

# SKYFLY



**PRESS RELEASE**

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**SKYFLY TECHNOLOGIES LTD**

[skyfly.aero](https://skyfly.aero)

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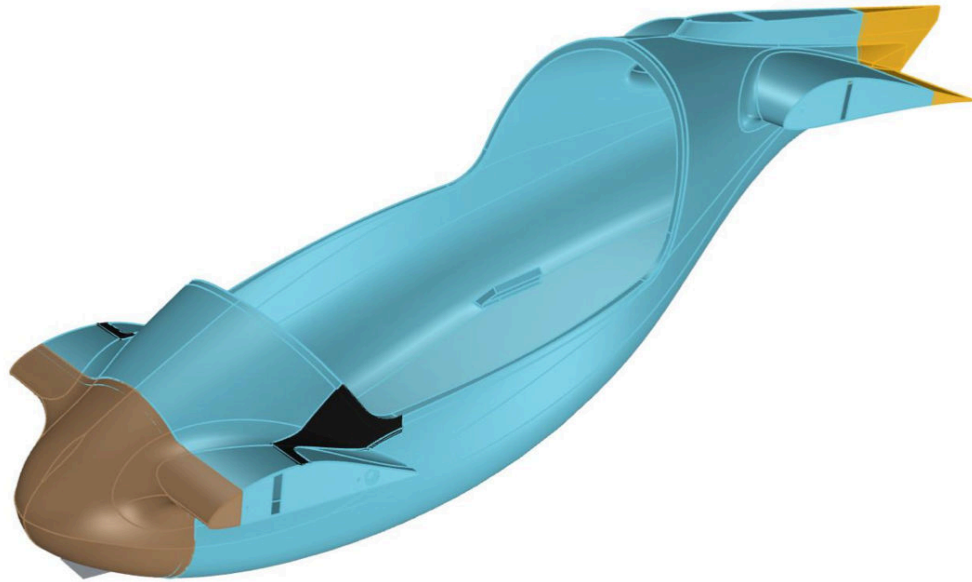
## **Skyfly selects [Norco](#) for composite manufacturing**

- Skyfly has chosen Norco to build and manufacture the fuselage, wings and composite components of the Axe aircraft.
- With the order now placed - Skyfly expects to have the first aircraft built by June 2023 which falls in line with their timelines.
- Norco boasts 35 years experience as a leading developer of lightweight composite structures and innovative GRP mouldings.
- Norco's operation covers six sites in the UK with an overall capacity of 130,000 sq ft and over 170 skilled workers.
- Norco has experience providing lightweight composite structures for some of the world's leading OEM's in the Aerospace, Defence and Marine markets

*"We have been extremely impressed with Norco from our first initial contact to now running the project alongside them. It is refreshing to work with such a slick operation and knowing that we are in capable hands. The Norco team have years of experience to draw on which they have driven into the design for manufacture stages examining every detail prior to the aircraft being signed off." - Michael Thompson, CEO at Skyfly*

Skyfly aims to achieve a complete airframe weight of just 220kg. This low weight structure is only achievable through the use of light weight composite structures which can retain the required crashproofing and structural strength

needed. The aircraft fuselage consists of a main shell built in one piece with a nose and tail cone:



*“The Skyfly Axe eVTOL fuselage main shell is built in one piece using resin infusion, which provides low void content lightweight mouldings at low cost. A sandwich structure and unidirectional carbon is used to reinforce the skin. The skin in the cockpit area uses hybrid carbon/aramid which improves impact resistance. The internal structure includes a tunnel which provides torsional stiffness and frames which distribute point loads (e.g. from the undercarriage and flying surfaces) into the structure. I have had a personally positive experience with Norco some years ago, since then, their expertise and experience in lightweight composite aerostructures has developed greatly. We find them responsive especially in DFM (design for manufacture) resulting in a better product at less cost.”*

- William Brooks, CTO at Skyfly

Using this method of construction - also allows for the low cost, accurate and reliable repeatability of our main structures - which is important when we progress into series production of the Axe.

*“Norco are very excited to work with Skyfly in developing the Axe aircraft. UAM will see the largest growth in the civil aviation sector in the coming years, and its aircraft such as the Axe that will provide ground breaking capability. This aircraft will enable Norco to leverage on its skills and capabilities in the manufacture of advanced composite structures. Norco have been involved in a number of UAM platforms and see the relationship with Skyfly as a natural progression in the development and manufacture of eVTOLs.*

*Norco are a leading UK manufacturer of large composite structures, the company embraces the majority of composite processes from wet lay and resin infusion to high end pre-preg mouldings. Norco have made major investments in equipment and facilities over recent years, providing a ‘One Stop’ capability from tooling design and manufacture to paint finishing and assembly. Every project at Norco is supported by one of our engineering team, who ensure projects are manufactured to cost, quality and schedule”*  
- Jason Hunt, Project Manager at Norco

The announcement comes just before the Christmas break ensuring Skyfly are on schedule with their build timeline.

