com/
Link(s) more information: http://www.elroyair.com/#building https://evtol.news/aircraft/elroy-air-chapparral/

delivAIRy (Doks)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: 25 minutes
Weight (empty): N/A
MTOW: N/A
Payload: 4,5 kg
Engine: 6 electric propellers
Size: N/A
Top speed: N/A
Cruising speed: 54 km/h
Battery capacity: N/A
Intended use: Cargo drone, industry (spare parts)
Stage: Testing
Country development: Germany
Contact information: +49 (0)561 81 67 64 93 contact@doks-innovation.com
Website: https://www.doks-innovation.com/?lang=en
Link(s) more information: https://www.doks-innovation.com/delivairy/?lang=en

Delivery drone (ACSL)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: 29 minutes
Weight (empty): 7,07 kg
MTOW: N/A
Payload: 2,75 kg
Engine: 6 electric propellers
Size: Width 1,17 m; Height 0,654 m
Top speed: N/A
Cruising speed: 36 km/h
Battery capacity: 2x12000 mAh (22,2V)
Intended use: Cargo drone, packages, emergency relief, healthcare
Stage: Testing
Country development: Japan
Contact information: N/A
Website: https://www.acsl.co.jp/en/
Link(s) more information: https://www.acsl.co.jp/en/solutions/delivery-logistics-mail/#specifications https://www.acsl.co.jp/en/solutions/delivery-logistics-mail/

Eagle (Flirtey)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: N/A
Weight (empty): N/A
MTOW: N/A
Payload: N/A
Engine: 4 propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Cargo drone, healthcare and food delivery
Stage: Testing
Country development: USA
Contact information: N/A
Website: https://www.flirtey.com/
Link(s) more information: https://www.flirtey.com/about/

Horsefly (Workhorse)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: 30 minutes
Weight (empty): 10 kg
MTOW: N/A
Payload: 5 kg
Engine: 4 electric propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: 40 000 mAh
Intended use: Package delivery (combined with van)
Stage: Testing
Country development: USA
Contact information: +1 513 360 4704 contactus@workhorse.com
Website: https://workhorse.com/index.html
Link(s) more information: https://workhorse.com/horsefly.html

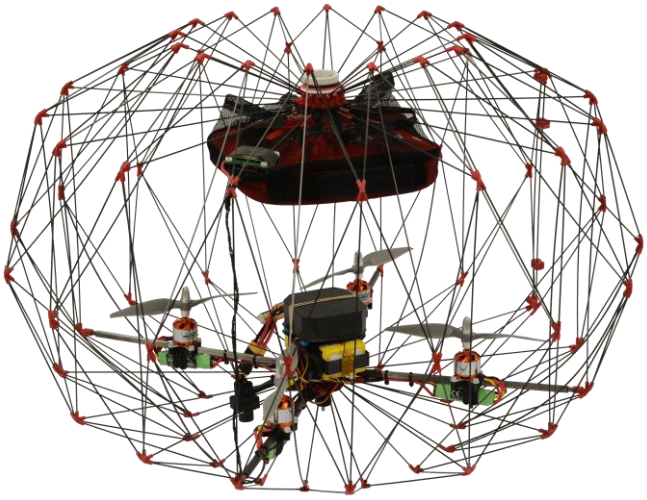
Jetgo TR7 (Antwork)

Technology: Batter electric multicopter
Number of Passengers: 0
Range/Endurance: +30 km
Weight (empty): N/A
MTOW: N/A
Payload: 7 kg
Engine: 6 electric propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Healthcare, E-commerce, Food delivery
Stage: Testing
Country development: China
Contact information: +86 751 8851 8203 arket@antwork.link
Website: https://www.antwork.link/build/pages/en.html
Link(s) more information: https://www.antwork.link/build/pages/en.html

Manna

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: + 15 km
Weight (empty): N/A
MTOW: N/A
Payload: 4 kg
Engine: 8 electric propellers
Size: N/A
Top speed: N/A
Cruising speed: 80 km/h
Battery capacity: N/A
Intended use: Cargo drone, Food delivery, healthcare
Stage: Testing
Country development: Ireland
Contact information: Partner@manna.aero info@manna.aero
Website: https://www.manna.aero/
Link(s) more information: https://www.manna.aero/

PackDrone (Dronistics)



Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: +4 km
Weight (empty): N/A
MTOW: N/A
Payload: 0,5 kg
Engine: 4 electric propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Food, Healthcare (last-cm delivery)
Stage: Testing
Country development: Switzerland
Contact information: info@dronistics.ch
Website: https://dronistics.epfl.ch/
Link(s) more information: https://dronistics.epfl.ch/

Rigione (Rigi Tech)

Technology: Battery electric VTOL lift + cruise
Number of Passengers: 0
Range/Endurance: 80 km
Weight (empty): N/A
MTOW: N/A
Payload: 3 kg
Engine: 4 propellers for vertical lift, 1 propeller for forward flight
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Cargo drone, Healthcare, e-commerce
Stage: Testing
Country development: Switzerland
Contact information: N/A
Website: https://www.rigi.tech/
Link(s) more information: https://www.rigi.tech/technology/

Volodrone (Volocopter)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: 40 km
Weight (empty): 600 kg
MTOW: 800 kg
Payload: 200 kg
Engine: 18 brushless DC electric motors and 18 propellers
Size: Diameter 9,2 m
Top speed: 110 km/h
Cruising speed: 80 km/h
Battery capacity: N/A
Intended use: Cargo transport, agriculture, logistic, humanitarian
Stage: Prototype testing
Country development: Germany
Contact information: info@volocopter.com volodrone@volocopter.com
Website: https://www.volocopter.com/en/
Link(s) more information: https://www.volocopter.com/en/volodrone/
https://evtol.news/aircraft/volocopter-volodrone/

Voly C-10 (Volansi)

