

REVOLUTIONARY V-SHAPED AIRPLANE MODEL TAKES OFF



In October last year, following the company's 100th anniversary, KLM Royal Dutch Airlines unveiled a futuristic V-shaped airplane. Many believed that the project would never see the light of day; however, the first scale prototype is now a reality, and it flies beautifully.

The Flying-V is being developed by the Dutch airline in a partnership with TU Delft (Delft University of Technology), and is sponsored by giants such as Airbus.

Maiden Flight

At a German air base, engineers from these companies tested the scale model that weighs 22.5 kilos, is 2.76 meters long and has a wingspan of 3.06 meters. The V-shaped airplane could also consume 20% less fuel than an A350 thanks to its better aerodynamic design.

The first flight of this prototype went smoothly. Project leader Dr. Roelof Vos confessed that one of the worries was that the aircraft might face difficulty taking off since previous calculations had shown that rotation could be an issue.

"The proof of the pudding is in the eating," said Vos. And with relief, he found that the plane could turn on the takeoff phase at a speed of 80 km/h.

Points to Improve

The team had to change the center of gravity of the model and prepare a better antenna for remote control. One of the points to improve is also the landing, which was too abrupt for what was initially expected.

Thanks to its unique V-shape, the aircraft could save up to 20% fuel compared to an Airbus A350 due to its aerodynamic design, which is 15% more efficient.

As of now, the project expects to have room for 314 passengers as well as cargo, with fuel tanks located in the wings. In other words, this would be a plane without a central fuselage.

Able to Land on Any Airport

Despite not being as long as the Airbus twin-engine jets (65 meters vs. 66.89 meters), the V-shaped airplane would have a similar wingspan, which would allow it, as KLM explained in a statement, "to use existing infrastructure at airports".

The tube-shaped aircraft design "has reached a plateau in terms of energy efficiency," said Vos in last year's presentation, hence the new configuration that allows creating "synergy between the fuselage and the wing". As Dr. Vos explained, the fuselage actively contributes to the lift of the plane and creates less aerodynamic drag.

The Next Step

The next step for this project is having the scale model be powered by more sustainable fuels, such as liquid hydrogen.

There will also be tests outdoors and using wind tunnels in order to fully design a model that can lead an aviation revolution.

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