## **What is the Axe eVTOL?**

With a fully-electric range of 100 miles, or 300 miles with an optional hybrid generator, and a cruise speed of 100mph, the Axe by Skyfly is a truly revolutionary two-seat eVTOL aircraft available for USD 180,000. It is designed for personal use and is as easy to fly as a consumer camera drone. Thanks to its small footprint and low noise, the Axe can be kept at home and flown directly to a destination, in complete comfort and with aerial views to enjoy, without traffic jams or bumpy roads.

Its unique four-winged design (patent pending), developed by renowned aeronautical engineer Dr William Brooks, enables the Axe not just to take off and land vertically like a helicopter, but also to fly, take off and land like a conventional airplane. This globally unique ability to also take off and land on a

runway means Skyfly's Axe is the only personal two-seat eVTOL aircraft that you can fly with any existing airplane pilot's license. By providing lift, the wings also enable a much larger range compared to "rotors only" eVTOLs, an extra layer of safety due to its good glide performance, and a class-leading 30-50kw energy use in cruise, comparable to a Tesla but not requiring an eco-unfriendly road..



The Axe also offers greatly increased safety compared to a helicopter, thanks to its eight-motor distributed propulsion, each with its own power supply and its glide ability arising from its four wings, which enables power-off landing. Additionally, the Axe is fitted with a ballistic parachute - which a helicopter can never have due to the positioning of its rotors.

Skyfly does not aim to develop an air taxi that shuttles commercial passengers into city centres, nor is it venturing down the onerous commercial certification route, which leads to high development costs. Instead, Skyfly follows existing certification routes for private kit-built aircraft, which greatly reduces costs for the owner and enables the Axe to be sold at a base price of 180,000 USD.

Unlike commercial air taxis, which require as-yet-unbuilt "vertiport" infrastructure, the Axe eVTOL can take off and land in a garden or any agricultural land where the landowner has given permission, without needing modifications or expensive infrastructure. This use is legal and well established,

with many light aircraft owners operating in this way worldwide from private “farm strips”.

The Axe is not just an idea or concept, but a fully designed aircraft. Extensive analysis and prototype testing has been carried out and manufacturing is being readied for series production. Our two teams of aircraft engineers have developed the Axe as a versatile personal aircraft with strict focus on low weight and aerodynamic efficiency and performance. Aside from generating lift from its wings, the Axe also differs from other eVTOL designs in that it uses existing technology from proven and certified suppliers to provide key components, including the propulsion system, battery system and flight control system. Furthermore, unlike other winged eVTOLs, it has no rotating motor or wing elements, but instead has fixed angle rotors, saving on weight, cost, complexity and maintenance. For more information about how the Axe stands out from other eVTOLs, [watch our full explainer video](#).

Skyfly’s Chief engineer, Dr William Brooks, has designed the Axe with efficiency at its core, with the four wings giving it the highest energy efficiency in comparison to other two-seat eVTOL aircraft. Compared to many other eVTOL designs, which have no or inadequate wings, the Axe’s wings generate useful lift in forward flight, improving efficiency, range and safety, while also giving it the ability to make conventional wing-borne take-offs and landings if required, saving yet more energy.

Skyfly sees the Axe as a direct competitor to currently-available two seat airplanes or helicopters – one that is much easier to fly, safer, quieter and more affordable to buy, operate and maintain. In addition, whichever bigger airtaxi eVTOL wins the race – these will require pilots, and the two seat, side by side Axe eVTOL is the ideal training vehicle – as the only eVTOL worldwide able to train pilots in fixed wing takeoffs and landings, and emergency glide landings, as well as vertical takeoffs and landings.

Following two years of development, CFD and CAD designing, followed by prototype flight testing, the Axe was officially launched in the summer of 2022. In the months since then, the Axe eVTOL by Skyfly has secured dozens of orders and has attracted the attention of air mobility specialist investors. Their backing allows Skyfly to push forward with its development schedule. The

strong and lightweight composite fuselage tooling for series production has meanwhile been manufactured and delivered, and with that, Skyfly is now building its first aircraft, with manned test flights due to begin in Q1 2024. Customer deliveries will follow at the end of 2024, when UK certification is expected.

To find out more about the Axe visit [www.skyfly.aero](http://www.skyfly.aero)

To watch a video of our prototype flying, visit our [YouTube channel](#).

**The Axe EVTOL by Skyfly**  
***You have arrived. Faster, cleaner, safer, smarter.***  
***Less time, more joy, amazing views.***