Technology: Battery electric VTOL
Number of Passengers: 0
Range/Endurance: 80 km or 60 minutes
Weight (empty): N/A
MTOW: 25 kg
Payload: 4,5 kg
Engine: 4 electric propellers for vertical lift, 1 propeller for forward flight
Size: Length 2,1 m; Width 2,93 m
Top speed: N/A
Cruising speed: 96 km/h
Battery capacity: N/A
Intended use: Cargo drone, Healthcare, military, industrial
Stage: Testing
Country development: USA
Contact information: N/A
Website: https://volansi.com/
Link(s) more information: https://volansi.com/technology/

Voly C-20 (Volansi)

Technology: Hybrid (Electric + gas) VTOL
Number of Passengers: 0
Range/Endurance: 482 km or 5 hours
Weight (empty): N/A
MTOW: 68 kg
Payload: 9 kg
Engine: 8 propellers for vertical lift, 1 propeller for forward flight
Size: Length 2,7 m; Width 4,6 m
Top speed: N/A
Cruising speed: 104 km/h
Battery capacity: N/A
Intended use: Cargo drone, Healthcare, military, industrial
Stage: Testing
Country development: USA
Contact information: N/A
Website: https://volansi.com/
Link(s) more information: https://volansi.com/technology/

Voly M-20 (Volansi)

Technology: Hybrid (electric +heavy fuel or electric + gas)
Number of Passengers: 0
Range/Endurance: 563 km or 8 hours
Weight (empty): N/A
MTOW: 104 kg
Payload: 9 kg payload + 4,5 kg sensors
Engine: 8 propellers for vertical lift + 1 propeller for forward flight
Size: Length 2,87 m; Width 4,6 m
Top speed: N/A
Cruising speed: 120 km/h
Battery capacity: N/A
Intended use: Cargo drone, Healthcare, military, industrial
Stage: Testing
Country development: USA
Contact information: N/A
Website: https://volansi.com/
Link(s) more information: https://volansi.com/technology/

X5 (Vayu)

Technology: Battery electric VTOL
Number of Passengers: 0
Range/Endurance: N/A
Weight (empty): N/A
MTOW: 23 kg
Payload: N/A
Engine: 4 propellers for vertical lift, 1 propeller for forward flight
Size: N/A
Top speed: N/A
Cruising speed: 83 km/h
Battery capacity: N/A
Intended use: Cargo drone, Medical, Logistics, Disaster relief
Stage: Testing
Country development: N/A
Contact information: N/A
Website: https://www.vayu.us/
Link(s) more information: https://www.vayu.us/product/

Atlis cargo UAV (AERGILITY)

Technology: Hybrid electric/gas lift+cruise
Number of Passengers: 0
Range/Endurance: 320-960 km (160 kg – 113 kg)
Weight (empty): 181 kg
MTOW: 363 kg
Payload: 113-159 kg
Engine: 8 vertical propellers for take-off and landing (electric), gas powered pusher prop for moving forward
Size: N/A
Top speed: 185 km/h
Cruising speed: 160 km/h
Battery capacity: N/A
Intended use: Good delivery to remote places
Stage: 1/4 scale prototype
Country development: USA
Contact information: N/A
Website: https://www.aergility.com/
Link(s) more information: https://www.aergility.com/ https://evtol.news/aircraft/aergility-atlis/

T-80 (malloyaeronautics)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: 34 minutes or 50 km
Weight (empty): N/A
MTOW: N/A
Payload: 30 kg
Engine: 8 electric propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Cargo transport / military
Stage: Presumably for sale?
Country development: United kingdom
Contact information: +44 1628 822 477 enquiries@malloyaeronautics.com
Website: https://www.malloyaeronautics.com/
Link(s) more information: https://www.malloyaeronautics.com/products/

T-150 (malloyaeronautics)

Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: 36 minutes or 70 km
Weight (empty): N/A
MTOW: N/A
Payload: 68 kg
Engine: 8 electric propellers
Size: N/A
Top speed: N/A
Cruising speed: N/A
Battery capacity: N/A
Intended use: Cargo transport / military
Stage: Presumably for sale?
Country development: United kingdom
Contact information: +44 1628 822 477 enquiries@malloyaeronautics.com
Website: https://www.malloyaeronautics.com/
Link(s) more information: https://www.malloyaeronautics.com/products/

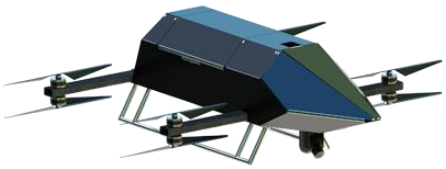
UAD M20 (DGWorld)

Technology: Battery electric VTOL 6 propellers of which 2 tilting
Number of Passengers: 0
Range/Endurance: 45 km
Weight (empty): 14 kg
MTOW: 19 kg
Payload: 5 kg
Engine: 6x800W brushless electric
Size: Length 2,15 m; Width 1,60 m; Height 0,75 m
Top speed: 150 km/h
Cruising speed: 100 km/h
Battery capacity: N/A
Intended use: Civil defence, filming, cargo, surveillance, cartography, …
Stage: Unknown
Country development: United Arab Emirates
Contact information: info@dgworld.com +971 44 249 400
Website: https://www.dgworld.com/Home
Link(s) more information: https://www.dgworld.com/Drone-_-UAD-M20/24
https://evtol.news/aircraft/digi-robotics-droxi/

Winged X8 (Aerial vehicle automation)

Technology: Gasoline-electric hybrid lift+cruise (future electric)
Number of Passengers: 0
Range/Endurance: 483 km
Weight (empty): N/A
MTOW: N/A
Payload: 91 kg
Engine: 8 electric motors and propellers for vertical flight and 1 pusher prop for forward flight
Size: Wing 8,53m
Top speed: N/A
Cruising speed: 97 km/h
Battery capacity: N/A
Intended use: Cargo or package transport
Stage: In development
Country development: USA
Contact information: contact@avapropulsion.com
Website: http://www.avapropulsion.com/
Link(s) more information: http://www.avapropulsion.com/ https://evtol.news/aircraft/aerial-vehicle-automation-winged-x8/

X8 (Aerial Vehicle Automation)



