



Press Release

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Vertical Flight Society Electric VTOL Directory Hits 700 Concepts

Designs by nearly 350 companies and innovators catalogued

Fairfax, Virginia, USA, Aug. 16, 2022 — The Vertical Flight Society (VFS), the world’s leading non-profit organization working to advance vertical flight, announces today that the number of electric vertical takeoff and landing (eVTOL) aircraft concepts being tracked in its World eVTOL Aircraft Directory has now exceeded 700 designs from nearly 350 companies and innovators worldwide. The directory is part of the VFS Electric VTOL News website, www.eVTOL.news, the world’s oldest and most extensive online resource on eVTOL aircraft and technology. Nearly every leading eVTOL company is a member of VFS, which has more than 175 corporate members worldwide.

The World eVTOL Aircraft Directory is divided up into propulsion system approaches, and currently includes 235 concepts using various vectored thrust approaches, 124 "lift + cruise" configurations, 195 "wingless (multicopter)" concepts, 103 designs for hover bikes and personal flying devices and 47 electric rotorcraft. The concepts are from 347 entities in 48 countries. The most prolific countries of origin are the US (124 entities), UK (24), China (21), Germany (19) and Canada (17), accounting for nearly 60% of all design entities.



The Umiles Next Integrity 3, the 700th eVTOL concept added to the VFS World eVTOL Aircraft Directory

After supporting the eVTOL community beginning in 2013, started a newsletter in 2016 and began tracking the public designs. VFS launched the website in April 2017, when the list of known eVTOL programs that were under development reached about a dozen. “We were pleased to create these resources to the nascent eVTOL industry six years ago,” said Mike Hirschberg, VFS Executive Director. “Since then, the directory exploded to catalogue every known eVTOL design — from the silly to the serious.”

Over the years, designs have been added and an ever-increasing pace. The number of design concepts catalogued (both active and defunct designs) has doubled over the past two years — an average of about three concepts per week. The directory grew at a rate of about one aircraft per week during the first years, but this accelerated to an average rate of two aircraft per week with 100 aircraft catalogued by July 2018, the 200th by September 2019, the 300th by July 2020, the 500th by August 2021, and 600th this January, as new aircraft concepts are unveiled. For the first time ever, hundreds of design teams around the world are engaged in the exciting possibilities of vertical flight and working to solve the extremely challenging design requirements, aided by the advancements in computer modeling and design tools, low-cost manufacturing, batteries, electric motors, etc.

Last year also saw a doubling of the amount of funding being invested in eVTOL aircraft developers. VFS had estimated \$4.5B of investments in eVTOL companies in 2010–2020. However, last year saw several additional developers go public and/or attract sizeable private investments, bringing the total to more than \$10B. This spike in investment of several leading eVTOL companies that went public in 2021 — namely Archer Aviation, Eve Air Mobility, Joby Aviation, Lilium and Vertical Aerospace — has given new momentum to the goal of beginning operations of eVTOL aircraft around the world over the coming few years.

The free website also hosts more than 700 eVTOL news stories, including some 300 in-depth articles from the Society’s Vertiflite magazine, the leading periodical on eVTOL and rotorcraft developments.

VFS has been at the forefront of what it calls the “Electric VTOL Revolution” since 2014 when it held the world’s first meeting of the eVTOL development community. Its 10th Annual Electric VTOL Symposium (www.vtol.org/evtol2023) is planned for Jan. 24-26, 2023, in Mesa, Arizona, in conjunction with the Society's 10th Biennial Autonomous VTOL Technical Meeting. The annual Electric VTOL Symposium is the world's largest and longest-running event on electric VTOL aircraft.

When VFS launched the first Transformative Vertical Flight (TVF) meeting in 2014, the idea of electric VTOL aircraft was greeted with widespread skepticism, but growing technical progress, flight demonstrations, government validation and private investment have helped reverse public perception. It is now recognized that the vertical flight market is poised for significant expansion over the next few years as eVTOL aircraft enter service that can have higher performance than conventional helicopters for certain missions, as well as lower operating costs and lower noise. The Society also helped launch the joint VFS/NASA TVF working groups in 2017 (www.vtol.org/tvf), and has started other working groups more recently.

Since then, VFS has also launched a series of additional workshops and working groups on critical issues. The first workshop in North America on hydrogen for aviation was held in March 2022 after two years of working group meetings (www.vtol.org/hydrogen). The next annual workshop is planned for March 2023 in Long Beach, California. VFS also held the world's first workshop on advanced air mobility (AAM) infrastructure in 2019, and is holding the 6th Workshop on AAM Infrastructure on Sept. 20-22, 2022 in Dayton, Ohio. The event includes a tour of relevant displays at Springfield-Beckley Municipal Airport, including the BETA Technologies Portable Vertiport, BETA Technologies Simulator, FlyOhio Community Vertiport Challenge, Ohio UAS Center, Agility Prime Program Display, Moog SureFly Vehicle and Springfield-Beckley Airport Future Development Plans.

VFS was founded as the American Helicopter Society in 1943 by the visionaries of the early helicopter industry, who believed that technological cooperation and collaboration were essential to support this new type of aircraft. Today, history is repeating itself, with VFS playing a similar role helping to advance today’s revolutionary eVTOL aircraft.

VFS is @VTOLSociety on social media: [Facebook](#), [Instagram](#), [LinkedIn](#), [Twitter](#), [Vimeo](#) and [YouTube](#)

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