Technology: Battery electric multicopter
Number of Passengers: 0
Range/Endurance: 48 km (loaded) 30 minutes (loaded)
Weight (empty): N/A
MTOW: N/A
Payload: 91 kg
Engine: 8 electric motors and propellers
Size: N/A
Top speed: N/A
Cruising speed: 97 km/h
Battery capacity: N/A
Intended use: Cargo or package transportation
Stage: In development
Country development: USA
Contact information: contact@avapropulsion.com
Website: http://www.avapropulsion.com/
Link(s) more information: http://www.avapropulsion.com/ https://evtol.news/aircraft/aerial-vehicle-automation-x8/

Summarizing table

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
CTOL	Pipistrel	Velis Electro	EASA Certified	Battery	Pilot training	2	172	50’	166	600
CTOL	Pipistrel	Alpha Electro	Certified in some countries	Battery	Pilot training	2	182	60'	157	472,5-550
CTOL	Pipistrel	Taurus Electro	Certified in some countries	Battery	Glider	2	N/A	N/A	115	450-472.5-550
CTOL	Ampaire	Electric EEL	Test flight(s)	Hybrid	Short distance commuter	6	N/A	N/A	N/A	N/A
CTOL	H55	BRM Aero Energic	Test flight(s)	Battery	Pilot training	2	200	90'	N/A	850 kg
CTOL	Voltaero	Cassio 330 & 480 & 600	Test flight(s)	Hybrid	Short distance commuter	4; 6; 10	N/A	0-200; 200-600; 600-1200	370	
CTOL	Bye Aerospace	eFlyer 2	Test flight(s)	Battery	Pilot training	2	204	180'	N/A	N/A
CTOL	Flight Design	F2e	Test flight(s)	Battery	Knowledge	2	N/A	120' - 180'	170	1100
CTOL	German Aerospace Center & Pipistrel	HY4	Test flight(s)	Hydrogen	Knowledge	4	N/A	750-1500	145	1500

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
CTOL	Magnix Aero	eBeaver & eCaravan	Test flight(s)	Battery	Prove capability	4	N/A	160	N/A	N/A
CTOL	Equator	P2 Xcursion	Test flight(s)	Battery	Personal vehicle	2	220	200	203	750
CTOL	Pure Flight	Phinix	Test flight(s)	Battery	Prove capability	2	N/A	150'	160-200	600
CTOL	ZeroAvia	Renewable Hydrogen Aviation	Test flight(s)	Hydrogen	Short distance commuter	6 (10-20 later)	N/A	480-800	N/A	N/A
CTOL	NASA	X-57 Maxwell	Ground tests	Battery	Knowledge	N/A	N/A	N/A	277	N/A
CTOL	Eviation	Alice	Prototype	Battery	Short distance commuter	2+9	1134	1000	444	6350
CTOL	Rolls Royce	ACCEL	Building prototype	Battery	Speed record	1	N/A	321	N/A	N/A
CTOL	Pipistrel	Panthera	Under development	ICE - Hybrid - Electric	Personal vehicle	4	415	N/A	327	1315
CTOL	Pipistrel, H2Fly, German aerospace center, Elringklinger and Air Liquid advanced technologies	HEAVEN	Ongoing project	Hydrogen	Knowledge	02-Apr	N/A	300' to 480'	N/A	N/A
CTOL	Project Fresson	N/A	Ongoing project	Hybrid	Knowledge	9	N/A	N/A	N/A	N/A

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
CTOL	Pipistrel, Politecnico Milano, University Delft	Unifier 19	Ongoing project	Near zero emission aircraft	Knowledge	19	N/A	N/A	N/A	N/A
CTOL	Faradair	BEHA M1H & M1AT & E1	Concept	Hybrid	Passenger transport or cargo	18	N/A	1800	370	N/A
CTOL	Heart Aerospace	ES-19	Concept	Battery	Short distance commuter	19	N/A	400	N/A	N/A
CTOL	Smartflyer	Smartflyer	Concept	Hybrid	Prove capability	4	400	750 km or 240'	222	1400
CTOL	Wright	Wright 1	Concept	Battery	Short distance commuter	186	N/A	N/A	N/A	N/A
CTOL	Zunum aero	Zunum aero	Concept	Hybrid	Short distance commuter	12	N/A	1127	N/A	N/A
VTOL - Vectored trust	Dufour Aerospace	aEro 2	Test flight(s)	Hybrid	Air taxi	2	N/A	800	320	N/A
VTOL - Vectored trust	Beta technologies	ALIA	Test flight(s)	Battery	Short distance commuter	6	N/A	N/A	N/A	2722
VTOL - Vectored trust	Blackfly	Blackfly	Test flight(s)	Battery	Personal vehicle	1	113,4	64	128	255
VTOL - Vectored trust	Kitty Hawk	Heaviside	Test flight(s)	Battery	Personal vehicle or air taxi	1	N/A	160	354	N/A
VTOL - Vectored trust	Lilium	JET	Test flight(s)	Battery	Air taxi	5	N/A	300	300	N/A
VTOL - Vectored trust	Joby Aviation	S4	Test flight(s)	Battery	Air taxi	1 + 4	N/A	241	322	N/A

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
VTOL - Vectored trust	Acubed - Airbus	Vahana	Test flight(s)	Battery	Prove capability	1	200	60	200	815
VTOL - Vectored trust	Autonomous Flights	Y6S	Test flight(s)	Battery	Air taxi	2	N/A	130	N/A	N/A
VTOL - Vectored trust	Bell	Nexus 4EX	Prototype	Hybrid or battery electric	Air taxi	1 + 4	N/A	241 - 97	241	3175
VTOL - Vectored trust	Bell	Nexus 6HX	Prototype	Hybrid	Air taxi	1 + 4	N/A	241	N/A	2720
VTOL - Vectored trust	Moller	Skycar M200 & M400	Prototype	Hybrid	Personal vehicle	2 and 4	181,4 - 325	700 - 1295	330 - 496	598 - 1090
VTOL - Vectored trust	Archer	Archer	Building prototype	Battery	Air taxi	4	N/A	100	241	3175
VTOL - Vectored trust	Airspace Experience Technologies	MOBi-ONE	Building prototype	Hybrid or battery electric	Air taxi	5	453	416 - 140	240	N/A
VTOL - Vectored trust	VRCO	VRCO	Building prototype	Battery	Personal vehicle	2	180	60'	300	450
VTOL - Vectored trust	PDRL	AeroHans 2S and 4S	Sub-scale prototype	Battery	Air taxi	2 and 4	450 and 850	40	N/A	N/A
VTOL - Vectored trust	Bartini	Bartini	Sub-scale prototype	Battery	Air taxi	2 to 4	400	150	300	1100
VTOL - Vectored trust	Delorean Aerospace	DR-7	Sub-scale prototype	Unknown	Personal vehicle	2	N/A	N/A	N/A	N/A
VTOL - Vectored trust	Neoptera	eOpter	Sub-scale prototype	Battery	Air taxi	2 to 5	N/A	N/A	N/A	N/A

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
VTOL - Vectored trust	Katla Aero	Katla Aero	Sub-scale prototype	Battery	Air taxi	2	200	N/A	N/A	N/A
VTOL - Vectored trust	Leap Aeronautics	Leap Aeronautics	Sub-scale prototype	Battery	Air taxi	5	500	125-200	250	2180
VTOL - Vectored trust	Samad Aerospace	Starling jet	Sub-scale prototype	Hybrid or battery electric	Business, leisure travel	elec 7 hybrid 10	N/A	e 644; h 1500-2400	e 482 h 740	N/A
VTOL - Vectored trust	Pterodynamics	Transwing	Sub-scale prototype	Battery	Prove capability	2	N/A	N/A	N/A	N/A
VTOL - Vectored trust	XTI Aircraft	Trifan 600	Sub-scale prototype	Hybrid	Personal vehicle	1 + 6	816	1060-1240	555	2404
VTOL - Vectored trust	HopFlyt	Venturi	Sub-scale prototype	Battery	Short distance commuter	4	N/A	185	220	N/A
VTOL - Vectored trust	Zeva	Zero	Sub-scale prototype	Battery	Air taxi	1	N/A	80	258	N/A
VTOL - Vectored trust	AeroG Aviation LLC	AG-4 liberty	Concept	Battery	Short distance commuter	2 + 10	907	N/A	519	5670
VTOL - Vectored trust	Aliptera	APV-1 VTOL Aircraft	Concept	Unknown	Unknown	2	635	722	N/A	N/A
VTOL - Vectored trust	Baaz	Baaz	Concept	Battery	Air taxi	4	N/A	N/A	N/A	N/A
VTOL - Vectored trust	FIPSI	BX4	Concept	Battery	Personal vehicle	2	181	48	72	630
VTOL - Vectored trust	FIPSI	WX4	Concept	Battery	Personal vehicle	2	181	N/A	72	630
VTOL - Vectored trust	Aeronext	Flyin Gondola	Concept	Hybrid	Unknown	1	N/A	N/A	N/A	N/A

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
VTOL - Vectored trust	Hoversurf	Formula	Concept	Battery	Air taxi	2 or 4	N/A	300	N/A	N/A
VTOL - Vectored trust	Jetoptera	J2000	Concept	Gas future battery	Personal vehicle	N/A	181	322	322	907
VTOL - Vectored trust	Macchina Volantis	Macchina Volantis	Concept	Hybrid	Personal vehicle	4 to 5	570	1600	278	1650
VTOL - Vectored trust	Deep Blue Aviation	MX18 Silhoutte	Concept	Battery	Air taxi	0 or 2 or 9	N/A	N/A	N/A	N/A
VTOL - Vectored trust	Kari	OPPAV	Concept	Battery	Personal vehicle	1	100	50	200	650
VTOL - Vectored trust	Porsche & Boeing	?	Concept	Battery	Personal Vehicle	2	N/A	N/A	N/A	N/A
VTOL - Vectored trust	Ray Research AG	Ray VTOL Aircraft	Concept	Hybrid	Unknown	1+4	N/A	1800	360	N/A
VTOL - Vectored trust	Hyandrai	S-A1	Concept	Battery	Air taxi	1 + 4	N/A	97	290	N/A
VTOL - Vectored trust	Aston Martin	Volante Vision Concept	Concept	Hybrid	Personal vehicle	3	N/A	N/A	460	N/A
VTOL - Vectored trust	ACS-aviation	Z-300 EVTOL	Concept	Battery	Unknown	2	N/A	300 km or 90'	222	1000
VTOL - Vectored trust	Vimana	AAV	Concept	Hybrid	Air taxi	4	400	900	244	1250
VTOL - Vectored trust	Overair/Karem	Butterfly	Unknown	Battery	Air taxi	1 + 4	N/A	161	240-322	N/A
VTOL - Vectored trust	Voyzon Aerospace	E-VOTO	Unknown	Battery	Air taxi	2	N/A	30'	250	N/A
VTOL - Vectored trust	DGWorld	UAD M470	Unknown	Battery	Air taxi	0 or 2	177	500	175	472.5
VTOL - Lift+cruise	Wisk	Cora	Test flight(s)	Battery	Air taxi	2	181	40	180	N/A

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
VTOL - Lift+cruise	Aurora flight sciences, Boeing	PAV	Test flight(s)	Battery	Air taxi	2	225	80	180	800
VTOL - Lift+cruise	AutoFlightX	V600 & V800	Prototype	Battery	Air taxi	2 or 0	N/A	N/A	N/A	N/A
VTOL - Lift+cruise	Zuri	Zuri	Building prototype	Hybrid	Air taxi	4	N/A	500-700	N/A	N/A
VTOL - Lift+cruise	Pegasus	Vertical Busness jet	Sub-scale prototype	ICE (maybe hybrid)	Business Jet	7	2660	2124 CTOL 4400	759	5700
VTOL - Lift+cruise	Pipistrel	801	Concept	Hybrid or battery electric	Air taxi	4	N/A	e 97 or h 300	N/A	N/A
VTOL - Lift+cruise	Ascendance Flight Technologies	Atea	Concept	hybrid	Air taxi	1 + 3	450	150	200	2000
VTOL - Lift+cruise	Embraer X	Embraer X	Concept	Battery	Air taxi	1 + 4	N/A	N/A	N/A	N/A
VTOL - Lift+cruise	Flyter	PAC VTOL 420-120	Concept	Hybrid or battery electric	cargo, personal vehicle	1	N/A	e 160; h 900	240	420
VTOL - Lift+cruise	Flyter	PAC VTOL 720-200	Concept	Hybrid or battery electric	Cargo, air taxi	2	200	e 150, h 900	250	720
VTOL - Lift+cruise	Terrafugia	TF-2 Air vehicle	Concept	hybrid	Road + Air vehicle	1 + 4	544	300	N/A	N/A
Mutlicopter	Ehang	Ehang 116	Producito n ready	Battery	Air taxi	1	140	31 km or 19'	100	N/A

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
Mutlicopter	Ehang	Ehang 216	Production ready	Battery	Air taxi	2	220	35 km or 21'	100	N/A
Mutlicopter	Aluada	Airspeeder	Test flight(s)	Battery	Racing	1	N/A	12'	130	N/A
Mutlicopter	Drone Champions	Big drone	Test flight(s)	Battery	Racing	1	67	N/A	N/A	165
Mutlicopter	Airbus & Rolls Royce	CityAirbus	Test flight(s)	Battery	Air taxi	4	N/A	15'	120	2200
Mutlicopter	Neo Aeronautics	Crimson S8 & S8-SR	Test flight(s)	Hybrid	Air taxi	1	100	E 20' H 100'	N/A	215
Mutlicopter	Astro	Elroy	Test flight(s)	Battery	Personal vehicle	2	120	20-25'	N/A	360
Mutlicopter	FLUTR Motors	FLUTR	Test flight(s)	Hybrid or battery electric	Personal vehicle or air taxi	2	N/A	200	250	N/A
Mutlicopter	Kitty Hawk	Flyer	Test flight(s)	Battery	Recreational	1	N/A	12-20'	N/A	N/A
Mutlicopter	Lift Aircraft	Hexa	Test flight(s)	Battery	Recreational	1	113	15'	N/A	N/A
Mutlicopter	Skydrive	SD-XX	Test flight(s)	Battery	Prove capability	2	N/A	20	N/A	500
Mutlicopter	Vertical Aerospace	Seraph	Test flight(s)	Battery	Prove capability	0	250	N/A	N/A	N/A
Mutlicopter	Moog	Surefly	Test flight(s)	Hybrid	Personal vehicle	2	180	112	N/A	680
Mutlicopter	VoloCopter	Volocity	Test flight(s)	Battery	Air taxi	1 or 2	200	35	100	900
Mutlicopter	Electric Aircraft Concept	Whisper	Test flight(s)	Battery	Personal vehicle	2	N/A	30'	N/A	N/A
Mutlicopter	Davinci	Zero G	Test flight(s)	Hybrid	Air taxi	1	150	N/A	N/A	N/A

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
Mutlicopter	Tecnalia	Air Taxi	Prototype	Battery	Air taxi	1 up to 4	150	15' or 15 km	90	N/A
Mutlicopter	Baykar	Cezeri Flying car	Prototype	Battery	Personal vehicle	1	80 to 100	70 to 80	100	241
Mutlicopter	Flyka	Flyka	Building prototype	Battery	Air taxi	2	165	20'	110	N/A
Mutlicopter	Metro-Skyways	Cityhawk	Building prototype	ICE, later hydrogen	Air taxi	1 + 4	760	150	270	1930
Mutlicopter	Beccarii	Beccarii	Sub-scale prototype	Hybrid	Personal vehicle	1	140	150	N/A	500
Mutlicopter	AirCarCorp	AirCar	Concept	Battery	Air taxi	2	500	N/A	N/A	N/A
Mutlicopter	Astro	Alta	Concept	Battery	Personal vehicle	2 or 4	N/A	N/A	N/A	N/A
Mutlicopter	Garudeus Aviation	KiiRA	Concept	Hybrid	Personal vehicle	1	113	96	100	N/A
Mutlicopter	Italdesign, Airbus, Audi	Pop.up Next	Concept	Battery	Combined Car & Aircraft	1 or 2	N/A	50	N/A	2000
Mutlicopter	Alaka'I Technologies	Skai	Concept	Hydrogen	Air taxi	1 + 4	454	300	190	N/A
Rotorcraft	Aquinea	Volta	Certified flight	Battery	Prove capability	1	100	15'	N/A	520
Rotorcraft	Tier 1	Robinson R44	Test flight(s)	Battery	Organ delivery	N/A	272	20' future 150'	148	N/A
Rotorcraft	Fraundorfer	Tensor 600x	Test flight(s)	Interchangeable	Air taxi	2 future 6	N/A	N/A	213	N/A
Rotorcraft	AutoGyro	eCavalon	Prototype	Battery	Prove capability	2	200	30'	145	N/A

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
Rotorcraft	Jaunt Air Mobility	Jaunt Aircraft	Prototype	Battery	Air taxi	1 + 4	500	N/A	N/A	2500
Rotorcraft	Horizon Autocopters	Auto-copter	Concept	Hybrid	Personal vehicle or air taxi	4 - 5 - 6 - 8	N/A	N/A	N/A	N/A
Rotorcraft	Prades	Gyroobike	Concept	Battery	Personal vehicle	1	N/A	120'	N/A	N/A
Rotorcraft	Piasecki	PA-890 EVTOL	Concept	Battery	Emergency or air taxi	5	N/A	N/A	N/A	N/A
Hoverbike	Flyt Aerospace	Red hummingbird	Test flight(s)	Battery	Recreational	1	N/A	19'	N/A	N/A
Hoverbike	Hoversurf	Scorpion Hoverbike	Test flight(s)	Battery	Personal vehicle	1	N/A	10' to 20'	N/A	N/A
Hoverbike	Electric Jet Aircraft	Verticycle	Test flight(s)	Hybrid or battery electric	Recreational	1	90	40 km or 31'	N/A	N/A
Hoverbike	Assen Aerospace	A2 Avenger	Prototype	Hybrid or battery electric	Recreational	1	100	20'	N/A	N/A
Hoverbike	AirTransTech	Catapult one	Prototype	Battery	Recreational	1	91	30'	56	429
Hoverbike	Electrafly	Electrafly	Prototype	Hybrid	Recreational or air taxi	1	N/A	32 km	161	N/A
Hoverbike	Talaria, Delft university	Hermes II	Prototype	Battery	Unknown	1	100	30'	N/A	N/A
Hoverbike	Silverwing & Delft university	S1	Prototype	Battery	Air taxi	1	90	30' or 60 km	140	N/A
Hoverbike	Tetra aviation	Tetra 3	Prototype	Hybrid	Personal vehicle	1	N/A	N/A	N/A	N/A

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
Hoverbike	X-aero	X-Craft	Prototype	Battery	Personal vehicle	1	N/A	N/A	N/A	N/A
Hoverbike	Ali technologies	Xturismo	Prototype	Hybrid later battery	Personal vehicle	1	N/A	180'	N/A	N/A
Hoverbike	WatFly	Atlas	Sub-scale prototype	Battery	Recreational	1	90	60' cruising 15' hovering	N/A	N/A
Hoverbike	Ryerson University	Helium	Sub-scale prototype	Battery	Personal vehicle	1	N/A	20'	N/A	N/A
Hoverbike	Neva Aerospace	AirQuadOne	Concept	Battery	Air taxi	1	100 to 150	30'	N/A	N/A
Hoverbike	TrekAero	Flykart 2	Concept	Battery	Personal vehicle	1	N/A	30'	83	N/A
Hoverbike	Electric Jet Aircraft	EJ-1 electric jetpack	For sale (uncertified)	Battery	Recreational	1	90	minutes	N/A	N/A
Cargo	Swoop Aero	Kookaburra	Ongoing operations	Battery	Healthcare	0	2,5	120	100	N/A
Cargo	Matternet	M2	Ongoing operations	Battery	Healthcare & e-commerce	0	2	20	N/A	13,2
Cargo	Zipline	Zipline	Ongoing operations	Battery	Healthcare	0	1,77	160	101	21
Cargo	Wingcopter	178 Heavy lift	Pilot Project(s)	Battery	Healthcare & e-commerce	0	6	120	100	16
Cargo	Flytrex	Mule	Pilot Project(s)	Battery	Food	0	N/A	11	51,5	15,5

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
Cargo	Drone Delivery Canada	Robin XL	Pilot Project(s)	Battery	Connecting remote communties	0	11,3	60	65	34
Cargo	Drone Delivery Canada	Sparrow X1000	Pilot Project(s)	Battery	Connecting remote communties	0	4,5	30	65	25
Cargo	Wing	Wing	Pilot Project(s)	Battery	Food	0	1,5	19,3	113	N/A
Cargo	Bell	APT-20 & APT-70	Test flight(s)	Battery	Logistics	0	N/A - 31	29 or 56	121	25 or 136
Cargo	Boeing	CAV	Test flight(s)	Battery	Logistics	0	227	N/A	N/A	500
Cargo	Elroy Air	Chapparral	Test flight(s)	Hybrid	Logistics	0	100-225	500	N/A	N/A
Cargo	Doks	DelivAIRy	Test flight(s)	Battery	Industry	0	4,5	25'	54	N/A
Cargo	ACSL	Delivery drone	Test flight(s)	Battery	Logistics	0	2,75	29'	36	N/A
Cargo	Flirtey	Eagle	Test flight(s)	Battery	Food & healthcare	0	N/A	N/A	N/A	N/A
Cargo	Workhorse	Horsefly	Test flight(s)	Battery	Packages	0	5	30'	N/A	N/A
Cargo	Antwork	Jetgo TR7	Test flight(s)	Battery	Healthcare & e-commerce & food	0	7	30	N/A	N/A
Cargo	Manna	Manna	Test flight(s)	Battery	Food & healthcare	0	4	15	80	N/A
Cargo	Dronistics	PackDrone	Test flight(s)	Battery	Food & healthcare	0	0,5	4	N/A	N/A

Type	Producer	Model	Stage	Technology	Function	Passengers	Payload capacity (kg)	Range (km) or endurance (minutes/h)	Cruising speed (km/h)	MTOW
Cargo	Rigi tech	Rigione	Test flight(s)	Battery	Healthcare & e-commerce	0	3	80	N/A	N/A
Cargo	VoloCopter	VoloDrone	Test flight(s)	Battery	Logistics	0	200	40	80	800
Cargo	Volansi	Voly C-10	Test flight(s)	Battery	Healthcare & militairy & industrial	0	4,5	80km or 60'	96	25
Cargo	Volansi	Voly C-20	Test flight(s)	hybrid	Healthcare & militairy & industrial	0	9	482km or 300'	104	68
Cargo	Volansi	Voly M-20	Test flight(s)	Hybrid	Healthcare & militairy & industrial	0	9 + 4.5	563 km or 480'	120	104
Cargo	Vayu	X5	Test flight(s)	Battery	Healthcare	0	N/A	N/A	83	23
Cargo	AERGILITY	Atlis cargo UAV	Sub-scale prototype	Hybrid	Cargo	0	113 to 159 kg	320 to 960	160	363
Cargo	Malloyaeriona utics	T-80	Unknown	Battery	Cargo	0	30	50 km or 34'	N/A	N/A
Cargo	Malloyaeriona utics	T-150	Unknown	Battery	Cargo	0	68	70 km or 36'	N/A	N/A
Cargo	DGWorld	UAD M20	Unknown	Battery	Civil defence	0	5	45	100	19
Cargo	Aerial Vehicle Automation	Winged X8	Unknown	Hybrid	Cargo	0	91	483	97	N/A
Cargo	Aerial Vehicle Automation	X8	Unknown	Battery	Cargo	0	91	30'	97	N/A

GREEN FLYWAY

Green Flyway Brochure

International Test Arena for future aviation

GREEN FLYWAY test arena

International test arena

- Everything within walking distance

GREEN FLYWAY test arena

GreenFlyway Östersunds kommun
SE- 831 82 Östersund, Sweden

e-mail: hans.dunder@greenflyway.com
web: www.greenflyway.com

Interreg Sverige-Norge
Europeiska regionala utvecklingsfonden
EUROPEISKA UNIONEN
REGION JÄMTLAND HÄRJEDALEN
Trøndelag fylkeskommune

Unique test arena for Electric aircrafts, ATM, UTM/U-space and ground support.

Unique test environment
- Large free air space
- Tough weather
- Point to Point
- Cross boarder

Large available air-space for testing

Challenging environment

- Mountains and tough winters

Three airports in two countries

Full service on ground

Leading industrial partners

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Trøndelag fylkeskommune

Highlights of Östersund

- Unique 2500 meter runway
- Air space
- International airport
- 40 000 m² of hangars and offices
- Electric infrastructure at the airport
- Wind tunnels
- Electric Engine Test Cell
- Maintenance for general aviation
- Research and development
- Convention center
- Hotels and apartments

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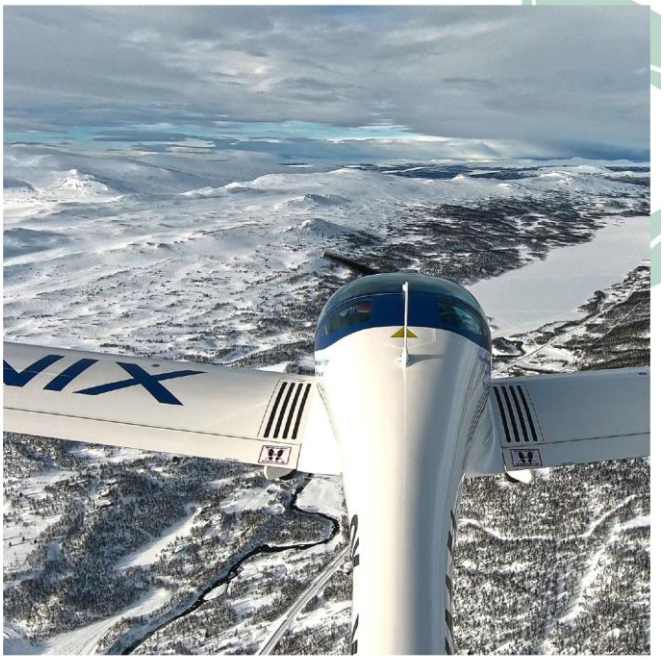

Air space

The Green Flyway test arena has a unique air space for testing. The current airspace design combined with today's opportunities to obtain temporary test permits that makes it possible to get started with tests immediately.

AIRPORTS

Östersund - Sveg	130 km
Sveg - Röros	170 km
Röros - Östersund	174 km

RÖROS ▷ ÖSTERSUND

SVEG

GREEN FLYWAY test arena

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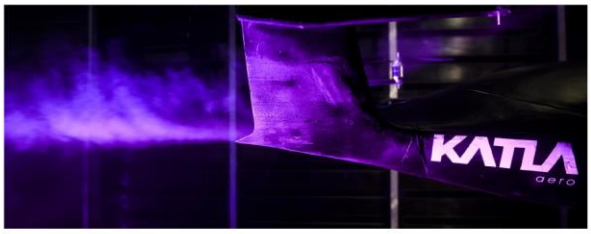
EUROPEISKA UNIONEN
REGION JÄMTLAND HÄRJEDALEN
Trøndelag fylkeskommune

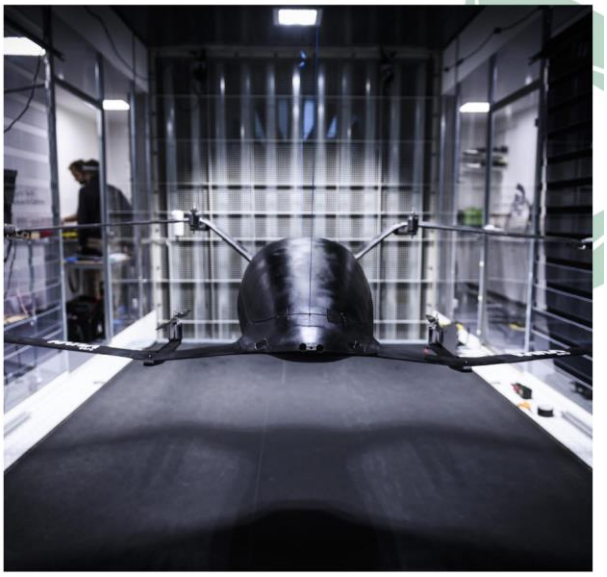
40 000 m² of hangars and offices ready for you

GREEN FLYWAY test arena

Electric infrastructure

- Partner Power companies
  - Jämtkraft
  - Ren Röros
- Aircraft charging
- Charging test center
- 100% Renewable energy at test facilities
- Storage research - via University partners:
  Mid Sweden University and NTNU (NOR)
- Industrial partners
- Redundant power supply





Wind tunnel

- Wind tunnel
- Testing of test models of proposed aircraft and engine components
- Flow Visualization
- Provides diagnostic information about the flow of air around the model
- Advance climate functions

GREEN FLYWAY test arena

Maintenance

- General MRO
- Maintenance for general aviation
- Globally recognized FAA 145 Repair Station
- Specializes in maintenance and repairs of hydraulic, pneumatic, electrical, fuel and electromechanical aircraft components
- Heavy maintenance Electric 145 station

GREEN FLYWAY test arena

EMC capabilities - SAAB

Complete test resource within electromagnetic environment and compatibility
The test laboratory is accredited by SWEDAC
EMC testing with high field strengths and stringent requirements.
Remote monitoring of equipment during measurement.

Engine test cell

Electric engine test cell (14,7x23m)
Test possible with complete aircraft
Test on engine beds
Test of complete powertrain
Remote monitoring
24 h testing
-20 to +20 degrees celsius
Control room - fire and explosive safe

GREEN FLYWAY test arena

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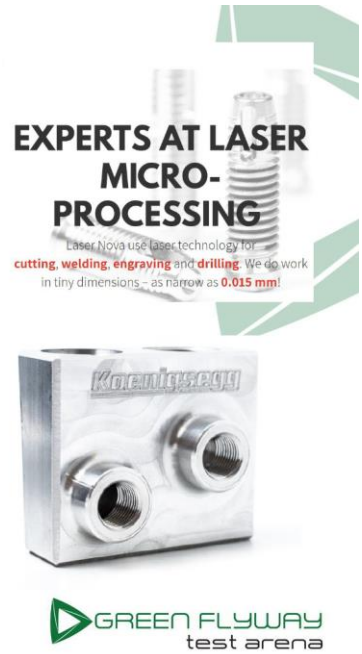
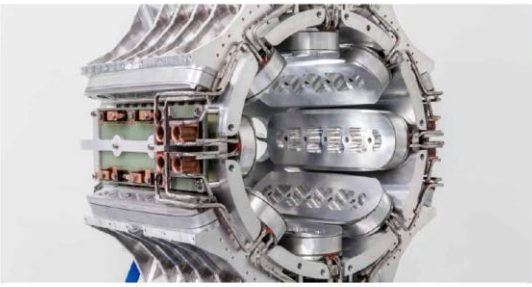
Trøndelag fylkeskommune

Partners

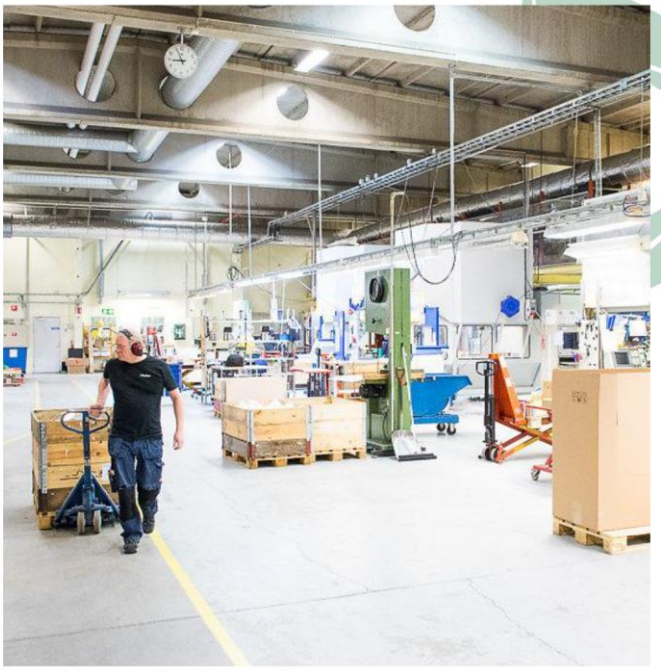
AIM - additive manufacturing, University and aviation industry.
LASER NOVA - use laser technology for cutting, welding and drilling.
ÅRE PRODUKTION - competent supplier of CNC machined aluminum. Especially with challenging parts and designs





Industry Partners

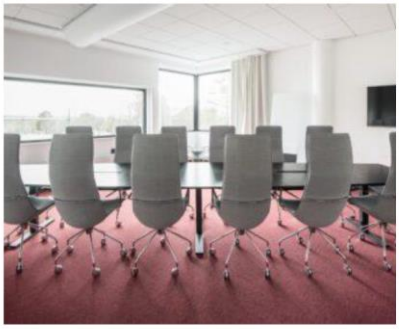
PR-PLAST - Large full service company, Combining vacuum forming with new technologies such as 3D printing.
IUC Z-GROUP - Cluster of manufacturing companies (electronic, hydraulic, etc) more than 1000 employees.



Meetings & VIP Experience Frösö Park

- At the Test Arena
- Norrlands largest and most flexible meeting place
- Meetings 2 - 3500 persons
- 15 conference rooms
- 200 rooms 700 beds
- VIP Events - Summer and winter

GREEN FLYWAY test arena



VIP Events up to 3500 people

GREEN FLYWAY test arena

OUR SERVICES

Support in Certification procedures

- DOA (Design Organisation Approval)
- POA (Production Organisation Approval)

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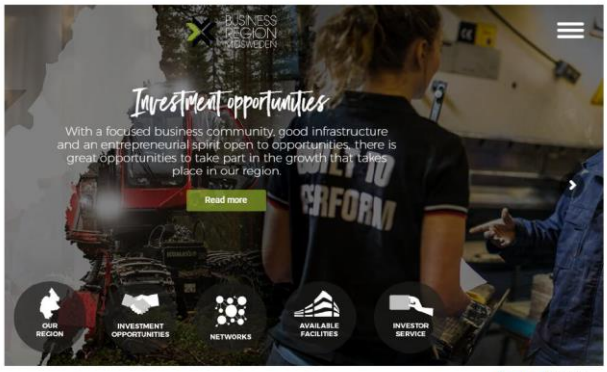
Civil Aviation Agencies

We will help you will all necessary permits to fly in our Test arena

Financial support

Business Region Mid Sweden

- EU funding
- Investment partners
- Network
- Investor services



JÄMTLAND HÄRJEDALEN

A business region on the move

EUROPEAN UNION
European Regional Development Fund

GREEN FLYWAY
test arena

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EUROPEISKA UNIONEN

REGION JÄMTLAND HÄRJEDALEN

Trøndelag fylkeskommune

Green Flyway Partners

Trondheim municipality	Östersund municipality	Röros municipality
Swedavia	LFV (Luftfartsverket)	Avinor
Frösö Park Arena	SINTEF	RÖROS FLYSERVICE
Samling näringsliv	Interreg Sweden - Norway	Härjedalen Sveg Airport
Scandinavian Airlines	HEART Aerospace	ÖRNSKÖLDSVIK AIRPORT
Jämtkraft	REN RØROS	Region Jämtland/Härjedalen
Tröndelag fylkeskommune	LänstyrelsenJämtland	Trafikverket

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